



# Recumbent Cyclist News

The Recumbent Enthusiasts' Newsletter — Since 1990 — #101 Aug/Sept/Oct 2007



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## An All Around Highracer: The Volae Expedition Pro

*"The first purpose-built touring bike with dual 26" disc wheels, brakes and room for fatter tires and fenders — accept no imitators. The world beckons! The Pro boosts our Expedition to full 'steroid' status" — Volae*

**BIKE: VOLAE EXPEDITION PRO**  
**TYPE:** Short wheelbase/highracer  
**PRICE:** \$2500  
**CONTACT:** [www.volaerecumbents.com](http://www.volaerecumbents.com)

By Bob Bryant

**V**olae has quickly become one of the most respected short wheelbase and highracer builders in the world today. The company focuses on customized attention to each bike ordered. The bikes can be personalized through Volae's several models, options and accessories. Additionally, all Volae frames

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## RECUMBENT CYCLIST NEWS

Recumbent Cyclist News was published by Bob & Marilyn Bryant from 1990-2007, 101 issues. RCN was closed in December of 2007 when it became no longer financially feasible to publish a print newsletter. [bryantrj@gmail.com](mailto:bryantrj@gmail.com)

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## Editorial License

### Ramblings of #101

by Bob Bryant, Publisher

For this edition of RCN we have really covered the spectrum of bikes. From the cheapest recycled homebuilt, to the semi-recumbent Day6 to one of the best bents we've reviewed — the Volae Expedition Pro.

While still tiny, the recumbent world crosses a vast spectrum of laid back and comfortable bikes. From crank-forwards, to casual semi-recumbents, touring short- and long-wheelbase bents to fast highracers and trikes. Heck, we've even covered kick scooters and recumbent boats in past years. Finding the balance of what to cover can be difficult — and we rely on your letters to tell us what you are and are not interested in — so keep writing!

### 2008 RECUMBENTS

We've started collecting information for 2008 recumbent model changes. If you have any rumors, tips, or new product information, please make sure we have it by the end of October.

The way in which new products are unveiled is changing. In the old days, we went to Interbike in the Fall to see all of the new surprises. A few years ago there were Interbike reports on the Interbike the night of the show. In the last few years we've seen manufacturers start making announcements before the show, and some not attending the trade shows at all — thus moving towards making Interbike redundant for the recumbent world, but the show is still fun.

Here it is late August as I write this and 2008 product announcements are starting to come in. We were baited by RANS' Randy Schlitter (see rumors in Dave Wilson's Dynamik Trail review). HP Velotechnik and Volae have announced folding or take-apart models, HP Velotechnik a new mesh seat. We've heard rumors of other big line changes, but we've been swarmed to secrecy on them.

### OTHER MAGS

For many years I have been stating that RCN is the ONLY recumbent print publication — and nobody has ever taken me to task on this — until the last issue. While RCN is the only real commercial publication with ads and reviews. There are other mags, most notably some recumbent club newsletters and *Recumbent & Tandem Rider Magazine*, that also covers upright tandems. It was not our intention to offend anyone in our 100th issue editorial.

Viva Recumbency!  
Bob Bryant

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New Sun rack with tadpole



New Sun rack with LWB & upright

# Recumbent News

## CHEDDAR CHEESE CHALLENGE

Every year, for the past 15 years, I have been involved in racing recumbents and human-powered vehicles by directing WISIL's race event at the Kenosha velodrome, the Cheddar Challenge. Last year, in addition to our competitive races, Harry Wozniak, from Wheel & Sprocket, sponsored a fun event between the regular races; the fastest 1K on a bike that he provided. This year, Harry wanted to involve more people, so he made the event a "matched time event", dubbed "Hurricane Harry's Challenge" (after a sign made for him at the W & S Expo in April). Harry took the provided bike, a WizWheel TerraTrike Zoomer, and rode a timed lap around the velodrome (including a momentary stop while he checked his wallet to make certain he had brought the \$300 in prize money). The time was recorded, but not revealed to the would-be contestants. Many rode around the velodrome very slowly to try to match Harry's pace (some taking twice as long--they must have thought Harry was a real slug!). Some stopped in the middle of the lap like Harry did, but the winner, Mike Mowett, from Michigan, put on a real show, including picking up the bike and carrying it over his shoulder for part of the lap, and then very slowly rolling the last foot, to come within 0.7 seconds of Harry's time! All without the help of a timer or coaching. Second was Bill Cassidy of Illinois, and third was John Lian, of Maryland, all within 1.5 seconds of Harry's time. For more info on the racing results and photos of racing at this year's Cheddar Challenge, see [www.wisil.recumbents.com](http://www.wisil.recumbents.com) — Dan Glatch (See photo center.)



Cheddar Cheese Challenge race winners (Mike, Bill, John, L - R) and Wheel & Sprocket's Harry Wozniak on the WizWheelz trike.

cumbent is no longer in production (it was not in the 2008 lineup at the Giant USA website. Too bad, this was a cool bike.

**HP VELOTECHNIK:** A new Grasshopper FX, folding 20"/20" short wheelbase model, will be introduced for 2008. Also coming are seat wings for the Scorpion's shell seat as well as a new full mesh seat option.

**LIGHTNING CYCLE DYNAMICS:** Has just unveiled the new and improved \$1495 Phantom SWB. This SWB comes in two sizes to fit more riders. [www.lightningbikes.com](http://www.lightningbikes.com)

**ROTOR USA:** Rotor's Howie Cohen retired in July. Kervin Quinones has taken over the

reigns at Rotor USA. We wish Howie a great retirement and the best of luck to Kervin with the continued success at Rotor USA.

**SUN RECUMBENTS:** The new SunLite Recumbent car racks are manufactured by Hollywood Engineering and exclusively distributed by J&B Importers. This rack is based on the new Hollywood Sport Rider SE platform and will accommodate either: 1-three wheeler (adult or recumbent, delta or tadpole style) or 2-two wheelers (from kids bikes to long wheelbase recumbents). These racks are available now and retail for around \$350. Feature: Easily adjustable wheel holders, Fits 2-regular or 2-recumbent two wheel bikes or fits 1-adult or 1-recumbent trike, Padded top clamps, No-wobble no-tools hitch system, Folds flat against car when not in use also tilts down for rear access. Comes with 2 small wheel adapters, 2 curved hooks and 1 flat hook. For more information, visit your local Sun Recumbent dealer. (See photos on page two).

**VOLAE:** Just before press time it was announced that a new knock-down (take-apart) frame option is coming soon from Volae. According to sources who have seen the new product, the system uses the seat mount holes (in the center of the main-tube) to light up the take-apart sections. This sounds very cool.

**VERSA TRIKE:** This is a new CLWB recumbent trike. Apparently it was designed with special needs in mind, but anyone can ride it. It is a basic 20"/16" delta trike with a Shimano Nexus 7 hub. It reminds me of the old Haluzak trike. [www.versatrike.com](http://www.versatrike.com). ♦

## RECUMBENT NEWS

**ADVENTURE CYCLING:** Published a recumbent special edition for July/August 2007. The issue includes a recumbent essay by Bentrider's Bryan Ball, a touring article by Chet Rideout and another by Dan Price (Eat, Ride, Draw, Sleep; The Great American Trike Tour).

**BACCHETTA:** The new Bellandare LWB will soon be available. The bike is equipped with SRAM SX5 and has an MSRP of \$1300.

**BURLEY:** The Burley LWB production equipment has come up for sale. See the classified ads in this issue.

**EASY RACERS:** In mid-June Easy Racers quietly increased their prices. The Javelin is now \$1595 (formerly \$1395), the Tour Easy is now \$2495 (formerly \$1995) and the Gold Rush is \$3495 (formerly \$2995). These are significant increases to say the least. The specs do not appear to have changed. Easy Racers did not send this information to any media outlet, we got a tip from a web forum poster.

**GIANT:** We were unable to verify this story, but it appears that the Giant Revive semi-re-

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# Letters

Email: recumbencyclist@gmail.com

Please write us. Letter limit is 300 words (or write an article).  
We edit for clarity, content and space limitations.

## TRIKE CRASH/TRIKER 72 UPDATE

I have been gratified by the responses that have appeared from time to time regarding my trike crash last year (original letter published in RCN 096). Ian Sims' letter in RCN 099 was great! It answered some of the burning questions I have had about improving independent breaking performance in trikes — especially tadpole designs. Since returning to riding my tadpole, I have found using one brake, getting more familiar with- and preparing for- my trike's reactions has made things nicely controllable and much less scary for me. Certainly, it helps that I have taken your advice by adding a clipless peddle system and never letting my speed get out of hand — AGAIN! Thanks for the very good counsel! I also want to thank you, Ian, and all the other bent folk who have expressed hope that I would achieve full recovery from that memorable and educational introduction to tadpole trike stability and independent braking problems at speed. I'm happy to report that, aside from occasional reminders from my right ankle, I am entirely recovered and, as you saw, back on the trike. I was, and am, very fortunate that I can hike, bike, and walk, about as well as I did before the crash. There was a frightening time, during repairs, when that was not guaranteed.

Lee "Triker 72" Clark

*Editor's Comments:* We're glad that you have healed and are back riding your trike!

## CRASH & TIRES

I crashed yesterday due to my own carelessness, but I crashed today on my RANS V-2 for no reason other than the tires (stock Primo Comets) have no gripping ability when laying the bike down in a turn on a dry, clean, paved road, at 18-20 mph! I could find no reason on the road surface for the bike to have just slid out from under me. So, I have to surmise that the tires/tread (or lack thereof) are incapable of gripping the surface when performing a laid over turn? Are there any tires out there that do have a gripping tread and compound? My local bike shop recommended mountain bike tires.

Terry Victor

*Editor's Comments:* Mountain bike tires are a bad idea unless you're riding off-road. Schwalbe is a good brand of tires to check out. They rate the "grip" of each tire model on their website. Here are some other thoughts:

1. Different recumbent configurations handle

differently in situations like this. You may not have crashed on a short wheelbase with a more balanced weight distribution — or maybe you pushed the bike too far — cornering too fast.

Long wheelbase recumbents are mostly safe handling bikes, but they go down quickly if pushed too far. Usually it has to do with losing traction on your front wheel and skidding out. A too late steering correction can also make the situation more difficult.

2. Wet pavement, sand, gravel, correction or weight shift or any combination of the above can make things worse.

3. With higher bottom bracket recumbents, a foot retention device of some kind becomes more important. However, these can add different dimensions to the safety of your bike. I know riders who swear by clipless pedals. Other riders who refuse to use them, a rider who uses old style toe-clips on a high bottom bracket short wheelbase and even one who uses "pegged" mountain bike pedals and bike shoes (me).

4. The potential for crashes increases dramatically as your speed goes up. My guess is that at 10-12 mph, you couldn't have crashed. Many bike trails post speed limits of 15 mph. There is a good reason for this. You have no business pushing your bike hard into corners on a bike path.

## LWB WASHOUT & TIRE PRESSURE

I've noticed in RCN Letters, that a few LWB riders have had problems with front wheel washout (sliding or skipping sideways on corners). I have a suggestion to make. The UK A to B Magazine discovered that on most real road surfaces, there was an optimum pressure for tires to get the lowest rolling resistance, and what is more, that pressure depended on the weight loading on the wheel. Thus for a bike with more weight on the rear wheel, the lowest overall rolling resistance was achieved when the tire pressures were adjusted according to wheel loading. Thus for example if you were running our Scorcher tires, which are rated 40 to 100 psi, on a bike where you had say 140 lbs on the rear wheel, and only 70 on the front, then you might run 100 psi on the rear, and only 50 psi on the front. So while it might seem counter intuitive to let the front tyre down, it should actually give better grip and lower rolling resistance, due to less vibration. Thus, I would suggest measuring your wheel loadings with some bathroom scales, and see what happens when you adjust the tire pressures. And take care!

Ian Sims  
Greenspeed

## SHORT CRANKS 1

I'm a recumbent newbie. I've had some upper back trouble, and wanted to keep riding, so in the fall of last year I bought a Sun EZ Sport AX from Mt. Airy Bicycles here in Maryland. The stroke felt awkward and inefficient, and I saw some of the discussions of crank length in RCN, so I decided to try a shortened crank. I contacted Mark Stonich of Bikesmith Design, and he sold me a Dimension crankset shortened to 154 mm. I went from 170 mm down to 154 mm, and also got smaller chain rings (46/36/24, down from 52/42/30). The new crank length felt more natural right away, and I think the down-gearing was a good idea too. So far I haven't needed either the lowest or highest gear of the new setup, but I've come closer on the low end. I'm still getting used to the bike, and starting up can still be a challenge when I'm on an uphill grade. I'm already thinking that after a year or two I may upgrade to a lighter, faster bike. But for now I'm having fun and I can ride without back or hand pain, so I'm happy! Thanks for the useful info in RCN!

Mike Holmes

## SHORT CRANKS 2

After reading the "Short Crank" article from RCN 090 (now online at our blog — ed.), I'm certain my knee problems are as a result of long cranks. I sold my first Easy Racers Tour Easy because of my failing knees, and after an operation, bought another because I missed biking so much. It's shorter cranks for me.

Don Peters

*Editor's Comments:* A key ingredient to the short crank plan is to lower the gearing. If you usually ride with a stock Easy Racers 24/42/52, I'd suggest a 24/38/48 or even 24/36/46. I have been told to reduce chainrings by 10%.

I find that MOST recumbents are geared too high. Pushing too high of a gear can lead to knee pain and/or knee problems. Many forget about the mid-range gear. Many recumbents come with a 42 tooth chainring, which is just too high (if your bike has a full size rear wheel). Starting out on any kind of incline with a 42 tooth ring can strain your knees. See the RCN short crank article at our blog for current resource links.

## INDUSTRY SHRINKING?

I began riding recumbents in the mid 1980s. I read the account of your recumbent journey with a sense of having traveled the same trail. I have been a reader of your publication and follower of the recumbent bicycle business for many years and have seen the things you chronicled. It has been amazing to me to see how the recumbent business has changed during that time. I watched it grow from basically a garage based business to an international corporate scale and then shrink back to nearly the same place it started from. I am at a loss to

explain why, but as they say, "why ask why"?  
Ron Bensink

**Editor's Comments:** I think your comments really captured what is going on in the recumbent world. While sales may be higher than in the 1980s and early 1990s, the number of manufacturers is decreasing. The types of bikes (and trikes) that are selling is changing a bit and bikes sold are being redistributed to different manufacturers. I just heard of one more manufacturer who may have ceased production and I know of two well known manufacturers who are not displaying at the Interbike show. I think the enthusiast side of recumbency is healthy, but we still need an entry level to nurture new riders into our sport. I have heard a few 2008 rumors that give me hope.

#### PINNED PLATFORM PEDALS

In your Nov/Dec 2006 issue (RCN 097) you mentioned "pinned downhill mountain bike platform pedals." Can you please tell me where I might be able to find these pedals?

Al Dempsey

**Editor's Comment:** These are wide platform (non clipless) pedals designed for BMX and downhill mountain biking. They have tiny pins on the pedal surface that hold your feet on the pedals. My feet have never slipped off of these pedals. Look for aluminum or magnesium pedal body, Cro-Moly axle, and/or cartridge bearings. The cartridge bearings definitely make the pedals spin easier. My current favorites are The Wellgo Magnesium (from Angletech and online mountain bike shops) and the Tioga Monoblock XL (from Wheel & Sprocket). Here are some others: Sun/Ringle Zu Zu, Azonic Fusion, Truvativ Holzfeller, Syncros Mental, Wellgo, Crankbrothers, DMR, Shimano, Xpedo and Sunline. Google and one of these brands to find the pedals, or visit an online MTB parts seller like JensonUSA.

I have some cheapies called: Bulletproof alloy platform pedals which are decent pedals. Any bike shop that orders from J&B Importers can order these pedals (\$20-\$25 retail). I previously used Pyramid Bear Trap pedals, but my bike fell over and bent the cage (also around \$20), so I don't like them as much as I used to. Nashbar has some similar house brand pedals in the Landcruiser and Jaws. The Landcruiser looks like an exceptional buy. Look for a 9/16" MTB pedals with a chromoly steel spindles and cartridge bearings. You can find other reviews online at mtr.com.

I use these pedals on all of my recumbents and uprights. I am not against clipless pedals, I just prefer platforms for my local rides and commuting. Please consider upgrading the very basic platforms that come with your recumbent. Most are not wide enough and won't hold your

Letters . . . continued on page 22



These are my fancy CNC aluminum Tioga Monoblock XL from Wheel & Sprocket. The cost around \$100. These are the fanciest of the three types. The downside is that the pedals come with a sticky protective film over the polished aluminum. I couldn't get all of the sticky residue off the pedals. Also, you get to screw all of those tiny pins into the pedals.



These are Bulletproof alloy platform pedals. They do not have cartridge sealed bearings, but they do come in red, black and alloy and cost \$20-\$25. We also saw these listed under the Wellgo brand name, as well as in a few other colors.



These are the excellent Wellgo Magnesium pedals. They come in several models and cost \$40-\$75. My most recent ones came from Angletech Cycles.

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are hand-built for Volae by Waterford Precision Bicycles in the US.

The crew at Volae shipped us a 2007 Volae Expedition Pro to test in early June. Perhaps you've heard that we don't like highracers here at RCN. Well that is totally NOT true. We were the first to write about the big wheel bikes and have written many complimentary reviews of them. It has been some time since I've tested a highracer. For whatever reason, I'm just not given enough opportunities to do so very often. It has been a few years since I had a Bacchetta Giro26, Corsa, RANS F5 (now Enduro) or Volae Club here to test.

**USE:** The Volae Expedition Tour is best suited for long and fast day rides. It is a highly versatile highracer offering lots of clearance for fatter tires, fenders and racks. I found the bike quite stable and forgiving even on unpaved trails of my daily commute.

**COMPANY:** Volae is run by the Garthus family, the owners of the Hostel Shoppe in Stevens Point, WI and publishers of an excellent recumbent mailorder catalog. The Volaes are designed by Rolf Garthus. They were originally built by the former Vision Recumbent company (Vision produced the first US-built highracer that I ever saw). According to the company's website, Volae means "You Fly" in Italian.

**COMFORT:** This model comes with the Volae carbon shell seat. The seats are made for Volae by We-no-nah Canoe in an overseas plant. The seat is lightweight (1.7 pounds, medium size), beautiful and fit me well. Having not ridden a shell seat over the past few years, it took me a few adjustments to get the right recline angle set.

The Volae seat braces telescope with hex bolt clamps offering an infinite adjustment range — no pins in holes. The seat stays seem very stiff — which is what you want for power generation.

The mainframe seat mount consists of two quick releases that run through plates that connect to the seat base. The quick releases run through the frame. The seat plates are slotted so the seat slides several inches with the quick release range. This is the single best seat mount we have tested on a recumbent. It should be the industry standard. I have never experienced a slipping Volae seat. Seat removal is simple and takes a minute or two.

The seat cushion is a mix of open- and closed- cell foam. It is quite breathable and comfortable. My XL sized body could have used a bit more foam on the base, but I was never uncomfortable. The one minor criticism I have is that the seat foam is apparently cut freehand and the cut was not quite perfect. Volae offers an optional mesh seat which is very similar to the old Vision seat. (The mesh seat comes standard on the Expedition model.)

I had no real pressure points, no neck dis-



The Volae seat slider mechanism is the best in the industry (in our opinion). It locks down tight and is user-friendly.



The robust telescoping seat stays offer infinite adjustment rather than matching holes with a ball-detent pin.



The big 26" Volae fork with disc brake.

comfort or any ergonomic issues with this Expedition Pro or the shell seat.

**BIKE FIT:** The Volae bikes are the best fitting short wheelbase and highracer models in North America. When you order a new Volae, you must submit a host of body measurements including your height, weight, measured in-seam, Volae measured x-seam, seated shoulder height, standing shoulder height, arm length and shoe size. The bike then magically arrives perfectly suited to your body. I have gone through this process twice and it works! These are the best fitting highracers I've tried. There are no excuses — just a carefully refined process.

**RIDE:** When the Volae Expedition Pro first arrived — I was nervous to take it out on the Port Townsend weekly recumbent ride. I told the guys I'd be hanging back while I got up to speed with the new highracer. But this didn't last too long and I was effortlessly cruising faster than I'd ridden for some time.

Think what you like about the highracer design, but one thing is for certain — these big wheels ROLL fast. Despite my lack of time on this bike, I knew it was fast from the moment I climbed aboard. I immediately was cruising out in front of the pack — and everybody took notice. The highracer position transmits power efficiently to the rear wheel like no other recumbent design I've tried.

I was also nervous to climb my local steep and slow hills. Umatilla Hill in Port Townsend is one of these long steep hills that seems to never end. While I usually shift into granny low and slowly crank to the top, with the Expedition Pro, I left it in the middle chainring and never really needed to shift down. I finally shifted into the small chainring at the very top of the hill just to see what it was like. Note to self: highracers can climb!

The Excursion Pro's dual big wheels are ideal for making fast tracks down the open road. The speed and acceleration flat out amazed me. Much of my riding is through wooded trail shortcuts, to town on errands and scenic (rough) old roads in and around our county. The Volae Expedition adapted to my daily ride better than other highracers I've tried. However, it isn't the best design for this type of terrain. A lower bottom bracket recumbent, such as the short wheelbase Volae Tour or Century, would have been better for urban low-speed and on/off, start/stop riding.

#### FIT & FINISH

**Frame:** Volae frames are built of Reynolds 4130 CroMoly. The frames are TIG welded for Volae by Waterford Precision Bicycles in the US ([www.waterfordbikes.com](http://www.waterfordbikes.com)). Each frame is also carefully aligned, which is something we don't hear much about in the bent world.

**Fork:** The fork is a threadless black alloy with disc. Another bright spot is that the threadless headset adjusts more like a normal headset compared to other brands (no two-person,

two-screwdriver adjustments).

**Steering:** The handlebars are custom Volae-style tweener bars. They have a cross section that is welded to the outside bars. This creates an open ended tube opposite the grips that can accept a Mirrycle rearview mirror (\$17). The stems used depend on the measurements supplied when you order the bike. I've now experienced two perfect test bike set-ups from Volae.

**Paint and colors:** The candy red paint is actually quite dark. The color is under-stated and suits the bike nicely.

**Weight:** The Pro weighs 29 pounds. Disc brakes tend to add a pound or so to a bike, so this isn't the right model for a roadie-weight weenie. However, it is the right model for a guy like me who wants a more robust bike that I can ride through the wooded trail shortcuts now and then.

**COMPONENTS:** If you love to hate my retro-grouch component rants — then this section should throw you for a loop. I loved the way this bike was equipped. There were no token cheap parts on it. I wouldn't change a thing about the Expedition Pro's component specifications.

The crank is a stunning Truvativ Rouleur Carbon GX with Giga-X pipe Mega Exo bottom bracket. While this may sound like some foreign language or secret code, let me just say this is one sweet crank. It is carbon fiber. Mega Exo means that the bearings are mounted outboard of the bottom bracket shell and the spindle is an integral part of the crankset. I've had these on two test bikes and love them.

The Pro is shifted by a SRAM X.0 rear and Ultegra front. The twist grips are X.0. This was the first time I've ever tried these. The rubber is soft and has this unique pattern that sort of massages your palms as you grip them. RCN readers know that I love to hate twist grips, but I loved these X.0s. Shifting is quiet, smooth and fast.

**GEARING:** The 30/39/52 crank offered perfect gearing for this speedy bike. I did not require any lower gearing and I climbed most of our local steep hills. A 26-tooth inside chainring or an 11-34 cassette would be a good choice if you were going to climb mountain passes, but for most, this gearing will be ideal.

**CHAIN MANAGEMENT:** The Volae power-side of the chain rides over a large diameter idler. The slack side rides over a small diameter idler at the head tube. This is the classic style of short wheelbase chain management. It is close to what RANS uses on the F5, but different than the Bacchetta X-path. We criticized the Volae chain noise on our previous bike, but this one seemed quieter and more refined. You can get an optional Terracycles idler for this bike.

**BRAKES:** The Expedition Pro comes with Avid BB-7 discs. These are quite simply the best mechanical disc brakes around. They have incredible stopping power. Our brakes needed almost no adjustment while the bike was here, but I did have to clean the rotors and calipers after getting caught in the rain twice during our June test!

**WHEELS:** Volae recumbents are equipped with excellent wheels — whether you order the base Tour model or the high-end Team model. Volae builds their own standard wheels (see their catalog for good Deore hub/Alex rim replacement wheels), and offers Velocity wheels on several models. The Pro gets Mavic XC717/Shimano XT disc wheelset. Man these are sweet — lightweight and robust — my kind of wheel. They are a great choice for this bike: high quality, trouble free and good looking. Again, kudos to Rolf and the staff for not cutting corners in the wheel department.

**TIRES:** The Pro comes with Continental Sport Contact 1.3" 85 psi tires. These are basically slicks with a slight tread pattern that is basically a wide "S" pattern that looks like the tracks of a downhill skier through the snow. I have had no other experience with these tires. They worked great and I have no complaints about them. I rode in the rain three times. They ride and perform well.

**UPGRADES/ACCESSORIES:** Since Volae is affiliated with the Hostel Shoppe, there are many upgrades and accessories. You can get pretty much any accessories that you can imagine: from fenders, bags, Rotor cranks (+\$500), to the Old Man Mountain rear rack (\$99), and the TerraCycles EasyReacher under-seat pannier rack (\$120), fenders



The Volae Expedition Pro

etc. We had some Planet Bike mountain bike fenders. Mounting them up took about 10 minutes.

We got a chance to try the Hostel Shoppe's Euro Seat Bags. They are designed to fit Euro shell seats. The small bag (350 cu. in.; 304g) will fit a 50 oz. bladder, spare tube, mini pump and a few tools. The larger bag (1050 cu. in.; 450g) will fit a 70 oz. bladder and everything you need for a day ride. The slick black bag caps over the top of the seat. Two stick-on velcro straps hold it on.

**COMPARABLES:** The Expedition Pro is an upgrade to the Expedition model (\$1875). The Expedition comes with a Volae mesh seat, X.9/Microshift drivetrain, Truvativ Elita triple crank and Velocity Aeroheat wheels with Kenda Kwest tires. The Expedition/Pro are similar to the RANS F5 Enduro (\$1895) and Bacchetta Giro26 (\$1575). The Giro has an SRAM X.7/Microshift drivetrain, BB-5 discs, Alex wheels and an imported CroMoly frame. The RANS F5 Enduro has a trussed CroMoly frame, SRAM X.7/Microshift drivetrain, Avid BB-7 disc brakes and Jetset disc wheels.

The Volae frame isn't ovalized like the Bacchetta or trussed like the F5, but I found the frame stiff enough, and it offered a smooth enough ride (although this could be due to the choice of tires). In fact, the Volae also has very stiff seat struts that seemed to make a difference in the bikes performance.

Choosing the right highracer is often about what design you identify with, which seat (and bike) is the most comfy and/or performs best for you and who makes the purchase process easiest for you.

As for the Volae line, if you want a racier highracer, check out the Club or Team. If you think a highracer will be a bit too extreme for you, check out the 26"/20" Century and Tour models.

**PURCHASE:** Once the house brand of the Hostel Shoppe, Volae has opened up its bikes to dealers for 2007. If you order by catalog, here is how it goes: Once you select your model, you submit your measurements and make your order. Our Expedition Pro was ready to go in about a week after we ordered it. We received a confirmation that the bike was being shipped via BAX global. I checked the status and found out the bike was leaving Chicago O'Hare airport. The next day I got a call from the shipper who wanted to deliver the bike to me — a day early.

The huge Volae box is custom built for the bike. I popped open the top and lifted the bike out. I then set the seat recline, checked the x-seam measurement (it was really close, but I slid the seat forward an inch or so). I then tilted the handlebars to suit my preference. I went to pump up the tires, but they were already at pressure. Ten minutes later I was riding down the road. This is the way all recumbent purchases should be. This is the best recumbent direct purchase program we've tried.

**RECOMMENDATION:** While not as light as aluminum, titanium or carbon fiber, Volae recumbents are welded of Reynolds CroMoly steel frame in the US by one of the most respected builders in North America. This is a more classic and traditional approach to building

bikes. While Volae builds fast and light bikes — the Expedition Pro is a more all-around or robust highracer.

Dealing with Volae was a first class experience. And if for some odd reason you don't like your new Volae, they have perhaps the best return policy in the business (see their website).

I've been impressed by Volae's marketing. While some manufacturers trash talk their competitors online, you don't see Volae involved in this. Volae has a lower key approach. Their Yahoo group seems to be a friendly place for fans, and Volae's sister company, the Hostel Shoppe, puts on a wonderful recumbent rally in Stevens Point, WI, each summer.

You rarely see Volaes for sale on the used market. This is the kind of review experience that makes me feel lucky to be a bike road tester.

For those who don't have a dealer, Volae does an exceptional job of selling recumbents — from the website. With assembly, pre-adjustments, email notification, big box, easy assembly — all bases are covered.

The Expedition is Volae's most popular model — and I can certainly see why. The Pro takes that popular model one step further, upgrading it just a bit. The Expedition Pro is a very sweet bike in every detail — an enthusiast's dream bike — and based on our experiences with this company, they are an absolute pleasure to deal with.

**HIGHS:** Friendly Hostel Shoppe/Volae staff. High quality made in USA (Waterford). Fantastic spec. Fast & Comfy. No short cuts or crappy parts. Unsurpassed direct sales program (fit, delivery, presentation and ease of set up).

**LOWS:** Seat foam trimming wasn't perfect. One color choice. One minor paint defect (chip on rear non-drive chainstay near cable tabs).

**RATING:** ★★★★★ 1/2 (4.5/5)

**NUMBERS:** Wheelbase: 45-47". Seat height: 25". Bottom bracket height: 33".

**Weight:** 29 lbs. Weight limit (rider & cargo): 250 lbs.

**FIT:** The bike comes in four sizes.

**FRAME & SEAT DETAILS:** Frame: Reynolds 4130 CroMoly. Fork: Volae Alloy disc. Chain idler: Volae. Headset: FSA Orbit X. Seat: Volae carbon shell. Handlebar stem: Volae OSS Aerotomic (tweener style). Color: Candy red or Iron Glimmer.

**COMPONENTS:** Rear derailleur: SRAM X.0. Front derailleur: Shimano Ultegra. Shifters: SRAM X.0. Crank: Truativ Rouleur Carbon GX 30/39/53. Bottom bracket: Truativ Giga X-Pipe. Cassette: SRAM 11-34 9-speed. Chain: SRAM PC971. Brakes: Avid BB7 Disc. Brake levers: Avid SL. Wheels: Mavic XC717/Shimano XT Disc. Tires: Continental Sport Contact 26" x 1.3" 85 PSI. Pedals: Wellgo platform.

**MORE INFO**

You can read Volae's excellent owners manual at:  
[www.volaerecumbents.com/2007/downloads/volae\\_web\\_manual.pdf](http://www.volaerecumbents.com/2007/downloads/volae_web_manual.pdf)  
There is a friendly Yahoo group at:  
[www.groups.yahoo.com/group/volae\\_recumbents/](http://www.groups.yahoo.com/group/volae_recumbents/)

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# A Custom Day6 Dream 700c

**BIKE:** Day Six Dream custom 700c

**PRICE:** \$1,600

**CONTACT:** www.day6bicycles.com

**OWNER:** Al Brody, Colorado Springs, CO

**USE:** Commuting on urban roads and paved and unpaved trails

**OWNED:** One year, 2,000 miles

**BIKE PURCHASED:** New from Day 6

By Al Brody

*"The best features of a recumbent, comfort bike, semi-recumbent and traditional bicycle all in one exciting new design!" — Day6*

Take a ride back in time with me for a moment to the 1970s. It was a time when muscle cars, chopper motorcycles, and "stingray" bicycles roamed the streets. Stingrays had high handlebars, banana seats and sissy bars. Maybe the intense draw of the Day 6 Dream is simply that it takes me back to my adolescence. In the early 1970s I rode a stingray style bike by Raleigh called the Chopper, and I loved it.

Little did I know that 35 years later the Stingray riding position would come to be known as "crank-forward." The Chopper's seat included a back, so it could be considered a recumbent. The tapered, rectangular, vinyl Chopper seat was comfortable and could even hold two teenagers. With high chromed handlebars, an extended sissy bar and a dual stick shift the Chopper was ultimately cool.

**USE:** My custom Day6 Dream is a step on my new age (new age, okay, maybe middle age), baby boomer, flat-footed, crank-forward evolution. My first bike of this type was a RANS dual 26" Dynamik. On the road and on dirt trails the Dynamik is comfortable and capable but the spade seat, even with additional padding, tends to torture my sit bones beginning at about the 20 -mile marker.

**SEAT & COMFORT:** The Day6 seat tube is canted so as that the seat is raised vertically it also moves rearward back away from the bottom bracket as it is raised vertically. The seat bottom pad is drilled for two different positions in relation to the back pad and the back pad is on a rail for additional adjustment. With the available adjustments, the seat can easily be dialed in to the optimal position for each rider. With about 2" of multi-density foam padding and lumbar curve, it is the most comfortable bike seat I've ever encountered.

For maximum power to the pedals I prefer a level bottom bracket height (like my RANS Screamer). With the ability to stand up and pedal or press back on the ample seat back, the Dream's low bottom bracket is more than satisfactory for stomping on the pedals for short bursts of acceleration or during long climbs.



Al's custom Day6 Dream

The Day6 Dream offers outstanding comfort — unmatched by any other dual 700c bicycle.

**RIDE:** Dream, it's not just the bike's name, it's how the bike rides and how it harkens me back to the days of cruising the neighborhood on my Chopper. This is the best performing, hop -on -and -go bike I've ever ridden. Many people that have tried my Day6 Dream find the front end twitchy at first. Having grown up on a Raleigh Chopper I am very used to the lighter front end and prefer it. The riding position enables riders to pop small wheelies, and also stand while pedaling, a couple of skills that come in handy in the urban riding environment.

**PERFORMANCE:** Compared to upright 700c road bikes, the Dream is relatively heavy (32 lbs.). I opted for lower mountain bike gearing and have had no problems climbing. Living along the Front Range of Colorado, I have never met a gear too low. My RANS Dynamik came equipped with a road triple, which is too tall for the hilly terrain I ride most of the time. This bike is comfortable — but not aerodynamic. Even down hills, theythe Dream will not keep up with lowracers, highracers or standard road bikes. The plus side is you will be cruising in comfort with your head up enjoying the view from the high perch.

**FIT & FINISH:** The aluminum frame is excellent. The finely machined seat post is fascinating. I run my fingernails along the surface just for fun. The finish is what I expected on a \$1,600 bike frame, which means it is outstanding for the \$699 bike it actually is.

**COMPONENTS:** My bike has all custom parts: A Shimano XT front derailleur, XTR rear derailleur, SRAM Attack twist shifters, a Race

Face Evolve 170mm 22/34/44 crankset with external bearings and a Shimano XT 11-34 cassette,

**CHAIN MANAGEMENT:** The Day6 uses two SRAM chains and no idlers. There are no chain management issues. When two the standard bike chains getchain gets dirty, it is noticeable but when the chain is clean and freshly lubed (I use Pro Gold) the chain is very smooth with no noticeable vibration.

**BRAKES:** My bike has a custom set up with an Avid BB7 front disc and Paul's Motobmx brake for the rear (www.paul.comp.com). My Day6 frame did not have a disc brake mount on the rear so I used Paul's Brake to adapt from the 26" to 700c wheel. The Paul brake is weak and just adequate for the rear wheel stopping needs. The newer Day6 frames are equipped with a rear disc tab.

**WHEELS:** My wheels have Sun rims with 32 spokes, and are machine built. They have held true and I've broken no spokes. I attribute this to the ability of poppingto pop wheelies or standing on the pedals and unloading the rear wheel as I traverse obstacles such as curbs.

**TIRES:** Continental Ultra Gatorskins 700 x 28c. These have great traction and so far they have been very tough. I ride with 90 psi (maximum pressure is 116 psi).

**UPGRADES/ACCESSORIES:** I installed a kickstand, a brass bell from Rivendell, assorted lights, and a bar end mirror.

**COMPARABLES:** RANS 700 X. This 2007 RANS model was not available when I built the 700c Day6.

**COMMUNICATION:** Day6's Kelly Hutson created the Dream. He was very willing to work with me to build any own version of the Dream



The Day6 Dream 21's 11" wide cruiser saddle.

that was not available. I worked with Mindy Carter, owner of CS West Cycling Hub, a Colorado Springs Day 6 retailer, to accomplish the build. The custom built Day6 Dream fulfilled my dream and I have been totally satisfied.

**RECOMMENDATION:** If you struggle to ride comfortably on an upright bike and long for a bike capable of pulling small wheelies to get over urban obstacles, the crank-forward design is for you. If you like comfortable seats with a supple yet firm back to press against — the Day 6 Dream is the bike for you. The only problem I have had with the bike is loading it into the back of my Subaru Forester. I have long legs so the seat is adjusted fairly high. The seat is relatively heavy and causes the bike to flip, seat downward, when I lean over to get it into the car. Removing the seat before placing the bike into a vehicle eliminates this issue.

**RATING:** ★★★★★ (4/5)



The Day6 Dream SL's 17" wide saddle. Note the quick releases that allow the seat either seat to be moved away from the seat base.



Day6 and the Al's Raleigh Chopper

At the time I built up the bike, I would have rated it a 5. Now that RANS has brought to market the 26.5 -lb. 700 X to market. That said, the Day 6 seat is still far more comfortable for me than the RANS' poly spade seat. The choice between these two bikes will depend mostly on how important comfort is to the rider.

**SUGGESTED CHANGES:** Make the seat assembly lighter.

**HIGHS:** The most comfortable non-typical recumbent riding position. Easy to get on and enjoy. Like a Harley Davidson, always draws attention and positive comments. Step through frame makes cyclocross-style dismounts a breeze. You sit up high and can easily converse with upright bike riders.

**COMMENTS:** The seat is heavy. Left uncovered in the rain, the seat becomes a big wet sponge. Adjustable handlebar stem flexes during wheelies.

**NUMBERS:** Wheelbase: 51". Seat height: adjustable. Bottom bracket height: 12". Weight: 32 lbs. 4 oz. Weight limit: 250 lbs.

**FITS:** 5'2" - 6'2".

**FRAME & SEAT DETAILS:** Frame: Aluminum 6061. Fork: Day 6 CroMo. Chain idler: None. Headset: Race Face Diabolus. Seat: Day6 custom injection molded with lumbar and integrated travel pack (17" base). Handlebar: High rise chrome. Stem: Adjustable. Color: Metallic Burgundy (Cobalt Blue also available).

**COMPONENTS:** Rear derailleur: Shimano XTR. Front derailleur: Shimano XT. Shifters: SRAM Attack. Crank: Race Face 170mm 22/34/44. Bottom bracket: Race Face Evolve with x-type external bearings. Cassette: Shimano XT 11-34 9-spd. Chain: SRAM 951. Brake front: Avid BB7 disc. Brake rear: Paul Moto-bmx. Brake levers: Avid Speed Dial 7. Hubs: Shimano Deore XT. Rims: Sun Total Control Braking ME14A 32 spoke. Wheel build: Machine built. Tires: Continental Ultra Gatorskins 700x28c 116 psi. Pedals: Platform

**ABOUT THE AUTHOR:** Al Brody lives in Colorado and owns seven recumbent cycles. (Raleigh Chopper, RANS Screamer, Counterpoint Presto, Optima Baron, Crank-It Mountain Quad, WizWheelz TerraTrike, homebuilt recumbent unicycle,) and a RANS Dynamik, which I do not consider a recumbent). I would not consider my stable complete without at least one crank-forward bike. ♦

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# The \$649 Day6 Dream 21

**BIKE:** Day6 Dream  
**TYPE:** Semi-Recumbent long wheelbase  
**PRICE:** \$649  
**CONTACT:** [www.day6bicycles.com/](http://www.day6bicycles.com/)

By Bob Bryant

*“One ride and your eyes will be opened” . . . “ Without question, the best combination of comfort, performance, safety, and ergonomics on two wheels!”*  
— Day6

The Day6 Dream is a new kind of comfort bike for regular folks. The bike has dual full size wheels (26”), your choice of two wide comfy seats, both of which have a seat backs, but with two different seat bases. The bike has 21-speeds and an easy step over frame — making it a very new rider friendly bike.

The Dream is not really a full recumbent bike we’ve seen before, and it’s not really a crank-forward (by RCN definition, despite the previous article) because it has a seat back. Day6 calls it a semi-recumbent.

**USE:** This is a casual recreational bike for cruising bike trails, beach trails and neighborhoods — but as we saw in the previous article, any bike can be upgraded for more serious use.

**COMPANY:** Day6 has been around for two seasons now. The bike was designed by Kelly Hutson (Day6) with initial research and development being done by Rod Minor of Lightfoot Cycles. The company has since changed hands. Most recently the website and model names have changed.

**COMFORT:** The Day6 uses a standard bike seat post size, but it is slotted, sort of like the RANS crank-forwards. The seat base sits on top of the seat post — with no seat back braces. The seat back clamps on to the seat post underneath the seat and the seat can be adjusted fore/aft away from or closer to the seat base.

There are two different seat bases: The standard is a basic nylon covered, 11” wide cruiser bicycle seat. New riders will love it, but seasoned recumbent riders won’t think it’s the most comfy seat they’ve tried. The upgrade seat has a Day6-made 17” wide seat base (\$93). This seat is nicely stitched up to match the black and blue cover of the seat back. The 17” base also has a seat base angle adjustment.

The 17” wide seat base is comfier than the cruiser base when you sit on it. However, once you start riding, you’ll find that the 17” wide base causes your hips to pivot up and down. It also seemed to make me rider higher on the bike. The 17” base also came into contact with the backs of my thighs, which seemed to suck the power out of my stroke on climbs. Designer Hutson says that people either like the 17” seat base or they don’t. But the people who like it, like it a lot.

**RIDE:** The Dream is comfortable, but not fast or a particularly good climber. The seat back mount is very flexible and rocks back as you power into the stroke. I was concerned about this, but Kelly Hutson, says no problem. Pushing hard into the seat was still a bit unnerving for me due to the flex.

The seat is quite tall as set up for me (6’ tall). The bike didn’t fit our 5’4” tester as well, as the handlebars were tall and too far away. The bars don’t raise/lower vertically, but the bars can be reclined backward. This works, but makes for a noticeable tiller feel.

**FIT & FINISH:** The frame is very nice for this price-point. The bright paint and even aluminum welds were attractive, and somewhat of an upgrade over other similar \$700 recumbents (of which there are not very many).

**WEIGHT:** The bike is somewhat heavy at 36.5 pounds, but it was lighter than I expected it to be.

**COMPONENTS:** The components are nothing to write home about. This is a basic-basic recreational 21-speed. This is also a very affordable recumbent and the specs are nicely chosen for the intended entry level market. That said, an 8-/24-speed would be an improvement.

**GEARING:** With the MTB-style triple crank, the gearing is nice and low, where it needs to be. The range is lower than similar bikes with an 20-84 gear inches. The bike does not have a chain idler, nor does it need one.

**BRAKES:** The bike has basic alloy linear V-style brakes and stops fine.

**WHEELS:** The wheels are basic imported machine built wheels. The rims



Perfect local terrain for the Day6 Dream

are single wall, but we had no problems with them.

**TIRES:** The fat low pressure Kenda tires are decent and offer a plush ride, but they are slow. The first thing you should do to improve performance is to upgrade the tires. Some Primo Comets or Kenda Kwests would make a remarkable difference.

**UPGRADES/ACCESSORIES:** The seat back has an integral small bag for keys, wallet, etc. that comes with the bike. The bike will only accept quick-release fenders (\$38). A rear rack is also available (\$105). Since there are front rack braze-ons, the rack must be bolted to the linear brake studs. The Dream E uses Bionx electric assist, prices start at an additional \$1100.

**COMPARABLES:** The Day6 is similar to entry level crank-forward bikes but with a much different seat. It is a bit heavier than our Townie. Day6 offers the Dream 1, Dream 21 and Dream E (electric).

**RECOMMENDATION:** The basic design is suits its purpose, however, some of the details could be better (seat design, mounts and accessory mounts). The Day6 Dream is a decent semi-recumbent for the casual cyclist who wants to ride local bike trails, around their neighborhood or perhaps an easy commute — casual fun and fitness riding. The Dream is affordable and rider-friendly. If you have more serious cycling ambitions, better look towards more performance oriented full recumbents.

**HIGHS:** Comfortable. Unique. Affordable. Surprisingly good quality. Very rider-friendly.

**LOWS:** Only 21-gears. Seat back flex (how about optional braces like Burley offered?). Wide seat base makes your hips raise/lower. Performance/climbing not quite up to par.

**NUMBERS:** Wheelbase: 51”. Seat height: Adjustable. Bottom bracket height: 12. Weight: 36.5 lbs. Weight limit (rider & cargo): 250 lbs.

**FIT:** One-size-fits-most, 5’2”-6’2”

**FRAME & SEAT DETAILS:** Frame: Aluminum. Fork: Steel. Chain idler: None. Headset: Threadless ball bearing. Seat Back: foam pad. Seat Base: Cruiser or wide foam. Handlebar: Chopper. Stem: Threadless fixed. Color: Metallic blue.

**COMPONENTS:** Derailleurs: Shimano Altus 21-spd. Shifters: Shimano Revo twist. Crank: alloy 22/34/42 with riveted chainrings. Bottom bracket: Square taper. Cassette: 13-28, 21-speed. Brakes: Linear. Wheels: 26” MTB. Tires: Kenda Kommuter 1.95 65 psi. Pedals: Platform. ♦

# Bulletproof your Bike: Wheels & Tires

## RHYNO LITE

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E.B.D.:  
548  
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550g  
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32, 36, 40, 48  
COLORS:  
BLACK



Note the cut away drawing of the Sun Rhino Lite rim shows the two walls of the "double wall". This rim also has eyelets for the spokes.

By Bob Bryant

Recumbent wheels can be a source of much joy or some pain. More and more wheels on entry level recumbents (up to \$2000) are equipped with wheel brands you may not have heard of. There are things you need to know about your rims, hubs, tubes, tires, etc. and perhaps you may even want to upgrade your wheels. Having a spare set is always a good idea.

Here are the rules for the care and feeding of your recumbent wheels:

**True:** Rule number one is to get your wheels trued and spokes tensioned when the bike is built-up (brand new). Your selling dealer can do this. You should also get them checked again after a few hundred miles (or if you're hearing spokes ping, pop or squeak).

**Tubes:** Next you should get some good tubes. There is a big difference between the good ones and the cheap ones. If you have a chance, order some Schwalbe tubes. These are the best tubes I've used. The difference seems to be in the valve stem. I have had lots of cheap tubes fail where the stem is fused to the tube.

**Rim Strips:** For just about any new recumbent, take off the wheels, tubes and tires and rim strips. Then buy some Velox rim tape to replace the cheap plastic strips. When the strip is off, check the rims for burrs or problem spokes (especially on single wall rims).

**Disc or No Disc:** I don't like disc brake compatible hubs unless my bike has disc brakes. Disc wheels are built with more off-set to allow for the brake rotor, which makes for a weaker wheel. If you are buying disc wheels because you plan to eventually upgrade, save your bucks and upgrade to discs right away. Otherwise your side-walls will look like crap from using rim brakes in the interim.

Discs are the hot mountain bike buzz word. Rim brakes have served us well for decades. That said, discs are becoming more prevalent. They usually offer better braking power, especially in wet weather. They add weight and cost to your bike, and make rack and fender mounting more of a challenge. We've seen several rotors that were out of round. I'd say

the hassles are about equal between linear (V) brakes and discs.

**Rims:** Most all recumbent bikes have aluminum rims. However, many (on several recumbents under \$1000) have the cheaper and less durable "single wall" rims. These don't hold true as well, are not as strong and won't last as long. A good rim will have a "double wall". Most rims come with 32 spokes. Larger riders or tourists may want to upgrade to a 36 spoke (40 or 48 on a 700c). A double wall rim will have a face in which the spokes are resting and another face in which the tire is seated. This makes for a box inside the rim that increases the rim strength.

Bike rims generally come in natural alloy, anodized black with machined alloy sidewalls or all anodized black. Choose an alloy or machined sidewall rim if your bike has rim brakes. The black anodized rims look great if your bike has disc brakes. If not, the anodized finish will start wearing off right away and the wheels won't look new for very long. We've noticed that rim seams are more pronounced these days (less than perfect rim seams), especially on disc brake-compatible wheels. If you feel a blip, blip, blip under braking if your rim has a bad seam. If you get one of these, notify your dealer or manufacturer and try to get a replacement. I also don't like the idea of having to hammer, sand or file rim seams (so-called solutions to the problem).

**Odd Sizes:** 26" and 700c are standard wheel sizes. 406mm 20" are BMX. Finding good rims and spokes for 20" and 16" wheels is more difficult in your average bike shop. I've never broken a 16" spoke, but I have had a bad 20" wheel which broke a few black spokes. I had to pay my local bike shop to cut spokes to fit that wheel. It pays to be prepared. Consider having an extra set of wheels, tires, tubes and even a few extra spokes to fit your wheels.

**Spokes:** If you start breaking spokes, start looking for a wheel replacement. Cheap wheels often come with cheap no-name brand spokes. I recently read in a trade magazine that there was a rash of bad spokes that entered the country over the past few seasons.

DT and WheelSmith are good brands. You will want stainless steel spokes. Talk to your wheelbuilder about size and other ways to make your custom wheels strong. Proper tension and stress relieving are key to a strong wheel build.

Black spokes look really cool — but good luck finding replacements at your local bike shop. While you may find an MTB 26", the odds are that you won't find a 20" or 16". I'm the guy with one silver spoke on his black spoked 26" wheels. This is in remembrance of broken spoke while on vacation in Central Oregon a few seasons ago.

## REPLACEMENT WHEELS

There are several good sources to purchase upgraded wheels: Angletech offers custom wheels — built with Ritchey or Phil Wood hubs. Velocity USA also builds excellent wheels. Zach Kaplan has a custom wheels built for his customers by a local wheelbuilder who is familiar with recumbents. The Hostel Shoppe catalog offers Aerospoke carbon wheels as well as a full line of Velocity wheels (Heater, Spartacus, Uriel and Thracian). Hostel also offers "Economy Replacement" wheels that are built in-house using Deore hubs and Alex DA16 rims in 20" and 26" sizes (\$90-\$115 each wheel). Be sure to check with your local shop, as wheel shipping can be expensive. I once found a Deore/Rhyno-Lite wheel at a local shop for \$35.

My cheapskate stand-by is a Shimano Deore hub with a Sun Rhino-Lite hub. It's tough to go wrong with this combo. Quality Bicycle Products offers hand-built wheels that are rumored to be built up by the Amish. These wheels can be ordered from any shop who deals with QBP, J&B or you can also order similar wheels online from Nashbar or Performance.

**Composite Spoked Wheels:** Yeah, you don't have to true them, but I've seen examples that weren't perfectly true. These tend to be heavier, more expensive — but they ride rougher than spoked wheels. I have had two problems with these types of wheels over the years. One had a bad rim, another I actually broke one of the spokes on the wheel.

**Paired Spoke Wheels:** These fancy wheelsets are for performance. Velocity is a well known recumbent brand. If you need performance wheels, this is a good place to start.

If you weigh 250+ pounds and are heading out on a solo tour of North America — you have no business on one of these wheelsets.

**Other Wheels:** Beware of 26" wheels designed for tubeless tires. We've found these to make mounting and seating tires very difficult if you're not using them with the tubeless systems (I prefer good old fashioned tubes and tires).

**Hubs:** I've had really good luck with Shimano hubs. In dozens of wheels, I've just had one bad race in a Deore hub. I'm a Phil Wood fan, but I'm also game for other good cartridge sealed bearing hubs. Since I mostly use rim brakes on my bikes, I just buy new wheels ever few years.

## TIRES

I dislike skinny tires. The skinniest tire I ride with is a 1.5 Schwalbe Racer. These are fast, smooth and fairly robust — and easy to install. I detest tires that are difficult to seat on the rim. Other tires that are among my favorites are as follows:

**Primo Comet Kevlar 1.5":** This is my #1

summer sport tire. They are affordable, robust enough, fast and comfortable. I usually ride them during the spring and summer.

**Kenda Kwest 1.5":** This is perhaps the best all-around affordable tire. It is more robust than a Comet and a bit slower than the Comet or Racer. These tires have come standard on many recumbents including the Sun EZ1 and EZ Sport.

**Panaracer Pasella:** We have also tried 700c x 28, 32 and 35 — and all are excellent all around touring tires. The 28mm is good for lighter riders or those looking for more performance. The 32mm and 35mm are more all-around tires. I didn't care for the 26" x 1.5" folding version. They were 65 psi and the side-wall didn't seem as robust.

**Schwalbe Tires:** I'd like to try some Schwalbe Big Apples, but haven't had the opportunity to put enough miles on the. In theory, they are my dream tires. I've had good luck with Schwable Marathons, but I prefer a slightly faster tire. The Marathon Racer 1.5 is my preferred Schwalbe tire for summer season riding.

**No Flat:** While I haven't needed these options, some riders have had good luck with Slime, tire liners or thorn-proof tubes. If you experience a lot of flat tires, check with your local shop for the best regional solutions.

We had some Specialized Armadillo 1.95" tires here this summer and they were big and slow. They were comfy riding, but way too much tire for me.

Why do I dislike skinny tires so much? Check out my article, "Bad Day, Blowout . . ." (see our online sample PDF or our blog).

## SUMMARY


Wheels are perhaps the most important component on your bike. Taking a few steps to make sure your bike has bulletproof wheels is a good thing. You don't want to be out in the middle of nowhere with a broken spoke or bent up wheel.

## MORE INFO

You can read reviews of prebuilt wheels online at mtbr.com and road bike forums. You can ask about recumbent specific wheels on your favorite recumbent emailing list or at Bentrider.

## RESOURCES


www.aerospoke.com (composite spoked wheels)  
 www.alexrim.com (recumbent rims)  
 www.angletechcycles.com (wheels & recumbent parts)  
 www.hostelshoppe.com (wheels & recumbent parts)  
 www.jetset.com.tw (wheels found on some RANS models)  
 www.kendausa.com (Kenda Kwest tires)  
 www.mavic.com (rims & wheels)  
 www.peterwhitecycles.com (wheelbuilder)  
 www.philwood.com (fine cartridge sealed hubs)  
 www.ritcheylogic.com (rims & cartridge sealed hubs)  
 www.schwalbetires.com (excellent tires and tubes)  
 www.velocityusa.com




*Scorpion*  
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*"The Scorpion is one impressive trike" RCN*

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*Scorpion with touring rack and fenders*



*New: Scorpion fix foldable touring trike*

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# Life & Times of a Valley Recumbent Nut

By Fox Conner  
foxconner@verizon.net



Today the ride won't be from home. (Loading my Canto and my wife's Townie)



Maybe the ride will be with the family or . . .



. . . With the Ventura recumbent group or . . .



. . . With the Wednesday group of friends.



But sometimes I just leave from home. But one day turned out to be . . .



. . . a bad day. A re-creation of an actual accident — the disc brake pushed the wheel out of the fork.



Where to ride — a ride along the beach is always popular but the traffic getting there is terrible.



How about a ride down to and around Sepulveda Basin?



Or a ride along the Orange Line on the bikeway to Burbank or to Warner Center and beyond. But mostly the rides are along Valley streets.



Cars, cars, cars — lights, lights, lights — and many the crossing buttons to push.



One gets to know the shortcuts and . . .



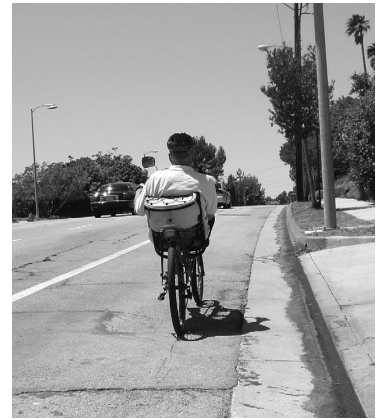
. . . convenient passage ways.



Thank God the city of Los Angeles allows bike riding on sidewalks.



... that brick pillar or those blown over trash receptacles?



It is nice to have a bike lane going home. Not so nice a 200 foot climb from town.



Seeing a friend in Simi requires going over Santa Susana Pass. Yours truly appreciates a rest stop.



Type I oasis — relaxing with friends at a park.



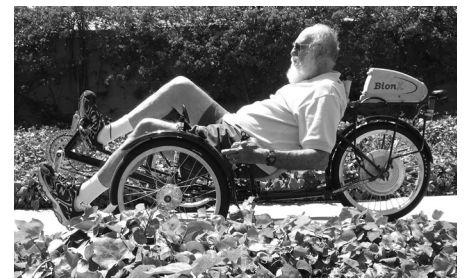
The hardest part of a ride is pushing up my steep driveway.



On the same ride as I was ripping downhill, this fellow just couldn't wait a couple of seconds at a crossroad. P.S.: I took the train back.



Type II oasis — relaxing with friends at a café.



Paul has a trike with an electric hub motor - but I don't need such a setup quite yet!



Always something happens on a ride. Am I going to hit that chicken or ...



Type III oasis — Dana's Bent Up Cycle.

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 informative website:  
[www.easystreetrecumbents.com](http://www.easystreetrecumbents.com)

**Bent Up Cycles**  
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[www.bentupcycles.com](http://www.bentupcycles.com)

[www.ice.hpv.co.uk](http://www.ice.hpv.co.uk)  
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# The RANS Dynamik Trail



Dave rides his Dynamik Trail

**BIKE:** RANS Dynamik Trail

**PRICE:** \$1,395 + shipping

**CONTACT:** [www.ransbikes.com](http://www.ransbikes.com)

By David Gordon (Dave) Wilson  
[dgwilson@mit.edu](mailto:dgwilson@mit.edu)

*"The Dynamik Trail is new for '07 with a suspension fork, disc brakes and medium-tread tires. The added wheelbase and low center of gravity bring a new dynamic to off-road cycling, increasing confidence in corners and steep descents. . . ." — RANS*

Having ridden recumbents happily since 1974 I wanted to try a new type for what was perhaps a strange reason: I had been trying to build my dream recumbent for four years, and everything had gone wrong with the project. My buddy Dick Ryan visited me to commiserate, and happened to speak highly of the RANS "crank forward" line. I decided to buy one, looked up the alternatives on the RANS website and chose the Dynamik Trail because it was the "lowest" in the lineup with disc brakes, which have become essential for me. My wife Ellen had previously bought me, for a birthday, another RANS recumbent that didn't work out for me, and she happily gave me another try. It has been a delightful gift.

The compliment to RANS happened to come just after our eleven-year-old daughter, on her new bike, raced me up our hill (we live on a hill with occasional over-twenty-percent stretches) and beat me thoroughly. I was on my compact-long-wheelbase (CLWB) Viento. Since getting the Dynamik Trail I have beaten her every time. For an aging father there can be no higher reason for buying a new bike.

**USE:** The quote above indicates that RANS believes that the "Trail" offers advantages for off-road riding. However, the bike comes with almost-slick Kendra Kwest 26x1.95" tires, which seem to me to be ideal for biking on the pot-holed streets of the Boston area, and the instructions state that you can "swap for some skinny, high-pressure tires and you've got a competent road machine." I've found it a pretty competent road machine with the Kwest tires as supplied. It also comes with a RockShox J2 suspension fork, I suppose so that you can launch yourself from a high rock to a lower one. I have not tested this capability of the bike. Go do it yourself. At my age I'm lucky to be able to stand vertically next to the bike.

**SEAT & COMFORT:** The seat is listed as a RANS Q.R./Poly Sspade,

a broad plastic base with a short curved riser at the back, covered by a black cushioned cover. The seat can be tilted through a sufficient angle to fit (almost) anyone, and locked with a quick-release. The large-diameter seat tube is held in the frame by another quick-release bolt. The seat tube has a keyway running down it so that there is no danger of the seat suddenly swiveling and dumping the rider. A nice touch is the scale alongside the keyway so that one can remember one's own setting when lending the bike to someone else who adjusts it to suit her/him.

The seat was the only item I needed to adjust. The handlebars seemed to be exactly the height and angle that I would have wanted, and the brakes and gears were in good adjustment. I have never experienced this seemingly perfect fit in a long life of bicycle purchases, after each of which I usually spend a couple of weeks adjusting everything. And once I had the seat height and angle to suit me it turned out to be surprisingly comfortable. It's not as sweet as the seat on a full recumbent, but far more comfortable than my lovely Brooks saddle on our Thorn tandem. This produces pins and needles in my male areas in twenty minutes and total numbness soon after, and when encountering sharp bumps the saddle comes up like a hammer to hit my family jewels very painfully. Nothing of the sort occurs on the RANS saddle. One's buns do get fatigued after about forty minutes, but it is easy to jump to a new position to let the blood flow.

With a seat-tube angle of around 45 degrees one can just about put one's feet flat on the ground at a stop while having the bottom bracket at the right distance from the saddle for pedaling.

**RIDE & STEERING:** The weight distribution measured with me sitting on the bike in my normal position is 27.5% front and 72.5% rear. This gives light, precise steering, and that is a principal component of the ride on any bicycle. I have always preferred underseat steering in my 33 years of recumbent riding, the very early years of which were on a very-short-wheelbase machine with direct steering and with most of the weight on the front wheel. My present full recumbent has double suspension, which may have spoiled me somewhat, with connecting-rod steering. The ball joints on these rods always wear out rather fast, and the resulting slack in the joints produces sloppy steering. So the precision of the direct steering on the RANS is very pleasant.

I remember how magical my first recumbent riding was because my body above the waist could be almost totally relaxed. On the RANS one's upper body must be fully involved, and one must haul vigorously on the handlebars when powering up a hill, for instance. I'm a little surprised not to be bothered by this in any way. One should also be able to stand up to bounce on the pedals on a hill, but I haven't yet managed this. It seems like a long lift off the saddle and then a long way forward before one is over the pedals enough to bounce.

It's a debatable point on whether or not to wish that RANS should bring out a fully suspended crank-forward model. I keep telling myself that it's not for my backside that I should want this, but for my precious laptop behind the seat. If that's the case, I should make a carrier for it at the well-suspended front of the bike: there's plenty of room in front of my knees.

A vital part of the "ride" is safety. I first began my interest in recumbents in the 1960s. Bicycling newsletters reported too many people who had run into holes or dogs or had something get into the front-wheel spokes, had gone over the handlebars and had broken their skulls or their necks. The RANS Dynamik is enough of a recumbent for there to be no danger of going over the handlebars.

**PERFORMANCE:** There's no doubt that I am biking faster on the RANS than on my old CLWB recumbent. But then I remember thinking the same about the CLWB when I abandoned my beloved Avatar 2000. The problem is that when I decide to adopt a bike as my principal commuting vehicle, I load on to it tools, spare tube, tire, lights, gel-cells, chain guards and so on so that it becomes heavy. At some point I added



a Rohloff to the CLWB, which adds considerable weight and seems to be inefficient in the lower seven gears. (They are noisy and make the whole bike-frame vibrate.) Whatever, as the young say, the RANS does move very well.

**FRAME:** The frame is beautiful. It is of aluminum alloy 7005, which has the outstanding virtue that welding does not destroy the metal's properties. The welds are also very well done. Under my now-modest pedaling forces the frame feels as if it would last for ever. There are lugs in all the right places, with an exception noted below.

**COMPONENTS:** All the components seemed to me to be first class. The brakes were Tektro Aquila Disc, which have so far performed well. The handlebar, a RANS Flat Bar, and riser, a RANS Mid 5", are well shaped and handsomely decorated. The headset is a Ritchey Logic Threadless 1 1/8". The SRAM gears are well chosen, at least for me, with a nine-speed cluster at the rear, covering 17.9-104 inches. I liked the use of a quadrant on the rear derailleur so that the cable is not required to go around a tight 180-degree bend as in most derailleurs. The thumb shifters that can down-shift by two cogs with full motion, and triggers for single-cog upshifts will please most people. The few old folk who ride this bike will find the thumb shifters very painful because of the arthritis that afflicts the thumb joint of almost everyone over 65. At some time I will shift to twist-grip shifting. These have the additional advantage that one can upshift by two or three cogs when making a fast start. The crankset is a Truvativ Blaze 22/32/44 with a Microshift front shifter, and they are fitted with Wellgo pedals. The RockShox J2 front fork worked well even in my bumpy-road commutes.

**UPGRADES & ACCESSORIES:** I bought a rear rack for the bike, and it came assembled on the bike, well engineered. (This was a relief, because the previous RANS bike I had tried could not be fitted with a rack, at least not by RANS.) During ordering I also tried to buy mudguards (fenders), but was told that the Dynamik could not be fitted with mudguards. So I fitted a pair myself. It involved drilling a small hole in the middle of the front-fork bridge, and using a hose clamp on the right fork leg to carry the mudguard stays. I recommend that RANS get lugs put on the RockShox forks and have a hole made in the fork bridge. Not all riders regard a line of mud up our bodies and head to be a sign of some sort of freedom. Also there are no obvious places for front and rear lights.

The advertised weight is 30.2 lb. The weight of my bike with mudguards, the RANS rear rack and a plywood piece on the carrier to help cushion my laptop is 37.5 lb. The wheelbase is 49.5" and the overall length is 75.5", virtually identical to my CLWB recumbent (which has 20" wheels vs. the 26" wheels on the RANS.).



Dave on his Dynamik Trail



The RANS crank-forward seat



The Dynamik Trail's frame

## RECOMMENDATION

In comparing this with full recumbents that I have ridden it has some advantages. In the rain one can wear a poncho (a cape in Britain) as one can on an upright bike, which is delightful compared with pulling on separate pants and jackets and getting overheated in them. One can also see behind one without the mirrors needed in a full recumbent position. The bottom bracket is sufficiently higher than on an upright bike that one can pedal around corners without danger of the pedals or one's heels hitting the

ground. One's ability to see traffic coming from near-side driveways and roads might be a little better than on a full recumbent. Whether one can be seen better on the RANS CF than on a regular recumbent is debatable. I have never subscribed to the frequently stated shibboleth that recumbents can't be seen as well by other road users. It is easier to maneuver around and through doorways and corridors than is a full recumbent.

On the other hand, I would miss the supreme comfort of full recumbency on a long ride. Also the wind resistance is undoubtedly higher.

All in all, the RANS crank-forward bike is an excellent commuting, shopping and comfortable road bike, is probably very good on not overly demanding trails (one can use "body English", though not so much as to permit the magnificent vertical leaps that skilled riders can perform on mountain and BMX bikes) and it is a very fine introduction to recumbency for those who hesitate to take the full plunge.

**RATING:** ★★★★★ 1/2 (4.5/5)

**HIGHS:** Safety from over-front-wheel headers and from pedal groundings; highly maneuverable; good visibility; excellent braking, gearing; superb craftsmanship, assembly and finish; my speed is higher on this than on my regular recumbent.

**LOWS:** High wind resistance and somewhat less comfort than with a full recumbent; I would like to have lugs for mounting fenders and lights.

**NUMBERS:** Wheelbase: 49.5" (OL 75.5"). Seat height: Adjustable to rider height". Weight: 30.2 lbs (factory). Weight limit (rider & cargo): 275 lbs. **FIT:** One-size-fits-most.

**FRAME & SEAT DETAILS:** Frame: TIG welded 7005 Aluminum. Fork: RockShox J2 suspension. Headset: Ritchey Logic. Seat: RANS Poly Spade. Handlebar: RANS fat bar. Stem: RANS Mid 5". Color: Metallic Silver.

**COMPONENTS:** Rear derailleur: SRAM X7. Front derailleur: Microshift. Shifters: SRAM SX5 Trigger. Crank: Truvativ Blaze 22/32/44. Bottom bracket: Truvativ. Cassette: 11-32 9-speed. Chain: KMC Z9000. Brakes: Tektro Aquila Disc. Brake levers: Tektro MT4. Wheels: Jet Set 26" Disc. Tires: Kenda Kwest 1.95. Pedals: NA. ♦

**2008 NOTES:** RANS' Randy Schlitter recently told us that RANS crank-forwards now account for 50% of the bikes they sell. RANS also has CF bikes in the works for shorter and larger riders. He also had this to say, "CF's get more layers. CF's get shorter and taller. CF's get stout roles to play." The 2008 RANS line will be announced in October.

# The Katy Odyssey

By Jon Dittrich



Jon Dittrich in front of the Muddy Mo (Missouri River) riding his WizWheelz trike

**H**ave you ever desired to move the hands back in time and experience life on the rail road in the 1890's and do it from your recumbent? If so, then the KATY Trail is for you. KATY (nick name of the Kansas, Arkansas and Texas railroad) was once a mighty railroad spreading its steel tentacles from St. Louis Missouri west into the frontier. Though the KATY stopped rail service in 1958, it is reborn as currently the longest Rails to Trails bike path in the country. Going from Clinton to St. Charles, the KATY stretches 251 miles across the Missouri heartland.

Before I go into the ride itself, let me explain the Rails to Trails concept and why it makes great bent riding. The Rails to Trails Conservancy (RTC) was founded in 1986 and is a national non-profit organization with the goal of "creating a nationwide network of trails from former rail lines and connecting corridors to build healthier places for healthier people." This is perfect for bicycle and recumbent riding. There are hundreds of Rails to Trails paths throughout the United States. Most are short from less than a mile to 20 miles. However there are some extensive ones and the KATY Trail is currently the "Grand Daddy" of them all. RTC promote policies at the national and state levels to create the conditions that make trail building possible. RTC with local support, converts the railroad beds into multiuse paths with local, state and federal monies. Some paths are cinder (like the Virginia Creeper in Abingdon Virginia); some are concrete (like the Silver Comet in Atlanta Georgia); and other are limestone aggregate (like the KATY). Regardless of the path construction, all railroad beds are 8 – 12 feet wide and make it very easy to support foot, bicycle and horse traffic going both ways. They are also normally flat because trains could not climb steep grades. (The highest point on the KATY was 958 feet, lowest point 500 feet and this is over 250+ miles.) There are exceptions like the Virginia Creeper which was an old logging railroad and starts at the top of White Top Mountain and has a gradual 2 – 3% decline of 1500 feet for 17 miles to Damascus Virginia.

What a RTC trail has to offer is safe and beautiful riding. For bent riders, it doesn't get much better than this! Normally the RTC trails

meander through unspoiled countryside unchanged since the railroads build the beds decades ago. Going on a RTC trail is like traveling back in time. You can let the worries of current times melt away while enjoying the outdoor beauty of unspoiled nature. Plus there is no automobile traffic!!!

To understand the usefulness of the Rails to Trails concept, let me explain about the KATY trail. Our bent club, Rocket (Recumbents Of Chattanooga, Knoxville and East Tennessee) Riders, decided to give the trip a try. One of our members had ridden the KATY on a DF some years before. This year he wanted to "enjoy" the ride on this V-Rex recumbent pulling a BOB trailer. Three others from my group after hearing him talk about the trail decided to join him making our foursome which left from Knoxville Tennessee to St. Charles Missouri to attempt the trail. We had a six day ride planned. We would park the cars in St. Charles (next to St. Louis), take a shuttle to Clinton (the current end of the trail) and ride back.

To understand the beauty of this ride, you must understand about railroads in the 1800's. Railroads allowed quick settlement of the frontier territory west of the Mississippi. Before the railroads came through, only those on horseback and wagons settled west. This is a slow and arduous process. Consequently, the frontier was sparsely settled by rugged pioneers. Once railroads speared their rails into the territories, this allowed the quick availability of goods and people to settle the areas. Railroad "boom" towns were formed.

Now one interesting element of those frontier towns is that the railroad determined where the towns would spring up based on where they put railroad stations. Thus, in those days if you wanted to prosper, you needed a railroad depot. In addition, the railroads wanted goods to send back east to make money. The main goods sent back east were agriculture products since the Midwest had such flat, fertile soil. However this was still a horse and buggy era, so farmers couldn't travel far to sell their goods and ship them by rail. Thus, the KATY and many other railroads ended having depots every 10 to 20 miles to facilitate the freight business back east.

I mention this background because the results for riding a bent, make this PERFECT riding. Every ten or so miles along the entire way, there is a town with food, drinks and restroom facilities. It is like having a 24 hour, 365 day a year SAG ride! It can't be beat! Not only do you see small town Midwest America, you experience the different ambiance of each town's culture developed by the founders and their chosen trades. Thus some towns along our trip were very agriculture oriented with large grain elevators right next to town. Others influenced by German settlers choose to grow grapes and sell wine. In fact Missouri was the largest wine growing state before prohibition due to fertile soil, ideal climate and German winemaking know how.

Another wonderful element of this trail is that you can camp it or if you are not that adventuresome, you can "credit card camp" (i.e. stay in motels and B&Bs which is what we did) the entire trip. Either way, you have a place to have a good meal, a hot shower and a place to lay your head at the end of the day. After a full days ride, what more could you ask?

History permeates the KATY trail. Just a few items you can see along the way are:

- The beginning of the Santa Fe trail in New Franklin Missouri.
- You parallel the Muddy Mo (Missouri River) and thus the Lewis & Clark expedition. (We explored a munitions bunker built by them.)
- You see where Daniel Boone is buried. (Controversy still stirs today about this.) He and his sons settled here late in life on land donated to Boone by Spain.

- You can visit Rhineland which was move uphill to avoid constant flooding.
- Visit the KATY museum in the old Sedelia depot. This was home to Scott Joplin who was instrumental in the formation of Jazz music and home to the B3 stealth airplane.
- Stay at Rivercene B & B which was a riverboat captain's house. He built the house next to the Missouri River and 1 foot above the all time highest recorded flood. (In 1993 it had 4 feet of water in it from the first of TWO 500 year floods in Missouri that decade. An other note, the Missouri River has changed course and is now 1.5 miles away from the house.)

The list could go on. You can see, there is no shortage of exciting and diversified history on the trail.

## EQUIPMENT

The trail works for whatever type of bent you ride. Our group had a Wiz Wheelz trike, a RANS Rocket and V-Rex, and an Easy Racer. Two of our group used trailers while the other two used panniers. No one had any problems riding the trail. In a typical day we would ride 20 – 50 miles and take all day doing it because of all the sights along the way. Our group took 800+ pictures in 6 days! The trail is well documented at each stop with a kiosk shedding light on the history of the area and highlight as to what is ahead of you on the trail. You can't get lost (unless you want to) on the trail but you can lose yourself in the history and beauty that permeates the KATY.

So if you get a chance, take your bent to a RTC trail and ride off into history. The KATY and many other trails await you! So what are YOU waiting for? All aboard...

## RESOURCES

Official Katy Trail website: [www.bikekatytrail.com](http://www.bikekatytrail.com)

Brad Dufur's Katy Trail Guidebook: [www.pebblepublishing.com](http://www.pebblepublishing.com)

Rails to Trails Conservancy website: [www.railtrails.org](http://www.railtrails.org)

Rocket Riders website: [www.recumbentriders.org](http://www.recumbentriders.org)

## KATY TRAIL GUIDEBOOK

By Brett Dufur. ISBN: 0-9646625-0-7. \$18.95.

As Gandhi once said, "There is more to life than trying to speed it up. Missouri's 225-mile long Katy Trail is the perfect place to slow the sway of your inner pendulum, atune your slower groove and practice an appreciation of nature seldom seen on the Discovery channel.

The longest rails-to-trails conversions in the United States, the Katy Trail meanders beside the Missouri River and towering limestone bluffs. The trail also passes through the world's breadbasket of agricultural production, Missouri's legendary wine country, and through many quaint towns ready to explore for antiques, bed and breakfasts, wineries, local history and more.

Explore the 225-mile Katy Trail with the trail "bible." The Katy Trail now extends from Clinton to St. Charles. The Katy Trail is America's longest rails-to-trails project. The Katy Trail is also the longest public, non-motorized portion of the entire Lewis and Clark Trail. The Katy Trail and the Missouri River corridor are popular heritage travel and recreation destinations.

This guidebook covers the many distinctive towns along Missouri's 225-mile long Katy Trail as it follows the Missouri River and passes through the world's 'breadbasket' of agriculture and Missouri's legendary wine country.

This guidebook includes handy service information for each town, maps, and photographs and features some one-of-a-kind individuals you'll meet along the way. Whether you're biking the trail, hiking it, or traveling from town to town by car, this guidebook is the perfect



The Katy Depot in Sedalia, MO



Recumbent Specialist  
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*Brett Dufur's Katy Trail Guidebook is about as good as a bike trail guidebook can be. If you are going anywhere near this trail, order this book. I ordered the most recently updated version earlier this year directly from Brett's Pebble Publishing Company in Rocheport, MO. Visit them on the web at: [www.pebblepublishing.com](http://www.pebblepublishing.com) — Bob Bryant*

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# Build A Bent The Easy & Cheap Way . . .

By Bob Bryant



This is Tim Lipetz's no-weld Y-frame SWB (see No Weld #3)

Recumbency can be very expensive with new bikes starting at \$600 and up, and enthusiast models in the \$1000-\$3000 range. The most affordable way to get on the road for less is to build your own recumbent. Unfortunately, this can require cutting frame tubes, building a frame jig, welding or brazing. In recent years, the concept of the No-Weld recumbent has become quite popular, though gets almost no press in the recumbent media — until now.

NOTE: Photos for this article were very difficult to obtain, so I will be posting some at our blog (see Sept. 2007 archive at <http://recumbentcyclist.blogspot.com>).

## THE "NO-WELD" RECUMBENT

*"The No Weld Recumbent is basically a girls bike base frame with a boom added to the front using a common bicycle fork. Our website has over 500 + visitors a week — with over three thousand plans in circulation. The No Weld Recumbent has become one of the most popular home built recumbent projects in the world. The best thing about this bike is that people are able to find out whether they are interested in riding a recumbent bicycle before spending of money."* — David Rehus, [www.noweldrecumbent.com](http://www.noweldrecumbent.com)

The first time I ever saw this type of design was an article on the Internet back in 1998 when a homebuilder named Ming Dinh attached a boom made of a bike fork to the front of a BMX bike. A wood wedge fastened to the frame tubes just behind the head tube held the fork blades with a through bolt. You can see this bike in RCN 047 Homebuilder Special, see PDF link.

Perhaps actually welding a frame is a better idea, but with recycling old bike frames in mind, steel frames are not as readily available as they once were, yet aluminum frames are more common— but you can't reweld aluminum. So, the bolt on boom solves a lot of problems.

## "NO WELD" PLANS

**No Weld SWB** offers plans for a recycle upright conversion for \$6. [www.noweldrecumbent.com](http://www.noweldrecumbent.com)

**No Weld #2** is Kent Peterson's and originally published in RCN. [www.mile43.com/peterson/wb.html](http://www.mile43.com/peterson/wb.html)

**No Weld #3** is a site by Tim Lipetz who used the "no weld" concept to convert a Y-frame MTB into a SWB bent. [www.wideopenwest.com/~lipetz/Bicycles/bicycles.htm](http://www.wideopenwest.com/~lipetz/Bicycles/bicycles.htm)

**No Weld #4** is Make: Magazine's photos of a no-weld SWB. [www.makezine.com/blog/archive/2006/11/freecyclemade\\_n.html](http://www.makezine.com/blog/archive/2006/11/freecyclemade_n.html) [www.flickr.com/photos/jbond/tags/noweldrecumbent/](http://www.flickr.com/photos/jbond/tags/noweldrecumbent/)

**No Weld #5** The EZ Build No Weld is a variation on the others with a different boom connection, but the plans are free. [www.wholesalegeneralstore.com/index.htm](http://www.wholesalegeneralstore.com/index.htm)

## RECENT HISTORY

Back in the 1970s, 1980s and 1990s, many of the current manufacturers got their starts in home-building recumbents. Among them are RANS, Bacchetta, BikeE, Easy Racers (Sun), ReBike, Vision and others.

The first mass marketed recumbent became available in the early 1980s, the HyperCycle. This was a 27"/16" short wheelbase with under-seat steering. The bike was sold as a "frame-kit" that included the frame, seat and front wheel. The new owner would strip the parts from their "10-speed" and build a recumbent. Sadly, this imported frame wasn't durable enough and the company eventually went out of business. Similar designs are still available today (S&B Recumbents: <http://home.pacbell.net/recumbnt> and Turner Recumbents: [www.turnerrecumbents.com](http://www.turnerrecumbents.com)). Both offer simple and affordable fiberglass seats.

The late 1980s was also a boom time for the human powered vehicle racing scene, and it seems like everybody had a plan to build a simple short wheelbase recumbent using steel monotubes or even old BMX frames. However, this style of building required metalworking and welding skills — which put it out of the reach of many. One home-built, Gaylord Hill's Cyceopedia Econ-Bent was based on a steel rear triangle being mated to a "muffler-moly" SWB main tube bent up at your local muffler shop.

When we first covered home-building recumbents in RCN 047 in our "Homebuilder Special Edition" we looked for easy "recycler" methods to build a recumbent from old bike frames with outsourced or even no welding at all. The best method we came up with was to find an old "mixte" frame to convert it to a SWB (see RCN 047 PDF link below). The European mixte had twin top tubes that ran diagonal from the head tube back to the rear axle. The twin parallel tubes made it easier to mount a seat.

## COMPONENTS & SUB-SYSTEMS

The best place to get parts for your low cost recumbent is to recycle an old upright bike. The next best is your local Craigslist or your local bike shop. I have purchased a new wheel for \$35. It was a new bike "take-off" and had a Deore hub and a Sun rim. It was one of the best wheels I've owned. Here are some additional tips:

**Seats:** Just about every recumbent maker sells their seats. The best mounting system is from Volae. The simplest seats are from Cruzbike and S&B.

**Wheels:** New bike "take-offs" at your local dealer, recycle or have your bike shop order you some "QBP handbuilt wheels." I paid \$140 for my bulletproof single speed rear wheel. Most shops can order any size wheel from J&B Importers, including 20" drive wheels and 16" front wheels (off the EZ1).

**Shifters:** Indexed/click shifting requires careful alignment and expensive matching component parts. 6, 7 and 8-speed parts are much more affordable. I like Sunrace friction thumbshifters. They sell for about \$15 but do not "click" shift.

**Gearing:** Try to use mountain bike or touring bike components, as "road" gearing is too high.

**Handlebars/stems:** Most shops can order extra-tall stems. RANS sells an assortment of recumbent stems, as does TerraCycles.

## OTHER OPTIONS

There are other ways to get a recumbent affordably. Check out the eBay for bargain brands, though buy at your own risk. Used bents can cost as little as 1/3 their new cost. Several RCN test bikes have sold for as low as 45% of their new cost. Even if you buy one that needs work, if you stick to a budget and use "recycler" tactics, you can get on the road affordably. A few sellers listed in the next paragraph offer frame-kits or you can buy a planset or tubeset if you have metal working skills.

## KITS, PLANS & FRAMESETS

**Bentech** sells SWB and LWB USS frames (\$469-\$519), plans (\$33) and tubesets (\$194) for a monotube SWB or LWB. The Bentech designs are somewhat similar to the former Vision bikes. They require metal working skills and tools. [www.bentechbikes.com/](http://www.bentechbikes.com/)

**Cruzbike FWD Kit.** This includes a seat and front-wheel-drive front frame section (\$375). The kit was designed for a basic "Y-frame" MTB, but works particularly well with a Downtube folding bike (see RCN blog archives Feb 2007 with link to Bike Forums photo and discussions). This is by far the simplest and easiest homebuilder conversion. The package is elegant and looks fantastic. The simple seat is perfect for homebuilders. The only possible downside is will you be able to handle riding a front-wheel drive bicycle (read our Cruzbike review in RCN 098 where we lay it out like nobody before or since). [www.cruzbike.com](http://www.cruzbike.com)

**LaBent** sells chopper-style LWB and delta trike frames (\$380), plans (\$26.75-\$40.50) or kits (\$120) for their recycle-style LWB. This is a recycle style building concept. [www.radiks.net/~ladue/](http://www.radiks.net/~ladue/)

## "WELD" LINKS & PLANS

**Atom Bikes** sells plans for various FWD and lowracer recumbents and a shell seat. [www.geocities.com/atombikes/](http://www.geocities.com/atombikes/)

**Atomic Zombie** is the publisher of the "Bicycle Builder's Bonanza" book. They also sell plans for a low delta trike, side-by-side delta trike, two LWB and a SWB. [www.atomiczombie.com](http://www.atomiczombie.com)

**EZ Clone** is a recycle LWB with above-seat steering. The concept if cutting up old bike frames and welding them together to create an Easy Racer-like recumbent. Lots of photos and ideas here. [www.recycledrecumbent.com](http://www.recycledrecumbent.com). **Robert Q. Riley** Plans offers plans for the carbon-fiber "Groundhugger XRW" LWB that was originally patented in the mid 1960s. [www.rqriley.com/bike.html](http://www.rqriley.com/bike.html)

**Woody Bent.** This is just a homebuilder link for a very cool wood recumbent LWB. [www.manytracks.com/Recumbent/woodydrawing.htm](http://www.manytracks.com/Recumbent/woodydrawing.htm)  
**2x4 Lowracer** plans. [www.mysite.verizon.net/res88kr1/](http://www.mysite.verizon.net/res88kr1/)

## CRUISERS & CRANK FORWARDS

While recumbents are expensive, cruiser bikes and crank-forwards can be found for as little as \$300-\$500 on up. Look for these models from Sun, Trek, Electra, Giant and others. Any recumbent dealer and most bike shops can order the Sun models. REI and LL Bean have been known to sell crank-forwards on the Internet.

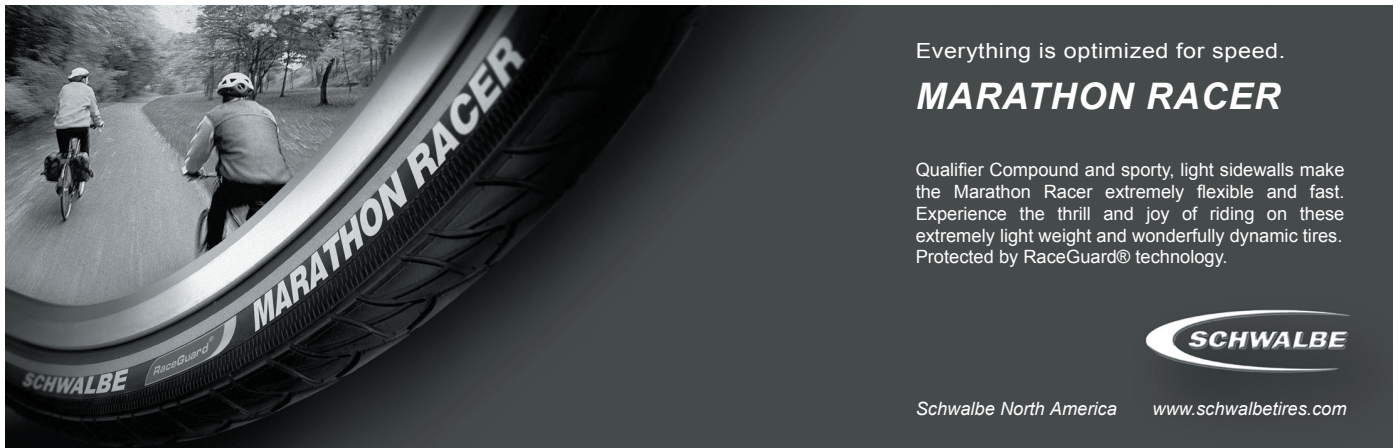
## LINKS OF INTEREST

- Bentrider (more links): [www.bentrideronline.com](http://www.bentrideronline.com)
- BMX conversion:  
[www.wisil.recumbents.com/wisil/junkbike/forrestbike.htm](http://www.wisil.recumbents.com/wisil/junkbike/forrestbike.htm)
- RCN Homebuilder issue:  
[www.recumbencyclistnews.com/pdf/RCN.Homebuilder.pdf](http://www.recumbencyclistnews.com/pdf/RCN.Homebuilder.pdf)
- S&B Recumbents: [www.home.pacbell.net/recumbnt/](http://www.home.pacbell.net/recumbnt/) (Malibu looks the most like a Hypercycle)
- Turner Recumbents: [www.turnerrecumbents.com](http://www.turnerrecumbents.com) (Hypercycle photo on site)

## WHERE TO LOOK FOR USED BENTS

- Bicycle classified ads in RCN or your free "shopper" paper
- Bentrider (see forums): [www.bentrideronline.com](http://www.bentrideronline.com)
- Craigslist (your local): [www.craigslist.org](http://www.craigslist.org) (used bikes and bents)
- Hostel Shoppe Classifieds:  
[www.hostelshoppe.com/recumbent\\_classifieds.php](http://www.hostelshoppe.com/recumbent_classifieds.php)
- NBG Ads: [www.bikeroute.com](http://www.bikeroute.com)
- RTR Classifieds: [www.rtrmag.com/classifieds.htm](http://www.rtrmag.com/classifieds.htm)


**Final Note:** Just because we supply a link, does not mean we are endorsing the company or products. Some of these we have never seen, and some we haven't seen in years. You can't expect a "cheap" or "homebuilt" or low cost bent to be as refined as typical mainstream recumbents. Look for more on low cost bents in part II of this article coming in the next RCN. ♦



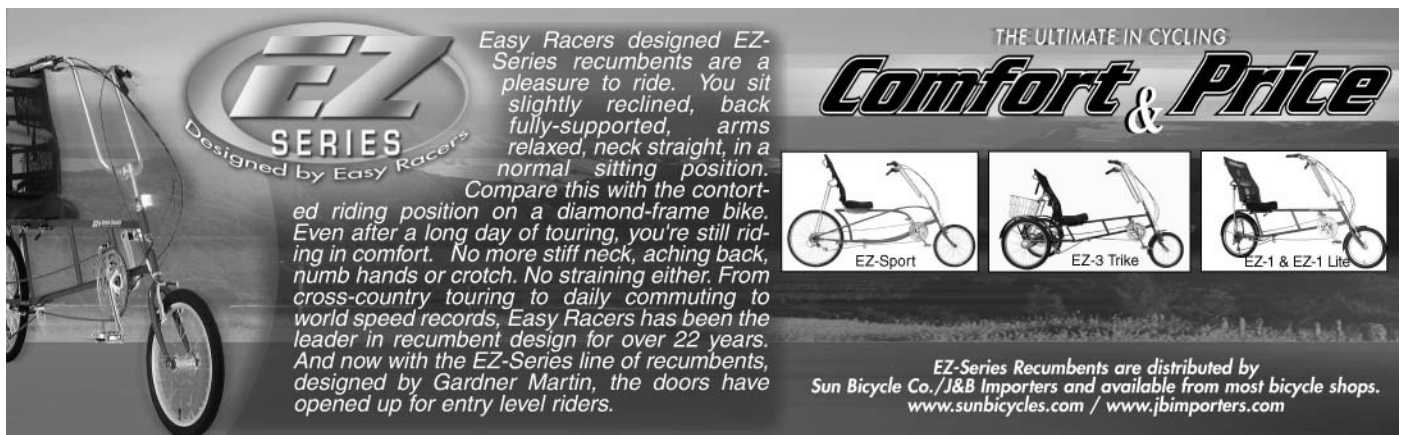
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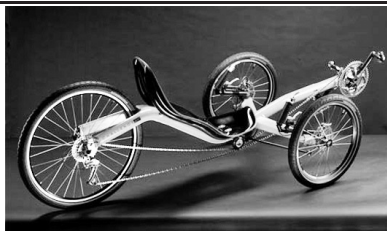
EZ-Series Recumbents are distributed by Sun Bicycle Co./J&B Importers and available from most bicycle shops. [www.sunbicycles.com](http://www.sunbicycles.com) / [www.jbimporters.com](http://www.jbimporters.com)

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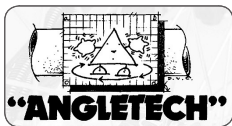
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... Letters continued from page 5.

feet on very well (no pins or teeth). In case you are wondering, I do wear bicycle shoes, Shimano MTB pedals, complete with a cleat mount for Shimano SPDs.

## MT. WILSON

I was interested in the article called "My Assault on Mt. Wilson." About 12 years ago I belonged to the L.A. Wheelman, and one of their yearly rides was called, "The Mile Higher Tour to Mt. Wilson." I did the ride twice, both times I used one of my swivel nosed front-wheel-drive recumbents. It was a much longer ride for us, because we started at Griffith Park. Which is about 30 miles away and only about 100 feet above sea level. The complete ride was a metric century. The first year I did it the ride was uneventful, but what a spectacular view when you get to the Mt. Wilson observatory. The second time I had an unusual experience with a huge and overly friendly dog. This dog took a liking for me and followed me from the gas station at the bottom, up to the 3000 ft. marker. He also tried to climb on my lap a few times. He succeeded in knocking me over in the middle of an intersection. I was lying on the road, the bike on top of me and the dog was on top of the bike all the time he was licking my face and slobbering all over me. Cars were honking at me thinking I was playing with my dog in the middle of the street. He finally gave up and went back down the hill. The upside of all this was in my effort to get away from the dog — I made it to the top 30 minutes faster than the year before — and no road grime on me as the dog liked it all off. A few month after this ride, I saw in a *Bicycling Magazine* that they wanted articles on what kind of experiences riders had with dogs. I sent them my story and they published it. They got a lot of positive feedback on the article.

Tom Traylor ♦

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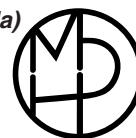
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