

Recumbent Cyclist News

RCN 079 A Publication by and for Recumbent Enthusiasts Since 1990 Nov./Dec. 2003



2004 Burley — *The LWB Jett Creek and Koosah, from \$900*



Autocanoe — *This new rear-wheel steering, front-wheel drive tadpole trike will keep you cool, because it's amphibious. Head for any boat ramp for a seamless transition to recumbent canoe. See page 4*



The beach at Pt. Hudson, Port Townsend, WA

RCN ROAD TEST

The Easy Racer Tour Easy A Classic Performance LWB

By Bob Bryant
bob@recumbentcyclistnews.com

What's Inside

- **Road Test: Easy Racer Tour Easy**
Classic Old School LWB.....1&15
- **Editorial License**
Gear Inch Rant.....02
- **Recumbent News**03
- **Events Calendar**.....03
- **Letters**.....06
- **Road Test: The RANS Stratus**.....08
- **Road Test: The RANS V2**.....12
- **LWB Choosing A Bike**.....20
- **Tech: Bacchetta to Barcroft**
The Installation of an M5 Seat...21

Be sure to check out our website at:
www.recumbentcyclistnews.com

So you want a comfortable bicycle, you'd like to commute to work, you want to ride with the local bike club on the weekend, and you also dream about going on a long bike tour. Oh yeah, and you'd like a fast bike that will make you look good while your getting back into shape. Well, the Easy Racers Tour Easy may be the bike for you. This bike has been in production for years. It's refined, durable, and the same bike can be commuted on, ridden on a fast century, and taken on a long tour. Who says one bike can't do it all?

We've reviewed the Tour Easy several times over the years that RCN has been published. One thing we can count on is that each subsequent test bike is better than the last.

Systems

Frame — The Easy Racers Tour Easy frame is TIG welded of seamless 4130 CroMo tubing in the Easy Racers' Watsonville, California factory. This frame design and build has been proven over more than 20 years and thousands of bikes. The frame is strong, torsionally stiff and has no weak points that I'm aware of. I believe that a frame built by a craftsman to be better than your run of the mill imported frames. They tend to be stronger and more durable, but the welds don't always look as perfect as the mass produced frames.

Some may feel that the frame looks a bit dated; there are no oversize frame tubes, which probably add to the bike's durability.

Continued on page 16

Recumbent Cyclist News

Subscription Information

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

Recumbent Cyclist News is published eight times per year. US subscription rates are:

- \$32 1 year, 8 issues*
- \$38 1 year first class mail**
- \$42 Canadian Airmail (US Funds)
- \$60 International Airmail

We accept payment via cash, check money order (mailed) or PayPal (see our website).

* 3rd class mail is *NOT* forwarded by the USPS. If you move, there will be an additional charge to resend issues.

** Recommended for those who've had trouble with their mail, move often, or have two seasonal addresses.

Contact

RCN, PO Box 2048, Port Townsend, WA 98368
E-mail: bob@recumbentcyclistnews.com
Web: www.recumbentcyclistnews.com
Tel. 360-379-5607 Live & VM (if I'm not out riding)

Schedule

RCN is published eight times per year. For the 2nd half of 2003, expect issues in July, August, Sept./Oct. and Nov/Dec.

When to Renew

Please renew 60 days in advance if you can. By the time you read this issue, the next issue and database have gone to the printer.

Your Mailing Label

"EXPIRES W/RCN 076" means that RCN 76 is the last issue of your current subscription.

Address Changes

Don't forget to send us your new address when you intend to move. Please allow 60 days' notice for address changes.

Standard Subscription/Missing Issues

RCN is mailed USPS 3rd class — which the USPS doesn't forward. You are responsible for keeping us aware of your current mailing address. If you miss an issue due to an RCN or USPS error, we'll send a free replacement. If you miss an issue because we don't have an up-to-date address (at mailing time) — the replacement must be ordered and paid for by you. The cost is \$4 or (-1) issue on your sub.

We do offer a first class subscription upgrade.

Privacy

We *DON'T* release, sell or, give out the personal information of our subscribers for any reason. If you need to contact an RCN subscriber, send us an SASE letter to the person, place inside another envelope and send it to RCN.

Fine Print

RCN is copyright © 2003 by Planet PT, Inc. in Port Townsend, WA. Contents may not be reproduced in whole or part unless expressly authorized in writing by the editorial office. Although we make every effort to provide useful and accurate information, we do not claim to have definitive answers particularly with regard to safety, technique and equipment. ♦

Gear Inch Rant

by Bob Bryant

bob@recumbentcyclistnews.com

"GEAR INCHES: An archaic formula used to determine range of gears on a bicycle"

This about sums it up. However, it tells us just about nothing.

Gear Inches.

Who needs them?

Why do we want them?

What good are they?

Confusion . . . that's for sure.

Here's how to find your gear inch range:

To find your low gear, divide your small front chainring by your large rear cog and multiply by your measured wheel diameter.

To find your high gear, divide your large chainring by your small rear cog.

Here's my bike's gear inch range:

Front crank: 30/42/52

Rear cassette: 11-34

Rear wheel & tire diameter: 27.25"

(Chen Shin 700 x 35 tire)

My bike has a 700c rear wheel (this week anyway). To find my low gear (the one I climb hills with), here's the math:

$$30 \text{ divided by } 34 \times 27.25 = 24$$

To find my high gear (the one I speed down big hills in), I take 52 divided by 11 x 27.25 = 128.8.

So my gear inch range is 24-129. My mid-range gear (middle chainring is 33.6-104, which is too high).

I know from years of recumbent riding experience, that this is awesome flat land and downhill gearing. And it's a wide gearing by recumbent manufacturer standards. However, if I were to haul groceries in my trailer, or do a self contained tour with some mountain passes, the low and mid-range would be too high. I'm a firm believer in low low-mid-range gears. This comes from my grocery hauling experience, as well as my Slumgullion fast-pack experience, where the minute you shift to granny low, you lose the pack, so we tried to keep spinning up mountain passes in the middle chainring.

To solve this, I could try to find a 24-tooth inner chainring (which I'm told I can get for my Ultegra crank). This would lower the low

gear to 19 gear inches which is better for those mountain passes. I'm not sure what to do about mid-range. I need a lower gear than 33.6 for climbing (42 divided by 34 x 27.25).

My Tour Easy has a rear disc brake, so I can use a 26-inch rear wheel if I want. I would then remove the 27.25 from my equation and factor in 26" with a diameter of 25" (Specialized Nimbus 1.5 tire). This would give me 22-118 gear range. My mid-range (middle chainring) would now be 31-95.5 and still not low enough. This isn't worth the effort. I'm still not under 20 for my low gear. I end up with a lower high gear and one gear inch lower low gear.

My next step is to take a look at installing an MTB microdrive triple crank — a Shimano Deore XT has chainrings of 22/32/44. When I plug this into my equation (22 divided by 34 x 27.25), I get a low gear of 17.6 — this is close to where I want it. To get this low gear, I've sacrificed my high gear — which is now 109 gear inches. My mid-range gearing (middle chainring and most used gears) is now 26 gear inches to 79 gear inches.

The most ideal low gearing set-up would be the Deore XT 22/32/44 crankset, 11-34 cassette and the 26-inch rear wheel. This would give me a 16-100 gear inch range.

There are other options as well. Angletech offers a Tour Easy with a SRAM DualDrive 81-speed drivetrain and a 18.5-147 gear inch range (could be adjusted lower).

The DualDrive set up is the most expensive but is unequalled if you're a *gearhead extraordinaire*. If you recall from the ICE Trice road test, the DualDrive offers three internal gears. Gear #2 is a 1:1 lockup, gear #3 is a 36% overdrive, and gear #1 is a 27% underdrive reduction. This is why the Trice had that wonderful 81-speed 9-104 gear inch range.

Me, I've just about talked myself into that new Deore XT crankset. I found one for sale for \$90, which is a great deal, and less expensive than building a new rear wheel. It's also probably about 1/3 the cost of a DualDrive upgrade (new wheel, hub and shifter). The Deore XT crank set up will give me a more useable set of gears, and I can shorten my chain a few links and lose a few ounces. Anybody want to buy my Ultegra triple crank?

If you're not a super-athlete, if you haul stuff, tour with a load, or ride up steep hills, look for a low gear around 15-18 gear inches. If you like to go fast down big hills, a high gear of 130 or more is perfect.

. . . Continued next page

Recumbent News



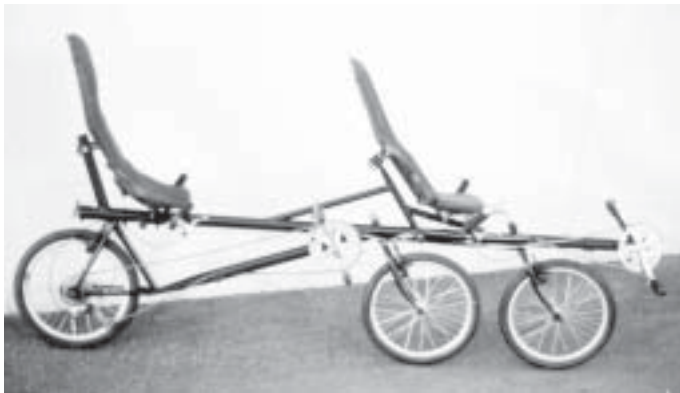
New WizWheelz Tandem Unveiled

WizWheelz Inc. of Hastings, Michigan USA introduces the new TerraTrike Tandem (TTT). WizWheelz has been creating exceptional Human Powered vehicles for over seven years. Their TerraTrike has been the best selling recumbent trike in the world for more than two years straight. Now they are offering a chance to "do it with a friend" says Randall Bertrand, WizWheelz head of North American sales. "We've been developing and testing the TTT for over a year now, and we couldn't be more

enthusiastic." The new TerraTrike Tandem offers a 4130 chromoly steel frame, hand built custom Velocity wheels, Shimano/FSA drivetrain components, and fully adjustable seats and handlebars. With a suggested retail price of \$3999 (USD), sales are expected to be brisk.

Contact WizWheelz at 269-945-5581 or visit their website at www.wizwheelz.com for more information.

Source: WizWheelz press release



Milt Turner's T-42 tandem 50% more braking, 100% more steering control, a second front wheel smooths the ride, adjustable seats, a triangulated frame, a 69" wheel-base, four brakes and two ergonomics seats . . .

Source: Turner

www.turnerrecumbents.com

Gear Inch Rant Continued . . .

The final rule is that you shouldn't allow others to dictate your gearing. Recumbent gearing is a very personal thing. So personal, in fact, that what works best for you may change as your fitness level changes. Be open to lower gearing. Most riders need more lower gears than higher gears.


If you need more information on gear ranges, check out these websites:

- www.sheldonbrown.com/gloss_g.html

- www.hostelshoppe.com/tech_gear_help.php
- www.bikesatwork.com/hauling-cargo-by-bike/gearing-and-gear-inches.html

Viva Recumbency,
Bob Bryant ♦

EASY RIDERS RECUMBENT CLUB MAGAZINE



To order a sample issue, or to subscribe: www.geocities.com/e_r_r_c or sample copy \$5 to: Connie McAyeal, PO Box 1688, North Plains, OR 97133-1688

New Ti Tadpole Trike Coming Soon

The new Ti Trike "Ti Speeder" will be built by ANGLETECH in Colorado Springs. The prototype is up and running, and it should be a stunner. The builder has extensive experience with Ti, Airmet, a full CNC shop, and high alignment standards. They've also built 33 Nissan GTP cars.

Standard equipment will include a single lever actuated dual primary disc front brakes and a rear "drag" disc brake. They will have Sew What seat mesh, Pulstar sealed bearing disc hubs, SRAM DualDrive 3x9 with rigger control, or Shimano Caprio, Ti S&S couples, Velocity rims, Schwalbe Stelvio or Comp Pools tires, WCS lifetime headsets and Phil BB, Dura Ace derailleurs and shifters. The seat frame will be an easy to remove CNC modular aluminum frame that is strong and good looking.

Price projections are \$5,550 for a GL81 and \$5,900 for an SHO.

Source: Angletech



Cannondale Rack

Cannondale has just completed a pannier rack designed specifically to fit their recumbents. The rack is welded from aluminum tubing and the rack attaches to the sliding seat base of any Cannondale recumbent and is clamped in place using the two QR's. This new underseat pannier rack will cost \$55 and be available in October. Source: Cannondale

RCN Calendar

WANTED: 2004 Recumbent events dates, times and ride descriptions.

4th Annual Way Down South HPRC Race
Saturday, March 6th
Brian Piccolo Park Criterium Track
Cooper City, Florida.
Contact: Shari Bernhard at shari.bernhard@comcast.net; Tel. 954-370-4804



Build An Amphibious Recumbent Canoe!

The Autocanoe is a pedal powered amphibious recumbent tricycle and a pedal canoe! The configuration is that of a recumbent Tricycle with the two forward delta style wheels driving and the single rear wheel steering — both on land and in the water. It can travel over the road and through the water with comfort and grace. Transitions from land to water and back are accomplished smoothly and seamlessly without leaving your seat. On the road it is stable and secure; on the water it is tractable and relaxing. This human powered vehicle would appeal to bicycle enthusiasts as well as wooden boat fans.

The Autocanoe plan is comprehensively laid out for ease of construction. Included in the plan are complete material lists as well as supplier contact information. Using simple techniques, common tools and readily available materials, you will be able to enjoy the satisfaction of wooden boat building with the added pleasure of owning a very unique vehicle.

Plans are \$30 post-paid USA. Add \$3 for International orders. You can order via PayPal

from www.autocanoe.com or send payment to: Autocanoe Company, PO Box 310, Port Townsend, WA. 98368.

Kits (\$1,450) and complete canoes are also available (\$2,950). ♦

Photos courtesy of Autocanoe and were taken at beautiful Fort Worden near Port Townsend, WA.

Recumbent News & Rumors


As you read this issue, we've just returned from Interbike. John Riley and I are working on an Interbike and 2004 Season Preview for RCN 080. Here are some news stories of which we're aware:

VISION — ATP Vision has canceled their Interbike booth, and sent a letter to dealers stating that they are restructuring the company and moving to a different location. The company will be closed and bikes out of production for three months. Lets hope they come back healthy.

LINEAR — After a change in ownership back in 2000 the company fizzled. Peter Stull,

The Bicycle Man, from upstate New York bought the remaining stock of Linear. The LWB USS, CLWB USS and SWB USS models are now available. For more information, visit: www.linearrecumbent.com.


SUN RUMORS — We're hearing rumors of an aluminum tandem (with Vision IPS), a 2004 SC Lite with a SRAM DualDrive, and even a delta tandem trike. We expect to see the dual 20-inch, rear suspension CLWB and new 3x20-inch aluminum delta at Interbike. Also watch for a sub \$200 front fairing.



TOPPER RACKS™


800-ATOC-021
www.TopperRacks.com
www.Atoc.com

Non-pivoting style for the cost-conscious... Models to fit any size 'bent!




BIKE TOPPER™

Give your rack a security upgrade




TOPPER LOK™

One-person loading for tandems & LWB 'bents



TANDEM TOPPER™

*Super grease cutting formula
Gentle on your hands
Multi-shot 10-ml tube
Perfect for your tool pouch!*



**CYCLEAN™
HAND CLEANER**



These are the new Angletech Tech Wind aero panniers. See RCN 076 July 2003 (Trice on cover) and visit www.angletechcycles.com

Long Wheelbase



New for 2004, we are now offering a new recumbent platform with two models, the Jett Creek and the Koosah. Both recumbents offer an ultra-stable handling coupled with low saddle height, lower bottom bracket height, and a long wheel base of 64 inches to give a relaxed and comfortable ride all at an entry-level price. Perfect for the new recumbent enthusiast!

We got a sneak peek at a 2004 Burley brochure. This is their new \$900-\$1300 LWB

2 SEAT BIKE DRIVES LIKE A CAR

- Easy to Pedal
- Multi-Speed
- 1, 2 & 4 Seaters
- Optional Electric Motor

1-800-974-6233 Ext. 16186 • www.4wc.com/#16186
RHOADES CAR Dept. 16186 • 125 Rhoades Lane
 Hendersonville, Tennessee 37075



LaBent by LaDue

Recumbent plans & kits
 Trike plans & web (mesh) seat plans

SASE for prices & info to:
 1607 S 84th, Lincoln, NE 68506.

Or visit our website at: www.radiks.net/~ladue/



Featuring:
 Vision
 Burley
 Easy Racers
 Bacchetta
 CaTrike
 Lightning
 Rans
 ...and more

Rapid Transit Cycleshop
 1900 W. North Ave.
 Chicago, IL 60622
 773-227-2288
www.rapidtransitcycles.com



WE'RE CHICAGO'S TRANSPORTATION ALTERNATIVE

COMFORT...



REDEFINED!



The Greenspeed GTO touring trike

HOW DO YOU IMPROVE THE ULTIMATE TOURING TRIKE?

SEAT RESEARCH AND DEVELOPMENT

First we talked to our chiropractor about what riders need from a seat, and then with her help, and using measurements from over 500 riders, we made a number of prototypes. We tested them with many, many different riders. Eventually, using special bending equipment, we managed to 'mould' the seat tubes to fit the curvature of the human spine. Thus we combine the nice curved appearance of a hard shell moulded seat with the better suspension, shape conforming and ventilation qualities of sprung mesh seats. Just one sit is enough to tell you that a new standard of comfort has been reached!

STEERING UPGRADES

Research indicated that even with our centrepoint steering, there was some toe-out under heavy braking with the optional hydraulic disc brakes. Thus the steering has been re-designed to give a small amount of stabilising toe-in under braking. The difference in single wheel braking from high speed is quite marked. To line up better with the new kingpins, the handlebars have been moved to the top of the main tube, giving better ground clearance, and shorter bars. Plus they have been given more rake, so that they fit the hands better, yet are still in line with the pivot, eliminating any tiller effect.

NEW LUGGAGE RACK

Our new rack is made from high tensile aluminium tubing, by Massload. It weighs only 370g, yet has been tested successfully to 40kg. Thus we rate it at 30kg. It has a universal mounting plate for lights or reflectors, and a mudguard attachment point.

To find out more please visit our website, or email, write, fax, or phone. Let us help you find a dealer or owner near you for a test ride.

GREENSPEED RECUMBENTS

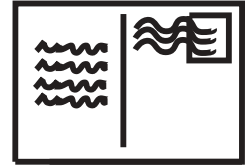
69 Mountain Gate Drive, Ferntree Gully, VIC 3156, Australia

Phone +61 3 9758 5541 Fax +61 3 9752 4115

Email info@greenspeed.com.au Web Site www.greenspeed.com.au

Letters To RCN

Write RCN . . . Write Soon . . . Write Often . . .
bob@recumbentcyclistnews.com



Recumbent Trainer

As a new Greenspeed GTO owner I have had the pleasure of discovering a whole new world of cycling. Along with the trike came a subscription to RCN, which has allowed me the opportunity to quickly get to know what is happening in the recumbent world. Using the dealer adverts in your magazine, I started searching for a trainer. There doesn't appear to be many trainers that adapt well to my GTO's 406 mm wheels. After a number of conversations with dealers across the US, the friendly folks at Angletech suggested that I contact a new company that attended last summer's trade show. While not designed specifically for recumbents, the trainer works exceptionally well on my GTO with no modification. It is US built and is sturdy as a tank. I can now get in shape for spring riding. The company can be reached online at chaindriver.com. The company's web page is www.chaindriver.com. Ask for Chuck

Mike Adams
michael.j.adams@rcn.com

Cycle Genius

Nice article on the Cycle Genius ALX-20. So you had a problem mounting a rack or bag to the seat? Who doesn't? That is my main gripe about most recumbents. Can't they manufacture the frame and seat so that the rider can in some way mount a rack? All it takes are a few threaded eyelets or brackets in the appropriate places. I decided a long time ago not to spend money on special bags for each bike. A plain old ordinary bike rack can accommodate any rack pack or pannier. I myself have found a way to mount a regular rack on each of my bikes, though some bikes I've had to drill holes in the frame. The Cycle Genius was one of the easier ones, with no drilling required. On the plus side, most trikes seem to come ready made with rack mounts, a feature I envy since I am not a trike person (yet!). I hope the manufacturers are listening out there. Us bent rid-

ers also need to carry our tools kits, water and food, etc.

Susan Townsend
recumbentlady@yahoo.com

GTT & Brakes

Good review of the GTT. I have a few concerns about brakes. First, it's possible to get an Arai drum brake on a hub with the SRAM Dual Drive. We have that setup on our Bike Friday Doubleday. We used it once to great advantage coming down a 12% grade towards a railroad crossing while towing a loaded Bike Friday trailer. Second, you should lose your fear of hydraulic brakes and maintenance. We have 12,000 miles on our five year old RANS Screamer with the Magura hydraulic rim brakes. I've changed the brake pads twice and that is all the maintenance we have done. I do have the Magura maintenance kit, but have never had to use it. I really like the Magura brakes. If we ever get caught on a tour with a ruptured brake line, I'll just have to put a mechanical brake on until I find a shop that can deal with the hydraulic brakes. Or if its the rear brake, I'll just use the drag brake more until I can find someone to fix it.

With the hydraulic brakes on the GTT, I suspect you can pull the same trick that some Screamer owners use for a parking brake. I've seen people with a couple of heavy duty rubber bands that are on the handle bars. They pull these rubber bands over the brake levers when they need a parking brake. That would probably work with the GTT.

John
john.m.leibman@juno.com

Likes RCN

RCN provides a great service. Keep up the good work. In a world of two minute sound bytes and fluffy bike magazines, your stands out as substantive and informative. Thanks for all you do!

John Lotze

RCN Aero Review

Thank you so much for your time and effort in composing the excellent "1000 mile update" on your Bacchetta Aero. I now have about 1800 miles on mine, which is an early production Standard model. I concur with all your assessments and it's great to stay comfortable with my "roadie" friends on all but the steepest hills. I do feel the people at Bacchetta could improve on the seat mounting. I don't know about yours but my original M5 seat hold down bolts were

held in place with some small wing nuts. The first thing those wing nuts did was vibrate off in the first mile or so. We replaced them with 8 mm nylock nuts. The seat placement dictated that the diagonal brace for the chain idler would be right in front of where I needed to place the nut. The expanded foam covering the carbon fiber seat has also turned out to be much more comfortable than I expected. It feels rough to the touch and I felt that I'd wear out the backs of my bike shirts but, that hasn't happened. I added my vote for a quick release on the front brake caliper. Since I carry my bike on a fork mount roof rack, I need to remove the front wheel frequently. In conclusion, I don't have much to add in the way of suggested improvements; they pretty well got it right on the first try.

Bob Rogers

Midwest Recumbent Rally

The 2004 Rally was a great event with about 300 recumbent cyclists in attendance. What impressed me most was that if this industry wants to get more into the mainstream they ought to hire Rolf Garthus to get them there. The guy is one marketing genius. He can get all of us riders up to Stevens Point, WI, which is amazing. The routes are shorter than most rallies I've attended. The ice cream ride was about 15 miles at a slowish pace with stops to pick up the stragglers.

The first morning ride was a great, mostly flat to gentle rises and falls ride of 37 miles (22 miles on the shorter one). We left at 8 a.m. we you could be back by noon when the community lunch took place, which was where the demos were being done. So, the riders come back, wait for lunch, and try the other bikes. There was even a small swap meet. Sunday's ride was a maximum of 34 miles (27 or 10 for those who didn't want to take the long route), at a place somewhat distant from Stevens Point with nice scenery, etc. The entire event was well organized.

I met Bacchetta's Mark Colliton and rode the prototype of the Bacchetta Aero 26/20. Lightning was scheduled to appear, and was advertised to appear, but didn't. Mark Mueller was there selling his Windwrap fairings. He spent a lot of time with people, which I know they appreciated.

Of all the bikes we rode, the one that surprised us the most was the Hase Kettwiesel delta trike which can be joined together and made into a tandem. There were a couple of Windcheetahs there, and one Catrike which

sold right away.

The most manufacturer who seemed to have the most bikes there was Easy Racers, with lots of Tour Easys and Gold Rushs. I expected to see more Sun EZ's, BikeEs or Cycle Genius. There were some, and a few V-Rexs, a mix of Burley's etc., but the LWB was the order of the day.

Mike Stern

5500 MILE UPDATE

Ti-Pursuit 700/20 with dual Nexus 7's

I've admired the craftsmanship of Steve Delaire at Rotator for some time now (review article in RCN 073) and after more than 5,500 miles of pleasurable riding, I still feel the same way. I had asked Delaire to make me a lightweight and "bullet proof" bike; and he did. Time and again, I've ridden over many of the toughest, bumpiest streets LA can throw at a rider and this bike has taken it. The spokes have remained tight and the wheels true. The bike tracks down long and fast hills as straight as ever. That big titanium frame seems to suck up the bumps!

Since the original review, I have twice shipped the bike to Wisconsin for a week of riding. Once the UPS destroyed the side of the shipping container, but the Rotator was unscathed!. It has performed beautifully, and with such comfort.

The dual Shimano Nexus 7 hubs (one laced to the back wheel, one under the seat as the mid-drive) still shift as smooth and precise as when they were new. I couldn't be happier with them. And I never have to worry about forgetting to downshift before stopping — you can always shift while standing still.

For the rough streets of Los Angeles, I replaced the front tire with a beefier 1.75" and went a bit bigger on the rear tire with a 700 x 37c. This may slow me down somewhat, but I appreciate the extra comfort and stability the larger tires give.

I've had several flat tires. As reported in my earlier article, changing the rear tire is more work due to the solid axle of the internal hub. Delaire suggested that I try to repair the tube without removing the wheel. At first it felt awkward, but with a little practice, I could just lay the bike on its side, pull the tube out from the tire and fix it in place. This is quite simple once you get the hang of it. (This would not work if you needed to replace the tube.)

As I reported in the initial review, I could not appreciate that famous all-mesh seat on long rides. With a 5 x 10" piece of thin paneling set on the mesh, and a 2-inch piece of firm foam covered with lycra, I now ride all day in total comfort.

This very comfortable seat, the pedal height even with the seat, and the easy-to-reach bars and shifters all make this rider's delight. Delaire makes both long and short wheelbase models, both in steel and titanium. I'd urge

anyone in the market for a quality recumbent to check out Rotator.

Thanks again, Steve Delaire! Thanks Bob Bryant for your great magazine! I look forward to every issue.

Steve Zrucky

stovitzrucky@yahoo.com

Trade Shell for Mesh

I have an Actionbent "Jet Stream" and would like to put a mesh seat on it. Do you have any ideas?

Patrick Mcguire

Editor Comments — My best advice would be for you to use the Rotator mesh seat. It hose-clamps to the main tube. The stock Rotator has a curved mount that fits on the oversize main tube. Otherwise, use a Bacchetta seat or have Organic Engines build a seat to fit.

Life Choices

All of us who ride recumbents know how to spend big money. But we know what we're getting. I jumped into recumbency with an Easy Racers Tour Easy in 2001 and quickly put almost 3,000 miles on it while also getting a Tour Easy for my wife who could not believe how easy it was to ride.

We got an EZ-1 SC lite too, because I thought it would be a good grocery-store bike. It was, but so was the Tour Easy, so we sold the EZ 1. And then, and then, I said to my wife, "I'm thinking about buying a Ti Rush and selling my Tour Easy." She gave me one her looks and quite a few words about finances, but six months later she and I agreed that it was a good idea, and with a body sock too. And she and I think yes, that was a good decision. Why? As one of my recumbent buddies says, if you enjoy it, then the price is right. And I do enjoy it.

I work as an Interim Pastor in the Presbyterian Church (USA), which usually doesn't take me far from home in the hilly Atlanta area. How does a nearly 63-year-old guy who had a heart attack when he was 56 say he's happy? He makes life a choice for safety in descents, and orders an Avid mechanical disc brake and gets a disc brake hub installed on the rear Aerospoke wheel. I did that after two blown front tires trying to brake from 62-to-64 mph descents that came into sharp switch-backs. One of those dumped me on my left side at 40 mph and I slid about 30 feet. Have you ever stuffed pine needles into a blown tire just to get into cell phone range 20 miles down the road so you can call for a friend to come in a truck and haul you in? I have, and it worked. It also makes you laugh at the ludicrousness

of invention. It also is important to tell you that pine needles, Georgia pine needles, are good for 10 miles at 10 mph sounding like a broken washing machine before the needles turn to dust and have to be renewed. But that is also great encouragement to put a good disc brake on the bike, which I did, and now I marvel at how fast I can stop. And, yes, I'm thankful for the safety. I can still reach those heady speeds going down the mountain, but I can also easily slow for the switchback.

As for GPS units, I've had a Garmin GPSMAP 76S, since its introduction from Garmin, first on my Tour Easy, and now on my TiRush. I added the USA mapping CD and with the GPS and the map software I've enjoyed creating everything from day rides to tours. But that has recently taken a huge leap forward with the addition of a Garmin Street Pilot III Deluxe GPS that comes with software and enough cables to keep you busy hooking things up for a while. One delightful discovery about the Street Pilot is that in the routing preferences the user can designate that routes will be designed for a bike along with the ability to eliminate highways and major thoroughfares. Now it is a simple thing to have the Street Pilot III create a bike route, load it into the mapping software, make any adjustments I wish, and then download the route to my 76S.

There is a RAM Mount for the Street Pilot III, but the GPS weighs a lot more with its six AA batteries (costs a bunch more too!) than my 76S. Maybe I'll mount the Street Pilot on the Ti Rush for tours, but the 76S is enough for most trips, and it is very light. It is useful too. Recently, on one of these humid Georgia days, I was at the end of my energy after 65 miles and a bit lost. One of the permanent waypoints I keep in the units is where I live, so I hit the buttons to have the 76S show me the way to go home, and it did it beautifully, getting me there in five more miles to air conditioning, a shower, and food. I consider the GPS a requirement. It's fun to use, but it doesn't play games, so I don't call it a toy, but a necessity. That helps in justifying the cost too. Garmin GPS units may be explored at www.garmin.com.

But why choose a Ti Rush and two GPS units? Life choices. That and a loss of words to describe the joy of riding and touring. Smooth, fast, easy, fun, all of those are true, but they don't get really close. My friend is right: "If you enjoy it, the price is right." En-

Letters continued on page 25

Send Letters to the Editor of RCN

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



RCN ROAD TEST

The Stratus — 25 Years of RANS LWB

By Bob Bryant

bob@recumbencyclistnews.com

“25 years ago when I drew up the first Stratus, I said to self, you know it will take forever for people to really realize what we have done here (maybe 25 years!). The lines of this bike just work! It looks like what a LWB recumbent should be. I never felt I designed the Stratus, I felt more like I discovered it. I truly believed all LWB recumbents would end up looking just like the Status, since the original inspiration was to take the diamond frame of a road bike, and lay it down. — Randy Schlitter

The 2003 RANS Stratus is a fine mix of performance and value in a Classic LWB OSS. The RANS Stratus is a true classic in the recumbent world. The Stratus (Stratus “A” model) was the first recumbent two wheeler built by RANS — nearly 25 years ago. The long and low frame looks as good today as the first prototype did back in 1978 (production started 1982). As with most LWB OSS recumbents, the style is timeless but the overall bike has been continually refined over the years.

Systems

Frame — The Stratus frame is a fully triangulated LWB OSS recumbent frame TIG welded out of aircraft CroMo. The matching 20” RANS front forks also CroMo and painted to match the bike.

RANS’ designer Randy Schlitter takes much pride in the frame design of the Stratus. He started from a clean slate and designed his LWB frame as he thought it should be. The result is a most unique and attractive design that has stood the test of time. In the mid-90s, the Stratus frame design was also used as the basis for the V-Rex frame style, a SWB with

Stratus frame design (see pg. 11 for more info).

RANS Taiwan build quality is very good. The welds, finish quality, paint and details are very attractive. The 2004 model is beautifully powdercoated, which is also more durable than the previous paint (2003).

Sizing — I found the frame sizing on the Stratus to be puzzling. I’ve tested the Stratus four times in the past 14 years and each time I rode a “standard” size model (they also make an XL that is 4.25” longer). To my surprise, the 2003 model didn’t quite fit me. It accepts riders to a 43.5” x-seam, and my x-seam is 44.5” — the test bike was too small! At Interbike this past October, I rode a 2004 standard Stratus and it fit. I had no idea what was going on! On the plane home I realized that on our 2003 test bike, I was riding with my specialized shoes and Egg Beater clipless pedals. At the Interbike Demo, I was wearing my Converse Chuck Taylor “flame” hightops (top secret high performance shoes) on platform pedals. It would be nice if RANS offered more frame sizes of the Stratus, or if the standard size could accommodate a 6’ tall rider (me; with or without my clipless pedals).

Steering — Like other RANS models, the

Stratus uses a stem stub that clamps down into the head tube. The stem/riser clamps to the stem stub. There are three different risers offering different reaches to the bars along with three handlebars options to suit many riding styles (see Control/Ergonomics).

Weight — Our Stratus weighed just under 33 pounds with pedals, which is on par with other LWB of this style.

Drivetrain

RANS has done an excellent job spec’ing this bike. The components are better than the competition (some bikes costing \$300 more). They are integrated well and offered superb performance.

Components — The crankset and BB are Shimano 105 (IMHO the most crank you’ll ever need). The rear derailleur and shifters on our 2003 test bike were SRAM ESP 9.0 (twist shifts) offering smooth and fast shifting performance. I’ve never been real keen on the plastic look of the SRAM derailleurs but you sure can’t argue with their performance. We had no problems with our SRAM drivetrain components. For 2004, SRAM has unveiled X.7 and X.9 (upgrades to ESP 7.0 and 9.0) which comes with button shifters or twist grips. We’re not sure which RANS will spec.

Chain Management — The Stratus has a high/low chain idler. Their main purpose is to keep the chain off the frame/chainstays. The RANS idlers have the look the tires on your high school hot rod — with raised white letters. The idler bracket is ripe for a chain tube mount (replacing the idlers). We’ll address this in an upcoming article. The RANS chain management system works well and was completely trouble free.

Braking — The Avid Speed Dial 7.0 V-brakes are excellent. Avids are my favorite brand, and these are fine performing and attractive brakes. A stiffener arch comes with the Speed Dial’s.

Wheels — The Stratus comes with Shimano LX hubs. LX and 105 offer enthusiasts the perfect mix of performance and value. The Alex DA 16 black anodized rims are attractive and were problem free.

Tires — The fat Primo Comets are ideal for this bike. They offer a comfy ride, great performance and are, again, a great match of performance and value. While I still think they’re a bit wimpy, I had zero flats on three Comet equipped test bikes this season and I have a new respect for them.

Comfort

Seat — For years the RANS mesh back, foam base seat back has been considered the most comfy in the recumbent industry. The seat back is near perfection, and its most recent incarnation is even better than before. Some details have been improved and the seat back is now



These are the RANS LWB risers. The center model "B-32 mid" is the stock 2004 stem.



These are two of the three different bars that are available. Above is the B-36 single bend, below is the B-37 double bend (stock on the 2004 Stratus).

A narrow version of this is also available (B-38).



more breathable. There is a billfold pocket, and dark gray cordura sides for added protection and the zip ties have been replaced with buckles and straps.

The Stratus uses a variant of the RANS seat. The angle between the seat back and base is greater, providing for a more open riding position. The RANS Stratus predated this style of RANS seat, it's slightly different. The more upright riding position of the Stratus will give different pressure points than other RANS models. This also means that seat foam quality and thickness may be more important.

The seat base is injection molded plastic, with a RANS proprietary foam pad and seat cover. In the last few years, the seat has been completely redesigned. During 2003, some riders have reported being able to feel the ridge or lip on the back of the seat base. Through our investigation of this, RANS discovered that the seat foam on some Stratus' models wasn't dense enough. A batch of foam sections that were 35% softer than what they had spec'ed (shipped on bikes between March 1st and August 1st, 2003). RANS quickly shipped out the corrected seat foam.

The foam upgrade seems to fix the problem for most riders. If not, it would be possible to place a 1/2" closed cell foam section under the RANS foam, or even trim the ridge down if need be. There will soon be optional lighter weight seat bases and backs and foam covers



This is the stock 2004 Stratus bar/stem combo. Shown is the B-32 mid-reach stem and B-37 double bend bars.



The RANS' Rad-Loc seat clamp

available to customize your bike.

The RANS Rad-Loc system is a vast improvement over the old RANS seat mount system. It's more attractive, easy to install (and remove) and appears to be one of the slickest systems we've tried. Our seat stayed locked down on the Stratus. The seat on our V2 did break loose. I then tightened the tension screws, which helped. We've heard from some reports of Rad-Loc slippage. RANS suggests tightening the adjustment screws. If the problem persists, contact them. Also see our reader tip for this on page 13.

Controls/Ergonomics — RANS now offers three different handlebars and stems for the Stratus. The 2004 model comes outfitted with the B-32 mid-reach stem. There is an optional shorter (B-31) and longer (B-33) stems available. The 2004 Stratus comes with B-37 double bend "tweener" (legs go in between) style bars. There is also a single bend bar (B-36) and double bend narrow bar (B-38).

The ergonomics on the 2004 Stratus are exceptionally comfortable. The stock bar (B-37) and stem (B-32) will be the best choice for the majority of Stratus riders. It's a unique feel, unlike other LWB OSS recumbents; A further refinement of the classic Stratus design. Hopefully, RANS dealers will stock the additional stems and bars so customers can personally customize their steering ergonomics if need be. Note: Our 2003 test bike was set up with the

INFO AT A GLANCE

Specifications

Model — RANS Stratus
 Type — LWB
 Steering — OSS
 Wheelbase — 66" or 70.25" (XL)
 Wheel size (front) — 406 mm 20"
 Wheel size (rear) — 559 mm 26"
 Seat height — 21.5"
 Bottom bracket height — 14"
 Weight — 32.75 pounds (RCN weight)

Frame — CroMo TIG
 Handlebars — RANS Top Loader
 Handlebar — RANS Top Loader
 Seat back — Aluminum/nylon mesh
 Seat base — Plastic base/foam
 Seat recline angle — Adjustable

Components

Crank — Shimano 105 30/42/52
 Bottom bracket — Shimano 105
 Headset — FSA 865N
 Derailleur (rear) — SRAM 9.0
 Derailleur (front) — Shimano 105
 Shifters — SRAM 9.0 (twist)
 Gears — 27-speed
 Cassette — Shimano 11-32 9-spd.
 Chain — SRAM
 Gear inch range — 23-118
 Pedals — MKS platform
 Rims — Alex DA 16 black anodized
 Tires (front) — Primo Comet 1.75 100 psi
 Tire (rear) — Primo Comet 1.5 100 psi
 Hubs — Shimano Deore LX 36°
 Brakes — Avid Speed Dial (V-style)
 Brake Levers — Avid Arch Rival

Incidentals

Price — \$1699
 Colors — Dark Emerald (2004 model)
 Blue Trance (2003 model)
 Accessories included — Pump peg

Pro

- A very versatile LWB OSS
- A beautiful design
- Excellent finish details
- Customizable ergonomics
- Excellent value

Con

- Difficult sizing for 6' riders
- We've heard a few reports of seat slippage
- Seat base foam density/seat base ridge may need refinement
- Riser/stem changes requires patience
- No disc brake option

Contact

RANS
 Web: www.rans.com
 Tel: 785-625-6346

B-33 long stem and B-36 single bend bars.

User friendliness — The Stratus is a very user-friendly bike. The double bend handlebars do slightly increase the potential for knee interference with the bars during low speed

sharp turns. This isn't as much of a concern as on higher bottom bracket (BB) bikes like the RANS SWB and even the V2.

Ride and Handling

Stability — The Stratus has refined LWB handling that is somewhat neutral feeling for a LWB OSS. The Stratus that is different than it's competition in that RANS uses a standard size 20-inch fork (not a longer fork like the Tour Easy). Stratus designer Randy Schlitter is proud of the fact that his steering geometry doesn't change in the steering arc (front end rise and fall as you turn right or left).

Maneuverability — The Stratus now has a split personality. For 2004, the double bend bars are stock. These may be more difficult for some to maneuver as you have to think about tucking your knees out of the handlebar path during low speed maneuvers (sharp turns). The lower BB Stratus is easier to maneuver with any of the bar and stem choices. The new double bend bars work especially well on this bike.

Performance — LWB OSS low BB recumbents offer user-friendly performance for most everyone. You don't have to use clipless pedals, and you'll be up to speed in no time.

When other aspects of performance are comparable, your personal best can depend on just how much you like the bike, and how well you fit the bike.

For some of our Stratus test miles, we rode with a Mueller Windwrap fairing. This fairing

has Stratus-specific mounting. The fairing and mounts fit perfectly and offered adequate adjustment to properly position the fairing (so that you look over the top of the fairing).

The Stratus is a very versatile LWB OSS recumbent. It's not the most aerodynamic with the wide double bend bars; nor is it the most performance oriented with its fat Primo Comet tire set. However, we feel these are worthwhile tradeoffs for everyday riders.

Climbing — The Stratus offers good climbing performance. The bike does have a more open riding position, which didn't feel as efficient up hills as the V2's more closed riding position. However, the Stratus was easier to climb with due to the lower BB height (improved user-friendliness).

Owning

Utility — LWB OSS low BB recumbents are extremely versatile machines. They can be at home on a fast century, a tour, daily commute or even ride them off-road and on trails.

Options & Accessories — RANS offers a great selection of options for the Stratus. We were able to try the RANS seat bag, the new foam case, and fenders. The seat bags are both excellent. The small wedge bag pops on and off easily and can hold your wallet, keys, multi-tool, a tire repair kit and a snack. The foam briefcase is very cool and James Bond-like. It's light and has a shoulder strap for ease of carrying.

The fenders work fine for stock size tires.

Be careful if you're opting for bigger tires, since they may not fit under the stock fenders.

RANS offers a rear rack that fits reasonably well. One problem mounting a rack to any RANS bike is that the seat braces cut across the forward sides of the rack, and make it less usable. RANS also offers a front pannier rack for touring.

The Stratus should also hitch to most types of bicycle trailers without much fuss.

Market Competition

Comparison — The Stratus offers a true enthusiast LWB OSS with no component shortcuts (that we could find), in a very attractive package. The Stratus competes with other LWB OSS that cost more. It's an excellent value in its class and price range.

Analysis

Verdict — The Stratus is a beautiful bike with attractive systems. The component specs are excellent and are better than recumbents costing more.

Our relatively minor concerns about the seat foam (and seat base ridge issue) and a few seat slippage concerns (RANS wants to know about if you experience it). We didn't hear many complaints, just a few. We'd also like to see RANS improve packing from the Taiwan factory (almost every Taiwan-built bike).

The Stratus is built in Taiwan. The finish quality and details are actually more attractive than the Tour Easy. The 2004 powdercoat is

RANS BIKES

RANS
Ride Original, RIDE RANS STRATUS SINCE 1978

4800 HIGHWAY 193 ALT. HAYS, KS 67601 785.625.6340 FAX: 785.625.2795 WWW.RANS.COM

Get the Classic today, MSRP. \$1599.00

stunning, yet tough.

I really enjoyed riding with the 2004 double bend bar steering set-up. On our test bike, I was overwhelmed with all of the bars and stem choices and am happy that RANS selected the B-37 double bend bar and B-32 mid-reach stem to offer as stock.

The Stratus is a classic LWB OSS recumbent that remains very popular. RANS actually ran out of 2003 models and had to build another batch at their Hays, Kansas, factory according to RANS' Randy Schlitter. At the Interbike tradeshow, Randy eluded to 2004 Stratus surprises coming soon, so stay tuned (perhaps a 25th Anniversary model?).

The RANS factory options list is growing all the time and gives owners the opportunity to customize their bikes. Also, the bags and case offerings are very cool and the parts seem affordable.

LWB OSS recumbents are among our favorite types of recumbents to review. They are user-friendly, perform well and are an American classic recumbent style. We're happy that RANS continues building and refining the Stratus. The Stratus is a great value for an excellent LWB OSS recumbent.

RANS owner Randy Schlitter loves the Stratus. His mission is to make other LWB riders love it as well, "I still love mine, and enjoy the fact I can ride it all day and not have numb feet and still get down the road with lots of zoom zoom factor," says Randy. ♦



Our 2003 1/2 Stratus with Mueller fairing



Note the fairing shape in this photo. The Mueller mounts work very well on the Stratus. This bike has the mid-reach B-33 stem and B-36 single bend bars.



The RANS seat bag is the best we've seen from a recumbent manufacturer



The updated RANS seat back is comfortable and refined. Gone are the zip ties, replaced by adjustable buckles.

Excerpted from www.rans.com:

INTO THE RIDE #8:

Stratus, How a Classic Was Born

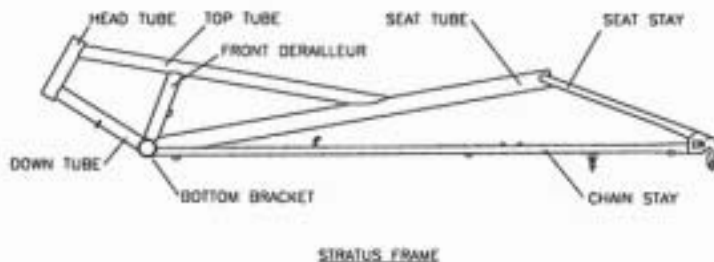
by Randy Schlitter

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

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

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

What is interesting about this design was the choice to not make a pure triangle from the front tubes. The top tube shamelessly falls short on the seat tube. The result is some give to the frame. Yet the power transfer is not compromised, since the large seat tube and rear triangle are plenty stiff.



"This is the year the Stratus turns 26 years old. What is it about a product that can endure 26 years and still resemble the original first year production? I would have to say it is because the problem was solved correctly. The problem being how to build a lightweight long wheelbase recumbent, at the time short wheelbase was *not* enjoying any good favor, this was the time of the Hyper-cycle. For a long wheelbase recumbent the Stratus is what a long wheelbase recumbent is expected to look and function like. It's not a re-hashed diamond frame, but a ground up design.

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

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



RCN ROAD TEST

RANS V2 — An Affordable and Advanced Performance LWB

By **Bob Bryant**
bob@recumbentcyclistnews.com

At \$1,299, the RANS V2 is the best enthusiast/performance LWB OSS buy around these days. However, it's not your average old school LWB OSS recumbent. The V2 is a more modern LWB bike with a BB (bottom bracket) that's higher than that of the classic designs. With the higher BB, the V2's weight distribution is more rearward and the seat has the ability to be more reclined. This can make the bike more comfortable for rider's who may not like the rather upright, low bottom bracket (BB), LWB models.

Hmmm . . . LWB + higher BB + more laid back seat. The V2 sounds sort of like a SWB rider's LWB. If you're a SWB rider who's looking for a longer wheelbase recumbent, this could be the bike for you.

Systems

Frame — The V2 frame and fork are CroMo built in Taiwan for RANS. The fabrication quality is very good and the bike is attractive. For 2004, the finish is now a beautiful and durable powdercoat (2003 model was painted).

Steering — The V2 has a very neutral and precise steering geometry. The handling feel is refined and SWB-like (neutral). More important are the steering ergonomics.

Weight — The V2 is not exactly a light-weight LWB, but it isn't that heavy either, it measured at just over 33 pounds with pedals. The new aluminum V2 Formula weighs under 28 pounds and costs \$3,200. There are light-weight upgrade (seat, and base, etc.) from the

Formula which can be fit to the entry level V2 model.

Drivetrain

Components — The ESP 7.0 drivetrain worked perfectly once I got the V2 on the road. While assembling this factory demo bike, the SRAM rear derailleur fell apart in my hands and I had a quick lesson in SRAM derailleur reassembly. This sounds ominous, but it had to do with derailleur bolt washer, pin and placement on the derailleur hanger.

The ESP derailleurs seem cheap and plastic to me. The derailleur bolt is metal, and the body is plastic. There is no real bushing or bearing, just plastic rotating on the bolt which doubles as a bushing. SRAM derailleurs shift on a 1:1 ratio and offer very quick shifts. For 2004, SRAM has redesigned the ESP 7.0 into X.7, which looks to be improved (less plastic). The X derailleurs are based on X.0, which is SRAM's top of the line.

Chain Management — The V2 has an upper/lower chain idler. Neither is too extreme. The lower idler's main purpose is to keep the chain off the chainstays. Both could be removed and replaced with chain tubes, however. This would reduce drivetrain vibration as well. HP Velo uses upper and lower chain tubes even on SWB recumbent models.

Braking — The LWB V2 has excellent braking. You don't have to worry about grabbing too much brake. The V-brakes on our 2003 model were SRAM ESP 7.0 V-brakes.

While not our favorite brand of brakes, they worked fine. The concern should be that you won't be able to find SRAM brake pads for the bike, and you'll have to go for aftermarket pads. These brakes stopped as well as the Stratus' Avid Speed Dial V's, though I much prefer the look, feel and quality of the Avids.

Wheels — The V2 wheels and tires were completely trouble free during our review. The Shimano hubs are an excellent for this price range. The wheel build and parts are on par with bikes costing more.

Tires — The Primo Comets are excellent and affordable performance oriented tires. While I've criticized them in the past, I've ridden them all season (on 3 different test bikes) with not a single flat. They are a fine performance tire at a good price. We especially like the fat 1.75" Comet on the front end.

Comfort

Seat — The V2 has the standard recently redesigned RANS seat, now standard with Rad-Loc seat clamp. The seat is very comfy and a definite upgrade from the previous version. I found the V2 to be a bit more comfortable than the Stratus. The more reclined V2 seat displaces seat base pressure differently than the Stratus and the seat felt more comfortable.

The Rad-Loc is a welcomed upgrade over the previous RANS seat adjustment system. It's attractive, easy to use, and requires minimal force to lock it in place. There's a ratchet lever that locks the seat down. Screws on the clamp control tension on the lever. These screws can be tightened for more clamp pressure. We've heard a few complaints about Rad-Loc slippage. If your seat slips, you're supposed to tightened the tension screws. RANS' Randy Schlitter wrote us and said, "If you have a Rad-Loc that slips, contact us."

Ergonomics — The V2 controls have the outstretched arm position of the trendy SWB (like a Bacchetta or Volae). I guess the question one might ask is why doesn't RANS offer this "tweener" (legs come up in between the bars) bars on any of their SWB models? Perhaps they're coming in the future.

The ergonomics work well, but at a cost — user friendliness does suffer just a bit. This is not exactly a beginner bike (despite the attractive price). The higher BB/pedal height and double bend bars make learning to ride the V2 a bit more involved. Turns require tucking knees inside or outside the bars. The Stratus requires this as well, but it's easier with a lower BB. We call this more advanced or extreme (higher BB) ergonomics. This type of bar is necessary for the design, as the higher BB requires a longer reach to the bars.

Ride and Handling

Stability — The V2 feels stable at all speeds. The bike tracks well and the handling is fluid



The RANS V2 is an exceptional buy at \$1,299. The high BB and double bend handlebar steering isn't as user-friendly as other LWB OSS recumbents.

and graceful. It didn't feel twitchy to me at all, though some riders may feel this as they get accustomed to the high foot placement of the V2.

Performance & Maneuverability — Blame it on the double bend bars — maneuvering the V2 is more difficult than low BB LWB models. Part of this is just the high BB, but when these bars and longer wheelbase are combined, the handling gets more complicated. This was most apparent in low speed, steep hill climbing (switchbacks and zig-zags). If you charge straight up hills, it's no big deal. The V2 is an excellent LWB climber.

The V2 is a fast and efficient bike. It felt faster than the Stratus to me, though not as fast as a SWB highracer. I did feel more efficient climbing with the higher BB.

The V2 has a more advanced ergonomic feel of any LWB OSS available today. Advanced can be a positive, or it can be negative. The riding position is also more extreme (high BB) than other LWB OSS recumbents. Certainly an enthusiast can get accustomed to it, like second nature. The V2 is so stable, that the bike can feel long and slow to maneuver. There is nothing to fix here, you either get used to it, or not.

Owning

Utility — I found the V2 a bit less user-friendly than a low BB LWB, especially climbing and in traffic for reasons stated above. Once accustomed to the bike, the V2 can be a versatile bike and can be used and outfitted for just about any use an owner feels comfortable pursuing.

Options & Accessories — RANS has a great line of options for this bike (see the Stra-

tus article). We didn't try a V2 with a fairing, but Mueller Windwrap has one that fits. It seems like a perfect match and it's our guess that it would definitely increase performance.

Market Competition

The V2's value is exceptional. At \$1,299 price-point competition is rare. See LWB market competition notes on page 21.

Marketing — I don't really understand the RANS V2 and Stratus pricing and the positioning in the market place. It seems to me that bikes should increase in price as the rideability becomes more advanced. If this were the case, the Stratus should be \$1,299 and the V2 \$1,699 (2004 prices).

Analysis

Verdict — RANS bikes look good and are terrific values. The V2 represents the best enthusiast value in the RANS line. It can go up against bikes costing much more.

The V2 was introduced in 2000 as RANS flagship high performance model — a CroMo speedster with a stock fairing selling for just under \$2,000. For 2003 the bike was de-spec'd and the price was lowered dramatically to \$1,249. For 2004 the V2 Formula, with its aluminum frame, will sell for more than double the price of the present CroMo version (\$3,200). This model is lighter and will come spec'd with some special lightweight parts.

While the V2 is a great bike in its own right, it doesn't have a race or speed record reputation like its competitor, Easy Racers. The V2 has yet to enjoy tremendous success, but maybe its time has come.

The bottom line is that the V2 is a cool bike and a welcomed addition to the LWB market.

INFO AT A GLANCE

Specifications

Model — RANS V2
 Type — LWB
 Steering — OSS
 Wheelbase — 65" or 70" (XL)
 Wheel size (front) — 406 mm 20"
 Wheel size (rear) — 559 mm 26"
 Seat height — 21"
 Bottom bracket height — 25.5"
 Weight — 33 pounds (RCN weight)

Frame — CroMo TIG
 Handlebar — RANS Top Loader
 Seat back — Aluminum/nylon mesh
 Seat base — Plastic base/foam
 Seat recline angle — Adjustable

Components

Crank — Truvativ Elita 30/42/52
 Bottom bracket — Truvativ Isis
 Headset — FSA 865 N
 Derailleur (rear) — SRAM 7.0
 Derailleur (front) — Shimano 105
 Shifters — SRAM 7.0 (twist)
 Gears — 27-speed
 Cassette — SRAM 7.0 11-32 9-spd.
 Chain — KMC Z9000
 Gear inch range — 23-118
 Pedals — MKS platform
 Rims — Alex DA 16 black anodized
 Tires (front) — Primo Comet 1.75 100 psi
 Tire (rear) — Primo Comet 1.5 100 psi
 Hubs — Shimano Deore 36°
 Brakes — SRAM 7.0
 Brake Levers — SRAM 7.0

Incidentals

Price — \$1299
 Colors — Galaxy red (2004)
 Accessories included — Pump peg

Pro

- Great value
- Fine performance
- Customizable ergonomics
- LWB for SWB riders

Con

- LWB "tweener" bars aren't as user-friendly
- Bike not as user-friendly as other LWB
- Seat slippage for some
- We don't like SRAM ESP brakes
- No disc brake option

Contact

RANS
 Web: www.rans.com
 Tel: 785-625-6346

**Let Our Advertisers Know That
 You Read About Them in
 Recumbent Cyclist News**

If there is a downside, it's that the V2 ergonomics have a slightly longer learning curve. Enthusiasts will certainly be able to handle the V2, but need to know what makes it different from the low BB models. This seems like it should be the deal maker or deal breaker on the V2.

The V2 is the best performance enthusiast LWB OSS bargain on the market today. The bike has earned it's wings as a LWB OSS recumbent to be reckoned with. We respect RANS' mission to continue with the design evolution of LWB OSS recumbents (in all of their LWB models: V2, Formula and Stratus).

RANS Updates

RANS Seat Foam Update — From the RANS website, "If you have purchased a 2003 RANS Recumbent bike and that bike was shipped between March 1st, 2003 and August 1st, 2003 and are not happy with the firmness of your seat foam, please notify your authorized RANS dealer for a possible replacement. Please note shipping charges may apply."

V2 Formula — The aluminum V2 Formula was not shipped as a 2003 model. RANS' Randy Schlitter says the Formula will now be a 2004 model. We rode the bike at the Interbike Demo in Boulder City, Nevada, this past October. The V2 Formula is both lightweight and fast. RANS is serious about this LWB performance bike: The components are Shimano Ultegra/XT, with Velocity Thracian (or optional HED) wheels, Schwalbe Stelvio tires and a slick carbon fiber seat base. A new, even lighter seat back was shown at Interbike this past October. We're not sure which seat will be outfitted on the bike. We look forward to testing one next season.

RANS LWB History — Visit www.rans.com and check out Randy's "Into The Ride #8: Stratus, How A Classic Was Born"

RANS Slipping Seat Fix Tip: More than one RCN reader wrote to tell us about the way he locks down his RANS seat. Buy a big hose-clamp, encased it in a plastic tube and tightened behind the seat clamp. An under-seat rack can also be a redundant seat brace.

Be sure to first contact RANS if you have questions about tightening down the seat on your RANS bike. ♦



The RANS wedge bag (left) is awesome and the soft foam case (right) is even better. These are wonderful accessories — and better than most we see.



These are the RANS B-37 double bend bars on the V2

Quik-Pak Bicycle Trailers
 Lightweight · 20" wheels
 A serious touring trailer
wraq11@netzero.com
www.quik-pak.com
 Tel. 719-269-7535



AUSTIN, TEXAS **Easy Street Recumbents**
 512-453-0438
 informative website:
www.easystreetrecumbents.com

Yes, we make Accessories!

We don't just make really nice Recumbent bikes, we make really nice Recumbent Accessories, too! Our ever growing line includes the oh-so-nice GlideFlex stem, of course, but it also includes underseat racks, super adjustable universal handlebar risers, ASS handlebars in 8 different width and angle combinations, and even custom fitted, custom made handlebars! And more great stuff is on the way!



www.terracycle.com
 1-800-371-5871
 Dealers: We have a program for you!

ZACH KAPLAN CYCLES
High Performance Recumbents for Transportation

Fairings · Suspension · Lighting systems
 Pedal systems · Excellent Tyre selection
 Wide-range gearing

**Bacchetta · Burley · Challenge
 Greenspeed · Easy Racers · RANS
 HP Velotechnik · ICE · Vision**

Telephone: 510-522-BENT (2368)
 1518 Buena Vista Ave.
 Alameda, CA 94501 USA

Serving the SF Bay Area
 and mail order

E-mail: zakaplan@earthlink.net

Easy Racers has found a design that works.

If there was a criticism, it's in the finish details of the bike. The TIG welds are not the most beautiful, the powdercoat finish isn't the glossiest and the logo stickers don't have a clear coat over the top of them (and a real head badge would be nice). Granted, these are nit-picky criticisms for a very refined bike.

Fork — Easy Racers has the polished chrome Tour Easy, Gold Rush and TiRush forks built to custom Easy Racers specs by Spinner overseas. It's an attractive and problem-free fork. Unfortunately, this universal Easy Racers fork *will not* accept disc brakes. Sometime in 2004 we should see a new Easy Racers fork that will accept a front disc. Steve Delaire (Rotator) has built custom front disc forks for Easy Racers in the past.

Steering — The Easy Racers steering geometry, handlebar and stem may look old school, but keep in mind there's 20+ years of refinement here. Easy Racers offers the most respected and popular LWB handling available.

The steering feel is unique. The straight forward handlebar position is the high point in the geometry, and as you steer right or left, the front end drops just a bit through the turning arc. This makes for a sweet spot when pointed straight ahead which some feel adds to the stability. The Tour Easy handling is fluid, graceful and predictable.

We asked Easy Racers about the old style quill stem, wondering if it would be replaced by a threadless stem. So far there are no plans to change it. The current stem is easily and simply vertically adjustable, which is a failing of stock MTB Aheadset stems. While the Easy Racers stem and handlebar setup easily fits most riders right out of the box, dealers can adapt a long reach/articulated stem for even more ergonomic customization.

Weight — While a basic small size Tour Easy can weigh just about 30 pounds, larger size frames get heavier. Our medium/large weighed just a tad over 33 pound with pedals. With the optional gear, the weight can increase to the high 30 pound range (or more). Our test bike weighed 38.5 pounds with Zzipper fairing, mounts, double leg kickstand, fenders, bottle cages (2), rearview mirror, rear rack, and a heavier 35c rear tire. A Gold Rush aluminum frame will save about 3 pounds.

Drivetrain

Components — The Easy Racers spec is fine. While some parts really stand out, others like the brakes are lackluster. Our Tour Easy was outfitted with the Gold Rush Replica spec option. There isn't much to complain about with this \$275 Ultegra/105/SRAM 9.0 upgrade, other than maybe the price. Our drivetrain worked flawlessly the entire 2003 season.

The standard Sugino crank is not a flashy component, though it's not a bad crank. The Gold Rush upgrade provides an Ultegra Racing Triple. The derailleurs are excellent, including a stock XT/105 set up, whereas the Gold Rush upgrade is an XTR/Ultegra. Both the stock and Gold Rush upgrade have SRAM Rocket shifters, which shift flawlessly and hold their adjustment better than most. The system only needed one major adjustment through the 2003 season.

I'm not a fan of SRAM V-brakes. While the Gold Rush upgrade 9.0 are better than the 7.0, I'd take Avids any day. So far the Tour Easy hasn't eaten brake pads like another SRAM brake equipped recumbents we've tested. In my opinion, the SRAM 7.0 brakes are the low point component on the bike.

Gearing — Our test bike came with a 27 speed triple 30/42/52 crank. Even with the optional (no charge) 11-34 cassette, the gearing is rather high through the range (24-127 gear inches). I can certainly use the high gear, but the low and mid-range gears seem too high for my local terrain. The optional (no charge) 24/36/46 (MTB style) crank solves the high, low, and mid-range gearing. It offers a 19-113 gear inch range. By doing this, you do sacrifice your high gear, which means you will be pedaling faster at high speed. (See page 2: Gear Inch Rant.)

Components II — Angletech offers some neat Easy Racers variations. They offer an ST27 model, which has some nice Ritchey components, a matching Ritchey tire set, ESP 9.0 SL derailleurs, Avid Arch Rival brakes and a Suntour Superbe Pro crankset for \$2,350. Even better is the GL81, which adds a SRAM DualDrive to the above, increasing the gearing range to 18.5-147 gear inches (18.5 is still too high for me). The GL81 costs \$2,500. (www.angletechcycles.com).

Chain Management — The Easy Racers chain tensioner is a spring-loaded derailleur-cage style idler that uses jockey wheels. This system keeps several inches of chain under tension, so that you can have wide range gearing with minimal chain slack. We've seen custom idlers using a modified cage and small recumbent skate-wheel type idlers. This would be smoother and quieter. Local TiRush rider, Jim Giles has done this to his bike.

Braking — Our Tour Easy was outfitted with a front SRAM 9.0 V-brake, which offered excellent braking, and an optional Avid disc brake upgrade (\$100) on the rear. I wasn't as impressed with the rear disc brake's power as I've been on other recumbents. Perhaps the larger diameter rear wheel (700c = 27" diameter) reduces the braking power.

The Easy Racers rear disc option bolts on to the rear dropout seat stay eyelet bolt and the rear QR (quick release). I'll like it better

INFO AT A GLANCE

Specifications

Model — Easy Racers Tour Easy
Type — LWB low BB
Steering — OSS
Wheelbase—63", 64.5", 66", 67.5", 69" and 70.5" (we reviewed M/L 67")
Seat height — 22"
Bottom bracket height — 13"
Weight — 32.75 pounds (size M/L; RCN weight). 38.5 pounds with options.
Frame — Seamless 4130 CroMo TIG
Fork — Easy Racers/Spinner CroMo
Handlebar — Easy Racers Aluminum
Stem — Kalloy Hi Rise aluminum
Seat frame — Aluminum/composite base
Seat material — Mesh/contoured & layered foam

Components

Crank — Sugino/Easy Racers 24/36/46 or 30/42/52; Shimano Ultegra 30/42/52*
Bottom bracket — Shimano UN52/Ultegra
Headset — NA
Derailleur (rear) — Shimano XT/XTR*
Derailleur (front) — Shimano 105/Ultegra*
Shifters — SRAM Rocket 9-speed
Cassette — Shimano 11-34 9-speed
Chain — SRAM PC 58/59
Gear inch range — 24-127.6 or 19-113
Wheel (rear) — 700c x 28c or 35c
Wheel (front) — 406 mm 20"/451 mm 20"
Hubs — Shimano LX/XT + Ultegra*
Rims — Sun alloy/Mavic Open Pro rear*
Tires — Varies
Brakes — SRAM ESP 7.0 V/9.0 V*
Avid disc rear (optional)
Brake lever — SRAM 7.0/9.0*
Pedals — Platform

Incidentals

Priced from — \$1995 + options
Warranty (frame & fork) — Lifetime **
Colors — Red or black

Pro

- Best LWB OSS design/ride/feel/performance
- User-friendly performance
- Most durable recumbent
- Best manufacturer reputation in the business (very friendly folks)
- Extremely versatile (commute, tour, fast century all on the same bike)
- Classic old school design

Con

- Expensive
- Finish and decals could be improved
- Can be heavy with options added
- Disc brake options need updating
- Gearing can be too high
- Some EZR attributes look somewhat dated (dropouts, twin bottom tubes, stem)

Easy Racers Inc.

Phone: 831-722-9797
Web: www.easyracers.com

*Gold Rush component upgrade

**Original owner



Koolback mesh and Super Zzipper

when the bike has braze-on disc mounts, perhaps sometime in 2004 when the disc compatible fork becomes available.

A negative feature of the optional rear disc is that one of the mounts is the rear axle quick release. This means that the QR has to come out of the hub in order to remove the rear wheel, making tire changes a bit more complicated. Another note is that the rear disc brake is heavier, adding 5-6 ounces to the bike.

The V-brake mounts are still on the bike and capped off. During our test, one of the caps fell off the bike and was lost.

Wheels — Whenever I defend the choice of a 700c on this bike, I hear the “wheel strength” argument (compared to a 26-inch wheel). These wheels are plenty tough and the 700c is arguably faster. I’d like to see the EX be available with a 26-inch rear wheel option, though I believe it would slow me down a bit. You can do this yourself with the disc brake option. A 26-inch rear wheel would provide more choices for matching tire sets and lower gears.

Our last two Tour Easy test bikes have come outfitted with a 406 mm front wheel. Easy Racers tells us that the 406 mm front wheel is by far the most popular (over the 451 mm). Some riders feel the 451’s steering geometry is better (slightly taller wheel) and it’s probably a bit faster, though not as durable. My best advice is to base your wheelset choice on your local terrain.

Tires — Our EX was outfitted with a Chen Shin 700c by 35 inverted tread rear tire. The front tire was a Primo Comet 406 mm x 1.35” tire. Both performed well. I learned to love Comet front tire on this bike. A good 700c x 28 match would be nice. Finding a matching 700c and 406 mm 20” tire seat is difficult. Angletech offers one in the Ritchey 1.4.



Our test bike parked at our local Library

Comfort

Seat — The Easy Racers Koolback seat is standard, the composite shell Cobra seat optional. The Cobra gives a better pushing surface and will make the bike a bit faster, though the Koolback is much more comfortable and popular. It’s one of the best recumbent seats made, in design, quality and especially durability.

The seat frame is polished aluminum, and the seat mesh is laced with Kevlar cord. Some owners have replaced the cord with big cable (zip) ties. Easy Racers offered this for awhile, but went back to the cord as it lasts longer. The cord is tied off with electrical tape, and there are hose clamps holding the seat base to the back, and for attaching the seat supports.

Ergonomics — Many riders feel that the Easy Racers ergonomics are as good as it gets. Thousands of owners and fans agree. The riding position mimics that of most automobiles. The seat is rather upright, though has a good recline adjustment. A really laid back position isn’t really possible on this bike.

Some feel that a low BB negatively affects performance, this is not so on an Easy Racers. The riding position is similar to that of many SWB recumbents, just rotated forward. A few riders experience *recumbent butt* (sore butt from sitting upright) with this style of recumbent, just as others have numb foot/toe and neck fatigue problems with laid back/high BB recumbents.

The handlebars remind me of an enhanced version of my Sting Ray bars from when I was a kid. Due to the multiple frame sizes, getting an perfect fit is pretty easy. About the only upgrade I’ve heard of is dealers offering an articulating comfort bike stem. If the bars are too narrow, those from the Sun EZ series bikes are a bit wider. Pat Franz from Terracycles now offers a vertically adjustable and angle adjust-

able LWB OSS bars (www.terracycle.com).

User Friendliness — The Tour Easy is a rather long bike. It’s low seat height and low center-of-gravity, combined with the low BB and the refined steering geometry, make it a breeze to handle in traffic or just about any other biking situation. New riders should feel right at home in just a few minutes.

You may have to tuck one knee outside of the fairing in very low speed turns. I’ve found that having your feet close to the ground on a bike like this (LWB OSS low BB) makes for easy maneuverability in traffic.

Ride and handling

Stability — The Easy Racers LWB recumbents are very stable and secure feeling— especially at speed. The Tour Easy is one of just a few recumbents that I feel reasonably stable at speeds of over 40 mph.

We’ve heard comments about the lightly loaded front end of LWB recumbents. The Tour Easy comes in 7 frame sizes, and with the more upright seating position and low BB, it has a more balanced weight distribution than almost any other LWB recumbent: 65% rear and 35% front. I’ve read some accounts of front wheels sliding out, but in all my years of LWB OSS testing experience, I’ve only had a front wheel slide-out once — on black ice.

Easy Racers LWB handling is the standard by which all other LWB OSS recumbents should be judged. It’s stable, forgiving and doesn’t make you feel as if you’re on a long bike. The road feel of these bikes is excellent, and very popular amongst owners and fans. LWB designers should pay close attention to this refined steering geometry.

Performance — While lowracers and highracers are the buzz, a contingent of happy riders have a secret: The LWB OSS with a fair-

ing. These bikes are fast and easy to ride.

For many riders who prefer *not* to have an extreme (laid back seat + high BB) riding position, this is about the best performing recumbent you'll find. Easy Racers offers user-friendly performance for average folks, and the bike will make you look good and ride fast.

On the flats and downhills, the Easy Racers bikes can accelerate very fast. It's possible to make your roadie (or 'bent) friend's heads spin when you put the hammer down. It's a secret recipe that few other 'bent builders have figured out. Perhaps it's the fairing, the big 700c rear wheel, the low stature or a cosmic reaction when all are mixed together. One aspect that really helps the bike is the fairing that was designed for the sleek Easy Racer bars. Several fairings are now available for the bike. If you want to go really fast, check out the body stocking options.

The Easy Racers bike is a fine climber. I'm a bit more efficient at climbing on a lighter bike or a SWB with a higher BB, but the faster flat land and downhill speeds of the Easy Racers equalize the performance (and can even make it faster). Climbing speed is also where bike weight catches up with it and when the Gold Rush and TiRush options look better.

Many Easy Racer riders are riding with too high of mid-range gearing, which makes them have to shift into granny low too early. A lower mid-range gear may help you climb faster. Gearing is very important (see Gear Inch Rant on page 2).

Owning

Utility — The Tour Easy may be the most versatile recumbent bike available. It's at home running errands in town, riding on bike trails, and the bike is ideal for day rides, tours, fast centuries and even off-road trails.

Many feel that because the bike is long, it won't be so good in traffic. I find this not true. The low BB makes negotiating through traf-

fic easy. I can almost trackstand the bike at stops due to the ideal steering geometry.

Options & Accessories — Here is an outline of the options that are on our test bike. All of these options are decent quality and work well.

Gold Rush component upgrade \$275 — For this sum, you get better derailleurs, a better crank, 9.0 instead of 7.0 SRAM brakes, a better BB and a better rear rim. I suggest you read through the component section and make up your own mind. I'm not offering a 100% positive recommendation on this option, since despite the hefty price tag I'm still stuck with ESP brakes.

Super Zzipper \$279 — I highly recommend a fairing for this bike. The fairing adds a new dimension to the ride and performance. The Super Zzipper is the most popular fairing for this bike. It was designed specifically for the Tour Easy many years ago.

Be sure to check all of the fairing options before you buy. There are fairings from two makers, including the body stocking Zzipper (wider and thicker) with or without a body stocking (needs to be ordered with the fairing). The body stocking gives the bike a new personality and will take your riding to yet another level. All of these fairing and body stocking options are easy to use and add noticeably to the performance of the bike. A rider in our local group has a body stocking and when he puts it on (< 1 minute) I can't keep up with him. For those who don't want to use the body stocking, the Easy Rider Recumbent Club (E.R.R.C.) along with Pat Franz' TerraCycles is now offering a Tail Sok (soft tail fairing) (www.geocities.com/e_r_r_c/).

Disc Brake Upgrade \$100 — See braking.

Carbon Fiber Fenders \$128 — These pricey fenders are handmade by Easy Racers. They look great, and are durable. I do get some chain slap in low gear shifts from the chain to the lower part of the rear fender. There has to

be a less expensive option, but bucks aside, these are nice fenders.

Dual Bottles/Cages \$15 — I still like water bottles and use them. Get these unless you plan to have a hydration system.

Blackburn Mtn. Rack \$49 — While not the best rack you can buy, this one fits and is trouble free. The rack (and panniers) adds weight, so consider what you want to haul as you choose cargo options.

A seat bag, such as those from Sun, Angletech or Hostel Shoppe would be a lighter weight option. If you go this route, keep in mind that your Easy Racers fenders mount to the rack in two spots.

Double Leg Kickstand \$39 — This holds the bike up pretty firm, unless you're on uneven ground. It's the best LWB kickstand made, and far more dependable than most kickstands I've tried.

Multi-Bag \$29 — I used one of these on my handlebar for years. I don't find it necessary now that I have the frame bag (below) and a pannier or two hanging from my rack.

Frame Bag \$20 — This little bag fits in the front triangle of the frame. It nicely fits my wallet, keys and a few tools or a candy bar.

EZ Seat Bag \$40 — Easy Racers offers the Sun "EZ" messenger style bag.

Other bags — The **Angletech Aerotrunk** will fit a Tour Easy (contact Angletech). The **Hostel Shoppe Seat Day Bag \$80** — This bag comes in yellow, red or black, and holds 800 cu. in. worth of your stuff.

Mirrcycle mirror \$15 — This is a must! This mirror fits and works perfectly on the Easy Racers bikes.

Market competition

Comparison — While you may find a better value, there are few recumbents that are this refined, durable, perform as well and have great resale. See page 21 for more comparison info.

Bike Technology From A Different Angle

Stock and Custom Spec'ed Recumbent Bikes, Trikes and Tandems!



Easy Racers TiRush with body stocking



MicWic back-to-back tandem

Bacchetta, Easy Racers, RANS, Vision, HP Velo, Haluzak, Quadraped, mC2, Altitude
CALL 800-793-3038 www.angletechcycles.com

Value — While Easy Racers are wonderful bikes, value is not one of their strong points. The bike is expensive, especially dressed out like our test bike. Money aside, this is a very satisfying classic LWB OSS recumbent.

Another aspect of the unique Sun/Easy Racer line is that the Tour Easy brings improved performance, however, the Sun EZ Sport Limited is arguably a more attractive bike. The problem for buyers is that the Tour Easy is much more expensive. I believe a despec'ed (cheaper) Tour Easy or a more performance oriented Sun LWB should eventually be offered to bridge the gap between the bikes.

Analysis

Verdict — Few recumbents made give you the amazing versatility, quality, durability, user-friendliness, and performance that the Easy Racers bikes offer, all from a very friendly company with the best reputation in the business. Sure it's pricey, and the bike isn't perfect, it's close. If I were to be asked about my dream Easy Racer Tour Easy, it would include the following items:

- More component spec options, with ultra-low or super-wide range gearing options, and more brake options (such as Avid V-brakes and full disc brakes).
- Custom paint options
- Fancier frame build quality (appearance)
- Some RANS-like seat bag options
- A 26-inch rear wheel option on the EX (could be done with a rear disc brake)

Note the optional disc brake, rack and Easy Racers fenders. The "bolt on" disc mount requires removal of the quick release to remove the rear wheel — kind of a hassle.

The Esge double leg kick-stand works very well, however, it's very heavy. Ours weighed about 1.25 pounds



Maya van Leemput takes her Street Machine Gt for a spin in the African desert. Read Agency Future's story at www.hpvelotechnik.com.

You've got your own ideas about a perfect day out. Your Street Machine Gt gets you there.

You deserve the best. The Street Machine Gt is a bike designed completely around the human body. It combines a luxurious fully suspended ride with a totally ergonomic riding position. Superior aerodynamics and mechanical efficiency provide outstanding performance. "The Street Machine Gt is one of the most thoroughly designed packages we have been fortunate enough to test.

The bike itself is delightful to ride" says RECLMBENT UK. "It is probably the most practical and capable recumbent made on the continent" adds BENTRIDERONLINE.COM. Engineered in Germany, our range of recumbents is available from dealers throughout the U.S. and abroad. Arrange for your personal test ride now, and prepare to get ahead of the crowd!

HP Velotechnik



HP Velotechnik recumbents • Bleichstrasse 5 • 65830 Kriftel • Germany • phone +49 6192 979920
fax +49 6192 910218 • mail@hpvelotechnik.com • Please visit www.hpvelotechnik.com for details and a dealer list

Rocket Lawnchair.



In cycling, comfort and speed are often distant relations. Not so with Burley recumbents. Our medium wheelbase recumbents offer laid-back comfort and a BLAST of a ride. Visit our website to find your nearest recumbent dealer! Or call us toll-free at 866-850-5486.

This is a professional stunt rider; do NOT try this at home. Flames not included.



BURLEY

www.burley.com

Most of the above can be handled by either buying a TiRush, or by building from a frameset or by buying from an attentive custom-spec dealer.

Overall, the Tour Easy is one of the finest recumbents made. I've felt this way since the first time I tried one back in 1987. Each time I review an Easy Racers Tour Easy, the bike is more refined than the previous one. Our 2003 is the best so far, and I expect the one we review after that to be even better. ♦

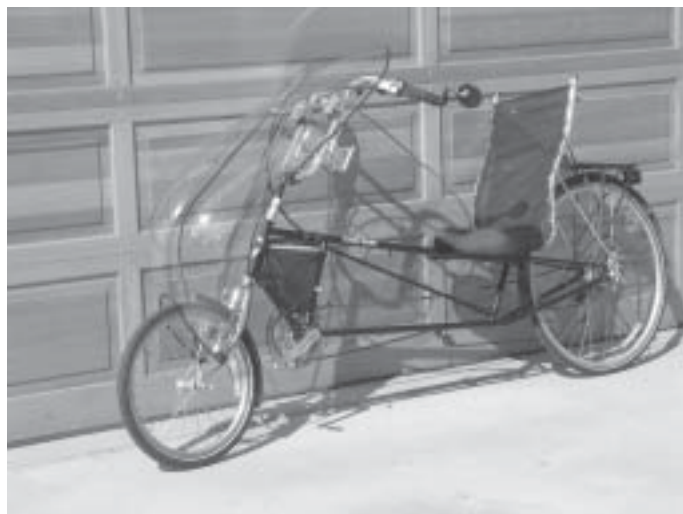
Photo caption & notes

Fairings — The LWB OSS is made to have a fairing. If you don't have one, you're missing out. Here's our test bike refitted with a Mueller Windwrap fairing. The Mueller fairing uses beefier mounts, is larger, heavier, rounder and fuller. It actually changes the handling of the bike a bit. The "tiller" is more pronounced with the added fairing weight out over the front wheel (as compared to a Super Zipper). This fairing is also more susceptible to side-winds. Mark Mueller was gracious enough to send us two fairings for our LWB OSS reviews in this issue. The fairings are excellent quality and fit the bike well.

Contact: www.windwrap.com/

Zzip Designs — Of the Zzipper fairings, I prefer the Zzipper "body stocking" (wider and thicker) bubble shape. Though it's heavier than a stock Super Zipper, I can tuck behind it and get better performance. Which fairing works best for you will be personal preference.

Contact: www.zzipper.com/



Tour Easy with Mueller fairing

Schwalbe — We also outfitted the bike with a set of Schwalbe Marathon tires (406 mm 1.5 front and 700 x 32 rear) and tubes. The Marathon didn't feel as fast as the stock Primo Comet, but it's a better quality and more substantial tire for the off-season. The rear 700 x 32 has a matching tread, and is a beefier tire than our stock Chen Shin 35c tire. Schwalbe sent us a Stelvio 1-1/8" front tire and matching high performance rear tire that we'll mount up in the Spring. The tubes are the best we've ever used. They have metal threaded stems which seem much tougher than the common plastic ones. Schwalbe is a recumbent-friendly company from BC, Canada.

Contact: www.schwalbetires.com

Volae
www.VolaeRecumbents.com

Your Only Excuse Is The Engine

Visit our website today! www.catrike.com

Introducing the Catrike Speed

- * Aluminum frame 6061 T6
- * Weight 30-pounds
- * Mechanical disc brakes
- * 27-speed all-Shimano drivetrain
- * Adjustable seat

Big Cat Human Powered Vehicles
580 Wilmer Ave, Unit F
Orlando, FL 32808, USA
Phone (407) 293-1626
sales@catrike.com



Made in the USA

RCN Long Wheelbase

Choosing A Bike

So which one do you choose? The choice can be difficult when the available bikes are all so good. Since the demise of BikeE, the market for the 20/16 wheel combo CLWB has softened. In contrast, the LWB OSS market is picking up. Manufacturers are finally realizing what Easy Racers and RANS have known for years — that there is a huge potential market for the laid back LWB OSS tourers, performance bikes and cruisers. Here's a bit about the bikes:

Easy Racers Tour Easy — Easy Racers is one of the original recumbent builders. They are respected and loved for their performance heritage, touring prowess, refinement, durability and dedication to LWB OSS. Thousands of Easy Racers have been built over the years by this friendly company. These bikes come with a 700c rear wheel and 20" front wheel. Zipper fairings and body stockings were designed specifically to fit the Easy Racers bikes. Performance oriented aluminum (Gold Rush) and Titanium (TiRush) versions are also available from this respected builder.

RANS is one of the original recumbent builders. The LWB OSS **Stratus** is a better buy than the Tour Easy (by \$300). The Stratus has great specs, beautiful paint and details. The new wide double bend bars add a new dimension to the comfort of the Stratus. The Stratus comes with cool fat 26/20 Primo Comet tire combo which make it very versatile. RANS offers among the nicest seat bag offerings we've ever seen. They also have a factory optional front pannier rack as well. RANS also builds the 20/20 Tailwind LWB OSS.

For 2004, RANS will offer the new **V2 Formula**. This is a good choice if you prefer the high BB and outstretched arm position.

Rotator's Pursuit is a monotube performance LWB that's a bit more extreme than the others. It can be lower, has a comfy full mesh

seat (in several heights and widths) and has lots more gears (mid-drive). Rotator offers this bike in CroMo or Titanium.

Lightfoot offers the rough and tough **Ranger**. This smooth riding dual big wheel bike is ideally suited for rough country, off-road and loaded touring. This is an a fantastic custom big wheel LWB OSS recumbent.

The **Sun EZ Sport** LWB OSS recumbents are licensed Easy Racers designs built in Taiwan by Sun/J&B Importers. They offer stylish, affordable LWB (26/20 and compact 20/16 models, a LWB tandem, delta trike (and upcoming tadpole trike and SWB). The Sun models have a slightly different version of the Easy Racers seat, and are not as performance oriented. These are best selling LWB models.

The **Burley LWB Taiko, Canto and Limbo** models are nicely built LWB monotube recumbents that are built in Eugene, Oregon, USA. The Burley's have a higher BB and linkage steering. Also, see the below 2004 news!

Turner has a new dual 26 LWB OSS as well as a 26/20 LWB USS monotube.

Longbikes also has LWB USS recumbents.

Market Heats Up for 2004

The LWB OSS market will heat up just a bit for 2004 with new offerings from Burley, Cycle Genius and Sun: **Burley** has just announced their new \$900 **Koosah** and \$1,299 **Jett Creek** at Interbike in October. Both are low BB OSS models at very affordable prices. Watch for the new **Cycle Genius** LWB OSS low BB **RDX** (700c/20; \$1,349) and **LTX** (26" 559 mm/20"; \$999) coming soon. **Sun** will soon introduce The **EZ Rider**, a 20/20 wheel combo LWB OSS. This new bike has the curved tube cruiser frame with rear suspension. The bike will be available with a Hiten, CroMo or aluminum frame. ♦

Hampton's Edge Trailside Bikes

Sale · Service · Rentals
Easy Racers · Sun EZ1 · Bacchetta · Catricle
Burley · Turner · Lightning · RANS
9550 East Atkinson Court in Istachatta, Central
Florida on the Withlacoochee Trail
60 miles north of Tampa close to Interstate 75
Email: bentedge@earthlink.net
Tel. 352-799-4979 · Credit cards accepted

Coventry Cycle Works

Oregon's Recumbent Headquarters

- Easy Racers
- Vision
- Haluzak
- Burley
- RANS

2025 SE Hawthorne
Portland, Oregon 97214
Tel. 503/230-7723
www.coventrycycle.com



Greenspeed GTO with body sock at Battle Mountain, Nevada.

Photo by Bill Cook

We sit behind our product Windwrap® Fairings

Weather protection & aerodynamics

Fairings and mounts for most recumbents.
New BikeE and Cannondale fairings available.
Fairings for all EZ series recumbents.
Forward Swing feature for frame mounted fairings—allows easy entry.

Toll Free Phone (US & Canada): 877-267-1645

Phone/Fax: 707-442-8133
mhp02@windwrap.com
http://www.windwrap.com



Mueller
Human-Power
made in the USA



From Bacchetta to Barcroft: The Installation of an M5 Seat

by Michael Stern, mbstern@primary.net

One result of the hoopla from the introduction of the Bacchetta recumbents was the push to center stage of the M5 carbon fiber seat. Hard-shell seats have been offered on American recumbent models before (Turner for one), but they were more prevalent on the European low-rider scene. Bacchetta offered the seat as an alternative to its standard mesh backed seat and it became a sought after option among those looking for more speed from their Strada.

My current bike of choice is a Barcroft Virginia GT. Previously I owned a RANS V-Rex and before that a BikeE. I've test ridden almost every American manufactured model from Burley to Wishbone. I love my Barcroft. While I can find no perfect bike in my recumbent world, the Virginia is as close to nirvana as I have found. It comes with the RANS padded/mesh seat, which I find supremely comfortable. The seat's downside is its weight and cushy bottom. Since I seek more performance from my bike (while also I work on the engine), dropping seat weight and securing a more solid platform from which to operate seemed desirable. Thus I looked into adapting the M5 seat to the bike.

I think analytically. Give me a problem and I enjoy delving into its theoretical details, but I am not mechanical. A friend I met on a bicycle ride, Ben Fox of Springfield, Illinois, thinks mechanically. More importantly, he is

mechanically gifted. He builds things, lovely things. In this article when I say "we" I usually mean "he." Ben owns a beautiful well-maintained P-38. He has owned many recumbents and has made additions to most. He is my "seat guru." Having adapted different seats to his bikes. When I spoke to him about the project he offered his help and guidance (and he did the work). The following is the journey we made to adapt the M5 seat to my Barcroft.

The seat: The M5 seat is narrow by mesh seat standards with a contorted frame that lips at the bottom, provides lumbar support for the small of the back, and then curves up at the top. It has two parallel vertical ribs down the back. It's rounded at the top. It's made of carbon fiber and is very light, about 4 pounds lighter than the RANS seat. It's slightly "cupped" from one side to the other so the body torso sits in it, not on it. It's covered by what can best be described as gray industrial strength filter foam which is attached to the seat with velcro strips. Our seat was made for Bacchetta, and came with bottom mounting brackets attached. It was held to the seat by bolts drilled through the seat pan, and support tubes attached to the top part of the seat by U brackets. Since the Bacchetta and the Barcroft/RANS seat set up are similar, it seemed natural to try this Bacchetta version of the seat.

Availability of the seat: Carbon fiber or other hard-shell seats are out there, but finding them might be a little difficult. Power On Cycling offers its own Swanson seat which some enthusiasts have adapted to their bikes. Fools Crow Cycle offers European hard-shell seats. The big recumbent shops such as Hostel Shoppe, Valley Bikes, Wheel and Sprocket and Calhoun Cycles either have them or can order them. You can also contact M5 directly. Other manufactures such as Novosport and HP Velotechnik make their own seats, but from postings on some of the newsgroups it appears that there was a run on the Bacchetta M5s making long waits a possibility. Not to worry. Ben knew that one of his local shops, BikeTek, had a seat that was a return, so we got it.

Concept: With the Bacchetta M5 hardware already in place, our task was to adapt it to our needs. The Barcroft uses the RANS configuration with a seat channel about two inches wide which sits on top of the frame tube. The back supports attach to the rear drop outs. The RANS seat mounts are aluminum 90 degree brackets with long flanges dropping down on each side of the seat channel. There are holes through the end of the flanges where an easy release skewer is threaded to a receiving piece. The procedure is to tighten the skewer, causing the flanges to compress against the seat channel, which holds the seat in place. Bacchetta uses the same general type of set up (although they use a Delrin ring with no seat channel) so the flanges on their 90 degree angles underneath the seat are not as long. Fortunately for us (we thought) the space between the angles was wider than the two inch wide RANS set up. Their seat support tubes also attached to the rear dropouts so it seemed that with a few minor adjustments we would be set.

Initial efforts: What we discovered was that when the RANS flanges were attached inside of the already existing Bacchetta seat mounts, the distance between the flanges was exactly the space we needed to fit our seat channel. We couldn't believe our luck. Ben, who in addition to being mechanical, also has the equipment to go with it, sawed off the RANS flanges from its bottom section, filed down the joint of the Bacchetta mounts to a true 90 degree angle (there was some rounding of the joint on the Bacchetta mount), and then attached the RANS flanges with screws to the inside of each Bacchetta mount. Screws were used because we were still implementing a concept here and it provided a less permanent option than welding, allowing us an out if our first attempt didn't work. The flanges were screwed in both from the top using the existing screw holes through the seat pan but with longer screws to extend into the RANS flange. Additional screws were used horizontally from the outside of the Bacchetta flange into the

RANS flange. We ordered RANS top seat support tubes (the RANS support tube set up consists of two tubes, a lower one with one hole that fits inside an upper one with many holes and you then line up the holes with the recline angle you want and insert seat clips). The Bacchetta seat supports are thicker and weren't compatible with the Barcroft (RANS) tubes. Our idea was to allow me to interchange the seats by transferring the skewer, unclipping the seat support tubes, pulling off the seat with the top support tubes still intact, putting on the new seat, inserting the bottom seat tubes into the new seat tubes (attached to the seat) and inserting the clips. It was simple, quick, and looked like it would work.

Not ready for prime time: The new seat was attached to the Barcroft frame. It fit snugly, which was great (RANS seats in the past have been known to slip unless the skewer was really torqued, something which I had never been required to do on my Barcroft). The snug fit meant I needed less torque. The seat support tubes were a different matter. Bacchetta's tubes are angled to accommodate their frame. Their rear dropouts are not set as wide as Barcroft's (the support tubes are attached to a bracket which is slightly angled to the outside, following the gentle contour of the seat back, but this angle was different than the wider tube position on the Barcroft). What that meant was that the top tubes were angled in too far so they didn't line up exactly. I could insert the lower tubes into them but I needed slight pressure on the tubes as I pushed the top tubes outward to line them up. It worked, I thought. But it didn't. The pressure to align the tubes caused the bottom support tubes (which were being pushed inward to meet the outward pushed top tubes) to move out from their normal angle slightly and to twist, which meant that the holes in the tubes did not align exactly. They looked aligned, but I couldn't get the clips inserted. I then removed the lower tubes from the rear dropouts, attached them to the upper tubes, inserted the clips, and then, with some slight pressure, moved the tubes outward and reattached them to the rear drop outs. It worked, sort of, but it was hardly a practical answer. The seat clips were now solidly locked in place by the misaligned holes and could not be readjusted without repeating the process of unscrewing the bottom tubes from the rear drop outs. But, it was good enough for the test run.

I started off in my normal middle ring, fourth gear. Great. I moved up into higher gears. Things are cool. But when I downshifted into the lower gears the grinding started. It was the same in each chain ring. If I rode in the larger gears, I was doing fine. Move into the smaller gears, I was riding on what sounded like an out of tune mixer. The problem was quickly discovered.

The Virginia is a semi-low racer, built with



The Bacchetta/M5 seat with RANS lower seat mount

a 48 inch wheel base. Its seat height is 19 inches (compared to 23 inches for a RANS short wheel base bike). It's meant to be longer and lower with a more laid back riding position. The bike works well, very well, but its tolerances are very tight. It is a performance bike more than an all purpose bike which is why I was adding the hard shell seat. The culprit turned out to be the chain path which drops from the chain rings around a mid-bike idler and then goes under the seat to the rear cog. When I moved into lower gears the chain path rose as the chain moved up to the taller rear cogs. That raised the chain line, which ran alongside the RANS seat mount flanges (no problem) but then contacted the bottom of the Bacchetta flanges (outside of the RANS flanges). Because the whole mount (including the Bacchetta flanges) was wider, the shorter Bacchetta flanges were in the way of the chain when it was on the taller cogs. There was also a problem with one of the screws holding a RANS flange in place, but that didn't cause the grinding sound.

Ben's solution: As stated before, I'm not mechanical. I was dismayed over this failure. I thought we were at the end of the road. For Ben it was just back to the drawing board.

A. Seat mount — Since the problem was the Bacchetta flanges, they had to go. Ben took the Bacchetta mounts and cut off the flanges, leaving only the bottom plates. He then had the RANS flanges welded to the Bacchetta bottom plates. This welding was done professionally. When welding aluminum to aluminum it is advised to make sure the person doing the welding knows what they are doing. Then, on the other side of the mount plates he tack welded a thin aluminum plate which was then attached, over a thin rubber strip, to the bottom of the seat, using screws through the Bacchetta pre-drilled holes. He wanted the plate to have some give so the flanges could flex when either the skewer (which would tighten the flanges) or the bolts holding the mounts to the seat bottom were tightened. There would have to be some movement as the bottom of the seat is not completely flat

but gently curves out and up. For reinforcement he also drilled two more holes through the seat pan so that the plate was now held in place with four screws, not two. They were inserted through a small steel strip in the top of the seat pan. This strip is covered by the seat cover so is not an issue. Seat problem solved.

B. Support tubes — Since the Bacchetta support tube angle of descent was narrower than the Barcroft angle, something had to be done to change the angle of the path to the rear drop outs. Ben's solution was to cut off the very top of the upper support tubes, just below their pre-drilled holes, and then re-drill the holes. But the new holes would be slightly off parallel, a little higher on the inside part of the tube, lower on the outside, so the top tube angle of descent was now more to the outside. What this did was slightly change the angle of the end of the bottom support tube (the tube is round until it gets within an inch of the bottom end where it flattens into a lip where a hole is drilled so a bolt can be inserted and screwed into the rear drop out). That caused this bottom lip to be slightly angled away from flush with the rear dropouts. To make it fit securely, a little Kentucky windage solution was used. With pliers Ben slightly bent inward each lip until it lined up correctly. This adjustment was very minor, nothing that would interfere with the integrity of the lip. Seat support problem solved.

The test: The seat was again attached. Now it was time to test the bike. Before even pedaling off, an inspection revealed that this seat looked like it belonged to this bike. The Virginia is a long, low, sleek looking short wheel base recumbent. This seat is consistent with that image. The M5 seat with its short lip requires a laid back sitting position, otherwise you fall off the seat. Laid back is what the Virginia is all about. So, stylistically, this looked like a marriage of equals.

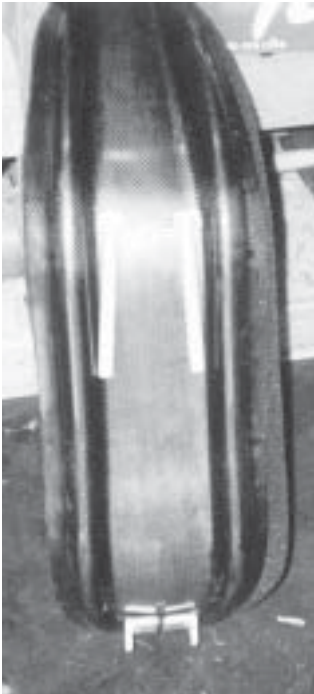
Down the driveway, into the street, up a hill, down a hill, sharp turns, wide turns, the seat held. The shifting encountered no problems. It flew through the test. It worked!

Impressions: As with anything else in the recumbent world, this seat is a compromise. If there was a perfect bike, a perfect seat, we wouldn't have options. But, there is good and not so good to all, and the addition of this seat is no exception.

A. The good. Besides the looks, the seat is a step up in performance. I read somewhere that the reason most riders (not all) maintain slower averages on a recumbent is not that the recumbent doesn't do fast well (it does fast very well, better than uprights in many cases) but because it does slow much slower. Compare climbing times and see what I mean. The hard-shell seat helps with the slower speeds because it provides a solid platform from which to pedal. No backward movement from



Barcroft with Bacchetta M5 seat and custom mounts



Seat ready to mount

a flexing mesh seat back robbing torque from each pedal stroke. I noticed this right away. I could feel how solid the platform was. There was no give. Hills I climbed at 8 mph I was now climbing at 9 - 9.5 mph and sometimes higher. Not a big increase but noticeable. I found at times I was one gear higher. This increase wasn't found on every hill, but I sure wasn't slower on any. I knew I had more climbing speed. At speed the change was significant. Combine a stronger pedal stroke with the more aerodynamic riding position and I flew. I did averages over parts of my rides that I had read other riders did, but which I found difficult to duplicate. Where I did 17 before I was now doing 19 - 20. Down hills where I would hit 23, I was now hitting 27. On longer descents the speed I was attaining was sometimes scary, not because the bike didn't handle it (it rode superbly) but I tend to pull back when I

reach the mid-30's. These increased speeds were not verified in coast down tests or by other objective testing techniques, but I am very familiar with the routes I ride and my results during the 15 months with the mesh seat. I have a normal stop and go city route. It's 30 + miles. There are stop signs, stop lights, hills, twists and turns. My normal average for the full ride is about 13.5 mph. Whereas my average with the M5 seat is about 14.5 mph. Clearly results change with weather conditions and what lights I hit, but I find my times are faster with this seat.

The seat handles inclement weather better. The pad dries quickly. No more waiting days for the thick foam bottom cushion to dry out.

Because of the seat's short lip and lack of cushioning, I find I am using more leg muscle groups. My gluts and quads are both involved in the pedal stroke, where before, with my butt buried in a soft pad, my gluts didn't contribute much.

There is nothing fancy about the parts needed for the switch. All the parts we used are readily obtainable from any of the big recumbent dealers or from the manufacturers. The seat is costly, but the other parts are not. We ordered the stock RANS mounts and the medium seat support tubes. Nor are there exotic steps (other than the welding) to be taken.

B. The not so good. The seat is noisy. Because it is solid with the vertical ribs, an echo chamber effect is created. This amplifies the shifting of the rear cog. I am used to it now but with the mesh seat I couldn't hear the shifting. Now, with the same bike and gears, there is definitely a sound when I change gears. Nothing horrible, just different. I also noticed the rattle of the round rings at the end of the seat clips. I just took some strips of cloth and tied them to the seat support post.

The seat has no tolerance for shifting body positions. Because of the rougher surface of the pad (which despite first impressions is not uncomfortable), you don't have the ability to slide up and down into position like you do with the mesh seats. When you assume your

riding position and lean back, your body may shift but your clothing doesn't.

The seat offers less versatility. Bottle cage mounts could be drilled into the seat back if that's what you want, but the rib requires them to be vertical, inconvenient at best. Also, there are a limited number of seat bags which will accommodate the narrow seat. This turned out to be a blessing in disguise. I felt I was forced to go with a Hostel Shoppe Euro mini bag which I thought was too small for me. This got me to start using a water bladder, and I have a place to put my bottle of Cytomax in one of the bag sleeves. It has enough room to carry other essentials. I can't carry a lot of things, but this is a performance bike with this bag has proved more than adequate for my needs.

It's difficult to imagine someone wide of girth using this seat. I am 5' 7" and 160 pounds. It fits me fine. Someone with a broader beam might wear this seat like a thong.

C. The neutral. From appearances it looks like you are riding on a narrow plank. You aren't. The seat is surprising comfortable. It does provide a more jarring ride since there is less passive shock absorbency, but after about ten minutes I was used to it and it was not a problem.

Because the platform is narrower I tend to rock a little from side to side under hard acceleration. This causes the bike to shift from left to right a little. This has lessened as I become more proficient with the seat, and has replaced the up and down bouncing I used to do under hard acceleration with the cushier seat. I imagine this will dissipate as I become more used to the seat.

The more laid back posture did not fully translate into a more laid back steering stem position. This bike has handled gloriously with the mesh seat for the 1700 miles I have ridden it. But when I reclined the steering stem to what I thought was the analogous angle to the seat recline I encountered some tiller effect steering (basically where the bike at very slow speeds tends to fall to a side. This is created by moving the steering bar away from the steering axis). This was minimal, but coming from a bike that previously handled as smooth as butter it was noticeable. So, I readjusted the steering (not as extreme as I had first had it) and no problem.

Hard-shell seats are known to be hot. I can't say that this seat makes me any hotter than before. Analytically, the seat should be warmer since you don't have the airflow a mesh backed seat gives, but, in practice, I don't feel much of a change.

Conclusion: For recreational riders, for comfort oriented riders, and for riders who might want to increase their speed but ride sporadically, I don't think the conversion would be meaningful. Performance is a combination of a number of factors, the most important

being the engine. For riders who aren't really in to working on their engines I would recommend finding the recumbent you like which coincides with your riding style and enjoy it. I will never be a race leader. I am too old and perhaps too cautious for that. But I want to go faster so I can chase down my wife in her body socked Gold Rush and use less effort keep pace with Ben Fox on his neat P-38. I want to cover more distance in less time and I want to increase my mileage each year. (I did 3200 miles in 2002 and want to add another 20% to that in 2003.)

I love the feel of gearing down and moving on this bike (and this bike does move). For me, I am happy with the change. I am fortunate that I can enjoy this sport, I have found a recumbent I truly love to ride, and I was able to add a new element (albeit slight) to my riding experience. As great as the Virginia was with the stock seat, it is even more inspiring to ride with this hard shell addition. Other seats may yield the same results. For me, this M5 seat addition is a winner. ♦

JAY'S

PEDAL POWER BIKES

512 E. GIRARD AVE, PHILA., PA

Tel. 215-425-5111 • Fax. 215-426-2653

We offer products from **Vision, Linear, RANS, Haluzak, Easy Racers, Santana** and many more.

We ship worldwide. Many models in stock now.

FREE catalog by request.

www.jayspedalpower.com

✚ KneeSavers ✚

These steel pedal extenders move your pedals out 20 mm from the crankarms increasing the "Q Factor" and improve cycling biomechanics, especially in recumbant cyclists. They also allow a more toed out position in those with a toes out/heels in gait pattern. As a result, foot, ankle, hip and most commonly knee pain is eliminated. Visit your local recumbant dealer for more information, or our website:

www.bikescor.com

(800) 548-4447 or e-mail BikeIce@aol.com

SCOR Productions • 12300 E Washington Blvd, Suite W • Whittier • CA • 90606

CYCLE GENIUS
RECUMBENTS

(866) 901-BIKE
(713) 666-BIKE

"Superior power transfer... over what is currently available"
—RCN



The 2003 ALX²

Comfortable, Quality Recumbents from \$450-\$960!

For your local dealer, call toll free 866-901-2453

www.cyclegenius.com

Dealer Inquiries welcome

Your Recumbent Bicycle Source in New Jersey & the Tri-State Area.



JERSEY "BENTS" LLC

What are You Waiting For?

You'll find Jersey "Bents" conveniently located in the heart of New Jersey!

Economy Bicycle Shop

31 George Dye Road

Hamilton Square, New Jersey 08690

609-586-0150

www.jerseybents.com

Phone/Fax 609-259-1404

Bacchetta • RANS • Vision • Quetzal • Haluzak
New BikeEs still available at terrific prices!

HEDIGER CYCLES

Trimuter • Big Wheel • Hed Turner

NEW MODEL AVAILABLE — Large rear wheel with or without **ELECTRIC POWER ASSIST**

1403 Pine St. Highland, Illinois 62249

Phone: 618-654-6740 Fax: 618-654-7266

jhediger@charter.net

Dealers Wanted

www.trimuter.com



Hed Turner



Trimuter

joy isn't even the right word. It's more than that.

Richard Stanford
Richard_Stanford@msn.com

EZ Tandem

I just purchased a new Sun EZ Tandem. The bike is a dream and can't believe it costs under \$2,000. I haven't had a chance to really ride it much due to our awful weather. But I was able to take some of the grand kids for rides on it. What I really like about this bike is the easiness of adjusting the seats. In seconds I can have the rear or front seat in any position, great for the family. My Ryan tandem took an engineer to adjust the front position and almost as bad for the stoker.

The bike has disc brakes and they work very well, but they do make noise, but think it will clear up once I get a few miles on it. The finish on the paint is beautiful, but only comes in gold at this time.

The components are Shimano Deore derailleurs, SRAM Verio grip shifters, Deore disc brakes, Tracer crank, and 27-speeds.

The steering is same as other Easy Racer models. One thing I had to do it to reverse the stem to bring the handle bars closer to me. I think the bike is an excellent value and very well designed and built. I'll let you know more as I ride it more. I'm 66 and my wife is 60 so we won't be setting any records. I have a Dimension Edge bicycle engine that I could in-

stall if the hills become a problem. Right now, I prefer not having the extra weight. It does help on the hills, but one must be willing to continually adjust the motor.

Thanks for all.
John Waring

Recumbent Shipping

I'd like to share with my fellow RCN readers how we ship our recumbents: Over the past few years my mate and I have ridden in many different parts of the U.S. and Canada. To get our recumbents (my LWB Rotator and Robby's BikeE) to our starting point, we have shipped them via UPS and on the airlines.

For the Rotator, I built a carton using Home Depot's thinnest (and cheapest) wall paneling and 1 x 2 pine framing all screwed together. (UPS rules = it can only measure 130 inches-circumference plus the length). To hold the bike in place within the carton, we use quick-release fork gizmo (used to secure bikes in pickup trucks) that bolt to a beefed up part of the carton with carriage bolts. Two big hand holes on each side make those big burley freight loaders happy and make it less likely that they have to kick the box in place! And, remember, in this age of security, to only tape — not screw the top on, for easy inspection. These cartons are a bit heavy and can still be severely damaged, but they provide good protection from rough treatment. The big back wheel goes into its own cardboard box, while the seats and a wheel can fit into a large roll-

ing duffle bag.

We have done at least two dozen of these trips now. On each one, we planned out a 350-450 mile loop route for 7-8 days of riding. We arrange with a motel within shuttle distance of the destination airport to accept our UPS-shipped bikes a day or two in advance of our arrival. Sometimes the bikes ride on the airplane with us and a van taxi/shuttle takes us and the bikes to the motel. Arriving at the motel we put our bikes together, get our gear ready and are able to take a short ride to explore the local neighborhood that afternoon. After a restful night's sleep at the motel, we get up early, jump on our 'bents, ready to start the journey. In exchange for us staying at the motel on the last night also before flying back home, the motel agrees to store the boxes. We have yet to find a motel that has refused us.

Four years ago, we, too 'bented around Holland for two weeks. We flew into Brussels, took the train up to Holland where we rented recumbents. I had an M-5 laid back SWB and Robby had a Flevo (BikeE-like model). We also did a big loop route which included taking the train into Germany and then up into Denmark. Except for riding in very bike-unfriendly Berlin, the rest of the trip we were in bikers' heaven — numerous, separate, well-paved bike paths and routes, very small cars on the roads, and a population that respected biking.

Steve Zrucky
stovitzzrucky@yahoo.com ♦

The Best Value
In Recumbent Trikes

WizWheelz

www.wizwheelz.com
Visit the internet's source for Trike information

or call
269-945-5581

The advertisement features a black and white photograph of a recumbent trike with a large, padded seat and three wheels. The trike is shown from a side profile, facing right. The background is a light, circular gradient. The text is arranged around the trike, with the company name 'WizWheelz' in a large, bold, stylized font at the top right. Contact information is provided at the bottom.

The Gold Rush



Speed, Power and Beauty
Form Following Function



It doesn't get any better than this!

Easy Racers Inc.

Call us today!
831-722-9797

200 Airport Blvd.

Freedom, CA 95019



www.easyracers.com



Easy Racers designed EZ-Series recumbents are a pleasure to ride. You sit slightly reclined, back fully-supported, arms relaxed, neck straight, in a normal sitting position. Compare this with the contorted riding position on a diamond-frame bike. Even after a long day of touring, you're still riding in comfort. No more stiff neck, aching back, numb hands or crotch. No straining either. From cross-country touring to daily commuting to world speed records, Easy Racers has been the leader in recumbent design for over 22 years. And now with the EZ-Series line of recumbents, designed by Gardner Martin, the doors have opened up for entry level riders.

THE ULTIMATE IN CYCLING

Comfort & Price



EZ-Sport



EZ-0 Title



EZ-1 & EZ-1 Lite

EZ-Series Recumbents are distributed by
Sun Bicycle Co./J&B Importers and available from most bicycle shops.
www.sunbicycles.com / www.jbimporters.com