

Recumbent Cyclist News

RCN 089 A Publication by and for Recumbent Enthusiasts Since 1990 July/August 2005

RCN 089 is our 15th Anniversary issue!



RANS' Randy Schlitter has a new surprise for us, see page 4



John Lindsay commuter tests the Sun USX, see page 15



The RANS Velocity² Formula

By Bob Bryant

The V2 Formula is based on an aluminum version of the V2 frame. We believe in the LWB format as a stable and safe speed mount. There is something very secure about a LWB when you are really hauling. The low center of gravity is apparent in corners, and the slippery aerodynamics make for high cruise speeds. The V2 Formula is one of the lightest and fastest LWB recumbents on the market weighing in at 27.3 pounds (less pedals). The brushed aluminum frame is beautiful to look at and ride, with the same handling the V2 is famous for. — RANS

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BIKE: Velocity Squared Formula

BUILDER: RANS

ORIGIN: Hays, KS/Taiwan

STYLE: LWB OSS

USE: Performance

PRICE: \$2395/\$2445

While many long wheelbase (LWB) over-seat steering (OSS) recumbent designs haven't changed in years, one team of recumbent designers has pushed the limits of LWB design: Randy Schlitter and his colleagues at RANS. The classic RANS LWB recumbent, the Stratus, is about to celebrate its 30th anniversary. Randy believes that there is more yet to be done with LWB design. The Velocity Squared (V2) was the first new style LWB.

After several years of refinement, RANS has now introduced the beautiful brushed aluminum lightweight V2 Formula. This LWB hot rod has a higher crankset, highracer tweener-style bars and marks a unique new direction in the world of LWB recumbents.

"The crank height on the V2 and Formula has allowed us to compact the frame and save some weight, place the V2 at the short end of the LWB class," — Randy Schlitter.

I have a revived interest in road bike technology sparked by watching the Tour de France on TV and attending the Cascade Classic in Oregon last Summer. I have an

Recumbent Cyclist News

"A newsletter by and for recumbent bicycle enthusiasts, since 1990."

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Editorial License: RCN 15th Anniversary

by Bob Bryant, Publisher
bob@recumbencyclistnews.com

This August will be our 15th anniversary. Since 1990, we have published 89 issues of RCN, all full of fun articles about recumbent bicycles and all mostly on time. This is almost unheard of in small niche publishing. We've been successful because we are unique and have built our business in a grassroots sort of way. We're not perfect, but we try our best. RCN is still a two-person company. I handle the content and ads, and Marilyn is the comptroller for our small company and handles the books and the banks. She is also my voice of reason. This article includes a bit of history, and a new game called "The Six Degrees of RCN." I hope you enjoy it.

I've been a bicycle enthusiast since 1969 when I was nine years old and my parents bought me a campus green Schwinn Stingray. I rode my bicycle everywhere, and I have been pretty much a complete addict since that time. I rode to school, delivered newspapers, and even trained on a Paris Sport fixed-gear track bike in the mid-1970s (long before it was hip).

While in college I traded in my bikes for a series of sports cars that drained my pocketbook. I then got married, bought a house and Marilyn and I had our first child. About this time I decided to get back into bicycling. After a series of really cool mountain bike/comfort bike conversions, I was ready for something different.

During the summer of 1986 I wandered into Angle Lake Cyclery looking for a more comfortable bicycle. The friendly bike shop owner, Kelvin Clark (now of Angletech), suggested I try a recumbent. Over in the side room of the old Angle Lake building were a P-38 SWB, a Presto SWB and a DeFelice LWB USS. Kelvin tried to get me to test ride one and I said, "No way. Those things are far too geeky for me." Over the next few days I just couldn't get them out of my head. I went back to Angle Lake specifically to ride a recumbent. Though I really did think it looked geeky, I took that long black LWB out for a ride. I couldn't believe the comfort, smoothness and easy-chair ride of that bike. From that moment, I knew I was going to go recumbent.

I had seen another recumbent called an Easy Racers in the back ad pages of *Bicycling Magazine*. The chopper look really grabbed hold of me, much like the Stingray did back in 1969. Because I was into the chopper and hot rod styles, I just had to have an Easy Racers LWB. Kelvin and Dale Clark were not interested in the Easy Racers back then (though both sell them now, thanks in part to my years of rants). I felt bad about it, but since they wouldn't or couldn't sell me an Easy Racer, I called

Gardner Martin. We spoke several times, and I finally decided to send my money (\$1,000) for a 1987 model medium-sized black Tour Easy with a Cobra seat.

The bike finally arrived. All of those weeks of worrying and I was on the road in less than an hour. My purchase experience was a great one and I loved the bike. I rode it for a few years. At this time I also started to write articles about recumbents for the International Human Powered Vehicle Association's (IHPVA) HPV (Human Powered Vehicle) News.

The IHPVA's main interest was, and remains, speed and HPV racing. My interest was in recumbents as practical and recreational vehicles. For whatever reason, they didn't seem to appreciate my writing. That gave me the idea of starting my own newsletter. So in the summer of 1990, I cobbled together several pages by typing columns on my electric typewriter and gluing them into a newsletter template made up on a copy machine. The Recumbent Cyclist Newsletter was handed out free at the Portland, OR HPV races that year. I was quite the controversial guy. Nobody believed that we could do it.

We got mailing lists from local HPV chapters and grew by word of mouth. The first issues went to just one hundred or so readers. I then got to know a recumbent builder by the name of Dick Ryan. Dick had the great idea of starting The Recumbent Bicycle Club of America (RBCA). He had patches made, sent out letters, collected dues and promised a newsletter. This is where I came in. We offered him RCN as the club's newsletter.

We continued to grow one member at a time. Within a few years, Dick was busy building bikes, and the RBCA volunteers wanted out. Dick offered to give me the mailing list to keep RCN going, but the RBCA folded. Neither of us had the financial resources to turn it into a non-profit organization. In retrospect, we should have done that.

Through the mid 1990s RCN grew by leaps and bounds. Most readers would probably tell you that the heyday was 1996 to 1998 (before the Internet). This was when I lived in Kent, WA, and led monthly and eventually weekly recumbent rides. My old pals Joe Kochanowski, Kent Peterson and Tony Licuanan were all riding recumbents, homebuilding and coming out on our rides in the pouring rain. This was by far the most fun period to produce RCN. We had a few RCN "open houses" at my home in Kent, WA dur-

Continued on page 26

Recumbent News

ARKEL PANNIERS: Arkel is one of just few companies offering recumbent specific panniers. The RT-60 is a large size (3650 cu. in.; pair) touring pannier set. The pair of panniers weighs 6.2 lbs. They are black with dark red accents and sell for \$279 (pair).

The horizontal design takes full advantage of the space available on a recumbent with a forward slant to cradle the shape of the back of the seat. These panniers are not as high as others since many recumbents use smaller size wheels — ground clearance will never be a problem. These panniers are definitely big enough for touring yet the removable pockets also mean that you can use them for everyday commuting without too much bulk. An internal aluminum frame helps the hold the shape of the panniers. These panniers were also codeveloped with Ian and Mick Sims from Greenspeed. For more info, contact: www.panniers.com.

BEST RECUMBENT CHAIN LUBE: ProGold ProLink is a wet lube with all the best qualities of a dry lube. It goes on like thin oil (no waxy, messy build up), and lubes each link reducing friction while helping to keep your chain clean. We use ProLink exclusively on all RCN test bikes, year-around, rain or shine. I relube about once per week and don't clean my chains often enough (60-90 days). This stuff keeps my chain cleaner than any other lube I've used, in the most abusive urban and wet commuting conditions — Bob Bryant, RCN. For more info, visit www.progoldmfr.com.

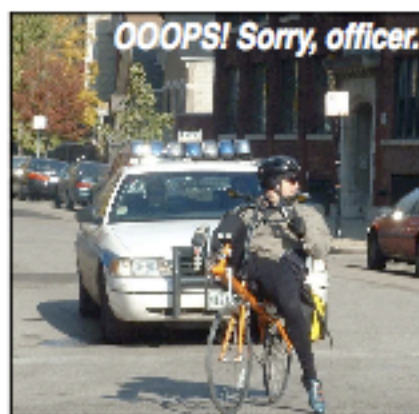
REYNOLDS: George Reynolds called to say that he is building mostly dual-700c front-wheel drive Z-Bone recumbents these days and that the dual 20" is on the back burner. While the dual 700c is not a folder, you can remove the fork/ front-wheel-drive unit and the swing arm will fold and the bike fits into a box 10" x 12" x 36". (The wheels and seat go in a second box). George says the bike is very comfortable to ride with the Cane Creek rear suspension and it is quite fast.

The Z-Bone is OSS with optional USS, has a seat height of 21", BB height of 31" and a wheelbase of 47". Stock models weigh 23 lbs.



Arkel Recumbent Panniers

We hope to get one to try out sometime this year, or at least have a reader write a review for RCN. The Z-Bone 700c frameset sells for \$2,700. www.reynoldsweldlabs.com.



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Above: RANS' Randy Schlitter shows the 2006 RANS Stratus XP with dual 26" wheels (right) alongside the stock 2005 26"/20" model (left). The Stratus XP will be available by the time you read this. Right: The Stratus XP chopper bars



RANS SET TO INTRODUCE 26x26 STRATUS: RANS' Randy Schlitter has been quietly working on another incarnation of the classic LWB OSS Stratus recumbent. The 2006 Stratus XP has a Chromoly frame, will come in two frame sizes, and will be painted Corvette Blue (a dark bluish-purple). The specs will be similar to the 26"/20" Stratus. The dual 26" Stratus will come with a choice of a new chopper style bar (like RANS' previous "B" bar) or the "T" bar setup. A fabric fairing for the chopper bar will be optional. The Stratus XP will be priced at \$1950 for either size frame and should be available as you read this. www.rans.com. *Editor's Note: This is one cool bike. I've been riding prototype #1 for a few months while Angletech builds our Stratus XP test bike. If you want to be the first on your block to own one, contact RANS, your local RANS dealer or Angletech for a custom spec model (www.angletechcycles.com).*



The Cruzbike FWD Recumbent Kit

CRUZBIKE DUAL 26" FRONT-WHEEL DRIVE KIT: You can now have a stylish recumbent bike for less than US \$700! The Cruzbike features two 26 inch wheels, front and rear suspension, compact drive train and a comfortable riding position.

You can obtain your own Y-frame mountain bike, then purchase the Cruzbike Kit and assemble yourself (experienced bicycle maintenance folk only). Or if you would like us to ship a complete bike, we can. The conversion kit includes everything you need to easily convert an inexpensive but good quality mountain bike to a recumbent cruiser — The Cruzbike. The conversion is based on our unique and patented front triangle and is complemented by our contoured Cruzbike Seat. The conversion kit adds a new triangle on the front of the bike to carry the crank set. Adding this conversion kit to a Y-frame mountain bike with a low cross bar for mounting the seat gives a comfortable and safe riding position. Other types of bike with a low cross bar can also be converted even if they have no suspension.

The rear wheel complete with its gear cluster fits the front forks, to keep the all-important steering geometry. The rear derailleur fits into the new front dropouts whether it is a screw on type derailleur or the type with a flange that is held under the axle bolt.

Building your own recumbent the smart way: If you have some experience of bicycle mechanics you have all the skills needed to convert a bike to a Cruzbike, all you need is to set aside an afternoon for the task. The Cruzbike comes with instructions that our customers say "read well and are very comprehensive." (See also page 7, this issue.)

As of this writing, the kit cost is \$350 USD. www.cruzbike.com



Bacchetta's new aluminum Corsa

BACCHETTA INTRODUCES ALUMINUM CORSA: "Bacchetta Bicycles, Inc. continues to lead the industry with the introduction of the new aluminum Corsa. The newly designed aluminum Corsa continues Bacchetta's uncontested lineage of lightweight, high-performance recumbents; and is surprisingly available at an affordable price range: \$2,200 and \$2,400, offering total weights of below 25 lbs and 24 lbs respectively, dependent upon seat option. The new Corsa comes standard with the new EuroMesh seat, with optional Bacchetta Carbon Seat for the truly hardcore. Built in the USA and available in two sizes (medium and large), the new Corsa sports a new, rigorously tested aluminum frame in its sleek new Black color. The frame is manufactured by Kinesis and is available as both a complete bike and frame kit. www.bacchettabikes.com." (Source: Bacchetta press release)

Bacchetta is also introducing a new EuroMesh seat weighs approximately 3.25 lbs with hardware and foam and is an option on certain Bacchetta models.

USA QUEST VELOMOBILE!?: Ethan Davis who runs www.velomobiles.net is currently doing a feasibility study on manufacturing the Quest velomobile here in the USA. www.velomobiles.net/wildfire/wildfireindex.html.

ROTOR SHORT CRANKS: Howie Cohen from Rotor USA called to let us know that Rotor USA now offers a 155mm (short) crank option for the Rotor cranks. www.rotorcranksusa.com

TECH ASS STROBE: Angletech offers a very cool LED tail light that is visible for over 2 miles, more than twice as far as normal bike strobes. The Tech Ass has 12 flashing modes, is drop/shock resistant to



Ray Brick's Velogenesis LWB OSS tandem



Ray races his lowracer at Northbrook in 2003



Ray Brick at United Bicycle Institute

10 feet, water resistant to 100 feet and will burn for up to 500 hours on 3 AA alkaline batteries. The light mounts with a single hose-clamp (included) and sells for \$40. www.angletechcycles.com.

HOME-BUILT RECUMBENT FOR KIDS: If you are looking for a kids homebuilder project: www.recycledrecumbent.com/new_page_11.htm

VELOGENESIS: There is a new custom recumbent bicycle builder working in the USA. Ray Brick is well known in midwest recumbent building and racing circles. Ray had been a cyclist for 30 years before he designed his first recumbent back in 1989. He later joined the Minnesota Human Powered Vehicle Association (MnHPVA) and has designed, built, ridden and raced many types of recumbent bicycles. He and his wife, Sharie, have been active in racing for many years. They were the

Multi-rider champions from 1995 to 2000. Ray is also involved in Ice Racing. Ray writes, "Most of what I know about recumbent bike design and construction I learned from the members of the MnHPVA and local pro frame builders. I've spent the last few years improving my building skills and purchasing or building the tools I need to do a professional job. Early in 2004 I completed a United Bicycle Institute (UBI) frame-building course."


Ray's new company is called Velogenesis and is based in Longs, SC. Ray writes, "Road and mountain bike cyclist have a wide choice of mass produced bicycles to choose from. For a ride able work of art or a perfect fit or a purpose built bicycle they can go to a custom frame builder. As the recumbent bicycle market has matured many fine mass-produced recumbent bikes have become available. The missing piece in the recumbent market is the


custom frame builder. Velogenesis was created to fill this need."

Ray has a well equipped shop and plans can custom braze or TIG weld custom recumbents, he writes, "Our frames are constructed with nicely finished fillet-brazed joints. The exception is our youth/small adult recumbent which is TIG welded." "Smaller people that don't need to ride an ill-fitting, heavy bike designed for the generic 250-pound rider (mass produced recumbents needs to be built heavy duty to cover a wide range of rider weights). Whatever you size we can custom tune the bike to your needs."

Ray has a very cool LWB tandem, a lightweight lowracer and adjustable youth/small adult stock recumbent designs. Other designs are in the planning stages.

Contact: www.velogenesis.com or give Ray a call at: 843.399.8786. ♦








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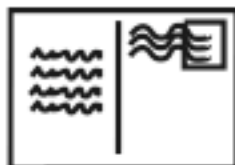
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Letters To RCN

We want to hear what you have to say!

letters@recumbentcyclistnews.com



Darryl Kimmel and his Doyle P.E.T.

MOTO-TRIKE

I was in my local recumbent shop, Spring Creek Recumbents, when the owner said, "You have to see this article." The article was the little one about someone putting a Honda engine on a trike. (RCN 087 letter and response — Ed.) Rob, the owner, knew I would like to see that because of all the grief I get about my motorized trike and my wife's motorized EZ recumbent. I also noticed Steve Chamberlin's request for information.

I had been looking into putting an engine on my wife's recumbent for about a year. That year of research led me to get her an EZ recumbent and then adding a Golden Eagle bike engine (www.bikeengines.com). My search for a recumbent trike that I could motorize led me to Jim Doyle's door. We went to Illinois to see the Doyle trikes (www.doylecustombikes.com) and I ordered one on the spot. Jim knows his craft and he is a good man.

Now I own the only trike in the area with a motor. We get our share of grief about our engines, but I get no grief from my legs on that ride home at night. You see, we live up in the hills outside of town. Now the hills are fun to ride and I haven't had as much fun in years. Engine on, engine off, it just makes you smile to ride it.

Darryl Kimmel

RANS V2

I bought a chromoly RANS V2 in the fall of 2000. At the time I bought it, the owner had put on a grand total of 12 miles and had to sell the bike due to a change in residence. He had bought it from Dale Clark at Angle Lake Cyclery. It was stock, except that Dale installed Magura hydraulic brakes on it. I rode it for several years, both in Seattle and down in Palm Springs — always with a Mueller fairsing.

The bike has a fair amount of "tiller" to the steering, but I got used to it. Last fall I noticed that RANS was offering a revised steering setup. I had Dale at Angle Lake install the new "top loader" arrangement, and, most recently, a set of Velocity Thracian wheels with Schwalbe Stelvio tires. WHAT A DIFFERENCE! I find the bike much more enjoyable to ride without the fairsing. After all, to quote Rich Pinto, "It's all about the frontal area." My "seat of the pants" impression is that my frontal area without the fairsing is actually less because I've reclined the seat quite a bit. I haven't tried any coast-down tests to compare, but the new steering arrangement makes the bike much more stable at speed and definitely a lot easier to start up and ride slowly. At

this point I tend to liken it to a Gold Rush with a higher bottom bracket.

I never get "recumbent butt" anymore. I find the bike a delight to ride. It "feels" lighter — even though it probably isn't. I just weighed it at 37 pounds with Speedplay pedals, Magura brakes, a Blackburn rack and the Thracian wheels. In conclusion: The V-2 has been dusted off, upgraded and, I feel, is now a much more attractive bike than when it was new.

Thanks for all your efforts as the publisher of RCN. When it arrives, I immediately devour it from cover to cover and reread it several times. Keep up the good work.

Bob Rogers

RCN 087, TRIKES & SAFETY

I enjoyed RCN 087, in particular, the "Jack" front-wheel drive story which was well written and appealed to my "tinkerer" instincts. The WizWheelz Edge strikes me as an exercise in futility; a cool thing to look at but you'd have to have a death wish to take one out on the streets of Santa Fe, NM. "Feeling safe" riding a trike is very subjective. As I've found out — the hard way — the real danger in cycling in traffic is the surprise factor. In each of my accidents I was riding safely but got caught in a freak situation that happened in a split second. Riding on three wheels with your butt nine inches off the road is not exactly preventative medicine. Maybe you've already done this at some point, but it might be instructive to have someone else ride a trike, in various situations, while you follow behind in a car (preferably an SUV), to learn how an ultra-low HPV interfaces with traffic. Also, a statistic that might be worth including in tests is the eye-level of the rider compared to a typical motorist's eye-level (including cars, SUVs, and medium-duty trucks). All of this is conjecture because there aren't enough recumbents of any type, let alone trikes and low racers, to have compiled any accident statistics.

Ms. Pippa Garner

Editor's Comments: I currently live in a small town with mostly lightly-traveled roads. I feel perfectly safe on these roads. Would I ride a trike on the busy suburban roads in the Seattle area? I don't think so. I would be riding on the many rail trails and bike trails. Each person has to determine what feels safe. Use caution, plan your routes, and be very aware.

RECUMBENT SAFETY

I received RCN 087 today — lots of great articles. I especially liked the recumbent safety article. I haven't had much chance to ride recently but this past weekend was sunny and high forties and most of the snow was gone, so off I went on both Saturday and Sunday. Monday was even better, with temperatures reaching into the low fifties. So, after picking up my daughter, I headed home to get in a ride before sunset. Well, it started drizzling but by this time I was so psyched to go for a ride that off I went. I put on my rain gear and appreciated the fenders I installed last fall. I usually drive through a new housing development where they've paved the roads but haven't started home construction yet. The road empties right into the Glacier Ridge Metro Park. This road has some dirt on it and some rocks to avoid but no traffic. Well, by now I'm sure you know what's coming: my bike went out from under me and I found myself sliding through the mud on my left side. I was amazed at how slippery this stuff was; it was difficult to just stand. Well, no big harm done; just muddy clothes and panniers and a bent mirror. I did find a gash on my chin later that night; I must have hit the pedal. Well, I've got a new respect for mud and rode home a

different way. Thanks to you and your family for publishing RCN.

Robert Vleugels

FLAGS & LIGHTS

I bought a second flag pole which is two-piece from BOB Trailers, went to a marine store and bought an 18" x 12" American flag, seamed it onto the pole and wrapped electric tape around both the top and bottom to hold it in place. Then I strapped the pole on the inside of the seat back on my Gold Rush with plastic straps. I have been using it for six years, replacing the flag as needed. It works great.

Al Howard

SAFETY LINKS

I was just reading your article on Recumbent Safety and your request for a source for a two piece safety flag. I live in Snowmobile and ATV country so I knew they existed.

- www.factoryteam2racing.com/safetyflag.asp
- www.arizonawhips.com

At this last site I noticed a picture of a recumbent using a lighted safety flag.

Tom Hendricks
Mpls, MN

Editor's Comments: We found some other unique links for safety items that will work for recumbent bicycles:

- Hokey Spokes:
www.xenonline.com/hs.html
- Nathan Sports (reflective vests and stickers): www.nathansports.com
- Glo Glov (USA made reflective gloves): www.gloglove.com

RCN KUDOS

We're subscribers to RCN and really feel fortunate that someone such as you has taken the time and effort to publish such a terrific magazine. Yours is the only magazine that my wife and I try to get to first. We are both 63 years young and have really enjoyed bicycling over the years together. I discovered recumbents after herniating a disc in my lower back. We now own a Rans V-Rex and two Tour Easys. Just love the Tour Easys. Gardner created a wonderful bike.

Count us in as long time subscribers to your fine publication no matter what the cost as it's the best.

Richard and Marva Knoedel

HAND BUILT vs. MACHINE BUILT WHEELS

Just couldn't resist a quick word. You've been mentioning the hand built wheels of late and yes the quality should be better, but I've seen some shocking hand built wheels as well. Especially for trikes, and recumbents with

small wheels. And some of the worst are by respected wheel builders whom have had no experience building small wheels. Also for trikes you need to build the left and right hand wheels differently and seem many trikes where they have just been built like bike front wheels.

A Taiwan built wheel laced correctly will out do wheels by so called professionals most days of the week.

Mick Sims
Greenspeed

Editor's Comment: Thanks for writing. It is difficult for recumbent buyers to figure out. We've had machine built wheels that were garbage and others that were perfect. We've also had fancy hand built wheels that had tension issues. If we have wheel problems with a test bike — we'll certainly report on it.

VOLAE HIGHRACER

Another great issue. I thought your review of the Volae Club in RCN 087 was spot on. I hope the market for highracers is big enough to support all these companies.

Warren Berger

FWD FEEDBACK

Thank you for your interesting article on the Pivoting Boom Front Wheel Drive (PBFWD). I've been fascinated by these bikes, studied the Flevo, read Tom Traylor's pages and eventually like many others I built one. Fantastic. But I wanted more, I wanted suspension and low cost and the cheapest suspended bike was the low end mountain bikes. Eventually I figured out a way to convert a y-frame mountain bike to a PBFWD recumbent while retaining the suspension. The result is what we call a Cruzbike.

I agreed with Tom Beuligmann in his appraisal. There is only a couple of points I would add, concerning the steering geometry of the PBFWD.

1. Studies of steering geometry done by Tony Foale, a well recognised author and speaker on motorcycle chassis design, (www.tonyfoale.com/Articles/RakeEx/RakeEx.htm) revealed that the standard slope on the head stem is for no reason other than to enable the fork to resist the bending moments that result from applying the brake. With the PBFWD, the chainstay arms are in tension when braking and alleviate some of these bending moments. That means a more verticle head stem is viable. Perhaps Tom Beuligmann could consider the Tony Foale information against his experience and make an interpretation.

2. Ridability of a FWD deteriorates as the head stem is sloped back further. The reason is that the weight of the crank and front triangle tends to flop into corners more easily. A more verticle headstem makes the bike easier to ride, particularly at low speeds.

With the Cruzbike, we have been able to mount the front wheel higher in the forks than

normal, thereby making the head stem angle taller, improving the ridability and because of the forward chainstay, without detriment to the braking performance.

I find with the Cruzbike, that the FWD is not really that important to customers. It is the price and the close resemblance between the Cruzbike and a regular bike that seems to be more important.

John Tolhurst
www.cruzbike.com



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If you have something to say, a differing viewpoint or experience—we want to hear from you! Please limit letters to 300 words. RCN reserves the right to edit submissions for clarity, content, and space limitations. Please send to bob@recumbentcyclistnews.com or RCN, PO Box 2048, Port Townsend, WA 98368



The Velocity Squared Formula — Photo courtesy of RANS

even greater respect for the design goals for the V2 Formula. This is the third time I have tested a RANS V2, and the fourth V2 review in RCN. After all this time and all those miles, I finally begin to understand what RANS' Randy Schlitter is trying to accomplish: This is a new style LWB OSS road bike with no chopper tendencies that rides and feels like a road bike.

USE/UTILITY

This is a fast open road performance recumbent. As with most LWB OSS recumbents, the V2 is a versatile bike. You can set it up for anything, even touring (See: www.thelongbikeride.com). RANS offers more touring options than just about any other recumbent manufacturer. There are several seats, bars, stems, bags, racks and other options. Customization has become a RANS specialty. However, this frame is particularly stiff. I would choose some much larger tires to soften up the ride for a long tour.

COMFORT

Seat: I've been riding LWB OSS low-BB bikes all season, including models from Burley, Sun EZ-Rider, and Cycle Genius RDX. While I really like all of them for several reasons, the one aspect I don't like is the super upright position and the loading on your butt/tailbone. The V2 is the only LWB OSS that offers some relief.

The V2 Formula comes with the standard RANS seat back, lighter carbon-fiber base and lightweight integrated foam/cover. While the integrated foam/cover is very light and it is far less comfortable. If you need more cushioning, be sure to also get the RANS standard seat foam/cover.

The seat back has the near-perfect RANS ergonomic shape with adjustable buckles and tension straps. The seat base is carbon-fiber and ultra light. It's also very tough and the edges are sharp.

According to RANS, the seat weights (with upper seat braces attached) are: 6 pounds for the standard seat & pad; 4.5 pounds for the standard seat with carbon fiber base; and 3.85 pounds for the Zephyr seat and race pad.

Ergonomics: The V2 has a low rider position and a moderate bottom bracket height. With the standard double-bend bars and medium riser, the optimum position places the bars just above the knees. Your arms are almost fully extended with your hands behind your knees. Your knees stay inside the bars on turns.

This position can be customized to suit any rider by adding additional stems and bars. The fit on our test bike was close to perfect, but I would have liked to try the closer reach stem or bars that brought the controls closer to me, to see if it worked better. I enjoyed the riding position. It was powerful, aggressive and comfortable as I've been on a LWB OSS recumbent.

RIDE

The V2 Formula rides like no other LWB OSS recumbent. This aluminum frame is stiff like a performance road bike. The handling is neutral, making for a lively and direct handling feel. With the stretched-out arm position, the V2 almost becomes a LWB version of a highracer. The Thracian wheels and Stelvio tires make the bike feel effortless, fluid and fast (though hard when you hit a bump). Overall the performance was among the best performing of all LWB OSS recumbents I've tried,

outdone only by the Easy Racers Gold Rush and TiRush (equipped with a 700c rear wheel, fairsings and a body stocking). I'd truly like to see a 700c V2 Formula.

Stability: The V2 has a lively road bike-like feel. It definitely has a quicker feel than other similar LWB recumbents — although the "tweener" style bars don't make it more maneuverable. The bike feels both lively and stable at speed. The handling seems about as neutral as possible on a direct-steered LWB with above-seat steering.

Performance: The V2 Formula is probably the lightest and fastest LWB OSS recumbent without a fairing. The V2 Formula is a serious performance LWB OSS recumbent and gives the Easy Racers Gold Rush a real run for the money — but at a significantly lower price.

The V2 Formula definitely has a more aggressive road bike-like feel. While the V2 Formula is the better buy, consider these factors when making your decision: First, the V2 Formula has a more aggressive SWB/highracer riding position (but with a lower crank position than a highracer).

The V2 Formula is a LWB that rides great and is fast without a fairing. RANS's Randy Schlitter has said, "fairings offer a drag reduction, but also offer adverse sail effects in cross winds. In our early days the Stratus had a fairing that was about as optimized as possible for conditions" (modern 1/2 fairing covering only the handlebars).

There is more of an interest these days in recumbents without fairings. Some riders just don't like the added noise, weight and possible sail effect in windy areas. If this is you, the V2 Formula is your LWB.

If you don't live in a windy place, and you want ultimate performance, a fairing and body stocking combination is available from Windwrap, and RANS is looking at their own aerodynamic options.

With the lightweight and stiff frame, the V2 Formula has the potential to be the fastest LWB OSS on the market. One design item that makes it a tad slower than an Easy Racers Gold Rush is the 26" rear wheel (vs. Easy Racers 700c).

The highest gear on the V2 was low enough for me to spin out, resulting in lower speeds. I've talked to Randy Schlitter at length about this and he agrees. There are both 700c and dual 650c V2's on the drawing board.

Personally, I like the versatility of the 26"/20" combo, and I don't ride with fairings much (we are seldom offered test fairing). This is an excellent performing machine as is.

We also had a RANS Force 5 here at the same time and it was slightly faster than the V2 Formula on our fast test course. However, I could ride the V2 Formula indefinitely, as the riding position is less extreme. The more reclined the seat and higher the bottom bracket, the more potential there is for neck strain or

numb toes. I can suffer from both on long rides.

Climbing: The V2 Formula climbs well. The "tweener" double bend bars take some getting used to for very low-speed climbing (and particularly on switch-backs), but it's not a big deal.

FRAME

Frame: The V2 Formula frame is built for RANS in Taiwan. Randy takes this bike seriously. When I met him recently at Interbike, he was about to meet with the builders of the V2 Formula frame to discuss refinements to the bike. The frame is beautifully made of TIG welded aluminum 7005 aluminum. RANS has had some quality control issues with the Taiwan builder, resulting in some damaged frames reaching Kansas. These concerns have been addressed, and should not be an issue for buyers.

Fork: The 2005 V2 Formula has a new aluminum fork that reduces the bike's weight by 1/4 pound.

Steering: The V2 Formula has an FSA headset, medium riser and double-bend bars. Other combinations of RANS bars and stems will work, but this one was just about perfect for me.

Finish: The natural aluminum finish is beautiful. The RANS graphics are subtle and cool. This is perhaps the best looking RANS bike we've seen.

Weight: This XL-sized V2 Formula weighed 26.7 pounds with my pedals (cromoly Eggbeaters). This is the lightest LWB OSS recumbent I've tested.

COMPONENTS

The V2 Formula is outfitted with a Shimano 105 crankset, BB and front derailleur and a SRAM X.9 group. The X.9 shifts fast and efficiently.

Gearing: We measured the rear wheel diameter at 24.625" and computed a gear-inch range of 29.6-106.7. The low profile 1" rear tire and the 559 mm rear wheel size hurt the V2's high gearing potential. If the V2 had a 700c, the high gear would jump to at least 112 gear-inches. Also keep in mind that the V2 uses a 12-25 cassette.

Chain Management: RANS has reworked the idlers on the V2. Even with an upper chain idler, the drivetrain was smooth and quiet, and I didn't detect the chain vibration I experienced on other RANS LWB tests.

Braking: The V2 comes with SRAM X.9 V-brakes which are just adequate. Throw on some Kool Stop pads, and they'll be better. They stop fine. I would prefer lighter Shimano dual pivot side-pulls on this bike. Discs could be installed, but would add some weight.

Wheels: The Velocity Thracian wheel 26/20 paired spoke recumbent wheel set remained true and trouble-free during our test. The Thracian's feature Velocity's black Aeroheat



RANS double bend bars



Photos courtesy of Kim Dopita, Randy Schlitter and the RANS company



Cool Velocity wheels and aluminum fork rims with machined side walls and black Velocity sealed bearing hubs. The wheels are hand-laced, tensioned and trued with black stainless steel spokes and brass nipples. The wheels are available from www.RANS.com or www.velocityusa.com if you want to upgrade your current recumbent.

Tires: The Schwalbe Stelvios are silky smooth, comfortable and fast. The Schwalbe tubes are the best I've used. This is a wonderful recumbent-friendly tire company. If you can't find the tires locally, order direct from

Schwalbe and be sure to thank them for being so committed to recumbents.

Forgettable parts: The FSA 865N headset is not the finest I've seen, and is one part that should be upgraded. This is the same headset found on the standard V2. The V2 Formula still doesn't have a threadless steerer and I had to dig out all of my old headset wrenches to adjust it (and adjustments were not the easiest). I've really come to love threadless steerer tubes and headsets. I think all recumbents, especially in this price range, should have them.

HOW TO BUY

RANS recumbents are sold through RANS dealers. Angletech offers a custom specification 81-speed version of the V2 Formula.

COMPARABLE MODELS

The standard RANS V2 (\$1,349; XL: \$1,399) is the best performance LWB recumbent buy on the planet. The V2 Formula has a rougher riding, though lighter, aluminum frame, and weighs about six pounds less than the standard V2. The standard V2 is not exactly a heavyweight at 33 pounds and can be lightened up with RANS seat options and some lighter wheels. The standard V2 also has a mostly SRAM 7.0 group with a Truvativ Elita triple crankset.

LWB Rumors: RANS' Randy Schlitter told me that he is working on a new affordable LWB hopefully priced under \$1000 to compete against some of the other new affordable LWB recumbents. RANS is also set to introduce the new Stratus XP that has dual 26" wheels (see page 4, this issue).

If you're looking at the V2 Formula, you must also consider the grand-daddy LWB OSS performance machines, the Easy Racers Gold Rush (\$2,995) and TiRush (\$5,200).

EXTRAS

There isn't much to add to the V2 Formula. Seat bag and fenders are available, but the bike is pretty well equipped as is. A V2-specific fairing is available from Mueller Human Power. We did not test a fairing on this bike. If you opt for a fairing, you'll definitely need a larger high gear.

COMPANY

RANS is a leader in the recumbent field, and has been for nearly three decades. RANS is also known for building kit airplanes.

VERDICT

It is amazing to experience such a lightweight LWB. I truly enjoyed riding this long wheelbase recumbent and I prefer the light LWB over the ability to have fairing options. Those who ride unfaired and taller riders on bikes with larger frame sizes can save a few pounds over a similarly equipped Gold Rush. Fairings have pluses and minuses: they add

speed, but they also add weight, noise and cost and can change the handling characteristics because of additional weight over the front wheel. Like so many other aspects of recumbency, some riders love fairings, and some will never use them.

The V2 Formula's low weight and stiff frame result in a very fast open road performance recumbent. The bike is stable, yet lively enough to be lots of fun to ride. The V2 Formula has an aggressive riding position inspired

by SWB/highracer style, but features a lower crank height than a highracer. With the added stability of a LWB — this will be the perfect bike for some. The V2 is a beautiful bike — elegant and fast. I applaud RANS for pushing the limits of LWB — and their commitment and refinement of the V2 platform.

The V2 Formula has a great heritage and a long line of fine RANS LWB recumbents. The design features include bits and pieces from SWB, highracers and other RANS LWB models. The V2 Formula is state of the art, and has to be the future of the performance LWB recumbents. ♦

FOR

- Fast
- Stiff frame
- Very lightweight for a LWB
- Affordable
- Velocity wheels

AGAINST

- Needs a 700c (to compete with GRR)
- Very stiff ride
- Not as fast as a highracer
- Gearing range could be wider

MORE INFO

Web: www.ransbikes.com

NUMBERS

Fits: Standard: 35"-45" x-seam
 XL: 40"-50" x-seam
 Wheelbase: 65" & 70"
 Seat height: 18.5"
 Crank height: 25"
 Weight: 27.5 (XL size)
 Weight limit: #275
 Gears: 27-speed
 Gear Inch Range: 29.6-106.7 (24.625" wheel diameter)

BIKE

Frame: TIG 7005 aluminum
 Fork: RANS aluminum
 Color: Clear-coated, burnished aluminum
 Handlebar: RANS double bend
 Stem/Riser: RANS
 Seat: RANS Zephyr
 Sizes: Standard and XL

SPECS

Crankset: Shimano 105 30/42/52
 Bottom Bracket: Shimano 105
 Cassette: 12-25 9-spd.
 Derailleur (ft): Shimano 105
 Derailleur (rr): SRAM X.9
 Chain: SRAM PC-89
 Shifters: SRAM X.9 twist grip
 Headset: PSA 865N
 Brakes/levers: SRAM X.9 V-brakes
 Wheels: Velocity Thracian 26"/20" 406mm
 Tires: Schwalbe Stelvio 110 psi
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Photos courtesy of Kim Dopita, Randy Schlitter and the RANS company

RCN Road Test: The RANS Force 5 A Trussed Frame Highracer

By Bob Bryant

The Force 5 is the force breaking the paradigms in short wheelbase recumbents. A strong trussed frame is power responsive and exceptionally light in chromoly steel, due to thin wall tubes, and clever "Y" chain stay design. A super machine for the serious road rider, the Force 5 does it all: responsive handling, quick acceleration, fast climbs, and high cruising speeds. Offered in two well-appointed versions, the LE and XP, our Force 5 line-up represents great value and choice equipment. — RANS

BIKE: Force 5 XP
BUILDER: RANS
ORIGIN: Hays, KS, USA
STYLE: SWB OSS Highracer
USE: Performance
PRICE: \$2295

RANS is a pioneer in the recumbent business. The LWB Stratus will soon be celebrating its 30th anniversary. The Force 5 is the latest recumbent road bike from RANS. Our test bike was the fancier XP, but I also rode the bike with the seat that is standard on the more affordable LE (\$1695).

The Force 5 is the culmination of years of RANS SWB design success which has produced such legendary bikes as the Rocket, the V-Rex and the Vixen. These bikes all have trussed rear ends, so it was inevitable for Randy Schlitter of RANS to go with a trussed triangulated road bike style frame (in contrast to RANS' non-triangulated STICK framed highracer market competition of Bacchetta and Volae). He seriously believes in his design theory, which is based on upright racing bike

designs inspired by bikes ridden in the Tour de France. The Force 5 has a lot going for it — it's affordable, light, fast and unique. The bike is also built in the USA. The Force 5 is an exceptional value and it comes from one of the most respected recumbent designers and manufacturers in the business.

USE/UTILITY

This is not a commuter, neighborhood cruiser or loaded touring bike — it is an out and out performance machine for fast club rides, centuries, etc. Utility is not the forte of the Force 5 or many other highracers. Cargo is limited to whatever fits in the RANS seat bag. If you need more than that, you're looking at the wrong bike. This could make a good lightweight tourer with a standard RANS seat and some tougher wheels. The trussed frame would be better than a stick (monotube) with a load on the open road.

COMFORT

The Force 5 XP model comes with the RANS ultra-light Zephyr seat. The LE comes

with the standard RANS seat. The optional M5 fiberglass Euro-style hardshell seat is new for 2005 and can be ordered for an additional \$100.

The Zephyr seat is the lightest RANS seat. Some have suggested that the Zephyr seat is "not ready for prime time." I disagree. I was pleasantly surprised at how comfortable the Zephyr seat was. Certainly it is not as comfy as the standard seat, but it's a minimalist seat that weighs two pounds less! I could feel the frame back vertical tubes on my back, but it was not uncomfortable. The ultralight pad/cover over the carbon-fiber pan works well, particularly in the more reclined Force 5 position. After an hour on the bike I developed some pain in the tailbone area, but I still like the seat. There is plenty of room under the pad/cover to add more foam. I figure that a custom piece of closed-cell foam would do the trick placed where my hiney (elegant term for tailbone) intersects the seat base.

The standard RANS seat on the LE model is a perfect example of how comfortable a recumbent bicycle seat can be. The seat back is tight and formed perfectly to suit riders of many heights and sizes. The base is roomy and comfortable enough as well. There were a few comfort problems for some riders in 2003, but those have been solved. This seat is every bit as comfy as any RANS seat before it. I did notice an annoying and occasional squeak on the standard seat. I'm guessing that it's in the pan, or at the pan/frame contact point. To lighten this seat there is an optional carbon fiber seat pan (\$99) and a lightweight cover with integrated foam (\$40). These options save 1.5 pounds off the stock LE seat.

Fit: The F5 comes in a 43" wheelbase model and a 47" wheelbase model. At only 6' (33" inseam, 44.5" x-seam) I was able to ride both the standard and XL-size Force 5. I'm not 100% sure which one I'd go for since my height puts me in a gray area between the two models. Another item of note is that with the standard RANS seat, I was on my tip-toes at a stop. I can't imagine anybody with shorter legs than mine riding the bike set up with the standard seat.

RIDE

The Force 5 has a light and quick feel to it, and it's about the most responsive highracer I've tried. (Or perhaps I'm just getting used to them by now.) As with most highracers, the frame and ride are stiff. You can feel every road imperfection. This results in fast speeds, but also requires careful control on rough pavement. The Force 5 seemed livelier than the Bacchetta Corsa and the Volae Club, perhaps with a hint of pedal steer. Some will prefer this, others will not. The Force 5 has its own unique charm which I like because it gives customers more options to choose from.

I have what could be called high bottom bracket (BB) phobia. Because of past toe numbness concerns, I tend to get nervous when BB's get too high. When seats get too laid back, I also get concerned that I'll get neck fatigue. So when I set up the Force 5, I set the Zephyr seat in a fairly upright position, thinking that is where I'd like it. I rode it, enjoyed it and didn't think about it again. When I mounted the standard RANS seat, the longer 47" frame required me to recline the seat more than I normally would. My first thought was that this would be a problem. Reluctantly, I installed the seat, and rode off onto my test course. The first time out with this setup, I cut five minutes off my previous record time for this 12-mile course. I thought this had to be a fluke, so I went out and did it again, and yet again. The morale of this story is that a laid-back seat on a highracer vastly improves your aerodynamics, lining up your feet, knees and body and creating a remarkably smooth air flow. The result: faster speeds. Interestingly, the Force 5 was faster than the V2 Formula which was here at the same time.

So how does the Force 5 stack up against other highracers? I honestly think it comes down to weight, wheels and tires and which bike you feel most comfortable on. I wouldn't expect to blow away any Bacchetta Aeros, but the Force 5 sure felt fast to me — every bit as fast, if not even faster, than our Volae Club or Bacchetta Corsa.

FRAME

Frame: The Force 5's trussed cromoly frame is built at the RANS factory in Hayes, Kansas. You can even see a photo of the guys who weld the frames (a/k/a "The Welding Force for the Force 5") at www.ransbikes.com/ITRForce5II.htm. The frames are beautiful and among the finest of RANS frames. Building a lightweight trussed frame is more difficult than making a monotube. The "Y" stays are unique, look good and save weight. The benefit of the truss frame is its torsional stiffness, and certainly longtime durability. Let's hope this technology trickles down to the other SWB models in the line.

Fork: The XP's fork is a RANS threadless aluminum with carbon fiber blades. The LE has a RANS aluminum fork. Similar 20" aluminum forks can be purchased from RANS for other RANS models.

Steering: The Force 5 uses a direct fixed position over-seat steering stem/riser with the RANS double bend bars. I was initially concerned because there really isn't much adjustment on the F5. The stem goes up and down, and that's about it. Luckily the arm reach worked for me.

The RANS fork steerer tube is connected to the riser via one clamp collar, and the fork is held into the frame via another clamp collar. To adjust it you clamp the top collar, and use a flat screwdriver between the clamps to force the lower collar down and take up the play. While the system is quite ingenious, I was initially concerned about the setup, but then I easily obtained a perfect adjustment (see RANS website for more info).



RANS' Randy Schlitter on the F5



Finish: The beautiful silver-bronze powdercoating is done at RANS.

Weight: The RANS Force 5 is a lightweight SWB highracer weighing in at 25.7 pounds (stock XP with Zephyr seat). The weight drops to 24.5 pounds with the M-5 fiberglass seat and 24.3 pounds with the M-5 carbon-fiber seats. The \$1,595 Force 5 LE weighs 28-28.4 pounds.

COMPONENTS

The XP is equipped with a Shimano 105 triple crankset and front derailleur mated with SRAM 9.0 shifters and derailleur. While I'd rather have bar-cons and Ultegra, the SRAM/Shimano close-ratio drivetrain shifted perfectly. Most riders should consider a wider range cassette. The 12-25 is a bit too roadie-like for me, and I'd swap it out for a wider range.

Gearing: The Force 5 comes with a gear-inch range of 29.4-106.16 (RCN figured gear range). The bike is fast, and the high gear is not high enough. The low and mid-range were not low enough (same old gearing criticisms; see RCN 079).

Chain Management: At first appearance, the Force 5's chain management system looks like any other RANS SWB system. It's not. RANS has developed new idlers

and this system is VERY QUIET. You can cruise along in near total silence. I was very impressed by this refined system. It's the best-managed chain of any highracer I've reviewed so far. (Bacchetta is a close second.)

Braking: After months of messing with V-brakes and discs, and then re-experiencing the wonderful Shimano 105 dual-pivot road brakes, I'm sold. I love the simplicity. No squealing, disc drag, readjustments or messing around. These are the real deal and you'll soon realize why you see similar brakes on every Tour de France racer.

RANS has a cool device called "BRS," or Brake Reverse Stop, which allows the brake cable to come in upside-down. This was necessary due to the configuration of the chain path, fork and boom area.

Wheels: The Force 5 XP comes equipped with Velocity Spartacus Uriel 650c wheels. They are light, fast and were trouble-free during our review. These wheels are better than the Thoracian model as the sidewall rim seams are not apparent.

Our test bike was outfitted with Kenda Konzept 650c x 23 tires. These are narrow and fast. You can always get better and faster roadie-type tires, but I found these tires to perform well and without problem.

Misc. Bits: Some folks we've heard from don't care for the headset adjustment (see above).

HOW TO BUY

Dealers/Direct: The RANS Force 5 is sold through RANS bicycle dealers.

COMPARABLE MODELS

The Force 5 XP is 2.1 pounds lighter than the more affordable Force

5 LE. Most of the difference in weight is in the seat (Zephyr vs. standard) and perhaps the wheels (if they're not lighter, the Velocity Spartacus are certainly faster). The LE has mostly SRAM 7.0 (vs. the XP's 9.0, which is nicer stuff and seems to be better quality). Instead of the XP's Shimano 105 crank, the LE has a Truvativ Elita triple crankset. Truvativ parts are very attractive and usually good values, but in my opinion the ISIS bottom brackets are not as proven or durable as Shimano.

There is certainly room in the line for a third, even more upscale, model with a real roadie spec like Ultegra 10-speed or Campy. I'd like to see this from any of the highracer builders.

The Force 5 compares favorably with the Volae Club (\$2,300). The Club is closer in design to the Bacchetta Strada with its non-trussed frame, yet the Club has a noticeably stiff ride, probably due to the very firm seat mounts. The bikes are about even spec-wise. The finish detail on the Volae might be a bit better (Waterford-built) and the Volae seat slider is my favorite in the recumbent industry, but I preferred the Force 5's lively handling, the RANS seat options and the Force 5's superbly quiet drivetrain.

Bacchetta's freshly updated Strada is priced right for the 2005 highracer wars. While its Taiwan-built frame is heavier (26.5 pounds with a hardshell seat and 29 pounds with a ReCurve mesh seat) and the wheels aren't as good (Xero paired spokes), the drivetrain specs are pretty close: a mostly X.9 drivetrain with a very attractive Truvativ Rouleur crankset. The Strada also carries a lower price (\$1,850-\$1,900). The bottom line is that the Force 5 models hold their own against the competition, and in the LE version (\$1,595) nothing can touch it.

EXTRAS

The Force 5 models are well thought out. The available upgrades for the LE are all included on the XP model (better wheels and lighter seat). Whichever model you choose, you now have your choice between the RANS standard seat, the M5 fiberglass Euro hardshell seat or a RANS Zephyr lightweight mesh seat. If you opt for the LE model, you can upgrade your seat pan to carbon fiber.

COMPANY

Randy Schlitter's RANS company is a recumbent industry pioneer. The F5 comes from a long history of SWB recumbents dating back to the still popular V-Rex design.

VERDICT

We should start calling Randy Schlitter of RANS "Hot Rod Randy." He can't leave anything alone. He always has a host of new ideas to improve and HOT ROD RANS bikes. Luckily for us these are upgrades to existing models and he sells the hot rod parts at the RANS



The Force 5 XP with optional M5 seat



The F5's trussed (triangulated) frame

website or your local dealer. Randy figures he can knock .7 pounds off the Force 5 by adding a carbon double crankset. He also says, "I like steel frames. They ride nice, don't cost a fortune to build, and with a little more tweaking on the frame and components, I think you can have a 24- or even a 23-pound steel-framed bike, and maybe still less than \$3000."

The Force 5 is the perfect platform to build a dual 26" fat tire commuter/tourer as the trussed frame gives added torsional stability. The trussed frame also helps when towing a trailer or to keep the rear-end stiff to support disc brakes (discs or dual 26" wheels are not offered yet).

We asked Randy Schlitter what might the future of the Force 5 line might look like. "We are pleased with the frame, and production is down to a science, with some new ideas coming such as lighter drop-outs and lower cost. This will segue into possibly building a 20/20, 26/20 and 26/26 Street Mamma. The seat height is up there on the 26/26, and we may just opt to bring out our original Z-Rex (a model prototyped about 4 years ago with dual 26, has a Z shaped frame to keep the seat low)." Randy also said that RANS is considering making framesets available.

Downsides? Availability was a concern in 2004, but wasn't when we recently checked with RANS. Another might be early Rad-Loc slippage, but the Rad-Loc has been updated with tighter tolerances. I've been able to keep mine tight, but the tightening takes its toll on those little screws. I've suggested that they change those to hex bolts and Randy seemed to like this idea.

RANS is taking the road less travelled in several of the design elements of the Force 5.

We love this about Randy and RANS. If you don't like the spec or want to upgrade, get a Force 5 frameset. We love testing bikes designed by recumbent enthusiasts. They are always shining examples of what recumbency has to offer.

Randy and I discussed highracers extensively. We share some concerns about the height of highracers, and the high bottom bracket (BB). The F5's BB is 7.5" higher than the Rocket/V-Rex. We also agreed that highracers don't make as good "all-rounder" SWB OSS bikes, or touring/commuter bikes unless you are over around 5'10" tall.

"I think we are better off for having made the F-5, because of both the sales, and what we now can do to a SWB using ideas this bike has brought out. I think SWB has a future, and we will be betting a chunk to back it up," wrote Randy. We also discussed the current lack of attention to the American style SWB OSS (V-Rex, Rocket, etc.) and agreed that the classic SWB is due for a comeback.

If you like the idea of a highracer, the Force 5 in either form is an exceptional recumbent bike. The bike mixes great value, comfort, performance, an American-built cromoly frame and Randy Schlitter's unique view of the scene. RANS offers several seat options to create a custom highracer to suit you and your personal riding needs, and if you choose to go with the LE (\$1695) model, the upgrade parts are available. It just doesn't get much better than this.

FOR

- Fast, fun, smooth & quiet
- Roadie parts
- Both F5s are great buys
- Three seat options
- Built in Hays, KS, USA

AGAINST

- Racey highracers are not for everyone
- Unique headset adjustment
- A bit quick handling/steering
- Zephyr seat not for everyone

MORE INFO

Web: www.ransbikes.com

NUMBERS

Fits: Standard: 38"-45" x-seam
 XL: 42"-49" x-seam
 Wheelbase: 43" & 47"
 Seat height: 22"-23.3"
 Crank height: 32.5"
 Seat angle: Adjustable
 Weight: 25.7 (47")
 Weight limit: 275 pounds
 Gears: 27
 Gear Inch Range: 29-106

BIKE

Frame: CroMoly
 Fork: Threadless alum. w/carbon fiber blades

Color: Silver bronze
 Handlebar: RANS double bend
 Stem/Riser: RANS fixed
 Seat: RANS standard, RANS Zephyr, or M5
 Size/s: Two sizes

SPECS

Crankset: Shimano 105 30/42/52
 Bottom Bracket: Shimano BB-5500
 Cassette: Ultegra 12-25 9-spd.
 Deraillleur (ft): Shimano 105
 Deraillleur (rr): Sram X.9
 Chain: KMC
 Shifters: Sram X.9 twist grp
 Headset: Ritchey Logic
 Brakes: Shimano 105 dual pivot
 Wheels: Velocity Ureil paried spoke 650c
 Tires: Kenda Konzept 650c x 23

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Author John Lindsay rides his USX all over Port Townsend

Real World Use: The Sun USX Delta Trike

By John Lindsay
jawnn.geo@yahoo.com
www.funnyfarmart.com

Before letting my gas-gulping van die years ago, I started commuting 30 miles per week by bicycle. Over the years I developed a case of carpal tunnel syndrome and a degenerated spinal disc. When my wedgie started breaking down I decided to look for a new bike. I discovered recumbents while looking for a utility bike and ended up buying one of the first new Sun EZ-3 USX delta trikes.

Sun offers many models of affordable recumbent bicycles and tricycles. The USX is the delta trike (two wheels in back) that is hinged and sprung at mid-frame. There are really no other trikes like this one — especially at this very affordable price. This article will discuss my experiences outfitting the USX for my daily transportation needs.

SYSTEMS

Frame: The USX has a two-section hi-tensile steel frame that is connected at a hinge with a spring shock (mid-frame suspension). The midsection suspension is mostly for looks and ease of folding the frame, but seems very durable — as well as offering some suspension.

When the frame hinge bolts worked loose

there was a horrible creaking sound. I replaced the post bolt with a solid bolt and two lock nuts so there is no chance of it coming loose. Applying Loctite to the hinge bolt may also solve the problem.

Steering: The giant “U” shaped steering side-stick under-seat handlebars pivot and are connected to a steering rod that runs to the front fork. The bars are adjustable for arm length and width.

Rear End: The rear end is fairly simple. The USX has one-wheel drive, and each wheel has a stub axle. A freewheel connects to the drive wheel axle, and the chain runs forward to the crankset. I found the freewheel difficult to remove, and the rear axle bearings (cartridge sealed) are press fit into the frame which will make removal and maintenance more difficult.

Weight: Sun is not known for building lightweight recumbents. In fact, their trikes are among the heaviest available. Sun states the USX's weight at 65 pounds. We could not verify this weight. According to Sun, the EZ-3 weighs 50 pounds (AX) and 56 pounds (CX). The Hase Kettweisel weighs 40 pounds (RCN 078 road test) and the Lightfoot Greenway weighs 50 pounds.

DRIVETRAIN

Shifters: In cold wet weather the SRAM twist shifters are difficult to operate — and shifting is even worse with gloves. I read in RCN about similar shifters failing. I was lucky to find a set of used Suntour bar-end friction shifters (\$30) and replaced the twist grips.

Sunrace offers new thumb shifters that cost \$12-\$17 (www.rivendellbicycles.com). Better yet, look for a stock set of Shimano or Suntour thumb shifters. You can also make thumb shifters using Shimano bar-ends and Paul Thumbies (\$55 + cost of 8 or 9-speed Bar-Cons) from www.paulcomp.com.

Gearing: The gear-inch range is 20.3-76. The low gear is too high for riding the hills of Port Townsend while pulling a trailer full of groceries, and the high gear could be higher.

There are several ways to widen the gearing. The easiest would be to substitute a 24-tooth inside chainring for the 30-tooth. This would lower the low gear to 16.3 gear-inches. You might want to consider a new crankset, perhaps one with shorter crank arms (see RCN 086, page 18).

I decided to install a fourth chain ring: a Mountain Tamer triple adapter with an 18-tooth chainring (www.abundantadventures.com/quads.html). This gives me a low gear of 12.5 gear-inches and enables me to climb a 14% grade with a 400-pound load (rider + trike + cargo).

To shift down to the fourth ring I have to stop and move the chain by pushing the chain tube over while cranking backwards by hand. Shifting up works, but not perfectly. I moved the chain tube up a bit to keep the chain off the bottom of the derailleur cage.

I made one more change to the gearing by installing an 11-34 7-speed freewheel (requires a gear puller and removal of one axle). This gave me a low gear of 10.5 gear inches!

Another more expensive option is the Schlumpf Mountain Drive (www.schlumpf.ch), a 2-speed bottom bracket single chainring crankset which offers a 1:1 gear and a 2.5:1 reduction gear, shifted by a heel button (at the crank's dust cap).

Short Cranks: I decided to experiment with shorter crank arms, so I ordered Tandems East pedal shorteners (\$80 from www.hostelshoppe.com). These offer shortened crank arm settings of 146mm, 129mm, 112mm or 95mm. I have a 30" inseam and set them up using the 146mm setting. When I tried the 129mm setting, I couldn't get enough leverage climbing the hills.

This low gear combined with the 146mm cranks are a near perfect solution. If I go to any shorter crank arms, I'll need an even lower gear.

The shorter cranks immediately relieved the pressure on my knees — which was noticeable on the first ride. They also allow me to push harder with a faster cadence, but it is more

difficult to climb hills due to less leverage.

For more information on the use of short cranks, see the RCN 086 article on Recumbent Components.

Chain Management: Both the upper and lower chain run through chain tubes back to the rear derailleur. The rear derailleur clears the road by only one inch in the lowest gear.

Bottom Bracket: The BB's lock ring kept working loose, so I eventually replaced it with a new Shimano cartridge-sealed bottom bracket (68 x 127 mm spindle).

Brakes: The disc brakes are so nice to have flying down a 14% grade hill in the rain with a busy cross street at the bottom, even if they do take a bit of effort to keep them balanced. They are both on the same right hand lever. I have found that these brakes need to be carefully adjusted (to keep from dragging on the rotors) and the bolts are rusting. I did replace the pads which was easy.

Wheels & Tires: The USX comes with a 65 psi recreational tire that was inadequate for my use. After I had blow-outs on both rear tires, I replaced the rear tires with Primo Comet 2.1" 110 psi tires.

The wheels seemed to wear prematurely. I eventually broke a spoke on the non-drive side rear wheel. To improve durability, I decided to order a set of hand-built wheels (\$133 each) using triple crossed DT spokes and Sun BFR (Big Fat Rims). I think stock wheels should be okay for recreational riders.

COMFORT

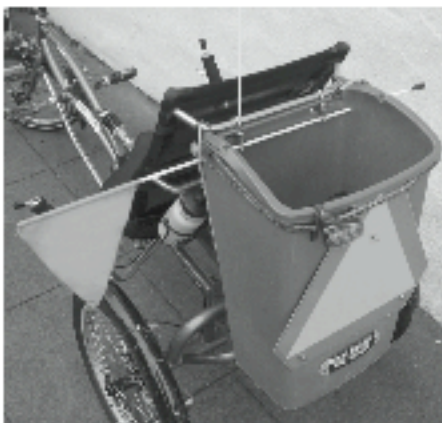
Seat: The USX utilizes the heavier of the two Sun seats (steel frame). The seat base has a Lycra cover over the foam. It isn't waterproof, so it should be covered on rainy days. The seat slides on a channel, and is locked in place with two quick-release levers.

I found the seat to be comfortable, but some riders may want a headrest. I think recumbent riders must have more neck stress than they are willing to admit. Easy Racers is reported to be working on one, but I may make one from PVC tubing.

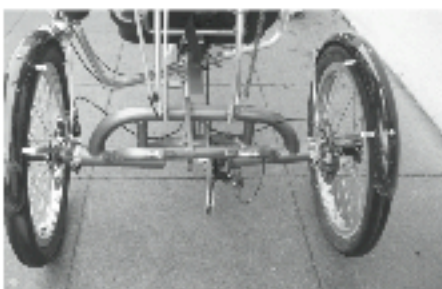
The hinge where the seat back and base connect is loose and appears to be irreparable. Sun suggested to the dealer to add a washer to take up the slack, but this didn't work and I still have a wobbly seat. I guess I'll have to buy a new one. Sun Bicycles is not very clear about the limits of the warranty.

THE RIDE

What a luxury — no more slow speed balancing problems, and I can ride up hills that I never could when I was perched on top of two wheels. And with the lumbar support of the seat, my back doesn't hurt nearly as much as on my MTB. On my first ride I discovered that I must not let go of the handlebars because the front wheel will not "track" in a straight line by itself (no gyroscopic kinetics). I can feel



This Sun USX is John Lindsay's daily transportation. Note custom horizontal safety flag and trash bin cargo carrier.



Note the rear end, beefy upgraded tires and wheels



The new custom wheels

the road vibration more at high speeds on smooth roads. If you want to go around corners fast, get a tadpole trike — as this delta could throw you right off. Yet I can corner at least as fast as a two-wheeler on a gravel surface. Having three wheels is great when it comes to low-speed climbing. I just gear down and spin up hills at my own speed.

What two-wheeler riders might not know is that most road surfaces are crowned, so that the edges are lower than the middle. As a result, when a recumbent tricycle rides down the outside edge of the road, there is a considerable amount of leaning to compensate.

Another trait common to delta trikes is to have the front wheel ever so slightly lifting off the ground and sliding to one side, when climbing steep hills, or in other low-traction situations. This is caused by the rearward weight bias of the delta and the one-rear-wheel

drive. When I crank slow enough with an even cadence, it is less likely to lift off.

Riding on a narrow road requires some new skills to keep cars from passing from both directions at once. Some drivers think they should slow down and pull over so the car behind me can pass. This is how I was hit several years ago. The car coming towards me in the opposite lane didn't have the room to move over and the driver behind me thought he did. I always prevent this by moving out into the road so the car behind cannot pass until it is safe.

OPTIONS

Water bottles: I installed two bottle cages on the back of the seat using hose clamps (there are no braze-ons for this).

Lights: Several outfits sell derailleur tube light mounts. I made my own using a recycled handle bar stem and a cut-down handlebar.

Cargo: I recommend using a two-wheeled-trailer or just hang a basket off the back of the seat. I use a trash hamper for a large basket. One problem with carrying a load on the rear of the USX is that the delta's rear end is already heavily loaded by design.

I have a horizontal safety flag on my bike. A local bus driver once told me that the flag is such a good idea that I should patent it. It does help drivers think clearly about how much room they need to give you. The 32" width of this trike helps also.

PURCHASE

Any bike shop that deals with J & B Importers/Sun Bicycles can order a USX. The price is \$825 plus shipping and fenders. I have about \$1,700 into mine (with upgrades and repairs). Dealing with a shop that knows Sun Recumbents is a good idea. An experienced shop can assemble a USX, make upgrades (such as wider gearing options, bar-end shifters), lube and tighten the bolts and true the wheels. My trike required constant tightening of nuts and bolts during the break-in period.

Market: The Sun USX is the most affordable trike of its kind (delta USS). Sun also offers two over-seat steering models: the 56-pound EZ-3 SX with a hi-tensile steel frame (\$725) and the EZ-3 AX with an aluminum frame (\$1295). Two new tadpoles have also been introduced for 2005: the hi-tensile steel SX (\$1095) and cromoly CX (\$1495).

VERDICT

I believe the EZ3 USX is an ideal first trike. The USX componentry was not designed to sustain daily commuting. If you use it for this purpose, you are likely to have to replace many of the components as they wear out. This trike is too heavy and the gearing is not wide enough for long or fast commutes. More serious users might want to consider a tougher vehicle with

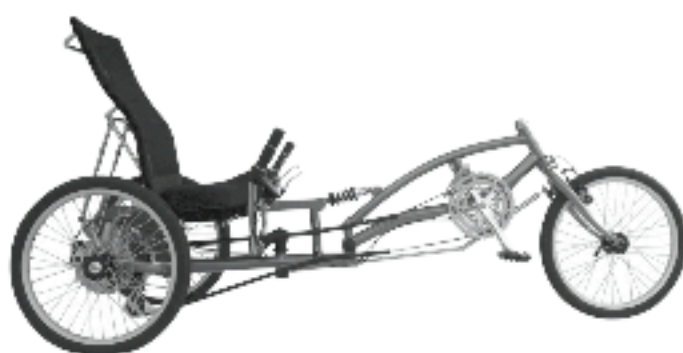
better components such as the Lightfoot Greenway or Magnum trike.

The Sun USX trike was designed as an entry-level recreational trike for cruising on a sunny afternoon cruise. The USX is an excellent value and has been a surprise sales success in many shops. The USX is a glorious value. Oh Yeah!

I would like to hear from other people trying to live with utility cycles or if you'd like further information about this trike. ♦

Editor's Note: I ran into John the other day while riding around town. All of his updates are working out well (with the exception of a chain breakage problem he's dealing with). While making the USX into a commute worthy vehicle did require costly upgrades, John is happy with the result. If you plan to buy a USX and place it into extreme commuter or touring use, you may want to consider upgrading the following parts:

- Bottom Bracket
- Wheels
- Tires
- Shifters
- Chain
- Wider range gearing.



The Sun USX delta trike retails for under \$1000. While most any bike shop can sell you one, we suggest you deal with a recumbent specialist who has experience setting them up, can suggest upgrades and handle gearing changes.



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RCN Road Test: The Bacchetta Aero Basso

By Mike Stern
bentpair@sbcglobal.net

The Aero is our "performance" bike and built for the ultimate recumbent experience. Featuring a titanium frame designed by recumbent aerodynamics guru Rich Pinto, the Aero comes standard with carbon fork and composite seat. With an out of the box weight of only 22 pounds, the Bacchetta Aero is guaranteed to satisfy the true enthusiast. Basso means "lower" and this design is our answer for folks that want the Aero experience but don't quite fit the standard big wheel format. The Aero-Basso features the same lightweight titanium frame and high-end components of the Aero but has a lower seat height and shorter boom, perfect for riders 5' to 5'8". —Bacchetta

BIKE: Bacchetta Aero Basso
BUILDER: Bacchetta
ORIGIN: USA
STYLE: SWB OSS
USE: Performance
PRICE: \$3,850

A cold March day in 2002 found me at Angletech Cycles in Woodland Park, CO, shivering at 7,000 feet with three other recumbent fanatics, while a new company, Bacchetta, provided test rides on their two prototype recumbents, the Strada and the Giro. Bacchetta had taken the recumbent world by storm. Their radically different short wheel base bikes (SWB) were the talk of the industry. They used a mono-tube non-triangulated "stick" frame, a different handlebar arrangement (tweener bars), a longer wheelbase and the Strada offered dual big wheels. While other brands of recumbents had offered similar de-

sign attributes, Bacchetta combined them into a performance package. As much as I wanted to, I didn't like the bikes. They didn't fit me very well. Since then I have test ridden Bacchetta offerings time and again. I still wanted to like them but the result was always the same.

I'm 5'7" tall (30" inseam, 40" x-seam) and weigh 165 pounds. I feel too short for the Bacchetta highracers and I feel too spread out on the Giro. I prefer a closed cockpit to an open one. I like my legs pedaling outside the handlebars, not inside. So, when I started riding the Basso for this review the bike had some pretty big hurdles to overcome. It would either have to change my mind about what I wanted or provide something that would cause me to alter my standards.

The Basso was introduced this past season. It is a variation of the successful titanium Aero model, but for riders 5' to 5'8" and less than

230 pounds. The bike comes in one frame size — small. The Basso has a 26" 559 mm rear wheel and a 20" 406 mm front wheel, a titanium mono-tube frame and high level components. The Basso is not a titanium Giro. It's lower, has a narrower cockpit, and a smoother ride. The seating position is more relaxed than an Aero and the bike imparts the feel of a traditional recumbent ride compared to a highracer road bike-like feel. The Basso has a unique personality all its own.

USE/UTILITY

The Basso is an ideal open road high performance machine. The front fork and front tire have very little room so narrow tires are required. Besides, you don't put fenders, a rack, or panniers on a titanium bike, right? That's like putting ketchup on steak. Having said that, doing city rides as well as weekend performance jaunts are right up this bike's alley. It is low, but not too low. It can handle a lot of different assignments, as long as they involve speed.

COMFORT

Seat: The Basso has the same seat mount as the Aero (but unlike the Giro, Strada and Corsa). There is a flat seat plate welded to the frame with rows of parallel holes. The seat bolts into these holes (3/8" inch apart), so it is not infinitely adjustable like the other Bacchetta models.

The seat is mounted via bolts and wing nuts. You should check the wing nuts periodically to make sure they are secure. The advantage to the bolt-on arrangement is there is no seat slippage; your seat is solidly anchored to the frame.

Comfort is subjective. What one person likes others may not. Some riders don't find the Euro shell seats comfortable. Having said this, with all the elements of this bike pointing to performance, it's one of the most comfortable recumbents I've ridden. The hard-shell carbon fiber M5 seat is wonderful. I've been on riding on one for 3000 miles now. The M5 seat is light, comfortable and provides excellent support. It doesn't absorb the bumps as well as a mesh seat so the ride is a bit rougher overall. When you need extra power you just plant your upper back firmly on the seat back and push on the pedals.

FIT

I picked this bike up from my local recumbent dealer, the Bike Center in St. Louis. They commented that some male riders had found it a little on the short side, and the fit was difficult. I found this to be initially true. The solution was to cut two inches off the rear seat support rods and re-drill the holes. This allowed the seat to recline more and the proper seat position was found.

Bacchettas are known to require a bit more time to get the rider position dialed in. All elements of the set up, the handlebars, seat and seat support, are crucial to finding optimal comfort. I started with the seat and extension. Next, your legs have to clear the handlebars so the bar height is critical. Then you have to set the reach to the bar ends since the bars are further away from your body. The seat support rods have one sleeve that fits inside the other and you line up the holes and put in a pin. Recline the back a little until you are comfortable and then start the fine-tuning adjustments.

This can be a rather time-consuming fit process that requires a number of rides, but you get there.

The downside to this scenario is that you might have to travel to get to a Bacchetta dealer. In contrast, Bacchetta's competitor Volae takes several measurements at the time of order, sets the bike up for you, and ships it nearly adjusted and assembled.

RIDE

The road feel of the titanium frame is incredible. It is stiff, and I could detect no frame flex, yet the road feel was not as harsh as with a steel frame. Whatever titanium does, it does it well. And because of the smaller front wheel the bottom bracket is lower. While you can recline the seat a lot, you still feel laid back, not laid out. I thought the overall comfort of this bike was in the top category, shared only with a few other recumbents I have ridden.

Stability: This bike has a 47-inch wheelbase. The longer the wheelbase the more stable at speed but the more difficult to handle at slow speeds. I found the slow speed agility of this bike to be lacking, while its high speed handling is impressive.

Starting from a laid back seating position where your legs are contained by drop handlebars is a little awkward for me. I also found the shorter cranks made me complete the push off a little sooner than I was used to. It just wasn't as natural as with my other bikes. Starting off in a lower gear helps. Over time the problem lessened.

All of this is quickly forgotten at speed where the bike is fast and stable. I've done sweeping turns on downhills in the high 20's and this bike holds its track — no wiggle or vibration. The Basso is confidence inspiring at speed. This is one of the most stable recumbents at speed that I have ridden.

Performance: As stable as this bike is at speed, accelerating to that speed is the best part. The Basso is amazing. It nearly jumps to 20 mph as you click through the gears. At one point I had a roadie glide by me with that look of superior disdain. I kicked up the pedaling reps, shifted a few gears and I was by him in a rush. I don't buy a bike for that but it's a nice bonus. And the cornering of the bike at speed is dead on. You steer more by leaning than by turning the handlebars. I had no pedal steer, no bouncing from side to side. You feel locked into the seat and part of the bike.

Climbing: With its light stiff frame, high-quality wheels and tires, hard-shell seat and aerodynamic riding position, the bike climbs very well. But I didn't find its climbing phenomenal. I find that bikes with a more closed riding position (such as Lightnings) climb better than more laid back aero machines because they keep your body in the crunch/power position.

FRAME

Frame: The frame is 3/2.51 2.5" diameter round titanium tubing.



Mike Stern on the Basso

The joints are impeccable. Titanium can be welded like other metals although the welding requirements can be more stringent. Regardless of the steps the frame maker employed, the result is uniform, practically seamless, joints. They are the best welds I have ever seen on a bicycle, period. The mono-tube frame is minimalist. It runs straight, without curve or deflection — from the front to the rear stays where it then forks to the rear hub. There is no triangulation in the frame. The finish is a bronze/gray called Mr. Natural. The Basso has simple lines, a clean form and is an attractive bike. Like the Aero, the Basso's frame is built for Bacchetta by TiSports of Kennewick Washington, USA.

Fork: The fork is a Bacchetta CarbonFoil 20" unit. It's lightweight and attractive, and provides a softer road feel than steel. The flat aerodynamic design causes it to slice through the air.

Steering: The stem riser is a TerraCycle GlideFlex with a Bacchetta top load aluminum bar (the Aero uses a fixed stem). The GlideFlex rotates forward when getting on and off the bike. It is also adjustable up and down, fore and aft. While it is heavier than a fixed stem, the versatility is worth it. The Bacchetta bar is "tweener" style set up (your legs go between the bars). The Basso bars are narrower than the standard Bacchetta bar, which I prefer. The handlebars and stem are taped and all of the cables enclosed. The bar is closer to my body and my elbows are slightly bent, providing a more comfortable fit for me.

COMPONENTS

From an FSA Platinum Pro bottom bracket, to FAS-Energy 165 mm triples, 30/42/53 front rings, to Shimano Ultegra derailleurs to SRAM Rocket shorty shifters, the Basso components are very good. It took a little while to get my low-end gearing adjusted the way I wanted but once dialed in the system worked well. The 165 mm crank arms are shorter than I usually ride with (by 5 mm), but worked well for me. Also, shorter crank arms for recumbents are becoming a bit of a micro-trend (see RCN 086: Components).

Rear shifting is a little loud due to the carbon fiber M5 seat ribs which amplify rear hub sounds (this happens on any bike with an M5 or carbon seat). The shift throws are short for both the front rings and rear cassette.

Gearing: The chainrings are 30/42/53 and the rear cassette is a Shimano HG50 12-27 offering a range 27.7-110.4 gear inches (25" rear wheel diameter). This gearing is a bit high for anyone who regularly rides up hills. I experimented with an 11-32 cassette and had some chain rub on the frame in the large cog, so I reinstalled the stock 12-27 cassette. Those wanting lower gearing should consider a lowering chainrings, such as a 24/39/53, which would give 22-110.4 gear inches.

Chain management: The Basso uses the standard Bacchetta X-path over/under chain path system. Theoretically, a chain from a straight path adds friction with the idler and takes away a small amount of torque effort. If I was losing power I couldn't tell, and the whole system was smooth, silent and vibration free.

Braking: Shimano BL-44 brake levers and Bacchetta dual pivot brake calipers make for a quiet, efficient and minimum effort system. The brakes stop well, and I never experienced a squeal from the brakes.

Wheels and Tires: Wheels are Velocity Spartacus Thracians and the tires are Schwalbe Stelvios dual compound. This is my first bike with Velocity's. I doubt it will be my last. They feel weightless — and they look great. I wouldn't take them mountain biking but that is not

their purpose. I love the Stelvios. I have over 3,800 miles on them on other bikes and they are fast, surefooted and deliver a nice ride feel. I find this wheel and tire combination outstanding.

HOW TO BUY

Bacchetta only sells through dealers so you can't buy one over the internet. The main reason for this is so your local dealer can properly fit the bike for you.

Comparable Models: There are plenty of SWB recumbents in the marketplace, many of them very nice. Most of them cost less. Models of this performance level that fit shorter riders include the Lightning P-38 and the Volae Tour and Century models. None are titanium.

EXTRAS

Bacchetta offers two seat bags. The OFA (One For All) is 502 cubic inches (\$80) and the Brainbox, which comes in two models, 700 cubic inches (\$50) and 860 cubic inches (\$62). A small rear rack, the Back Rack, is available (\$36). Bacchetta's mid-ship rack will not fit the Basso.

Mirror: Because of the bike's handlebar set up, finding the right mirror was a problem. On other recumbents the Mirrcycle Mountain bike mirror is excellent. But it attaches into the end of the handlebar. The problem here is that with the drop bars your hand is always in the way of the mirror. I solved the problem with a mirror called a Cycle Star (found at Valley Bikes) which has a long enough stem that it can fit into the bar end but also has a plastic hose clamp which can hold the apparatus on the bar itself. I attached mine to the bar.

COMPANY

Bacchetta is an American company founded by recumbent enthusiasts. They have been building high performance SWB highracer recumbents since 2002.

VERDICT

If I could have only one recumbent in my stable, and wanted a bike that was versatile enough to do everything from touring, to weekend rides, to commuting on inclement days, the Basso would not be my choice. I just could never bring myself to ride this beauty in the rain. This is the kind of bike that you keep for weekly club rides on sunny days.

I had always put titanium in the category of gold bathroom faucets: pretty to look at and nice to talk about, but I just never considered it. What I didn't realize is that titanium brings something new to the table. It has a very smooth road feel, more refined and comfortable than steel or aluminum. This bike is unique. It is a high end, top quality bike designed for us smaller riders. And it provides an exceptional riding experience. If you are short in stature, don't want to be perched on

top of a highracer, like performance and speed, love to ride, and are willing to pay what a bike is worth, then this bike is one to definitely consider. The Basso offers a minimalist design, a beautiful lightweight frame, a top quality finish, and a high quality component package. The Basso is bred for speed and performance — and it delivers. ♦

FOR

- Excellent road feel due to titanium frame
- Excellent performance characteristics
- Excellent high speed maneuverability
- High quality components and wheels
- A bred for speed offering for the shorter rider
- Excellent company support

AGAINST

- Price
- Slow speed turning has a learning curve
- Starting off is more difficult
- Handlebar in visual field
- Gearing may be too high for some
- No lower gearing options

MORE INFO

Web: www.bacchettabikes.com

I Rich Pinto writes: 3/2.5 refers to the tube alloying percentages of the titanium. The numbers refer to the 3% aluminum and 2.5% vanadium that are added to greatly improve the materials characteristics over the unalloyed tubing. The 3/2.5 alloy is generally regarded as the best titanium alloy for bicycle frame tubing, and in many bicycle designers' minds, the best long lasting and high performance frame material period.

Tweeners or Straight Bars?

By Michael Stern

Bacchettas aren't for everyone. The "tweener" style steering is perhaps more aerodynamic and faster, but it is less user-friendly in town and at low speeds. The idea is to reduce your body frontage mass to be as aerodynamic as possible. This means putting the legs and the arms in the body trunk shadow — arms outside of the trunk expand the frontal area. While the tweener bars help decrease the frontal mass they create a less intuitive steering set up which takes time to get used to.

If I am going to turn sharply at slow speeds on a longer wheelbase bike with tweener bars, the leg on the side of the turn has to be straight for the bar end to pass over it. I found myself unclipping from the pedals on the turning side and dropping my foot — not as easy as with a straight bar. Most riders should get accustomed to this over time.

With this type of SWB steering, the handlebars have to be high enough to allow the legs to pass under them — and raising the bar can bring it into your field of vision.

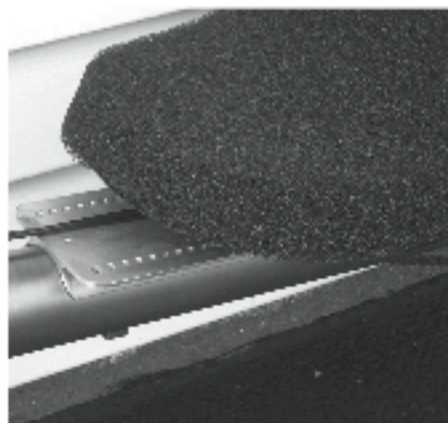
The Bacchetta steering set up is something



Mike Stern on the Basso



Note Hostel Shoppe Euro mini bag



Basso seat track

to get used to — you either like it or you don't. While the Basso position was vastly superior to my previous Bacchetta experiences, in the end I still prefer the "begging hamster" over-seat steering style of the SWB designs like the RANS V-Rex and Barcrofts. It suits me better, but this is my personal choice. ♦



Tandem Triking On A WizWheelz TTT

*Or . . . How a tandem recumbent trike changed my wife's attitude:
. . . why Mary has joined me in my love of cycling*

By David (& Mary) Lawson
dms@impulse.net

Riding a Wizwheelz TerraTrike has been one of my great joys since 1997. Unfortunately up until now my greatest joy, Mary — my wife and partner of 31 years — hasn't been able to share this enthusiasm. I've already written in an earlier review for Recumbent Cyclist News about how a recumbent trike changed my life. And believe me, once aboard my TerraTrike, I found it comfortable and fast enough to inspire me to ride far further and faster than I'd ever done on my traditional "upright style" bicycles. I was becoming an invisible man around the house, as I would disappear for hours or all day to participate in bike club rides. When Mary asked for more time together I reasoned that a second TerraTrike was the answer — after all, we'd had great times mountain biking together back in the '80s. But that wasn't the point, as our riding strengths and styles were too dissimilar. Thus began the search for a happy compromise — via a tandem.

Traditional diamond-frame tandems were completely out of the question. We didn't consider two-wheeled recumbent tandems for a number of reasons — primarily Mary's carpal tunnel syndrome and my concern for low-speed balance. That left tandem tricycles as our only hope for domestic tranquility. Considering the financial investment, it had to be

one that wouldn't be a source of family friction itself. Since we were so impressed with the affordability and excellent design of WizWheelz solo trikes, we joined the chorus of riders asking the company to put a tandem in the product line. And once again, WizWheelz succeeded: they manufactured a recumbent tandem trike that continues in the tradition of the company's credo that a cyclist should be completely comfortable, both physically and fiscally. The TTT, or TerraTrike Tandem, combines the elegant simplicity and performance qualities of the WizWheelz design with the great value that has always been the company's standard. This has resulted in a tandem that is both thrilling for us and at the same time reassuring for our financial concerns. It is truly a machine that could be called a family-rated marital aid.

What follows is a recounting of Mary's first metric century ride, "The Cool Breeze Century," or as she put it so well after the ride, "like being on a first date after being married for 31 years." After all, this ride had everything important for a relationship: the excitement of the unknown, the thrill of the chase, the joy of two souls in harmony . . . the list could go on and on, but suffice it to say we had a successful experience and we're looking forward to more distance rides — and best

of all, together on the same machine.

The Cool Breeze Century is a collection of mid-August rides organized by the Channel Islands Bicycle Club in the Ventura-Oxnard area of southern California. The routes include a half-metric, a metric, a full century and a double-metric century extending west along the coast from Ventura harbor to rest stops at the Rincon, in Montecito, and beyond. We chose the metric century for our debut.

The ride day started out way before dawn as we hopped in our car in Santa Barbara with the tandem atop and drove along the coast to Ventura, passing various spots we'd later traverse aboard the tandem. Once at the starting point at a hotel in Ventura, we rolled the trike off the car roof and loaded it up with panniers, a rack trunk and bottles of water, juice, and flavored coffees. With the addition of tools, tubes, pump and other gear, we were beginning to resemble a SAG wagon! After adjusting the earpieces of our tandem intercom (a wonderful way to communicate between captain and stoker,) we were underway by 7:30 a.m. The early morning quiet of the harbor and beach area of Ventura was a pleasure to navigate and after a few miles we started westward out of town on the coastal bike path that connects Emma Wood State Beach with the Old Pacific Coast Highway. Aided by the wide bike lanes along the level coastal road we got into a comfortable rhythm of spinning along at 15 mph, with one peloton of bike racers after another shouting out their greetings as they passed us. At other times, we would actually pass riders! While I've trained on this stretch a number of times, it was a new experience for Mary to see the many beach-side camping facilities and parks that are not visible from the adjoining Hwy. 101 freeway. As she put it so well, she loved pedaling along and leaving the "braking, steering, and gearing" to me. Approaching Muscle Shoals, our route had us join the freeway for several noisy miles where our pace picked up noticeably — sometimes almost touching 20 mph — wahoo! This was definitely an adrenaline rush for me, but the din and close proximity of traffic whizzing past wasn't as positive an experience for Mary.

The first rest stop was at Rincon Park, and it had a sudden unadvertised steep uphill entrance for a hundred yards. It was so steep that some riders were getting off to walk or even falling off after losing their balance. This wasn't to be the only place we saw riders having such control problems. It was certainly reassuring to know that balance was not an issue for us. However, I did accidentally overshift beyond the largest back gear and should have had the rest stop's repair station look at it. (I finally wised up at the second rest stop and had the mechanic there adjust the derailleur stops.) While enjoying the selection of fruits, muffins and drinks at the stop I asked

Mary if she wanted to make this outing a half-metric century and return back to Ventura as we originally planned when we signed up for the ride. I pointed out that we would now be tackling the Bates Canyon ascent as well as both sides of Ortega Hill, climbs that I didn't even like doing on a solo trike. Maybe it was the early morning air or the thrill of our first 17 fairly easy miles, but Mary smiled and said she wanted us to do more.

Perhaps the dead snake at the base of Bates Canyon was a harbinger, as we were immediately in the second lowest gear. (I was afraid of over-shifting again.) The actual climb was shorter than I remember from my last solo ride, and we were heartened to see riders enthusiastically speeding up at the top. Alas, that was because there was a short downhill which turned onto the aptly-named Foothill Road and we began the laborious process of climbing once again. At this point, for the first time on the ride we saw a cyclist sitting at the side of the road and it was he, not the bike that the SAG wagon people were attending. This was a tough ascent. However once we crested the climb we were gloriously rewarded with a long stretch of an ever-so-gradual descent and we started passing other riders again. This continued for a pleasant half-dozen miles more before we reached the polo fields and joined Via Real that paralleled the freeway. At about this time Mary announced that her toes were cramping so we temporarily stopped in a church parking lot where she walked around a bit. I joked to passing riders that we were praying for assistance. Summerland's Ortega Hill loomed ahead of us a few miles later and while it was a hard climb, we noticed that some riders were walking while we spun our pedals in low gear. We reached the top triumphantly and savored the downhill portion to Sheffield Drive where we turned up the steepest (but thankfully the shortest) climb of the ride. This one was advertised on the route slip, but apparently not everyone was reading as some riders were caught in the wrong gear ring and were forced to get off to walk. It definitely pays to read that route slip! Our smugness lasted another mile or so when we turned and faced . . . yet another hill at the top of Santa Rosa! We drove this part of the route the week before to familiarize ourselves with the approach to Montecito's Manning Park rest stop. "Don't you remember this hill?" reminded Mary, who had anticipated this last test of energy before the half-way point.

Rest stop number two was a welcome relief and we both celebrated by taking a long break. We also found a mechanic who made a simple but much-needed derailleur adjustment. After that a number of people availed themselves of sitting in our tandem and one couple even test-rode it a short distance. They were recumbent tandem riders who were doing the century aboard a Rays Screamer. They had just returned from a week of RAGBRAI, the five hundred-mile cycling trek across Iowa, and said they had seen quite a few fellow recumbent riders.



Mary at the start



Taking a break at the Surf Dog

Buoyed by the satisfaction that we were now on the return leg, we left the park and rode an uneventful number of miles through the coastal towns of Montecito, Summerland, and Carpinteria. On the east side of Carpinteria I spied a treat: the Surf Dog wiener stand. As we rode up, the proprietor offered to photograph us and then served us the most delicious hot-dogs I've ever eaten . . . even better than the three that got me through the night hours of the 2002 National 24-Hour Challenge. These 'dogs' were covered with cooked sweet onions that made for a melt-in-your-mouth experience.

We almost bypassed the third rest stop at Rincon Park but I'm glad we stopped so a number of other biking couples got a chance to try out our rig. I remember one of the stokers smiling as she commented on how comfortable the TTT was. Perhaps it was the lessening of tension among riders who knew they only had another 17 miles to go, but the mood at this rest stop was very upbeat. How interesting to compare this same place hours ago with the outbound riders then who were so serious and quiet.

After another couple of "freeway miles" we gratefully exited to the Old Pacific Highway and rode along miles of motor homes parallel parked only a few yards from the beach. Just before getting back on the bike path to Emma Woods Park, we stopped to let Mary stretch and

wiggle her toes once again. I also made an adjustment to the recline angle of her seat back, a feature of TerraTrikes that she greatly appreciated. The return into Ventura in mid-afternoon was characterized by much more foot traffic on the bike paths and definitely more vehicular traffic on the streets. Two events stand out on this final leg. The first was Mary's happy announcement "my legs are back!" which was also music to my ears. The second was catching up to a group of riders and traveling with them for a number of miles. Club rides are meant to be in the company of lots of bright colorful jerseys.

As we neared the start/finish hotel, we rode directly to the parking lot to load up the trike and to prepare for the well-earned luncheon. When we walked back to the hotel's front entrance we discovered that had we ridden to the front entrance instead of directly to the parking lot, we would have been cheered by dozens of spectators — what a great welcome as each rider cycled the last few yards! And then we found out that the ride organizers were providing showers in a hotel guest room . . . yahoo, we were now both cheering as well! As Bart, one of the ride organizers, shook Mary's hand and gave her a bumper sticker saying "My first century ride was a Cool Breeze," I knew (in the word's of Rick at the end of the film Casablanca) that this was the beginning of a beautiful relationship. Viva la WizWheelz!

So, just what is this machine and what makes it so endearing to us? I could attempt to launch into a layman's stab at the trike's technical specifications, but www.wizwheelz.com has all these details. Reading a list is one thing, but the qualities are far more evident by actually

sitting and pedaling— as a number of Cool Breeze Century riders found out during the ride. Others along the way shouted out “sweet,” “a cool machine,” “radical,” “the most comfortable thing on the ride,” “a styling rig”... well, you get the idea. Believe me, there’s nothing like the cheers of others while you’re riding along to inspire you during the ride — something I would add to other necessary ingredients like sports drinks, carbohydrates, and a good night’s sleep.

One of the tandem’s most outstanding specifications is the cost of the machine. The TTT is one of the most reasonably-priced tandem trikes on the market and is almost in the same range as many two-wheeled recumbent tandems. It’s obvious that WizWheelz has worked to put a product on the market that won’t cause the bill-paying member of the couple grief! This is all the more admirable considering the fine assortment of features that are standard equipment on the TTT, such as adjustable seats and disc brakes.

The TTT comes with a very adjustable set of light-weight seats featuring forward and backward adjustments, a selection of reclining positions and a seat mesh material that can be easily adjusted to fit a rider’s back. The seats can also be removed for transport or storage. We’ve found that we can drive at freeway speeds with the TTT atop our station wagon with the seats attached to the trike. It should be noted that the trike’s profile atop the car is much lower than the standard bike top carrier set-up — nice to know when pulling into gas stations, etc. Placing the trike atop the car requires both of us, naturally, but is easier than one would first imagine since once the two front wheels are on the back of the roof, one merely rolls the trike forward to the mounting brackets without worrying about balance issues. This is very reassuring after a long ride. We use a Thule roof rack with short trays for the front wheels, a short tray for the back wheel which extends on a strut attached the rear Thule cross member and a U-bolt lock securing the frame to the front rack’s cross member.

Besides the seat specifications, another standard feature on the TTT is a very capable set of mechanical disk brakes. They work like a charm, requiring only fingertip control even when coming down hills at 20+ mph. They almost impart a feeling of an automobile’s power brakes, giving a sense of control with so little effort. This is quite reassuring when you know you are also responsible for the person behind you — known as the stoker, or as I like to call Mary, my “Rear Admiral.” While the drum brakes that came with early models of the TerraTrikes were an improvement over traditional bicycle rim brakes, I now feel even safer and more confident with the powerful stopping power of disc brakes. Incidentally, the TTT is equipped with a Velcro strap on one of the brake handles that serves quite handily



The 50-mile mark

as an effective parking brake.

While my “Rear Admiral” voiced concerns whenever the tandem approached speeds of 30 mph on downhills, I always felt under control and the tandem remained reassuringly stable — regardless of the road surface. We were quite comfortable maintaining speeds of 15 mph, and when we wanted we could approach speeds of 20 mph during level parts of the ride (such as the stretches along the multilane freeway). Not too bad for a couple over 55 and one of whom is a novice rider! We enjoyed our teamwork of pulling together and sharing our comments via the intercom. Even uphill (which I hate pedaling no matter what the bike or trike) seemed more endurable by pedaling together. We rode every long grade on the century — and there were four major climbs on this metric circuit that had us down to the lowest gear. While we sweated and puffed up each hill we got to share in the triumph at each crest. Make no mistake about this or any sixty-pound machine, the TTT is not an easy long uphill climber unless both riders are in excellent condition. But with a trike, you don’t have to keep climbing speed up for balance, so we just take it easy and eventually get to the top.

I recently spent the lunch hour next door at the campus bike shop where the manager, Sam, and his assistants were quite jazzed to take the tandem out for a spin. And since one of them is on the cycling team, it was an incredible experience for me in the stoker position to corner almost on two wheels and to experience blurring speeds along the bike paths. I was amazed to find that being a stoker can be just as much fun as riding up front as captain. A new concept was invented by one of the bike shop employees who tested the tandem: being a stoker on a TTT is like riding a roller coaster — hanging on while rapidly moving in many directions. These weren’t the only people in the cycling business who’ve been impressed

with our tandem. When the TTT first arrived, I brought it down to my local bike shop in Santa Barbara where it was a hit with the mechanics who really appreciated the quality of the components.

The tandem is indeed impressive and imposing. It takes up ten feet of linear space. You need to either use the full width of a street to make a u-turn or literally pick up the trike and pivot it 180 degrees to reverse direction. The gearing amidship reminds me of an engine room on some luxury ocean liner. But that’s the whole point of this limousine on three wheels: it’s the most comfortable style of family cycling there is. What we have here are two people enjoying all the advantages of recumbent triking and sharing their energy in powering it forward. And while this isn’t the only tandem on the market, it is in my opinion the most convenient to own — not only for the price, but also for the confidence of the traditional WizWheelz standard of quality, warranty, and buyback guarantee. All these claims are important when two people are deciding on purchasing this “family cycle.” While I was the one who was more enthusiastic initially, I’m impressed with how much Mary has come to enjoy the tandem. I’d heard the same thing from another tandem trike owner in town who remarked how his wife is now the one who says, “So, when are we going out riding next?” It’s a transformation in attitude that’s akin to my discovering the joys of recumbent riding all those years ago.


Finally, here is Mary’s addition to this review in her own words: *Here’s what I didn’t like about riding on a standard diamond frame bicycle: I got tired easily. My wrists were painful because of carpal tunnel syndrome. My rear-end got numb and sore. I argued with my husband about where we were going and how fast and how far we were going. Basically I hated to exercise on a bike, and I refused to put myself through that unpleasant experience. Here’s what I like about tandem triking: I do not get tired (I’m being pulled by the front-person while I push with the strongest part of my body, my legs). I have no pain at all in my wrists or my rear-end (due to the recumbent position). I feel connected to and supported by my husband (we use a intercom system with microphone and earpiece to communicate) and I enjoy going along for the ride while he leads the way (no decision to make which contradicts his). If I feel he is going too fast, I speak quietly into the intercom and he slows down. I don’t mind going a much farther distance than I could go on a solo bike or trike because I’m not winded or exhausted. Basically, I’m beginning to like exercise. (My friends and family truly will not believe this last statement.) In short, I LOVE the tandem trike and plan to share the joy of it with my husband for a long, long time. I am a TerraTrike Tandem convert.♦*

MORE INFO

Web: www.wizwheelz.com
WWOG (WizWheelz Owners Group)
<http://groups.yahoo.com/group/wwog>

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on my machine

Living With A Velomobile Corrections (from RCN 086)

The Alligt AW shown on page 24 was built by David Eggleston at the factory. He came by train to the factory Monday morning, lived there, built the Alligt AW working every available minute, day and night, all week. By Saturday noon he had a rideable Alligt.

Page 25: Alleweder and Alligt, this is an Alleweder Alligt AW on the left and a Flevo AW on the right.

Page 25: This photo is of a customer test riding the Alligt AW.

For more information on these Velomobiles, contact: David M. Eggleston, meengr@sbcglobal.net, www.velomobileUSA.com

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RCN Calendar

RARE Recumbent Rally
July 2 — Rochester New York
Hamlin Beach State Park
Contact: dave_larson@teknik.com

Benrideronline Rally
August — New York State
www.benrideronline.com

12th Annual Midwest Recumbent Rally
August 12-14 — Stevens Point, Michigan
Contact: www.hostelshoppe.com/recumbent_rally.php

Recumbent Retreat
August 19-21 — Warrenton, Oregon
(Camp sites avail. Aug. 15-21) Ft. Stevens St. Park
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www.recumbentretreat.org

Midwest Tandem Rally 2005
Sept. 2-5 — Grand Rapids, Michigan
Great Lakes, Great Times, Grand Rapids! Hosted by the MUTS www.cmiregistration.com/user/splash.jp?org=441

Michigan Recumbent Rally West
September 10 — Hastings, Michigan
Displays, socializing, ride options. 10am - 3pm.
www.wolverbents.org, wolverbob@cs.com or 734/487-9058

Fall Recumbent Rendezvous
September 17 — North Detroit, Michigan
Stony Creek Metropark Eastwood Beach shelter.
Test rides, group rides, display. 9am-3pm.
www.wolverbents.org, wolverbob@cs.com or 734/487-9058

New England Velomobile/HPV Rally
October 8 — Northampton, Massachusetts
www.velomobiles.net


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ing those years.

We were completely convinced that RCN would grow into a real magazine. We were doing well financially (better than now). The phone and fax machine were ringing off the hook night and day. To support and grow RCN, I sold recumbent bikes (1990-1993) as Millennium Recumbent Cycle. Customers could come to my house in Kent and see up to 20 different recumbent models. The gross of RCN has never surpassed what we did in recumbent sales back in 1992. I started taking heat from some detractors. They questioned my integrity by asking how I could sell bikes and also review them. They thought that I might write a glowing review in order to sell bikes. What they didn't know about me is that I'm really an honest guy, and that I was concerned about my reputation. I would never sell anything I didn't think was excellent, unless I told the person first (which I have done many times). Even today I still talk people out of buying my test bikes quite often if I don't think it's a good fit for them.

In 1997 we had an interested party who wanted to buy RCN. I spent countless hours in negotiations trying to make it work (I planned to continue working for the new company), but it fell apart in the 11th hour. I learned some hard lessons about business. It was after that experience that we made the conscious decision to publish a little newsletter by and for enthusiasts; no schmooze, buzz or hype, just plain talk and opinions about all things recumbent. Shortly after this, we put our house of up for sale and moved to Port Townsend.

The Port Townsend years have been spent perfecting our craft, and streamlining our business, while also doing lots of bike riding here in the banana belt of Washington State (we get about half the rain of Seattle). I really missed not having a recumbent rider group, as we did in Seattle in the 90s. I feel that RCN got more refined and perfected.

I take it as a big compliment that so many of you are willing to pay to read RCN. It is truly a labor of love. It is incredible that it actually makes a profit, let alone makes our family a living. RCN is far from perfect. Most people think we're a real magazine with a staff, employees, a location and everything. The fact of the matter is that RCN is written from my iMac or laptop computer, wherever I happen to be. My wife, Marilyn, takes care of the books and accounting, my son, Daniel helps out setting up test bikes and as a road tester (as does daughter Amy). Amy is also the RCN photographer and takes or prepares most of the photos.

RCN as a magazine has never had more competition. With more media outlets scrambling for a piece of the pie, we've had to streamline our operations and make do with

less. The industry itself has been going through a shakedown as well. In the 90s everybody thought, "We're going mainstream." By early 2001 we realized that growth would come slowly and steadily. This is healthy growth, but for those who must have the numbers, business is tough. Only time will tell what happens over the next few years. We're planning to be here to report it to you.

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We know that you mostly love what we do. We've been hearing about it from you for over a decade. All we ask is that you help spread the word. For newbies, we have a free pdf sample magazine online. We'll send a one-time current paper sample and order form anywhere in the US for three \$1 bills. We hope that RCN can continue to thrive for decades. I'm prepared to print this magazine for the rest of my life if you'll allow me the pleasure.

To all whose lives we have touched over the last decade and a half, we humbly thank you for inviting us into your lives. If you have a note or comment about what RCN has meant to you over the years, please drop us an email or letter.

Six Degrees of RCN

There is a game that college kids play, it is called, the "Six Degrees of Kevin Bacon." The object of the game is to take any actor and hook him up with Kevin Bacon through movies he was in with other people. After reading the comments from readers and industry folks about our 15th Anniversary, I realized that our legacy could be the Six Degrees of RCN. Through these letters and comments, I was reminded just how big a part RCN has played in the modern history of recumbent bicycles from 1990-2005. If you choose most any builder, or industry person, you can link them back to RCN.

RCN connected John Schlitter, Mark Colliton and Rich Pinto, who went on to start Bacchetta. Mark Colliton also co-designed the RANS V-Rex, which led RANS' Randy Schlitter to design to other SWB models. Mark also co-designed the Angletech MC2 and Barcroft Dakota, which connects us to these models, as well as the RANS SWB line.

We first wrote about Catrike long before Paulo Camasmie became a powerhouse in the trike industry. The same goes for WizWheelz, a little trike company from Michigan, first written about in RCN. We were the first in North America to review a Greenspeed, back when nobody knew what a Greenspeed was, or who the heck Ian Sims was. We were testing Trice recumbent trikes even before the guys from ICE were riding them.

Bryan Ball first wrote about recumbent bicycles in RCN, and then went on to start bentrideronline.com. This connects us to everything Bryan has ever written at his popular site. Even Larry Varney was a long time RCN reader before his days at BROL.

I must give credit where credit is due, and guys like Gardner Martin (Easy Racers) and Randy Schlitter (RANS) were around long before us, though there are connections. The two most instrumental people in getting me into recumbents were Kelvin Clark (Angletech) who gave me my first recumbent ride back in 1986, and Gardner Martin who sold me my first recumbent back in 1987 (Easy Racers). We also had a very ambitious and passionate reader and her daughter, Connie McAyeal and Laurie "Wo" Smith, who after getting into recumbents head over heels started their own club and magazine (Easy Rider Recumbent Club).

I played a part in getting the late Gardner Martin to install a "lawn chair" seat on his Tour Easy, and years of discussions made the Easy Racers KoolBack seat the most popular seat at Easy Racers. John Riley wrote about "cruiser style" and recumbents in RCN years ago, and now one of the most popular recumbents sold is the Sun EZ Sport with its curvy tube frame.

Our special mission in the early 1990s was those "lawn chair seats." Besides the Easy Racers Cobra seat, RANS was using a simple fiberglass bucket seat on their bikes. When the V-Rex was being designed, we rallied hard for the new RANS seat, which became known as one of the most comfy seats in recumbent history.

Sadly, many builders who quit participating with the recumbent media seem to disappear into the woodwork or even go under. We were unable to get Vision test bikes for several years before they finally shut their doors. And there are other builders from whom we don't hear as well. It isn't like we charge for the spotlight either — just send us the information! But many are just too preoccupied to do this.

The list could go on and on. And if we can't connect every person and company to RCN in some way, we can sure connect a lot of them. Our criticisms over the years have helped make recumbents better bikes, and we've always been on the forefront of recumbent trends and new ideas. We're happy to have been here over the last 15 years and hope that we're just getting warmed up.

RCN Reader Comments

Here are some of the wonderful comments that RCN readers and builders have sent in. If you have a comment about RCN, please feel free to write to us:

Important Meetings

I first met Bob Bryant in July 1991 at the League of American Wheelmen rally in Olympia, WA. I had been interested in recumbents for a long time, ever since seeing one for the first time on a bike path in the late 1970's, but there didn't seem to be much information available on them. My long term plan was to have a fleet of bicycles instead of a car, including one bike of each style. At the time I had a touring bike and a mountain bike. The recumbent was low on the priority list as it seemed impractical for general use based on conversations with employees at the local bike shop. They told me recumbents were too low to ride in traffic and were difficult to climb with.

There were a number of recumbents on display at Bob's small booth in the library building of The Evergreen State College, including an Easy Racers Gold Rush with body sock and a DH1000 LWB with remote steering. He gave me a sample of RCN and an information sheet with answers to common recumbent questions. The answers to all the common anti-recumbent beliefs seemed logical to me. Bob was offering test rides on the DH1000 so of course I took him up on it.

I sat down on the DH1000 and although the bike wasn't nearly as attractive to me as the beautiful Counterpoint Presto with wheel fairing I saw earlier that day, I immediately felt right at home. As I pedaled the recumbent across "Red Square" I knew I had to have a recumbent sooner rather than later, and acquiring a recumbent went to the top of my priority list of bikes to get for my collection.

After six months of research, including several visits to Bob Bryant's house for test rides, I finally ordered my first recumbent, a Counterpoint Presto. I wrote an article in the Counterpointers newsletter about some gearing changes I made to the Presto. Bob saw this and encouraged me to write for RCN, which I have done periodically over the years. In 1995 Bob was instrumental in encouraging me to become a recumbent dealer. I still look forward to and enjoy reading each issue of RCN. I would have to say the past 14 years of my life have been heavily influenced by meeting Bob Bryant and almost all the friends I've made in that time have been connected with my activity with recumbents. Thank you, Bob.

Zach Kaplan
Zach Kaplan Cycles

Bacchetta Beginnings

Congrats on the first 15 years. I hope it goes 15 more! I met Bob the year he started RCN. He was working a full-time job, selling recumbents on the side and doing a bit of writing for the IHPVA. At the same time, I was looking for my first recumbent. Our shared interests soon lead to a close friendship and we began meeting annually at the Interbike Show each fall. With that came many new

friendships that I still cherish to this day, not the least of which is my relationship with John Schlitter. Bob introduced me to John back in the early 90's and his encouragement lead to our collaboration on the V-Rex. I am happy to say that our friendship and successful collaboration continues here at BACCHETTA. Bob was also responsible for introducing me to my other business partner, and now good friend, Rich Pinto. Bob, Rich and John have all been very influential in my thinking when it comes to recumbent design. And, for the most part, they are largely responsible for the few successes I have had in the recumbent business. So, I guess it is your fault Bob! Thanks again and keep up the good work.

Mark Colliton
Bacchetta Bicycles, Inc.

Light in the Dark

RCN was the light in the dark when I started riding recumbents back in '89. I think my first issue back in '90 was about four pages long. It was really great to know there were other

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Recumbent Cyclist News Back Issues For Sale

We have a limited number of each of these back issues for sale. The rate is \$5 each postpaid USA \$6; Canada \$7; Worldwide \$10; Buy 5, get one free.

- RCN 086: 2005 Season Preview: What's New in Recumbents; plus our Recumbent Component over-view, a must read; Tribute to Gardner Martin.
- RCN 085: Crank It quad & HP Velo Grasshopper
- RCN 084: GS GT-3, Actionbent, Giro, Rotor crank
- RCN 083: HP Velo Street Machine & Bert GPS
- RCN 082: Bacchetta Corsa
- RCN 081: 2004 Season Preview/Buyers' Guide.
- RCN 080: Bacchetta Corsa; Sun EZ tandem.
- RCN 079: BIGHA; Cycle Genius CGX; RANS Screamer tandem; Windcheetah Kit.
- RCN 078: Easy Racer Tour Easy; RANS Stratus; RANS V2; Euro Seat SWB Installation.
- RCN 077: Catricle Speed; Hase Kettwiesel; Velomobiles.
- RCN 076: Greenspeed GTT; Bacchetta Aero 1000 Mile.
- RCN 075: ICE Trice trike; Volae Intro; OG ALX20.
- RCN 074: HP Velo Spirit; Barcroft Columbia tandem; WizWheelz trike.
- RCN 073: Bacchetta Giro; Bacchetta Strada & Aero.
- RCN 072: Sun EZ Sport; Why We Sold Our Car.
- RCN 071: Penninger Trike; Burley Hepca; Burley Carto and Burley Nomad trailer.
- RCN 070: Lightfoot Ranger
- RCN 069: Rotator Pursuit; Cycle Genius STX (CLWB version); Pantour suspension nub
- RCN 068: Cannondale; Trimeter Trike; GS GTO.

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people as in love with 'bents as I was.

Rich Pinto
Bacchetta Bicycles, Inc.

Next Bikes

Congratulations to Bob Bryant, his family, and supporters on 15 years of RCN. I've been riding recumbents since 1982 and have seen a lot of people come and go from the recumbent world. Fifteen years is a long time.

Bob has been a tireless supporter of recumbent cycling through his thorough, frank, and yes, sometimes opinionated, reviews and commentary. Agree or disagree, you always know where Bob stands on a bike or issue.

On a personal note, I have enjoyed working with Bob on Interbike coverage for the past few years, and the opportunity this has provided to meet other people involved in the recumbent world. Being a fickle bike owner, I have also enjoyed our almost constant dialogue about potential "next bikes."

John Riley

Grassroots RCN

RCN has been an instrumental tool in communicating to the recumbent market trends, news, and general pulse. It has served to keep the sport growing and vibrant. The grass roots flavor and approachable nature of all involved in making this publication is perhaps one of its most appealing aspects.

Randy Schlitter
RANS

Who Is This Guy?

RCN was and still is the first real recumbent magazine. During my early years at RANS I wondered, "Who is this guy?" After meeting Bob in person at an early Las Vegas Interbike show I started listening to what he had to say about the bikes I was working with at RANS. His comments and recommendations many times over eventually made it in to the products. Now at Bacchetta I still listen and wait to hear what he has to say. Bob, congrats on 15 years.

Keep spinning
John Schlitter
Bacchetta Bicycles

Connections

You probably don't remember, but I met you for the first time at Interbike in the mid-1990s at the Windcheetah booth. You gave me a copy of the RCN Buyers Guide at the time. Between your magazine and our brief discussions, I became hooked on trikes and quads. Your influence is partly responsible for the creation of Crank-It and the Mountain Quad in 1999. Thank you for all your input over the years. Keep up the good work!

Robert Kay
www.crank-it.com

I (heart) RCN

I love RCN for its upbeat and succinct coverage of this exciting industry, from high-profile manufacturers to the tinkering fringe.

Pippa Garner

RCN's Cool Nerd Bikes

Recumbent Cyclist News has always been much more than a magazine. It's more like a buddy that wanders over to your house and says, "Hey, look at this. Isn't it cool?" And what RCN showed me was cool — very cool, cool in a way that says, "Hey, we're not just thinking outside the box; we threw away the toy inside and built this out of the box!" RCN showed me that bikes can come in lots of shapes and styles; that people can build these things in their basements or build entire companies because they have a different idea. RCN shows off the good, the bad, the "What-the-hell-is-that?" and the "Why-didn't-I-think-of-that?" RCN says it's more than OK to be passionate about metal and rubber contraptions that fly down the road when you spin your feet. RCN says, "Nerd bikes are cool," and deep in our hearts we knew that all along.

Kent Peterson
Issaquah WA USA

RCN's Detailed Insight

Lightfoot Cycles is about as far away as you can get from anywhere else in the 48 states. We are far more likely to encounter a moose on the road than another recumbent rider. In our isolation, the first years of product devel-

opment were difficult and slow. Not being able to ride a lot of the other products that were on the market, we would go through RCN with a fine-tooth comb, picking up on all the detailed insight that Bob and the other writers had to offer. Without information of the sort gathered and disseminated by RCN, we would not be nearly this far along.

After Lightfoot Cycles LLC began to achieve some momentum, we were very gratified when RCN picked up on our existence and showed a very discerning appreciation of our style of design. The rural environment in which our designs evolved produced big, rawboned cycles that were categorized as being "Montana tough." Bob clearly understood that a diversity of cycles was a good thing, and that everything did not need to be ultra-light and compact sport bikes; some bikes were needed to haul big people over rough terrain with big loads. This validation was very encouraging.

As entrepreneurs, we can appreciate how much work Bob has put into his business. I can also appreciate the effort it takes to sift out the valuable factual information from the mountain of opinion in the bicycle industry (both informed and mis-informed) and from the widely varying perspectives of thousands of cyclists. RCN has done this, and we have all benefited. Thanks for being there.

Rod Miner
Lightfoot Cycles Inc.

RCN Reader/Reviewer

I was introduced to recumbents in 1999. My knowledge was limited to BikeE as that was all that was available where I live. A fellow cyclist referred me to RCN later that year. The 2000 buying edition still remains my favorite issue. It increased my knowledge of recumbents exponentially. It provided me with real choices and possibilities. And while I know a lot more today, RCN still provides me with a "hands on," thorough and analytical approach to recumbents and cycling events. When the new issue arrives all else stops until I read the new articles. Over time they are re-read. And re-read. And re-read. It is a chang-

STELVIO:
15" 25-258, 2
17" 25-288, 2
18" 25-298, 1
19" 25-308, 1
20" 25-328, 1
21" 25-338, 1
22" 25-348, 1
23" 25-358, 1
24" 25-368, 1
25" 25-378, 1
26" 25-388, 1
27" 25-398, 1
28" 25-408, 1
29" 25-418, 1
30" 25-428, 1

MARATHON PLUS:
16" 49-395, 2
18" 49-405, 2
20" 49-415, 2
22" 49-425, 2
24" 49-435, 2
26" 49-445, 2
28" 49-455, 2
30" 49-465, 2

MARATHON SLICK:
20" 47-495, 2
22" 47-505, 2
24" 47-515, 2
26" 47-525, 2
28" 47-535, 2
30" 47-545, 2

MARATHON:
16" 49-385, 2
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BIG APPLE:
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Mike Stern
St. Louis, MO.

Spreading the Word

RCN has meant a great deal to the development of WizWheelz over the course of our eight years in business. This magazine put us on the map when it published photos of our first production trike in 1997, and has helped spread the word about our product improvements with fair and thorough reviews. We have always appreciated RCN's objective, independent, and impartial approach to covering the recumbent scene. Bob's integrity is what makes RCN the respected publication that it is.

Wayne Oom
WizWheelz, Inc. Co-Owner

What RCN Means To Me

I bought my first recumbent (a BikeE) 10 years ago after seeing a recumbent on an MS150 ride. I borrowed a copy of RCN and found out about OHPV (Oregon Human Powered Vehicles) within its pages. I went to OHPV meetings, subscribed to RCN, and devoured every page to read about the different brands. After purchasing an Easy Racers Tour Easy, this all evolved into my daughter Laurie "Wo" Smith and I starting the Easy Riders Recumbent Club Magazine (ERRC), with the encouragement of Gardner Martin of Easy Racers. Looking at bicycle history, nothing evolves quickly. Recumbents are still in the growing stage. In its history RCN will be seen as a major focal point. Gardner's last words were: "Grow recumbent faster." Many people have a stake in that happening, whether they are manufacturers, casual riders, bike activists, or parents who want their children to be healthy and happy. Anyone who owns a recumbent knows that they ride their bike more, and how much a recumbent adds to their life. Recumbents can truly change history, and add so much to so many more peoples' lives. RCN has a big share in this happening.

Connie McAyeal

Recumbent Community

Being involved in the recumbent industry I know a lot about what is new and exciting. Yet I am sure to find something that I didn't know about or another perspective in *Recumbent Cyclist News*. I also like the fact that Bob Bryant says what he likes personally. It helps me understand and weigh his reviews of equipment and cycles. Over the years, Bob has created a network of information about recumbents and those who make, service, and use them that has been of great value to our community.

Mark E. Mueller
www.windwrap.com

Long Time Reader

I got my first recumbent in May of 1989 and found I was biking in the dark because no information was available about them. Help was soon on its way; I started my subscription to RCN with its first issue in the summer of 1990, and haven't missed an issue since. Bob Bryant has put out an exceptional magazine for the last 15 years. It has enabled me to keep up with the changes in the industry, and helped me select six more recumbents over the years.

My passion in bicycling has been self-contained touring, and RCN and Adventure Cycling have provided information about touring and an outlet for articles about my tours in the U.S., Canada, and Europe. Here's hoping Bob continues to publish his excellent magazine for many years to come.

Chet Rideout

Beginnings of Catricle

When I was starting my business, Bob Bryant heard about this young

Brazilian looking to build a trike in the US. He then contacted me and asked me to tell him more about me and about how I came up with the idea and development of the trike. I was surprised to get that kind of attention in that early stage. I then submitted an article entitled "The Quest for the Perfect Trike," and I was quite surprised that Bob published it in RCN! That really helped us out. I have never found an old-timer so tuned, interested and open to newcomers like that. Looking back now, I think Bob is either a visionary or he has a crystal ball. He gave us enough exposure and support to help us be who we are today. Thanks Bob & RCN!

Paulo Camasmie
Big Cat HPV
www.catricle.com

Happy Anniversary!

One of the main gifts that RCN has brought to recumbent enthusiasts everywhere is connecting the "What's out there?" question when our world needed it. It was true then, and it is true now. We learn about the knowns and the unknowns. The balance of road tests, opinion, tours and home-builder articles have preserved an interesting publication worth reading. Thanks RCN.

Kelvin Clark
Angletech

RCN's Long Track Record

Because of you and your long track record of getting the word out, recumbent lovers have had a great source of information in RCN for 15 years strong, and I wish for you continued success in the years to come.

Laurie "Wo" Smith
Easy Rider Recumbent Club

Editor's Comment: We're happy to publish your RCN comments and letters for the next few issues. Thank you for 15 wonderful years!
— Bob Bryant ♦

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