

RCM

RECUMBENT CYCLIST NEWS

Issue # 57
May/June
2000




The Late Dan Duchaine and his Pharobike Low Fat

- | | |
|--|--|
| 3 Editorial License & Bob Rants
Reflections From A MicroBikeMag | 26 Touring: Miss Piggy 'Bent The Santa Fe Trail |
| 14 Road Test: WizWheelz TerraTrike
Could We Have Found A Bargain Enthusiast's Trike? | 32 Recumbent Design: Development of a Practical Low Racer
Dan Duchaine's PharoBike Low Fat |
| 18 How A Trike Changed My Life | 35 A Tribute To Dan Duchaine |
| 20 Tech: Recumbent Wheels & Tires
The Complete Story | 36 Kelvin Clark's Recumbent Anthology
An Interview with Ryan Recumbents' Dick Ryan |
| 24 Races & Rides:
The RSD 24 Hour Challenge | 40 Kent Peterson's NoteBook Of An Unreasonable Man: 'Bent Talk |



get  Motion



We call it FAT [Full Air Technology]. You'll call it FUN. BikeE's dual-suspended, revolutionary **FX** re-invents All-Terrain riding. BikeE. A Better Way to Ride.

www.bikee.com 1.800.231.3136

bike
E



RECUMBENT CYCLIST NEWS

PO Box 2048, Port Townsend, WA 98368

RCN#57 May/June 2000

*The Recumbent Enthusiast's
Publication, since 1990*

Recumbent Cyclist News is published six times per year. US subscription rates are: \$40 1-Year 6-Issues or \$70 2-Year 12 Issues.

Contact us at: PO Box 2048, Port Townsend, WA 98368
Tel. 253-630-7200 (voice mail)
www.recumbentcyclistnews.com

RCN is edited and published by Bob & Marilyn Bryant in Port Townsend, Washington.

Special Thanks to our devoted volunteers and subcontractors: Associate Copy Editor—Paul Arends, Int'l Distribution—Ron Schmid; Art Director—Mark Colliton and most of all to our loyal readers.

Fine Print: RCN is copyright © 2000 by Recumbent Cyclist International. Contents may not be reproduced in whole or part unless expressly authorized in writing by the editorial office. Although we at Recumbent Cyclist News make every effort to provide useful and accurate information, we do not claim to have definitive answers—particularly with regard to safety, technique and equipment.

International service can be had through: Cambie Cycles in Canada
Tel. 604-874-3616,
www.cambiecycles.com

Future Cycles in the UK at
Tel. 011 +44 1342 822 847
or sales@futurcycles.prestel.co.uk

Greenspeed in Australia at
www.greenspeed.com.au.

In Our Next Issue...

Road Test: The Radius C4
Road Test: The Angletech V-Rex
Rohloff RBT14
Review: Bill Volk rides the V-Rex
Reader Review: The Turner T-Lite
Design: The Crank It Mountain Quad
Touring on a Speed Ross (SWB)
20/20 Vision: How to hot rod your R40
Cheap Bikes by BJ Strass
Numb Feet
Suspension Pogo

On the Cover...

The Late Dan Duchaine and his
Pharobike Lowfat recumbent.

Late Note...

Our Rans V2 test bike is here!

Editorial License and Bob Rants

Reflections From A MicroBikeMag

by Bob Bryant

I spent the better part of the last six months working on our Season Preview issue (RCN#56). Admittedly, I'm less than enthused about how this past issue came out—and its lukewarm reception from the recumbent industry, from manufacturers to dealers and advertisers alike. This experience has caused me to spend quite a lot of time in reflection. I've been thinking about just who we are at RCN, what are we doing here, and where we should be heading with RCN for the future.

So Who Are We?

First and foremost, RCN is and always has been an amateur enthusiast publication. We don't try to put out a *BigGlossyBikeMag* to catch people's eye on the newsstand. We do accept press releases and print bike reviews just like those *BigGlossy-BikeMags* with all their huge staffs and budgets, but at heart we are a newsletter, existing primarily to support the recumbent enthusiast, and we won't pretend to be otherwise.

Being an amateur enthusiast publication has some disadvantages. Since we don't charge 25 grand for an ad, we simply can't afford professional writers (with a very few exceptions), nor can we afford a professional staff to publish RCN. Our articles are written primarily by serious hobbyists and enthusiasts. Our writers come from a multitude of commercial and professional backgrounds other than journalism, and are united by our love of recumbency. Our full-time staff amounts to just the two of us. We are ably assisted by a few dedicated part-timers, lending their talents to us after their full-time jobs elsewhere. Given that status, you are certain to find some mistakes in grammar, typos, and the like. That's the way it has been since 1990 (though the modern-day RCN is better than past versions), and that's the way it's going to remain for the foreseeable future.

Another disadvantage inherent in being an amateur enthusiast publication without the revenues of the *BigGlossyBikeMags* is that we simply can't afford to purchase bicycles for testing, so must rely on the goodwill and support of the recumbent manufacturing community. We can only review bikes that manufacturers choose to lend us for testing. Some manufacturers have pressured us to give their products glowing reviews, the implication being that future advertising and test bikes would cease if their products were criticized in their RCN reviews. The same "warts and all" reporting by RCN that has given you the information you need to know in considering your recumbent purchase has led some recumbent manufacturers to take offense. Sadly, some of those manufacturers no longer lend us test bikes, and we are unable to test their products for you.

Yet another disadvantage of our amateur enthusiast publication status is that the lack of *BigGlossyBikeMag* advertising revenues has caused our subscription rates to be higher than we

would like. We would dearly love to cut the subscription fees to our loyal subscribers in half, but can't do it as long as some recumbent manufacturers withhold their advertising dollars from RCN because they have taken offense at our refusal to sugarcoat their products' defects.

And What Are We Doing Here?

From the outset, RCN has really had only one primary mission. That mission is to provide our readers with thorough, objective and detailed reviews of the bikes offered by manufacturers and dealers in the recumbent industry, as well as all the latest news and gossip about future offerings for 'bent enthusiasts. Achieving this mission has become increasingly difficult over the years. Browsing through one RCN from our 'early years,' I was struck by how few commercial manufacturers of recumbents there were back then, and how few real choices we all had for recumbent bikes in those days. Easy Racers, Lightning, Rans and Ryan were the lions in a very small universe of manufacturers. LWB and SWB with ASS or USS were about the only choices. All of the manufacturers in that day were supportive of RCN, and they were thankful for the publicity received through RCN.

Nowadays, things are quite different. There has been a tremendous proliferation of styles, models and manufacturers in the 'bent world. Along with that proliferation has come a chilling of the relationship between some manufacturers and RCN. More than a few of the recumbent manufacturers in today's market have adopted some of the attitudes displayed by some of the industrial giants in the wedgie bike industry. One 'bent manufacturer is mad at us for not coming to their factory to schmooze like the other *BigMagWriters* do (the ones that got fired recently) and so they pulled their ads. Others have taken offense at our reporting any of their products' shortcomings in our reviews, and pulled their ads. Others have pressured us to attend a multitude of promotional events all over the country. Unfortunately, in most cases travel expenses to any one of these factories or to their promotional events outweigh what an advertiser spends with us in a year of advertising, and the manufacturers know it—yet they get upset with us for not attending, and sure enough, they pull their ads. The next thing you know, some of them may be demanding that RCN send a bottle of fine scotch over, or invite them and their staff out for a power lunch if we want to keep their advertising dollars.

The strict schedule needed to maintain RCN without a regular publication staff, along with our limited finances greatly restricts our ability to play the role of a *BigBikeMag* and travel around the country doing trade-shows, factory visits and public appearances (although we would like to do some of this). We cannot visit very many factories

due to the time and expense involved, and we refuse to stroke anyone, or pull punches in my reviews of their products.

So, as you can see by these few anecdotes, RCN doesn't pretend to fill the role of a *BigBikeMag* with all its glossy, multicolor, eye catching pages, or its 'promotional' industry product reviews. We're focused on our mission, and we are continuing to try our best to fulfill what we perceive as our charter. We are striving with every issue to serve the enthusiast and no one else.

And Where Should We Be Going From Here?

We are considering a few evolutionary approaches for the future of RCN, all based on a continuation of our focus on the wants and needs of the recumbent bicycle enthusiast.

Some examples currently on the table, and some of our inclinations: Based on our expectation of a substantial increase in reader submission, we are considering a move to a monthly RCN schedule (9-12 issues per year) starting in 2001. We are going to test this plan over the next few

HPV
SUPPLY

**for the
owner-built &
production recumbent!**

PRAIRIE DESIGNS/HPV SUPPLY
21806 S BROADACRES ROAD
PRETTY PRAIRIE, KS 67570
TEL. 316-459-6237
www.hpvsupply.com

Barcroft Cycles

LOW • FAST • COMFORTABLE • ELEGANT



Falls Church • Virginia

www.barcroftcycles.com

703.750.1945

months. That means we need to hear from you. We need to publish your RANTS as well as ours, and your experiences with the various recumbents and recumbent-related products in the marketplace, as well as our own. What you get from this publication is completely up to YOU. So, get involved. Let us hear from you. We may also revert back to a standard mail service again in order to lower subscription prices (our mailing costs are about \$2 per subscriber, per issue (with poly bags and first class mail)).

Recently many of you have written to RCN and asked us to write more about the small, weird and obscure stuff. We like this idea, too. We are going to incorporate articles from this arena in several upcoming issues. We will need to have more suggestions and more recounting of your own experiences with some of these products before we can make this type of article a regular feature. Help us out.

We also invite manufacturers to GET INVOLVED in our process and write about their own recumbent design missions and experiences. We ask you manufacturers out there to take the time to write for RCN and take some pictures of what you're doing and send it all in to us. Even though our singular mission is the interest of the enthusiast, you manufacturers out there should not take offense at that. Wasn't your own "enthusiast" status what got you into manufacturing these great 'bents in the first place?

Imagine a recumbent publication with a lot more enthusiast-written content: more coverage of the odd, weird, obscure and unique bikes, home-builder and modification projects, and local (reader) event coverage. We are interested in what and where you are riding, what you are tinkering with; what modifications you've made; your home-builts, modifications, conversions and the like.

Given the substantial costs involved, there is little chance that we will be able to get the rare Euro test bikes and fancy faired vehicles and trikes some of you have asked about for our own testing. Once again, in this area we'll need to get input from our readers who own these recumbent vehicles if we are to be able to publish reviews on them.

We should also be hearing from every rider group at least every few months with local updates as to events and experiences.

As for future form and format for RCN, we plan to continue as a printed publication that you can read, reread, carry around, dog-ear the pages, use a highlighter pen and leave stacked on the toilet tank. If you get mad at me you can even rip up the paper pages if you like. We're a *MicroEnthusiast-Mag* and proud of it. We have given considerable thought to publishing on the Internet, but don't expect an eRCN (online) version to replace the print version anytime soon. The problem with eMags is that it takes A LOT of cheap banner ads to pay for them. The base of advertisers available for the 'bent industry at this stage in its life is not sufficient to support a web site publication, so we think it to be impractical, at least at this time. From what we have heard, most of the hotshot web companies are losing money anyway. A good web designer makes a lot more than we do and most of the really good web sites require a full-timer. Also, we just don't like the idea of our sole revenue source being advertising.

To Sum It All Up

The bottom line is, we are focused on you, the recumbent enthusiast. No matter what the consequences, we like that focus, and we plan to stay that way. We simply will not pull our punches in our reviews of the products recumbent manufacturers want to sell you. Since some manufacturers have taken offense and no longer loan us bikes, we will not be able to review their products for our enthusiasts (all 5000+ of them). The bikes that you do find reviewed in our issues are from manufacturers who also believe in RCN's mission: focus on the enthusiast, and get out the widest scope of knowledge so the enthusiast can make the wisest purchase for his or her own needs. Rest assured that those manufacturers who have no presence in RCN have done so at their own choice, not ours. We will continue to give you all the facts, no matter who takes offense.

We are the amateur enthusiast publication for recumbency, with the emphasis on *enthusiast*. Marilyn and I see our job for the future of RCN as the facilitators of enthusiast recumbency and we are committed—as long as you are too. Our report card is your renewal check, and your participation in this publication. Let us hear from you.

Viva Recumbency,
Bob Bryant

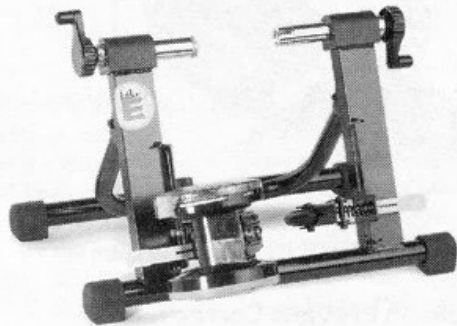
P.S. If you think RCN should go big-time and glossy color, give us a call. We'll sell RCN to you. □



Happenings on the Recumbent Planet

20" INDOOR RECUMBENT TRAINER

BikeE Introduces 20" Wheel Trainer for Recumbents and BMX. Since traditional rear wheel trainers have not been designed to work well with 20-inch wheels, BikeE now offers a rear wheel trainer that can accommodate these bicycles. The trainer provides the rider with a real road riding feel while training inside the house when you don't have enough time to train outside or under bad weather conditions. Working with Minoura Corporation, the BikeE trainer utilizes a patented rim drive system and 7 levels of magnetic resistance. This system is quieter than wind and fluid trainers, has no vibration or noise and creates no excessive wear on your tire. BikeE's trainer is available now at a cost of about \$250. Source: BikeE.



BikeE's new trainer

HAWAIIAN RECUMBENT DEALER

Hawaii Rainbow Riders wrote us to say that they are now selling Lightning Recumbents. Hawaii Rainbow Riders has been serving the needs of recumbent enthusiasts since 1995. They are opening a new shop at 593 Kamehameha Hwy. Unit B Pearl City, Hawaii, (Oahu) Call 808-456-5707 or 808-721-7110. Source: Rainbow Riders.

TRAIL TOOL "RAX" FOR BOB

Inspired by the original Kurt Loheit design (IMBA's Trail Building Guru), BOB Trailers, Inc. has put into production a new set of trailer tool racks that provide the ideal platform for carrying a variety of tools by bike. The RAX are CNC machined out of mahogany plywood and anchored with high strength zip ties. The RAX and trailer package allows trail crews to be fully equipped and have quicker and deeper access to trail work projects. The added bonus is that trail crews get to ride to work sites rather than walk! RAX can also be purchased separately for \$60 per set.

BOB also sent along information about their redesigned trailer brackets and tubing that are 3x stiffer than the originals. BOB has also redesigned the quick release axle/trailer hitch retainer pins.

For more information call BOB @ 800-893-2447. www.bobtrailers.com. Source: BOB

MARATHON HS 308

This classic bicycle tire has been improved in three important ways: A new rubber compound with a distinct improvement to rolling resistance; An additional Kevlar belt under the tread for further puncture protection; A new uni-directional tread design that is quiet running and safe in all road conditions.

The new MARATHON: A really "easyrunning", high mileage tire, dependably safe. The new MARATHON is now available in a mini size: 37-349 (16 x 1 3/8") for small-wheel folding bikes. Both have a 3M reflective stripe for improved safety. The max. pressure is 100 psi and they cost about \$20. The MARATHON HS 308 is also available in the following sizes: 28-622 (700x28C), 32-622 (700x32C) and 50-599 (26x1.90). Source: Canadian Schwalbe Rep.

PEDAL BOAT DEMO DAY

Come one, come all! The "Hartland HydroFest" will be held at Waldendwoods Resort in Hartland, MI USA on June 17th, 2000. There'll be racing and manufactured boat demo rides open to the public. Info: <http://www.HumanPoweredBoats.com> or Ron@HumanPoweredBoats.com.

WIN A GOLD RUSH

The Easy Riders Recumbent Club Newsletter is having a raffle for a Gold Rush or suspended Gold Rush (base model). To participate, send \$25 per ticket to Connie McAyeal, 28009 NW Dorland Rd., North Plains, OR 97133. The deadline is June 1, 2000. Source: OHPV Newsletter.

FRAME SAVER

Bike enthusiasts have long treated the insides of their steel frames to WD40, linseed oil and even marine grease to protect them from rust. A cool bicycle specific product is available specifically for this process: J.P. Weigle's Frame Saver (Internal Rust Protection). It is suggested that you spray the inside of the frame during annual tune-ups after removing the bottom bracket and fork (any any other holes that your recumbent may have). One can is about thirteen bucks and will spray 2-5 frames. Grant Pederson from Rivendell likes the stuff, and we've read about it in other magazines as well. For more info, call

860-434-0700. Tell them you read about it in RCN (and they say, "RCN....whaaat?").

ROCK & ROAD

Rock & Road Cyclery in Oxford, Georgia has just unveiled a 23-pound 'Roadrunner' SWB ASS recumbent. The frame is TIG welded 3" dia. aluminum and the seat appears to be a Rans. Components are SRAM/Shimano and the wheels are 700/349mm 16 in this 24-speed high performance SWB. The new SWB comes in blue or maroon and sells for \$1695. Tel. 770-787-8193 or <http://RTCyclery.com>. Source: Press release.

CAT TRANSPORTATION RECEIVES SUSTAINABILITY AWARD

This is the co-op bike center that is related to Jan Vander Tuin's recumbent manufacturer Human Powered Machines in Eugene, Oregon. The Center received top honors at the West Coast's largest sustainable business conference in November. Fondly called the "Zen Center for Bicycles" by U of O Environmental icon John Baldwin, who presented the award and a check for \$2500, the CAT was praised for its work promoting sustainable businesses. The Center's mission is to involve the community in the manufacturing, use, and advocacy of sustainable modes of transport, specifically the bicycle.

CAT includes several businesses including Bicycle Valet Parking; Eugene Rack Works (students learn to build racks); Pedalers Express (bicycle delivery service: mail delivery, route delivery, and on call delivery) as well as the Center's bicycle shop.

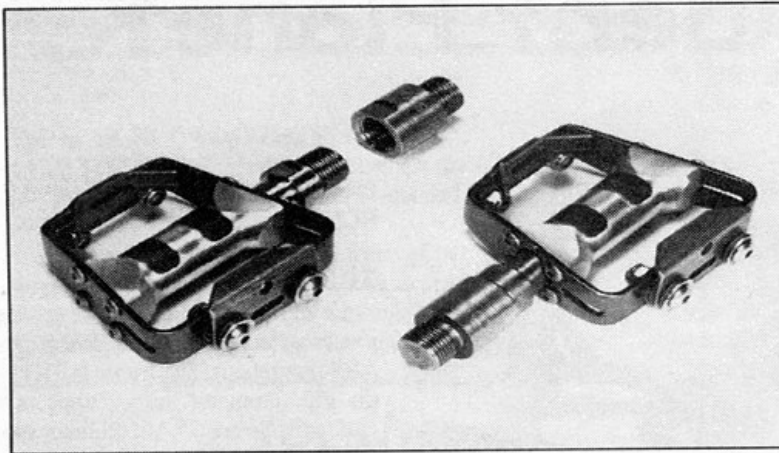
The CAT is honored by this recognition brought by the Sustainable business Symposium. For more information, call CAT at 541-343-5568 or see their website at www.efn.org/~cat. Source: Press release.

KNEESAVERS PEDAL ADAPTERS

Kneesavers are stainless steel extensions which relocate each pedal an additional 20mm away from the chainstay and crankarm. They have been developed by physical therapist Randy Ice, P.T., C.C.S. Kneesavers help eliminate knee pain for these cyclists with a toe-out condition as well as improve biomechanics in those cyclists with wide hips (women), large feet (men), bowlegged/knock-kneed leg structure or....XL sized recumbent magazine publishers.

In his practice evaluating and treating cyclists with knee pain, Randy Ice recognizes the design limitations of current fixed and free floating pedal and crankarm systems. These systems limit toe-out to approximately 4-5 degrees before heel contact is made with the crankarm

KNEESAVERS™ PEDAL ADAPTORS



and/or chainstay. by installing Kneesavers, the degree of toe-out can be increased up to 25 degrees, distancing the pedals further apart, which improves the biomechanics of cyclists with any of the above mentioned conditions, thereby improving pedaling efficiency and power for both competitive and recreational cyclists.

I heard about Kneesavers from Zach Kaplan (Zach Kaplan Cycles). Zach suggested that I might want to try a set. I now use Kneesavers on all of my bikes, and particularly enjoy using them with BMX-style platform pedals (with no cleats or straps). My body ergonomics, power output and comfort have increased. My knees are less strained and I no longer feel like I am pedaling inward. Kneesavers are a simple and very durable product which I give two big thumbs up—Bob, RCN

Zach Kaplan Cycles and Angletech are dealers for Kneesavers, or you can order directly from Randy Ice's company, SCOR PRODUCTIONS, at 12300 E. Washington BLVD, Whittier, CA 90606 or 310-943-9440. Kneesavers are \$45 (+\$2 USA S/H). Source: RCN, Zach Kaplan.

RIGHT: Bob's Kneesavers & low-tech pedal system—BMX platforms (note 2.1" front tire on bike)

Season Preview Corrections

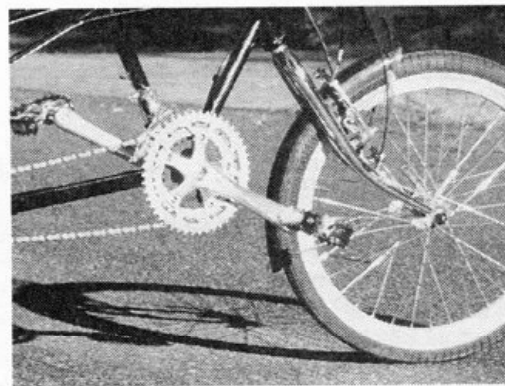
BARCROFT—We inadvertently deleted Barcroft from our recumbent manufacturer list on page 39. Barcroft Cycles, Falls Church, VA <http://www.barcroftcycles.co>, Tel. 703-750-1945.

BikeE—The correct address is 5125 SW Hout St., Corvallis, OR 97333, Tel. 800-231-3136.

RANS—The phone number is wrong in the 2000 Season Preview. Page 39 under the 2000 Recumbent Manufacturer Listings. The correct number is 785-625-6346.

WHIRL—Our apologies to the WHIRL Rider group who inadvertently was listed as Washington state instead of the correct Washington DC.

SWB—The designation more reflects the layout of the bike. If the bottom bracket is in forward of the front wheel, it is a SWB. A SWB can have a wheelbase of more than 45 inches.



Do You Have Stuff For Recumbent Planet?

A Product Review Product News An Event? Club News?
Have you bought a really cool & rare new bike?
Have you built a really cool new bike?
Do you have news from your recumbent shop or factory?

If so, please send info to:

RCN, POB 2048

Port Townsend, WA 98368

Text only can be emailed to:

bob@recumbentcyclistnews.com

Happenings 2000

MAY 7 BELMONT RECUMBENT EVENT
Belmont, MA. Contact Belmont Wheel Works at 617-489-3577.

MAY 13TH SATURDAY MICHIGAN RECUMBENT RALLY—EAST
Willow Metropark pool shelter, 9am-3pm.
www.lmb.org/wolbents,
BobMich@compuserve.com or 734/387-9058.

MAY 26 - 28 HPVSO NIAGARA R'BENT RALLY
Niagara Falls, Ontario, Canada—Contact:
HPVSO Web site <http://www.hpv.on.ca/> or from
Roy Bird birdy@bconnex.net

JUNE 4 VELODROME FUN DAY
San Jose, California
Hellyer Park Velodrome. Sign-ups begin at 10, racing at 12:30. Contact Carole Leone at (805) 466-4111 or traslo@fix.net

JUNE 3-4 MIDWEST RECUMBENT RALLY
Stevens Point, WI Hostel Shoppe
www.hostelshoppe.com

JUNE 10 WHEEL & SPROCKET/TREK RALLY
At Trek, contact Wheel & Sprocket

JUNE 10TH SATURDAY MICHIGAN HPV RALLY
Waterford (n.w. Detroit). 8am-4pm www.lmb.org/mhpva,
kiehler@juno.com or 313/884-0109.

JUNE 11TH SAGINAW VALLEY CHALLENGE
Saginaw Valley State College. 8am-3pm.
www.lmb.org/mhpva, kiehler@juno.com or 313/884-0109.

JULY 8-9 3RD ANNUAL R'BENT ROUNDUP
Ogden, IA—Contact: 1-800-645-2981 or
www.Thebikebarn.com.

JULY 8-9, 2000 RARE 2K R'BENT RALLYE
Rochester, New York—Contact:
rarelist@rcbbs.win.net or call Michael Brisson at 716-461-5084 or Hank Walck at 716-217-9450.

JULY 28-31 2000 SPOKESFEST 2000 HPV FESTIVAL LEICESTER, UK
Contact: Roger Lovel +44 (0)116 278 1360
Email roger@spokesfest.free.serve.co.uk or
write c/o Leicester Spokes, PO Box 30, Leicester LE1 9DG.

AUGUST 19 & 20, HPVSO TRIKEFEST 2000
(two wheeler & upright riders welcome
Port Hope, Ontario, Canada (50 mi. E. of Toronto)
Contact: John Murray at
johnmurray@bigfoot.com, or visit the HPVSO
website at <http://www.hpv.on.ca/>

SEPTEMBER 9TH SATURDAY MICHIGAN RECUMBENT RALLY - WEST
Grand Rapids area, 9am-3pm. www.lmb.org/wolbents,
BobMich@compuserve.com or 734/487-9058.

SEPTEMBER 16TH SATURDAY FALL RECUMBENT RENDEZVOUS
Stony Creek Metropark Eastwood Beach shelter
(north Detroit suburbs). 9am-3pm. www.lmb.org/wolbents,
BobMich@compuserve.com or 734/487-9058.

RACE NOTE: For a complete schedule of hpv racing activities, see: <http://www.wisil.recumbents.com/events.htm>

SEND CALENDAR LISTINGS TO
RCN, PO Box 2048, Port Townsend, WA 98368
or info@recumbentcyclistnews.com



Recumbent Mail

If you have something to say, a differing viewpoint or experience—we want to hear from you! **Please limit letters to 300 words.** No charity ride sponsorship request letters. RCN reserves the right to edit submissions for clarity, content and space limitations. bob@recumbencyclistnews.com or RCN, PO Box 2048, Port Townsend, WA 98368

SPECIALIZED MACHINES & COSTUMES

RCN#55 is great as always! I enjoyed the kinetic event article and support your decision to include it. Not recumbent, but of interest. Next time please include photos of the mechanics of how they get them to move.

Here is my two cents in response to Tony Sowers' The Learning Curve — Pedals & Shoes. I've been on a bike for 50 years and a Ryan Vanguard (now Longbikes Ryan Vanguard LWB USS) for the past six. It is my transportation and I ride 20+/- miles/day, every day, doing business in and around town, unless it is raining hard. The bike has over 40,000 miles. I'm not out for speed or high performance, but I beat cars around town and pass most bikes. As I'm in and out of stores and offices, I ride in my regular clothes and old leather sandals with Birkinstock soles. I can't remember a foot ever falling off the pedal. I'm 6'3", 230 pounds, with a size 15 foot. I investigated bike shoes and clipless systems a while back and quickly decided against them for my size and use. While I'm generally on short trips, I often go to nearby towns (15 miles) and have come down the coast from San Francisco (250 miles) a couple of times, including the hills of Big Sur. I haven't experienced a hot foot, numb feet or a numb butt.

I work to promote the bike as transportation. Reading Tony Sowers' experiences and solutions I see his ideas moving from transportation and towards a specialized machine and costume that is used only for special situations, rather than as an everyday means of transportation. Thanks for a great job on RCN.

Steve Eabry

KINETIC IDIOCY

What were you thinking, Bob? The article, editorial, and worse, the cover dedicated to the kinetic idiocy followed last issue's honest appraisal of the magazine's cost and your concerns regarding the same. And now this.

You and your wife are leading a fledgling industry though the end of it's struggling-to-gain-legitimacy phase, and into one where recumbents are poised for mainstreaming. There is no room here for a cross between TV shows Northern Exposure where insanity was the norm (nobody wanted to get it, either) and Mash which (though loved by me) is not something that rationality would try to live out in real life. Your guidance led me to the purchase of my Dragonflyer.

Respectfully,
Gary J. Seckel
gsec911@aol.com

KINETIC NEVER-NEVER LAND

In RCN#55 you used up 7 pages out of 44 covering 'kinetic events.' Since you are throwing it out here for RCN readers to decide, I just thought I'd make a comment. To be 'nice,' I thought it was really dry and boring. It's no surprise to me that "this fun-loving group doesn't really have a magazine of their own." Please go back to using all of the pages in RCN to cover what RCN readers are interested in; recumbent bikes and trikes. Other than this brief digression into kinetic never-never land, your magazine is terrific.

Dex Ostrum

BAD KMC CHAIN

Last night while commuting home I was thinking how my Thunderbolt drivetrain had become noisy and kind of crappy in shifting, so when I got home I took a good look at the chain. What I saw was amazing and frightening. You know how links look like this: O=O. Well I have one that looks like this: O=(. Yep part of it is completely torn off! I've got several others that look like this: O=V, where the link has cracked at the pin and is

opening up. This is in 25 days of rainy Northwest riding (644 miles).

Needless to say I immediately replaced the chain with Sachs chain. I had always figured I'd ride the cheap stuff until it wore out, but in my opinion the KMC chain is positively dangerous in that it would most likely fail at the worst possible time, like when somebody was starting from a dead stop at a traffic light or powering up a hill. When a chain snaps at best you have no power. At worst you fall over or lose control and get run over. This was the stock KMC SS71 that various manufacturers spec on their bikes. I've got a full record of every mile I've logged on the bike. I know I log more miles than most folks but for a chain to deteriorate this much in less than a month is completely unacceptable.

Now you guys know me and I'm an easy going guy. I'm not going to sue or say Lightning makes a bad bike because of the chain. I still think the T-bolt is a super bike for the money. Anyone who actually rides a bike in the real world with all its grit, hills and traffic as a matter of safety I'd STRONGLY recommend replacing the SS71 chain with something like a Sachs PC41.

Kent Peterson

Editor Comments: Readers, keep an eye on your chains. Haluzak, BikeE, Rans, some Lightning models, most Visions and yes even their \$5000 TiSaber have KMC chain.

CLIMBING & PERFORMANCE

I keep reading comments by various writers in your magazine that a particular bike may be slower going up hill, but it makes up for it on the downhills. What planet do they live on? On earth, time is obtained by dividing distance by rate. Even a very small difference in climbing speed means a huge difference in time that could never be made up by speed of descent. For example, suppose two bikes start together on a one mile climb that is followed by a one mile descent. Suppose a traditional bike climbs at an average rate of six mph and the bent climbs at five mph. The traditional bike then descends at 30 mph. The traditional bike completes the climb in ten minutes and then completes the descent in two minutes for a total elapsed time of 12 minutes. The bent requires 12 minutes to complete the climb and must now do the descent at the speed of light to catch the traditional bike!

I think there is too much emphasis on speed anyway. I care more about grins per mile, and my Haluzak provides far more than any of the many traditional bikes I've ridden. Keep up the work on a great magazine!

John Heiam, JOHNHEIAM@aol.com

Editor Comments: Your point is well taken, however, what about comparing 'bents to 'bents. Compare known fast recumbents, lets say an Easy Racer Gold Rush and a Lightning P-38 to your Haluzak (leave the wedgies out of the equation), and most will see faster speeds. There are performance differences between recumbent designs and riders, though we can at least attempt to figure out what makes the different bikes fast or slow. Every rider will be different.

WEDGIE FEVER

Conventional bikes are always referred to as "wedgies" in RCN. So I'm asking the obvious question; namely, how did that term originate. I could guess, but it's better to know. You probably get this question often, so a good place for the answer would be in: FAQ (frequently asked questions) on your web site. A curious new subscriber.

John Bartlettjbartlett@empire.net

Editor Comments: As far as I know, the term came from a Saturday Night Live skit called, "Wedgie Fever" a mock game show where the contestants

would get their wedgie pulled tighter as they answered incorrect questions. The rest I'll leave to your imagination. We may have coined the term as it relates to upright bikes. We don't really mean to use it disrespectfully. I like all bikes and have a wedgie (a bike...) myself.

RECUMBENT BUTT

I've heard this phrase but have never asked exactly what it is. Is this an actual physical injury? A temporary pain in the ____ ?

Jill McIntire
jillmcin@pacbell.net

Editor Comments: Some recumbent seats and some recumbents with rather upright/erect riding positions can create butt pain after an hour or two in the saddle. I've experienced it with some seats on 40 minute rides. The more upright the riding position, the better possibility for recumbent butt. An excellent seat design is required if a bike has an upright seat position. In contrast, a very laid-back seat position can allow a mediocre seat design to be quite comfy. The bottom line is that upright seat positions are more user friendly and work for a wider variety of riders.

CLIPLESS CONCERNS

I'd like to comment on the letter from Joel Wilson ('Clipless in 'Bentland') in RCN #55. He notes that during a panic stop his right ankle was twisted out of its socket and he suffered two radial fractures. In addition to the special sympathy all your readers would have for a fellow cyclist who hit the ground, I found it interesting because I recently had a very similar accident with very similar consequences (although without any clips, which I find cumbersome).

In my case, a short stretch of black ice popped my BikeE out from under me. The top of my (non-clipped) left foot hit the ground and was pulled behind while the leg was twisted. The results included multiple fractures and a major dislocation from my ankle (followed by 8 weeks on crutches).

It might be interesting to hear from other 'bent riders to see if ankle damage resulting from a sudden sideways fall, with the trailing leg being pulled backwards, isn't a common injury on 'bents. If it is, I'd be curious to learn what various 'experts' suggest be done to avoid this scenario. Based on the experiences of Joel and me, it seems to occur with and without clips. See you on the road in about 8 weeks!

Carl

RCN IS TOO EXPENSIVE!?

I delayed my renewal because paying over \$6.67 per issue hurts. But I love recumbents so much and you are the only game in town so here I am for another year. If possible, please offer reviews, tests, etc. of a wider variety of lesser known bikes, like Reynolds Weld Lab, instead of revisiting Rans, Vision or Easy Racers so often. You are doing a great job.

Richard Bonjour

Editor Comments: We are well aware that RCN is too expensive and we're working on this. In order to lower the price, something will need to change. Our two biggest costs are printing and mailing. The poly-bags are

also quite expensive. As far as road tests of the 'lesser known' bikes go, we truly need the readers' help on this one.

Calling all readers: If you are the owner of a rare, odd or Euro recumbent bicycle, please sit down and write a short article about it and send along a few pictures. If you'd like a copy of our road test template, send us an email or SASE. RCN is an enthusiast publication, by and for recumbent riders. These reader written articles will play a much larger role in the future of RCN.

REVIEWER BIAS

I have been a subscriber to RCN for a long time and really enjoy reading it. Whenever I receive it, I usually read it cover to cover right away. I continue to subscribe not only for the content, but also to support your efforts to provide information and a forum on recumbent cycling. The information RCN provides is very useful not only to the people already familiar with recumbents, but more importantly for the people who are new to recumbents. In fact, when I am asked about recumbents, I always refer them to RCN. Which brings me to my idea for your consideration. When writing a review of a bike can you include in some identifiable way that the various favorable or unfavorable aspects of the bike may be in part based on your personal preferences of what a "good" recumbent should be. I am sure it can get repetitive for you to always qualify your observations on a bike. However, keep in mind that some of your readers may be new to recumbents and your comments probably influence their decisions on what bike to purchase.

I know you get bashed (by owners) for anything less than a glowing review of their favorite (perfect) bike. I personally feel there is no 'perfect' bike. They all have their good and bad points. And this suggestion is not about whether a certain style of bike is better than another. It is more about perspective or balance for your new readers. By reading RCN and riding different recumbents over the years, I can appreciate your remarks and have some perspective on them. On the other hand, readers new to recumbents, may not have this perspective to reflect on.

Roy Ryall

rrrrecum@3wave.com

Editor Comments: Keep in mind that very review is truly the opinion of the writer—there is no right or wrong, just a difference of opinion. In my writing, I feel the need to explain to the reader where a particular bike fits into the grand scheme of the recumbent planet (entry level/recreational; enthusiast; advanced enthusiast/extreme). Because I end up doing this in nearly every review, it may sound like I am a raving lunatic at times. I think there are many good recumbents and designs for a wide variety of different riders. Just because I don't personally like a design doesn't mean that it gets trashed or a gets a poor review. Generalizing is a bad idea. I do understand why riders might want a lowracer, high pedal/BB SWB and a trike. Contrary to popular belief, I do not think all riders should be on LWB ASS recumbents. In fact, I believe that the SWB works best for the majority of enthusiasts. Just as the compact works best for the majority of newbies and recreational riders. Some design/quality issues are no-

YO!
IF YOU
CAN'T BE
RECUMBENTING
AROUND
THEN...

Check Web Page For Weekly Specials

www.foolscrow.com EMAIL: edde@tfn.net

FOOLS CROW CYCLES

1046 Commercial Dr.
Tallahassee Fl. 32310

850 224-4767

brainers. In this recumbent market, items such as 'hose-clamps' or hardware store "L" brackets to hold the seat on just don't cut it. This doesn't mean don't buy a bike with these parts, just that this is one of our criticisms of that brand.

I have struggled for 10 years to maintain some consistency in RCN reviews. And this is more than most other bike magazines can say. We have updated the road test template for 2000. The first road tests off this template was the BikeE FX, and in this issue, the WizWheelz trike. It makes the writing a bit less interesting, but makes comparisons easier.

Lastly, it is difficult to give a recumbent 'primer' in every issue. We cannot even squeeze it all into a buyers' guide these days (page count limitations set forth by amount of ad pages)

A GOOD WAY TO DIE

When I flew gliders, "doing what comes naturally" was a good way to die. In preparation for emergencies I not only learned what the procedures were, but in normal flight or the comfort of an easy chair at home, I'd imagine as vividly as I could, even generating feelings of panic, then "feel" my muscles responding correctly. Gliders are quite safe, but a pilot must know how to fly.

It's a shame when a serious fall reminds us of the importance of being able to operate our equipment safely under all conditions. Like a glider pilot, a rider with clipless pedals must know how to "fly" them. "Kicking out" of them must be second nature. That motion must be automatic even in emergencies. So practice. While riding straight, practicing releasing. Imagine a bike cutting you off... release. Visualize a car running a stop sign... release. See a charging bull gore your front wheel... release. Confident? Try stopping, then releasing... on soft grass at first. Make an intentional bad start falling toward your clipped in foot, then release in time to catch yourself. These are equivalent to actual glider training stalls and spins. Learning to use any equipment is a lot easier and safer under controlled conditions than during an emergency.

John Kaplan
jck@juno.com

RANS WAVE, TAILWIND & GLISS FAIRING MOUNTS

Here is some additional information on Rans fairing mounts for the RANS Wave, Tailwind, and Gliss (RCN #55). The fairing available is the narrow "Easy Racer Super Zzipper" from Zzip Designs (www.zzipper.com, 813-425-8650). The mounts are available from Tom's Bike Annex (www.bikeroute.com/BikeAnnex/, 618-262-4088) and fit all three bikes.

Tom Sherman
tsherman@students.uiuc.edu

Editor Comments: We should also let readers know that Rans sells their own Zzipper fairing mounts through Rans dealers.

CLIPLESS CRASH

I read with great interest the letter by Joel E. Wilson in RCN #55 regarding the safety of clipless pedals. I had a similar experience last September. While riding my BikeE RoadE on the Burke-Gilman trail in Seattle. I accidentally wandered off of the pavement and, attempting to ride back onto the pavement, caught my front wheel in a rut and fell sideways. I was quite surprised to find that I had broken my leg (tib and fib) right above the ankle, which was also dislocated. After surgery, I had asked the orthopedist what the heck happened to have caused all of this. Without a pause, he informed me that I must have put my foot down to break the fall. If I would have been clipped in and had practiced the same techniques that motorcyclists use in a fall situation, I probably wouldn't have been injured. Staying with the bike might be the best practice.

Bill Sonnenburg
bill_sonnenburg@yahoo.com

BUCKING THE TREND

I truly enjoy your magazine. I recently received a sample copy of <another bicycling magazine>, and it seemed to be little more than fluff, glitter and cheesy advertisements. Recumbents made nary a mention, and there was absolutely nothing for homebuilders. Their bike rating seemed to be written by the manufacturers (heaven forbid, they are offended by one's opinions, and withdraw their \$XX,XXX.XX advertising). I must give you great honor and respect for 'bucking the trend' and giving a true, honest opinion from your perspective, which is something that most people in this

RCN

RECUMBENT CYCLIST NEWS

Subscribe to RCN Today!

The Recumbent Enthusiast's Publication, since 1990

Celebrating our 10th Year

Subscribe Today. Get six info-packed issues of 100% recumbent articles written by and for recumbent enthusiasts: news, reviews, road tests, events, history, tour articles, new product information, insider news & rumors, riding tips and how to's.

The first and foremost recumbent publication in the world—Since 1990.

NAME: _____

ADDRESS: _____

ADDRESS 2: _____

CITY: _____ STATE: _____

Zip+4 _____ + _____

EMAIL/TEL _____

This is a renewal
(See top line of label RCN # " ____ LAST ISSUE")

Subscription rates:

- \$40 One-year subscription
- \$70 Two-year subscription
- \$100 Supporter-5 (5 copies of each issue)
- \$150 Supporter-10 (10 copies of each issue)

Need more info? See our website at
<http://www.recumbentcyclistnews.com>

Please enclose payment and mail to:

RCN
PO Box 2048
Port Townsend, WA 98368



RECUMBENT CYCLIST NEWS

Order RCN Back Issues

Order Back Issues and Road Tests

Back Issues \$8 for the first one, \$6 each additional.
Are you an active subscriber? If so, deduct \$1 each issue.
Order must be prepaid. USA ONLY.

- RCN#40 Linear Compact, Turner T-Lite & HPM Tritan
- RCN#41 Angletech Altitude, Haluzak Hybrid Race
- RCN#42 Slumgullian Colorado Tour
- RCN#43 '98 Compact Buyers' Guide
- RCN#44 '98 SWB Buyers' Guide: Rans SWB Trio
- RCN#45 '98 LWB Buyers' Guide: Tour Easy Test
- RCN#46 '98 Trike Buyers' Guide: Chase 3, Windcheetah and Earthcycle Dragonflyer Reviews
- RCN#47 Homebuilder Special Edition
- RCN#48 Easy Racer Gold Rush Replica
- RCN#49 '99 Season Preview, Vision R40 Review
- RCN#51 Trice & Greenspeed Trikes
- RCN#52 Vision R32, Lightning R84, Velocar part 1
- RCN#53 Rans Stratus, Barcroft Virginia, Haluzak Horizon Vision's Grant Bower Interview and Velocar part 2
- RCN#54 Easy Racer TiRush, Terra-Za SWB, Lightning T'Bolt, Rans Randy Schlitter Interview and KMC test
- RCN#55 Kinetic Racing, Trek R200, Rans Wave & Tailwind
- RCN#56 2000 Season Preview, BikeE FX

NAME: _____

ADDRESS: _____

ADDRESS 2: _____

CITY: _____ STATE: _____

Zip+4 _____ + _____

EMAIL/TEL _____

Here is an additional \$35, please renew my RCN subscription for another year (SAVE \$5)

Need more info? See our website at
<http://www.recumbentcyclistnews.com>

Please enclose payment and mail to:

RCN
PO Box 2048
Port Townsend, WA 98368

politically correct world to do have the intestinal fortitude to do these days. This is what gives your magazine character, and you are to be equally commended for publishing the dissenting opinions from your readers and manufacturers.

Sean Bickerton

MAINSTREAM SOLUTION...

Thanks for a wonderful issue again. #55 caused me to pick up pen again and, as usual it was the letters that prompted it. I have found in most magazines, indicative of an extremely narrow minded readership—put one comma wrong and you will hear about it—I wish to state that I am extremely pleased that yours is NOT a full color, slick mag. I think that most of your readers would fall into the category of people who evaluate a 'thing' on substance and not flash or style. We are, after all, recumbent enthusiasts—individuals from the smallest segment of commercial bicycle purchasers—we have actually thought about what is best for us and not accepted the mainstream solution. So, from my perspective, you are not only producing a valuable information format but your cost consciousness results in increased value.

The second issue that really caused me to write was the clipless pedal article. May 3rd, 1999 saw me lose control of my BikeE on a rushed rock road, fall on my side and slide 40 to 60 feet. My down foot came out of the clip and was caught by the handle bar and dragged along. I ended up with a compound fracture including both tibia and fibula that the doctors at Mayo Clinic put back together in a satisfactory manor but whose bill will be unsettled until near the end of this year. This goes into the column of problems caused by clipless pedals releasing too easily, although the permanent damage to my ankle makes it necessary to lessen the release tension of the pedal so in a reoccurrence I would be less likely to be damaged excessively. Keep up the good and valuable work.

Kirby Johnson

Editor Comments: A few years back I had a spectacular crash on a Vision SWB USS test bike. The bike went down quickly—in a split second. With USS (and nothing out in front of me)—I was launched like a catapult through the air and smashed down to the ground directly on my tailbone—thus breaking it. It is still painful to this day. In contrast, I have gone down ASS bikes and stayed with the bike and have walked away, though once twisting my ankle. I am not making a judgement about which way to go down is best (I say neither), though this has been my experience.

TREK & EASY RACER FEEDBACK

I have owned a new Trek R200 for a few months now. My impressions of the bike: PRO: Comfortable; handles very well; Rans seat; rear suspension is nice; lower bottom bracket; 40-speeds. CON: Heavy; complex drivetrain; some friction in drivetrain; rear derailleur doesn't always shift well; throws rear chain off mid-drive when you are going fast in high gear on rough road (I had to make my own chain retention device); hard to mount a kickstand on bike. Overall Grade: C+

I also have a new Easy Racer Tour Easy SS. Its fast, comfortable and everything works correctly. I rode it in El Tour de Tucson (a 111 mile bike race). I finished in 8 hours and 43 minutes. Not real fast, but enough for a silver medal. I'm 57 years old and not in that great of shape either. The bike was a joy to ride and I still felt great when I finished. Overall Grade: A+; The specs for such an expensive bike could be better (came with 21-speeds, Alhonga, etc.). Recumbents Rule!

Bill Kunkle

TREK R200 FEEDBACK

I just received my RCN #55 with the Trek R200 reviews and commentaries. Prior to last fall, I had never ridden a recumbent, but after being able to try one for a weekend, I just had to purchase it! I considered other recumbents, such as the Rans V-Rex, but my area does not have many recumbent dealers. Being a new recumbent rider, I felt comfortable purchasing from a dealer where I had already purchased many Trek mountain bikes. I thought you (and your readers) might want to hear from a newbie and my new Trek R200. I have always liked Trek's quality and my dealer's knowledge of bikes. Since I ride about 4,000 miles per year, I really want a well-built bike that can be maintained. My dealer realized that the chains did not work well and upgraded them to SRAM/Sachs right away. Also, I was not happy with the tires, so I tried Harry Wozniak's recommendation, the ASC RL Edge 100psi tires.

The ride was very much improved. We also trimmed the seat support

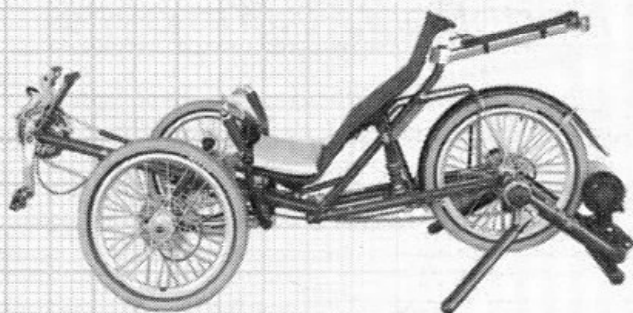
tube so that I could recline the seat a bit more. The rear shifting seems to require too much adjusting, but my dealer had upgraded another R200 to use the SRAM 9.0 on the rear derailleur with a marked improvement.

My primary problem has been with the seat on longer (> 30 minutes) rides. My tail bone will hit the hard part of the seat base. For now, I have added additional foam, but that does not seem to be the best solution. I wish that I could adjust the seat back rest distance closer to the seat base to avoid this problem.

Overall, the Trek R200 is a quality bike that is fun to ride. I was pleased with how easy it was to learn how to ride without being too limited. That is, as I improve my riding skills, I feel the bike is still a good choice.

Howard B. Halstead
halstead@ieee.org □

INDOOR TRAINING HAS NEVER BEEN EASIER ... OR HARDER



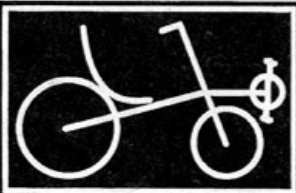
The Kinetic Trainer makes it easier to train anytime, anywhere, regardless of the weather. And with resistance levels of up to 2500 watts, you'll never train harder. Made in the USA, the Kinetic fits wheels from 16" to 29" O.D.

Now available at Easy Racers, Calhoun Cycle or factory direct. Call 800-328-4014, or visit www.kurtkinetic.com for more information.



An indoor ride so realistic you may want to wear your helmet.

*Small wheel adapter required for wheels less than 22" O.D.



21st Century Bikes

*"New England's Premier
Recumbents-Only Dealer"*

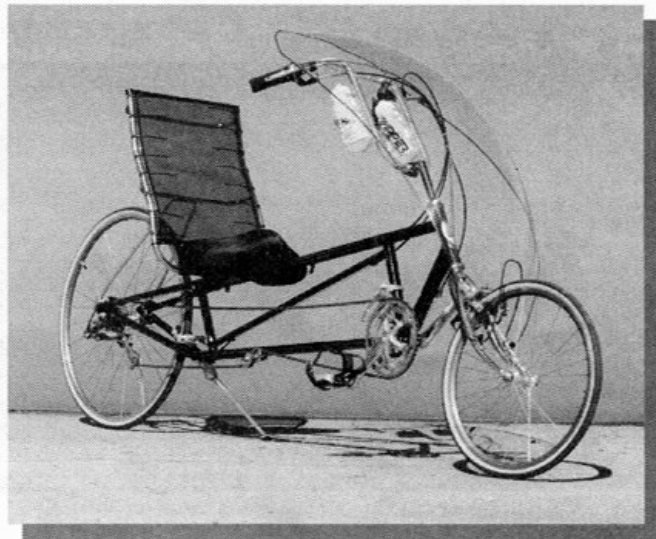
**We offer most U.S. brands as well as a
growing list of imported models,
Trikes, Trailers and Tandems too!**

690 Main Street (Rt 123), Norwell, Massachusetts 02061
phone 781-659-2991 fax 781-659-2998
www.21stcenturybikes.com



The True Wheel

A Cool Bike Shop In Hailey, Idaho



The Easy Racer Gold Rush

Recumbents from:

**Easy Racers
Rans
Haluzak
BikeE**

We deliver anywhere

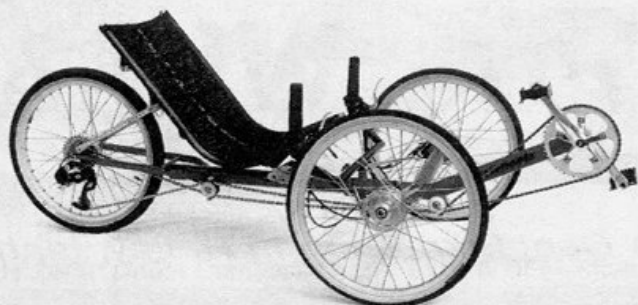
Visa • Discover • Mastercard

PO Box 1658, 400 North Main Street
Hailey, Idaho 83333
Fax • 208-788-6426

www.webpak.net/~jstoke/bike

Tel. 208-788-5433 • 1-800-607-7915
We have your dream bike in stock!
Give us a call today.

WizWheelz



*Compare and you'll see why the TerraTrike
is the best value in recumbent trikes*

www.wizwheelz.com

616-940-1909

TRICE

Inspired Cycle Engineering, Ltd.

www.ice.hpv.co.uk

Unit 9B Spencer Carter Works, Tregoniggle Ind. Est.,
Falmouth, Cornwall, England TR11 4SN

Tel (011 44) 1326 378848

Email: sales@ice.hpv.co.uk



NorthEast Recumbents

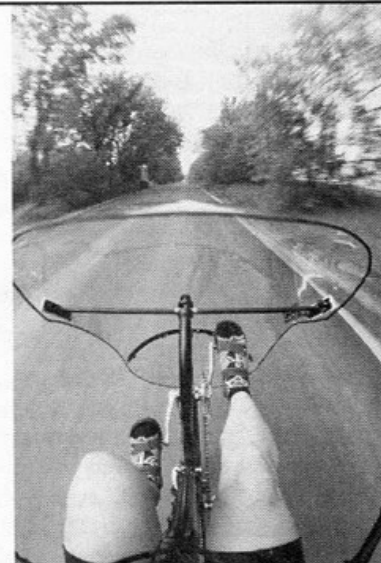
*BikeE / Vision / Lightning / Easy Racers /
Windcheetah....& more for test rides & showroom*

CALL Tel. & Fax: 973-239-8968

9 Wayland Drive, Verona, NJ 07044



Fairings and mounts
for most recumbent
makes and models,
uprights and
experimenter kits



*Helmet-cam mounted on Keith
Philpott's '98 V-Rex (P-38 mount)*

ZIPPER®
ROAD FAIRINGS

PO Box 14

Davenport California 95017

Tel. (831) 425-8650

www.zipper.com

zipdesign@aol.com

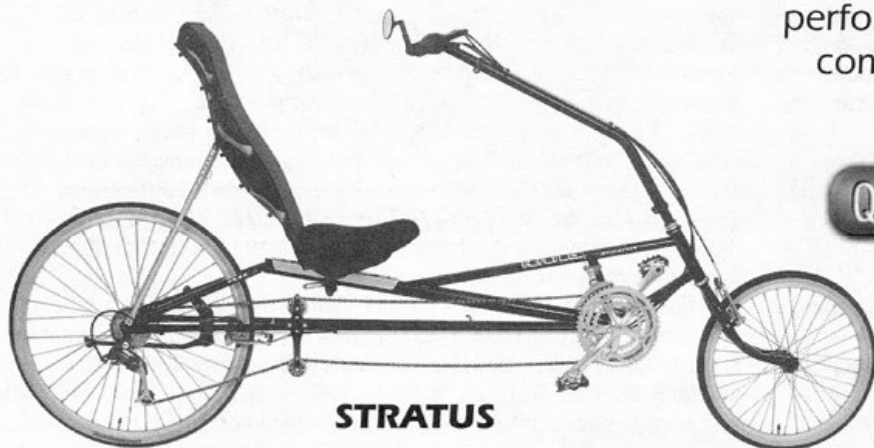
Fax: 831/425-1167

Hotline • 1-888-WINSCRN (946-7276)

A Revelation. Have One at Your RANS Dealer.



V-REX



STRATUS

Our Classic Series. Highly evolved designs with worldwide followings. Quick, agile and smooth. Honed for speed. Artfully rendered in aircraft-grade chromoly for lifelong performance. And equipped with premium components. See your RANS dealer. And discover how good cycling can be.

QUALITY RIDE TIME **RANS**

RANS INC.

4600 Highway 183 Alternate
Hays, KS 67601 U.S.A.
(785) 625-6346 • FAX: (785) 625-2795
www.rans.com • rans@media-net.net

.25 C
CLICK ME

Atlantic Bicycle

Why buy your recumbent from Atlantic Bicycle?

We know recumbents! Each bike is carefully assembled by a very specific set of standards. Our technicians give top quality service and advise. We constantly strive to offer a wide range of tires, tubes, parts and accessories for recumbents. Our selection is one of the broadest, and Atlantic Bicycle has been in business over 20 years.

Atlantic Bicycle is one of the east's largest recumbent dealers offering recumbents by BikeE, Haluzak, Lightning, LongBikes, Easy Racers, Radius, Rans, Vision, and many others.

6350 West Atlantic Blvd, Margate FL. 33063 (Near Ft. Lauderdale)

www.atlanticbicycle.com

Ph: 888 / 41 - BENTS (412-3687) OR 954 / 971 - 9590



The WizWheelz TerraTrike

Could We Have Found a Bargain Enthusiast's Trike?

by Bob Bryant

If you're like me, you've always been seduced by the thought of three wheels in a recumbent position. Imagine light, lean and seductive looks, a flashy bright paint job, and the thought of riding on winding smooth roads, switchbacks (in a mostly downhill direction) with the only sound being the whisper quiet whoosh of your pedal powered human powered sports car—a recumbent tricycle.

As you wake up from this dream <again>, you think about reaching for the credit card and calling that phone number. And then you are shaken by the thought of how you'd explain this character defect and your plans for another RECUMBENT WHATEVER purchase to your significant other. In your preparation, you mentally go down the list: Why you need one?; Where you're going to put it?; What are you going to do with the other three in the garage?; and the most difficult one to overcome: How can you ride more than one at a time?

Well, WizWheelz is here to help. Instead of \$7500, \$5000, \$4000 or even \$3000, the '00 TerraTrike 2.3 is available for \$2195. We had a lot of fun during our WizWheelz experience and we're here to tell you about it.

■ WIZWHEELZ IMPROVEMENTS

Admittedly, WizWheelz has had previous product refinement difficulties. They've been around for a few years and have just introduced the WizWheelz TerraTrike 2.3. There are many small and subtle differences over their last model, though I am here to tell you that the changes are overwhelming. I won't go into all of the gory 2.0 test details, but let's just say that the Wiz crew has been working very hard on this new offering.

✓ **V. 2.3—2000:** Tighter and more responsive steering without sacrificing stability, wider track, wider handlebar, improved control ergonomics, tighter steering radius, slip pockets in seat mesh, triangulated seat frame rib.

✓ **V. 2.2—11/99:** Longer wheelbase, new steering pivot position, new sling/mesh seat (w/heat-treated aluminum frame), seat adjuster and lower center of gravity: More seat positions.

✓ **V. 2.1—8/99:** Tilted hand position for ergonomic improvement and longer steering "throw."

✓ **V. 2.0—6/99:** 20-inch drive rear wheel, new seat, new steering, tighter steering radius, improved handling.

I. SYSTEMS

■ **FRAME**—The WizWheelz Terratrike frame is a very simple and straightforward structure. There is minimal traditional triangulation, however, the frame is much stiffer than previous generations thanks to the move to three 20" wheels (from a 20"/26" combo). The CroMo tubes are TIG welded. The weld beads are of an industrial nature, and certainly not the most beautiful that we have seen—though weld bead beauty does nothing for strength. In fact, I have been told that a traditional weld bead is stronger than a Taiwan factory pulse weld. The fabrication quality of our test trike was very nice, and much improved from our first (spring '99) Terra Trike. The Wizwheelz trike came in a bright yellow powdercoat and is a real show-stopper.

There had been some talk about previous WizWheelz steering subassembly problems. We went to WizWheelz and asked. Here is what they had to say, "We began using the Sturmey-Archer hubs with 12mm axles with v1.6. There have been no problems with these. And no changes have been made to the hub mounts or axles since v1.6. The kingpins are 10mm Grade 8 heat-treated bolts. These are surrounded with CroMo sheath tubes and dual oil-impregnated bronze bushings. The resulting hub-mount gives a solid 5/8" pivot diameter. These are then supported by custom stamped CroMo yokes. The front axles are also Grade 8 and are 12mm in diameter." The new front end assembly was trouble free.

Our trike weighed in a pound or so less than stated at WizWheelz website—around 34 pounds—a nice surprise.

DRIVETRAIN—The component selection is excellent. We couldn't find any cheapo parts on our test trike. Jack Wiswell and the WizWheelz crew are true recumbent enthusiasts and don't want to ship trikes out with mediocre no-name brand parts that will break down in a few months. Even places where they could cheap-out, they have not. Most entry level recumbents use a Dotek crank. The Wiz offers a Sugino XD, which is very similar to a Ritchey Logic, with not quite as refined a finish.

With the lack of a front derailleur post on the boom, the multiple gears come from the SRAM/Sachs 3x7 hub. This hub has 7 derailleur gears on the cassette (like a normal derailleur geared bike) and a three speed internal gear inside the hub (crankset inside the hub, well kind of). The 3x7 offers a 1:1 lockup gear as gear #2; a 136% overdrive as gear #3; and a 27% reduction as gear #1 (figure your gear-inch range and do the math). The only drawbacks to the 3x7 are the added weight (marginal), added friction in the hub for gears 1 & 3 (marginal for recreational use) and the primary problem with the 3x7 hub is the added difficulty of changing a flat tire. You must disconnect the cable and loosen the wheel bolts. The gearing is a bit on the low size at 22-94 gear inches, though it is perfect for this recreational recumbent trike.

CHAIN MANAGEMENT—The chain management is my biggest criticism of the TerraTrike. Designer Jack Wiswell has designed an aesthetically pleasing chainline that adds to the sporty 'look' of the machine. He's the designer, that is his call. From front to back: the chains go from the high crank, down to a low double idler, both go under, and are directed rearward parallel to the frame. This is an extreme bend, though not my biggest concern. As the two chains meet the rear idler, they do an "X-path" (one goes under, the other goes over the idler). The upper chain goes uphill like a rollercoaster to meet the cassette gears, while the lower chain diverts to meet the lower derailleur pulley.

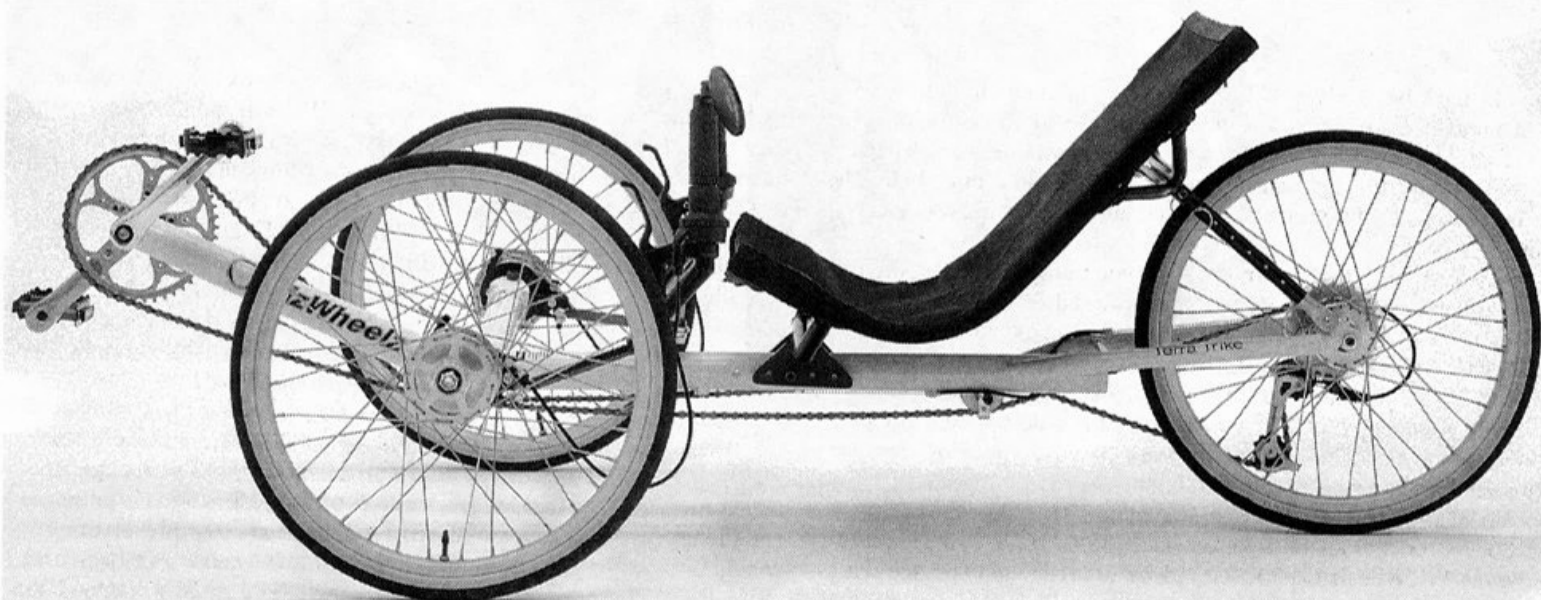
My first thought was that the trike would eat idlers (saw them in half). This doesn't appear to be that significant of a problem on the 2.3 model with the new idlers. WizWheelz had this to say about the idlers, "A few split, typically when it was very hot and they were under a lot of pressure, i.e. climbing steep hills. We have increased the diameter of the chain idler wheels, as well as increased their durometer rating. This should improve the lifespan of the idlers significantly."

We found that the chain is under a rather heavy load in the first three lowest gears, as noted by the chain noise in these gears. Climbing a steep hill on an organized ride might be a little embarrassing if your trike is as noisy as my test trike. Here is what WizWheelz had to say, "The chain is rubbing on the side of the idler groove when it is routed a bit sideways to reach the larger cogs. This usually diminishes as the idlers break in. Also, the chain sometimes rubs the chain guards on the idlers if they are out of position. It is a simple matter to move them so they don't touch (easily adjustable by hand/metal brackets)." As somebody who has been around unique chainlines and management systems for the last 13 years, this wouldn't keep me from buying the trike. I would, however, consider a more direct chain-path via chain tubes (if anybody does this, please send us an update). Chain tubes are common on several other trikes.

SHIFTING—The shifting quality is pretty good, though not world class. The SRAM 3x7 twist shifters are dull feeling and sound like grinding plastic. They are tried and true and used on many recumbents these days. There are some extreme bends in the shift cables/housing, though a concern, they didn't cause any noticeable problems. We appreciate WizWheelz selection of an SRAM/Sachs chain—a chain reserved for the best recumbents from the most thoughtful manufacturers these days.

WHEELS—The wheel quality on our WizWheelz trike was excellent. All three wheels held their true just fine. Hubs are Sturmey Archer drum brake fronts and a SRAM 3x7 rear.

BRAKING—The Sturmey Archer hub brakes stop the WizWheelz



The 2000 WizWheelz Terra Trike

trike adequately. I've always thought hub brakes on trikes were good enough. Only the most high performance rider or load will necessitate the use of disk brakes. And they are not currently available on the WizWheelz trike. Absent is a parking brake, so the Wiz tends to roll around if not blocked or tied down. The coolest parking brakes we've seen are those from the old Trice. Peter Ross used a ratcheting BMX stubbie lever to keep his trikes from rolling away while parked. Another idea would be to adapt a bar-con or thumbshifter connected to a rear caliper brake (though Wiz will need to address this).

TIRES—The WizWheelz trike comes with a set of three Primo Comets. This is a fine tire for this trike and fits the simple and fun to ride persona of this trike. Real world commuters, tourists and those who ride on varied terrain may want to opt for a fatter set of tires.

II. COMFORT

RIDING POSITION/ERGONOMICS—The WizWheelz TerraTrike scores highly in user-friendliness—once you climb down into the seat. This is truly the only user-friendliness glitch where low trikes are concerned—it is a no brainer to ride. Setup and dial-in are easy and will take just a few minutes. Your USS bars are fixed in a fairly decent position. Your only other goal will be to ride the wheels off your Wiz and get accustomed to the higher pedal/BB semi-extreme riding position. Interestingly enough, I found the ergonomics of the TerraTrike more adaptable than some of the other trikes.

SEAT—The simple heat-treated aluminum framed sling/mesh seat is a much needed improvement over the Rans seat (great seat, bad mounting for a trike/didn't adapt well to body English required to ride a trike). The mesh is laced on the seat frame. The seat mounts at the base to aluminum plates that straddle the mainframe. A bolt and wingnut hold the seat in position. The adjustment is not infinite, though the telescoping stays make up for it. We found the seat comfortable—more so than some more expensive trikes we've tried. Being a full sling/mesh seat, there was some 'pinch' on the outside of my thighs, though this is due to our XL sized test rider.

The WizWheelz trike fits riders 5'4" to 6'6" with x-seams of 39-48

inches. We had everyone here at RCN riding the TerraTrike. Even 7-year old Danny was able to stretch out and get a trip around the block. The fit felt equally good for my 6' and Marilyn's 5'4" heights.

III. HANDLING

STABILITY—The TerraTrike is very low. This aids in stability. Low/medium speed stability is exceptional for a trike. As you get into higher speeds, the new, and more 'enthusiast' level handling of the TerraTrike reminds me of a Rans Rocket the way it predictably darts around obstacles. It is possible to react too quickly and give yourself a fright. With the addition of the 20" drivewheel, the center of gravity has been moved rearward. This also has improved the stability of this trike. The firmer USS bars, and stiffer frame/torsional rigidity in the rear end (though it still flexes to some degree) all help as well. I would say the handling is very close to perfection. I'd like to see the handling just slightly more stable, without reverting to the previous comparably sluggish handling of the 2.0. Fatter tires (like Comp Pools or Avocet Slicks) may do the trick.

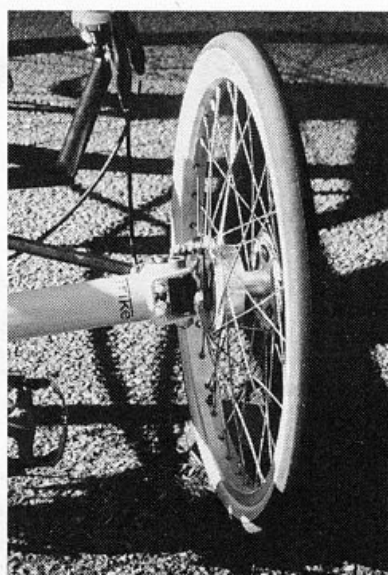
TRACKING—The TerraTrike tracks well, though not as well as the more 'stiff' triangulated frame trikes. I did not detect much 'tail-wag,' though it is possible until you smooth out your cadence. Version 2.3 tracking is vastly superior to ANY previous WizWheelz trike. Previous versions with the 26" rear wheel had way too much torsional twist in the rear end, which caused it to self-steer. The 2.3 is a definite improvement.

MANEUVERABILITY—The previous TerraTrikes were downright sluggish due to the slow handling steering geometry. This, combined with the torsion-frame twist/wag from the mono-stay rear end and 26" drivewheel, made for a handling mess. The 2.3 solves all of these problems. The TerraTrike is easily as maneuverable as the best of the trikes. If anything, it might be a little too quick ('enthusiast' oriented).

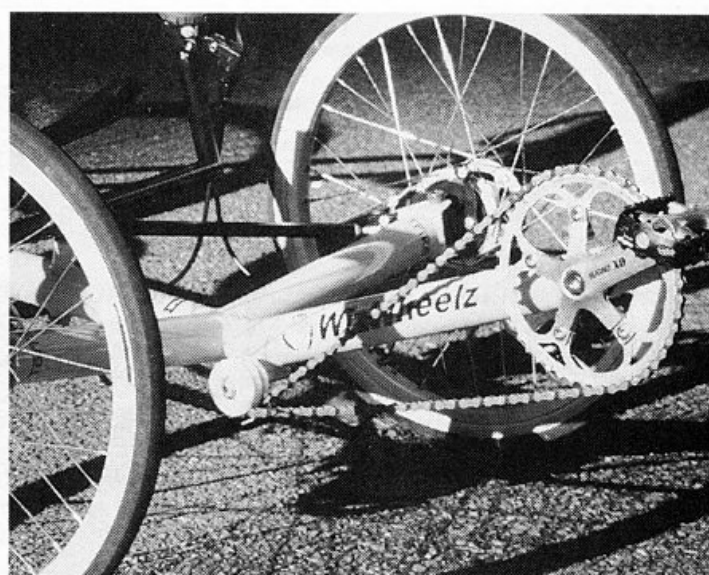
SPEED/EFFICIENCY—If we start by saying most recumbent trikes are slower than their two-wheeling counterparts, the WizWheelz scores better than average. It is lightweight and has skinny road tires and it was quite speedy. I would say it was on par with our ICE Trice, Greenspeed GTR test and ET Dragonfly trikes. It is comparable to your average recumbent in performance—no slouch, but no Gold Rush or R84 either.



New seat, bars & chain 'x' path



Front hub assembly



Note extreme upper chain path

THE RIDE—The WizWheelz TerraTrike is a pedal-powered Miata. Climb down into it, put the power to the pedals and go find a twisty road. We can argue the viability of low trikes in heavy auto traffic, but one aspect we will mostly agree on is how much fun they are to ride. Worries of falling down, unclipping at stoplights (...and stops....and starts) will be a thing of the past. Just learn to finesse, trike body English and keep all three wheels on the ground...well at least two of them.

FUN FACTOR—The fun starts when you get to save \$1000 and still get a decent trike. It continues with reasonable delivery times. It takes a dip when you have to assemble the trike, though the instructions are great, and any bike shop can do it in a few hours (kudos to PT Cycles who set up our TerraTrike; pro-assembly—a surprise gift from WizWheelz). The WizWheelz trike might not be the best, most technologically advanced or even the fastest, but it was REALLY a fun experience. I recommend it UNLESS you are a trike technoweenie to the highest degree (and you know who you are).

IV. OWNING/PURCHASING

VERSATILITY—The TerraTrike is not an extremely versatile trike. The build is fairly petite, it comes with wimpy little Primo Comet tires, and is very low to the ground. I would not be rushing to ride a TerraTrike off-road, on trails or even long rides in heavily trafficked areas. As a recreational trike racing around the streets of my neighborhood, it was the most fun recumbent vehicle we've tested since the last recumbent trike.

SHIPPING/ASSEMBLY—The good news is that the Wiz ships UPS in one box—shipping costs just 40 bucks. The bad news is that it requires a fairly intense build. A competent mechanic can get it built in 2-3 hours (around 75 bucks), an enthusiast might spend the better part of a full day getting the trike built and dialed. I prefer to have trikes arrive 100% complete, though the premise of WizWheelz is an affordable alternative to expensive trikes, which you have to respect.

TRANSPORTABILITY/STORAGE—The WizWheelz trike can easily be packed into its factory box and ship anywhere via UPS. It has to be the most compact trike next to the S & S coupled Greenspeeds. The WizWheelz TerraTrike is still a trike, and will take up more room in your garage than a bike and will require special consideration to haul it to and from rides. It may fit in the back of small wagons and SUV's. One could adapt a 3-rail roof carrier as well. A small pickup or van would be ideal for trike owners.

QUALITY & DURABILITY—This is a very simply designed uncomplex recumbent tricycle. Durability has been a problem in the past, though with the new model, should be about average, though the trike does not strike me as being as heavy duty as one might need in the rigors

"I feel more safe riding the trike for several reasons. One is the obvious stability, no chance of falling down due to slick spots on the road, sand, gravel, mud, ice or blowouts. The less obvious advantage is the trikes get more respect and more passing room on the road. The fact it is so wide seems to make drivers respect it much more, or maybe I look like I'm in some sort of wheelchair so they give me extra room.

Also on a steep climb I can hold a perfectly straight line at the edge of the road with the trike, no need for wobble room."

—Zach Kaplan.

"We have an absolute mission to continuously improve. We are focusing a great deal of effort on customer service and building a relationship with our "family" of TerraTrike owners."

—Wayne Oom, WizWheelz.

of a heavy duty or long commute (especially in nasty weather). Trikes tend to require more owner care and can wear quicker than two-wheelers. This is primarily due to the inherent torsional twisting of everything (almost non-existent on a two-wheeler). Only time will tell how the TerraTrike will hold up. The beauty of the Wiz is in the simple design and excellent value.

OPTIONS & ACCESSORIES—There are few options at this time. Other brands of recumbent rear fenders, racks, etc. should adapt. They are working on accessories that will be retrofittable for older versions as well. In the works are a seat bag, accessory mount (lights/computer) and a fender kit.

V. RCN ANALYSIS

VALUE—What can you say—this is the best enthusiast trike bargain going, and it is no slouch. This is an entry level trike with an eye on keeping things simple and straightforward, easy to build and reasonably low tech. Due to the affordable pricing, TerraTrike depreciation will be slightly better than average. As their reputation grows and improves, the trikes will hold their value better.

MARKET COMPETITION—WizWheelz kicks hiney over Earthcycles, Trice, Greenspeed and Windcheetah all over town. WizWheelz has managed to make the product noticeably BETTER, while keeping the price lower than the competition by a LONGSHOT.

WizWheelz trikes are currently available manufacturer direct, though they do have a local dealer commission program.

VERDICT—I was so jazzed at the way the WizWheelz TerraTrike had been improved—and their market leading price-point, that I don't have much room to criticize. We discussed the chainline/management. This is the biggest issue for me, though not a deal breaker. WizWheelz needs to develop some options to offer such as racks, hydration system options (there are no braze-ons), and if you want to call your trike versatile—full fenders (that is a tough order on a trike). Also, some tire options wouldn't be a bad idea (think FAT). And then there was the slight amount of 'play' in the seat attachment (about 1/8"). I could live with this as well (especially while that extra \$1000 is sitting in the bank).

To sum it all up, everything I know about the WizWheelz trike is that it's a fairly affordable entry level or recreational trike that for many will do everything its costlier peers will do. I'm sure it's capable of more than this, but that is how I've categorized it in contrast with the costlier ICE Trice (with its many configurations), Greenspeeds (ruggedness & refinement) and ET Dragonflyer (rear suspension). However, for extreme trike-usage and conditions, a more bulletproof trike than the Wiz might be in order.

The WizWheelz trike now belongs in this league, though they are playing catch up. The product is pretty nice and they are on a mission to build a reputation. □

■ RATING

- ✓ Comfort — B+
- ✓ Design/Style — B
- ✓ Drivetrain — B-
- ✓ Chain Management (Idlers/Noise/Vibr.) — C
- ✓ Brakes/Braking — B
- ✓ Finish Quality (welds/paint/preassembl.) — B-
- ✓ Rider Ergonomics—Adjustable recline seat, pedals/BB above seat height, though ergonomics are fine for riders 5'2-6'1" (our test rider height range). Seat base does not adjust infinitely (holes spaced every inch, though recline angle can help to dial in leg extension)
- ✓ Best Use — All around recreational trike. Might not be tough enough for heavy duty commuting or loaded global circumnavigation, though this remains to be seen. This is a low trike, and serious use on busy streets will require some additional safety equipment and a whole lot of nerve.
- ✓ Best Rider Type/Size — This trike fits 'average' riders best, though everyone in our family could ride it (including kids).
- ✓ Comparison to Market Competition — This is the best deal in recumbent trikes. It is gaining on the Trice, Greenspeed and Dragonflyer. WizWheelz is really trying hard and their products, service and attitude have definitely improved in the last year.
- ✓ Weak Points — Extreme chainline and non-adjustable stem/handlebar and seat side-play.
- ✓ RCN Performance Potential — B
- ✓ RCN Value Rating — A
- ✓ RCN "Bob" Rating — B

■ PROS

- ▲ A great value
- ▲ KISS designed trike (Keep It Simple, Stupid)
- ▲ Comfortable and simple sling/mesh seat
- ▲ Good and simple ergonomics
- ▲ Improved quality across the board
- ▲ Quick and maneuverable handling (drastic improvement over previous version)
- ▲ BEST TerraTrike to date
- ▲ Easy company to deal with, they answer emails, their phone, and are in the USA

■ CONS

- ▼ Craftsmanship is not quite as good as some competitors (costing \$1000 more)
- ▼ Extreme chain-line=low gear chain noise
- ▼ Seat mount has minor side-to-side play
- ▼ Non adjustable USS side-stick steering (though a good position)
- ▼ No parking brake
- ▼ Lots of assembly required
- ▼ Still working on their quality/design company track record

ABOUT THE BIKE

MODEL—Terra Trike; TYPE—2-wheel in back; STEER—direct USS; WB=39.5"; SH=11"; BB=14"; WT=#34; FM—TIG CroMo; FK—None; Access—www.wizwheelz.com

COMPONENTS

CRANK—Sugino XD 170mm 46-T w/guard; BB—NA; ; DER—SRAM ESP 7.0 (2); SHIFT—SRAM 3x7 21-spd; GEARS—Shimano 12-28 7-spd.; CHAIN—SRAM/Sachs; GEAR INCH RANGE—22-94; PEDALS—Platform; WHEELS—3 406mm 20" X 1-3/8"; RIMS—Sun ZJ-18; TIRES—Primo Comet; HUBS—Sturmey Archer (front), SRAM 3x7 rear; BRAKES—Sturmey Archer drum hub; WARR—Lifetime frame/ 1-year components; COLORS—Yellow or Red.

KEY: WB=wheelbase; SH=seat height; WT=weight; FM=frame; FK=fork; SUSP/RR=rear suspension; SHIFT=shifters/speeds; BB=bottom bracket or BB height; WT=weight; HS=headset; DER=derailleur; WARR=warranty

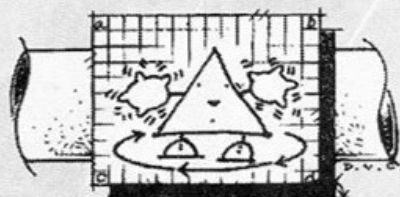
■ RECURRENT ENTHUSIAST TIP

Keep a stock of spare parts. With continuously evolving recumbent designs, updates and the bike industry's fascination with outdating componentry, we suggest that if you find a bicycle that you love, and plan to keep around, don't be a cheapskate. Invest in a cache of spare parts to keep on hand.

What to stock: Cassettes, a shifter set, a chain or two and anything proprietary (or exotic) to the design. On the WizWheelz Trike I would suggest a few idlers, front axles, kingpins and of course tires and tubes. This is a good tip for anyone who owns and loves their recumbent—ESPECIALLY if your trike is rare and/or difficult to get parts for.

"BIKE TECHNOLOGY FROM A DIFFERENT ANGLE"

STOCK and CUSTOM SPEC'D RECUMBENT BIKES, TRIKES* and TANDEM!



"ANGLETECH"

318 NORTH HIGHWAY 67
WOODLAND PARK, CO. 80863

EXCLUSIVES!

ALTITUDE / MC²
TRISPEEDER*
QUADRAPED*

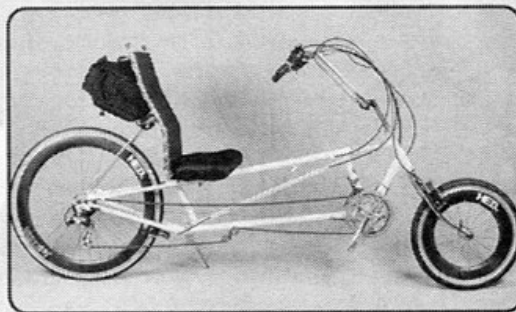
OTHER BRANDS!

RANS / BikeE / VISION
TREK / LIGHTNING
EASY RACERS

BUILD YOUR
DREAM BIKE!

CALL 800-793-3038

- or visit our web site -
ANGLETECHCYCLES.COM



How A Trike Changed My Life

By David Lawson, AKA TerraTriker 009

If necessity is the mother of invention, then adversity is likewise the parent of improvement. Let me explain: in the last few years, my lifetime fascination with cycling had been taking its toll on my body. Noting the inexorable wear and tear I was incurring to myself via my daily bicycle commute to work, both my chiropractor and urologist were recommending that I give up cycling. And not only physical parts of me were aching: the ever-increasing regularity of not being able to keep up with others on the bike path coupled with my approaching half-century birthdate was taking away from the fun I'd always felt as I pedaled my way through life.

Into this midlife crisis arrived my discovery of recumbent cycling and particularly the WizWheelz TerraTrike. I tracked down recumbent dealers and spent a fair amount of time test-riding many types of recumbents. I became particularly enamored with the Greenspeed and Trice trikes but found their price beyond my means. Meanwhile, WizWheelz had come out with their introductory-priced trike at roughly half the price of the trikes I'd fallen for. While I couldn't test-drive a TerraTrike, I did make inquiry by phone. This is what convinced me that this was the cycle I was looking for. One memorable day the semi pulled into the parking lot at my workplace. The completely assembled "proto-trike" (serial number 009) had arrived in a very large box, ready to roll out for a ride after merely inflating the tires! At this point I should note that inventory supplies and delivery times have much improved at WizWheelz. Trikes are shipped inexpensively, albeit in a somewhat disassembled form, the next day via UPS.

Once again cycling not only became a naturally comfortable part of my daily life; the almost daily incidents of outright fun experiences were making me feel young again! And part of the human "race" in literal terms was that I had suddenly become one of the faster cyclists on the road (albeit one limited to a fairly level playing field). I found myself eagerly looking forward to my daily nine-mile roundtrip commute to work. I'd give accounts to my long-suffering family and co-workers afterwards of catching up to racers half my age who kept looking back in surprise when they couldn't pull away or of drafting cyclists and then losing them when I took the lead. There was even the time when I passed and then lead a pace line for several miles averaging 25 mph. All this with a platform that far outweighed anything I was passing or pacing when all I'd really asked for was a not-too-expensive, comfortable HPV platform for commuting to work. Here I was cycling to and from work with tools and a complete change of street clothes and "choosing out" much younger cyclists carrying barely more than a water bottle!

I've joined a local bike club for the first time in my life and have even started doing centuries (albeit half and metric, so far). After all, this is a platform that is comfortable for hours of riding; in fact the joke at rest stops is that I've rolled in already set up in a recliner! But as those who've been cycling alongside me will note with envy, I'm coasting along during the ride far more often than they are, aided by the recumbent's aerodynamic shape and the high-pressure tires tracking effortlessly on very tiny contact patches with the road.

A word about fairings: the trike platform is designed for them. For not



David Lawson and his WizWheelz trikes

only does the frame provide easy points for attaching aerodynamic aids, but the stability of three wheels means not worrying about crosswinds sailing you right off the road!

What is this platform that brings initial frowns of concern to roadies and eventually smiles to them and everyone else—including shouts of praise from kids? A recumbent trike for the world: the TerraTrike. Simply designed, a single chainring up front, a quick-release attached comfortable Rans seat (now a new and improved custom seat) in the middle, and a Sachs 3x7 21-gear setup in the rear—all on an incredibly stable tadpole 4130 CroMo steel frame. Everything about the design is efficient, even the price which remains significantly below the rest of the world of performance trikes. A word of praise for those: they're all well

worth their price and I'd love to have each of their models as well, but honestly why would I spend the extra \$1000 or more when the TerraTrike's available?

I'm currently equipping a second TerraTrike frameset, which arrived with USS for even more comfortable riding. I'm anticipating that the ease of steering & braking on this new model will prompt my wife to once again join me in cycle adventures as we used to do before she incurred a painful wrist condition. And I likewise acknowledge her concern for safety as well as comfort; I've found riding the TerraTrike to be as safe or safer than any other cycle. People notice recumbents (however, I still am cautious in riding defensively and use a light/flag in heavy traffic). Recumbent trikes are stable, no matter what the condition of the road and easy to navigate on narrow bikepaths at speed.

Storage isn't a problem either. I have a separate cycle closet in the garage and to my neighbors' amusement I pack a remote garage door opener for zipping in and out of my driveway. At work, the trike fits through any standard 3-foot wide doorway. I keep it lovingly parked in a corner of my office where it takes up hardly any more room than my other cycles did and doubles as a great conversation piece. And it never tips over. For long trips by car, the trike's seat and fairings are quickly removed, allowing the TerraTrike to travel on the roof at freeway speeds with each wheel set in the trough of a rooftop carrier and the frame U-bolted to the carrier's crosspiece.

Negatives? Well, this shy guy who grew up in a small town in the Midwest has had to learn to deal with being the center of attention. I've also had to put up with the standard reaction that 3 wheels are slower than 2. Which brings to mind one last anecdote for the reader to suffer through. On PeopleMover's last Rally, I left the oceanside halfway point/rest stop with a number of the fastest faired bikes for the return trip back to PeopleMovers. I was enjoying the literal rush of travelling with this fast crowd when I suddenly lost power via my front chain ring suddenly locking. Having to await a long coast to a stop safely off the narrow bridge I was crossing, I got off the trike to discover the problem while at the same time noting with frustration my fast crowd now disappearing in the distance. After what seemed an eternal couple of minutes, I found the problem and then went looking for a stick to get the chain back on the cluster. I'd recently replaced the original one with a

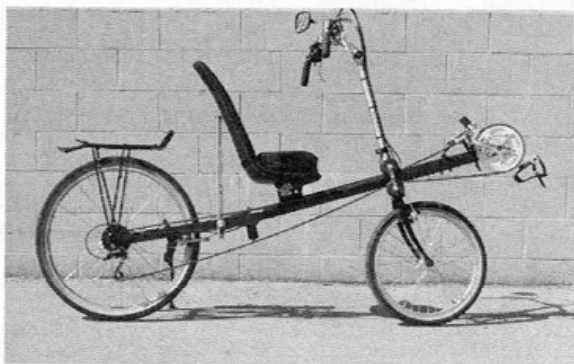
wider range of gears and a new, but apparently not correctly adjusted derailleur. I got back on the trike thinking there was no way I'd ever catch up to that group. About half a dozen miles down the path, I don't know who was more surprised when I pulled up behind that group and once again enjoyed their fast company for the rest of the ride.

Ok, so trikes are fast. Does speed imply lack of safety? To those who would say that recumbents, especially trikes, are less safe in traffic than traditional diamond-framed bikes, I've got one response: what cycle is safe sharing the road with two tons of steel? It's the vigilance of the rider making informed decisions on choice of routes and traffic volume that makes cycling safe and fun. I invariably choose less traveled routes especially those with fewer cross-streets. Traveling by trike means I can go farther and faster, so I don't have to compromise

safety for shorter distance. Cars and trucks aren't the only concern, however, in the daily travels of a triker. In the event of an encounter with something less heavy (debris in the road, a pothole, an unleashed dog, or some similar hazard), I'd rather be riding a stable trike. Sitting feet forward with shoes clipped to the pedals is such a reassuring feeling that I've half-jokingly commented that trikes should come with a seatbelt as standard equipment! And finally, to those who'd complain about spending nearly two thousand dollars, I'd ask them just how much they're willing to spend to commute to work daily, keep in good physical condition without added cost or time, and who want to add some fun and simplicity to their daily lives. For all these reasons, I'm glad I'm riding a TerraTrike. □

Cambie Cycle

Recumboni LWB
Recumbini SWB
BikeE · ATP Vision
Quetzal · ReBike
Custom Fabrication



The Cambie Recumbini SWB

**Canada's Premiere
Custom Recumbent
Builder & Dealer**

SALES/SERVICE/RENTALS

Tel. 604-874-3616

Fax. 604-874-3696

Info@cambiecycles.com

www.cambiecycles.com

Visit our updated website

**We ship anywhere
in North America**



We are the exclusive Canadian Agent for Recumbent Cyclist News

BURLEY®

The Limbo



...has arrived!

- Full-sized 26-inch rear wheel
- Fully adjustable folding steering mast
- Easily convertible to short wheelbase recumbent
- Superior linkage steering and RockShox™ coil-over rear suspension
- Seat custom-designed by motorcycle guru Mike Corbin
- Low 21-inch step-over height

TEST RIDE THE LIMBO AT THESE BICYCLE SHOWS!

- February 18-20 – Seattle International Bicycle Expo
Seattle Center Exhibition Hall, WA
- March 5-7 – Midwest Consumer Bicycle Show
Rosemont Convention Center, Rosemont, IL
- March 18-19 – Portland Bike Show
Rose Quarter Exhibition Hall, Portland, OR
- April 28-30 – So. California Bicycle Expo 2000

Burley Design Cooperative • 4020 Stewart Rd. • Eugene, OR 97402 USA • (800) 311-5294 • (541) 687-1644 • www.burley.com

Recumbent Wheels & Tires: The Complete Story

by Zach Kaplan, zakaplan@earthlink.net

There seems to be a good deal of confusion surrounding recumbent tyre sizing as unlike conventional upright bikes which have settled on a handful of tyre sizes and use same size wheels front and rear. There are many different tyre diameters currently in use on recumbents and most recumbents have smaller front wheels for crank clearance reasons.

◆ HOW TYRES ARE SIZED

Many people still refer to tyres by archaic English/American terminology such as 20 x 1 1/8" or by archaic French terminology such as 700C. In the old days tyres were sized by their outside rolling diameter. Typically one outside diameter would have four available rim diameters so the outside diameter remained the same when various width tyres were used. For example in the 700mm outside tyre diameter category four rim diameters were used. The 700mm rim was used for 1-1/4" wide tyres and had a bead seat diameter of 647mm. The 700A rim was used for 1-3/8" wide tyres and had a bead seat diameter of 642mm. The 700B rim was used for 1-1/2" wide tyres and had a bead seat diameter of 635mm. The 700C rim was used for 1 3/4" wide tyres and had a bead seat diameter of 622mm.

Narrower tyres became available for the 700C size and now a 700C road tyre has an outside diameter much smaller than 700mm. Likewise the American and British so-called 20" size had an actual rolling diameter of 20" inches. One 20" size would be fitted with a narrow fractional tyre size such as 20 x 1-1/8" and have a rim diameter of 451mm while the other would be fitted with a wide decimal tyre size such as 20 x 2.125" and have a rim diameter of 406mm. As the 406mm wheel size became the more common of the two newtyres were introduced so now the so-called 20" size can have an actual rolling diameter ranging from 18.5" to 20". As a result of people continuing to use the archaic tyre sizing terminology there is all sorts of oddness such as an 18" tyre that is only 6mm larger in diameter than a 16" tyre that actually measures 16.5" in diameter.

To eliminate all this confusion I prefer to use the ETRTO/ISO method of tyre and rim sizing. The European Tyre and Rim Testing Organisation/International Standard Organisation system is really quite simple. The first number is tyre width in millimetres. The second number is rim/tyre bead seat diameter in millimetres. Thus a 37-406 is a tyre which is 37mm wide and has a bead seat diameter of 406mm (meaning it will fit almost any 406mm rim). Note that in order to make their advertised weights look lower almost every manufacturer's stated tyre width is narrower than the actual tyre width. Also a tyre will have a slightly narrower actual width if run on a narrower rim. So the tyre width is just a rough guide to how wide the tyre will actually be when inflated but the bead seat diameter is very exact or else the tyre would be impossible to get on the rim or would blow off the rim. Although all tyres and tubes are supposed to be labeled in ISO terms, many of the less expensive non-European brands aren't, but can be identified by their fractional or decimal inch based labels. As with any switchover to a new system it doesn't happen all at once.

◆ TYRE SIZES USED ON RECUMBENTS

The most common rim diameters used on current production recumbents are 305mm, 406mm, 559mm and 622mm. These sizes are all widely available at the majority of bike shops and there are many manufacturers producing a wide variety of tyres in various widths and styles in these sizes. Some of the older recumbent designs and even a few of the new ones use the much harder to find 349mm, 369mm, and 451mm diameters for which there is extremely limited tyre selection and only relatively narrow tyres available.

◆ 305MM

This is the common 16" size used on children's bikes throughout the world. The tyres for the 305mm size have traditionally been expressed in decimals such as 16 x 1.75". Emergency replacement tyres are available at most bike shops and many department stores and super markets. The road

tyres available in the 305mm size range from the very lightweight Primo Comet 37-305 to the Schwalbe City Jet 54-305. There are also mixed use on-off road tyres available in this size such as the Primo V-Monster 38-305 standard on the front of most BikeEs and the RANS Wave and the Kenda Krisp 54-305 standard on the front of the BikeE FX. The 305mm wheel size is used on the fronts of most BikeEs, the RANS Wave, ReBikes, various European MWB city recumbents and the new generation of low racers that can be pedaled through U-turns such as the Earth Cycles Sunset and Festina 16/20. The 305mm size is also used on BOB trailers. BikeE is having the Maxxis Hookworm 53mm wide high pressure semi-slick tyre made in the 305mm size for their E2 tandem. The 305mm size is here to stay for applications where crank to tyre clearance is restricted or compactness is important.

◆ 340MM

This is the archaic French 340A size. It isn't used on any current production recumbents and hasn't been for some time. It has been used on the fronts of some European recumbents in the past such as the Roulandt. Availability is extremely poor.

◆ 349MM

This is the British folding bike 16 x 1 3/8" size. It has been used on older pre-spaceframe Moultons and is still used on the Brompton folding bikes. Recumbents using the 349mm size in the front include Lightnings, Visions, Linear Compacts, Easy Racer EZ-1s, BikeE RoadEs and some BikeE NXs. The Green Gear SatRDay uses 349mm wheels at both ends. Tyre selection is extremely limited in the 349mm size. The most common high performance 349mm tyre is the Primo Comet 37-349. Primo also has the Champ 19-349 tyre which is too narrow to be of use on the road but could be used for smooth velodrome racing. Raleigh offers a more durable fairly low pressure 37-349 tyre with a high rolling resistance hybrid tyre tread pattern. Schwalbe recently introduced the Kevlar belted Marathon in the 37-349 size which looks like it will be the most durable 349mm tyre and has a high pressure rating. At 37mm wide, the widest available 349mm tyres are too narrow for an adequate safety margin with the majority of recumbent riders on the majority of roads when used on a SWB but this width is adequate for most CLWB and LWB applications where the front wheel doesn't experience nearly as much impact loading.

◆ 355MM

This is the decimal 18" size which is hard to find in North America but reasonably common on folding bikes in Northern Europe and Asia. The Birdy folding bike uses the 355mm size. None of the 355mm tyres are particularly high quality and they are available in both road and off-road tread patterns. A number of Birdy riders have converted to the 349mm, allowing them to use the much more readily available Primo Comet.

◆ 369MM

This is the Alex Moulton size, also known as 17 x 1-1/4", used on space frame AM bikes. Wolber makes two varieties of 32-369mm tyres, expensive and ultra-expensive. Both are in the esoteric hard to find category. This expensive tyre costs \$40 and has more rolling resistance and is heavier than a Primo Comet, though offers better wet weather traction. The ultra-expensive C3 slick rated 140 psi and costs \$120. The Wolber-Moulton tyres have been used on Lightnings and Windcheetahs though now most new Lightnings use the 349mm or 406mm size and newer Windcheetahs use the 406mm size. The C3 version has been used in HPV races, successful record attempts and Race Across America. The only real reason to use the 369mm size today (other than that your bike came with that size) is if you want to run a HED carbon fibre aerodynamic rim on a recumbent that doesn't have enough clearance to run a 406mm front wheel. HED's carbon fibre rim mold won't work with a 349mm size.

◆ 390MM

This is the archaic French 450A size which has sometimes been called 18". Wolber and Michelin used to make fairly low quality 28-390 tyres and these were used on the front of a British Kingcycle. Both are no longer produced.

◆ 406MM

This is by far the most common small wheel size world wide. The 406mm size is the 20" size which has been referred to in decimals such as 20 x 1.75". Emergency replacement 406mm tyres are readily available in bike shops, department stores and super markets throughout the world. Many manufacturers produce a wide variety of widths and styles of 406mm tyres in a wide range of quality levels. The narrowest 406mm tyre is the somewhat fragile Continental Grand Prix 28-406. The widest road 406mm tyres are 54mm though there are knobby off road 406mm tyres up to 60mm. The 406mm size is used on the front and/or rear of many recumbents in addition to children's bikes, BMX bikes, freestyle bikes, folding bikes, utility bikes and bike trailers. In addition to the wide assortment of tyres there are also many high quality rims available in the 406mm size. RCN's favourite high performance road tyre, the Tioga Comp Pool, is only available in the 47-406 size. Other high quality road tyre manufacturers such as Avocet, Continental, Nokian and Vredestein can't be bothered to make small tyres in any sizes other than 406mm. The 406mm tyre market is larger than all other compact sizes put together.

◆ 438MM

This is the archaic French 500A size. It was used on some European recumbents before the 406mm size took over but none of these were officially imported into North America.

◆ 451MM

This is the fractional 20" size for which the widest available tyre is 37mm (1-3/8"). For many years the 451mm size was the diameter of choice for high performance 20" front wheels because the narrow IRC Roadlite 28-451 tyre was (and still is) available in this size. The 451mm size is a junior BMX size and as such tyres for it are available in some bike shops but most likely they are knobby tyres. Since the 451mm size isn't used on children's bikes many bike shops won't even have tubes for it, same with department stores. With the advent of narrow 406mm tyres the 451mm size has been largely replaced by the 406mm size. Major manufacturers such as RANS which used to use the 451mm size have switched to the 406mm size since 406mm tyres and tubes are far more readily available, the best 406mm tyres have lower rolling resistance than the best 451mm tyres and the 406mm size gives one maximum versatility to run narrow or wide tyres rather than being locked into narrow tyres. The only 451mm road tyres available today are the IRC Roadlite 28-451, the Primo Champ 19-451, the Primo Comet 26-451 and the Primo Comet 37-451.

The only current production bikes from major manufacturers using the 451mm size are some versions of Bike Fridays, some versions of the BikeE NX and some versions of the Easy Racers Tour Easy and Gold Rush. The only reason to use a 451mm size instead of the 406mm size would be to allow a narrow, unsuspended tyre to roll over road imperfections better. The difference isn't much though and for most people not worth being restricted to a small number of available tyres in narrow widths. The weight and aerodynamics are also worse on an equivalent width 451 compared to a 406.

◆ 507MM

This is the decimal based 24" mountain bike size. Most of these tyres are fairly wide and knobby and are made for mountain bikes for smaller riders, some children's bikes and "cruiser" bikes. The 507mm size hasn't been used as standard equipment on any production recumbent though riders have converted V-Rex 24s to the 507mm size to allow using wider, more readily available tyres such as the Specialized Fat Boy 32-507 and the IRC Metro 54-507 (Angletech offered this tire size as an option).

◆ 520MM

This is the fraction based 24" road bike size and is mostly used on the front wheels of Terry road bikes though it has also been used on both wheels of some esoteric road bikes over the years such as the Bruni

Second Century full suspension road bike. RANS once offered a 520mm rear wheel V-Rex and the Vision Saber currently uses the 520mm size front and rear. There are only a few 520mm tyres currently available and they are made by IRC and Panaracer. These Japanese made tyres are fairly high quality but not top quality and they are only available in 25mm and 28mm widths which is too narrow for most recumbent applications.

◆ 540MM

This is the archaic 600A size which was used on the rear of the Kingcycles. Tyre availability is extremely scarce in this size.

◆ 559MM

This is the common 26" mountain bike size widely used on mountain bikes, utility bikes, tandems and the rear wheels of recumbents all over the world. There is a tremendous selection of rims, tyres and tubes in all styles and quality levels in this size and replacement parts are readily available. The narrowest 559mm tyre is the Specialized Turbo 20-559 and the widest 559mm road tyre is the Ritchey Moby-Bite 54-559 (26 x 2.1"). There are also knobby off-road tyres available in this size up to 3.0" wide. With the popularity of mountain bike use on roads there are many high quality narrow, medium and wide road tyres available in the 559mm size.

◆ 571MM

This is the uncommon 26" road bike size known as 650C. It is used on an increasing number of road bikes, particularly those for shorter riders and those used in time trials and triathlons. Some riders have put this size wheel on the rear of a recumbent designed for a 559mm wheel to allow using a particular brand of composite aerodynamic wheel or to allow using a tubular since the 571mm tyre has the same rim diameter as a 26" tubular. The 571mm is not recommended for general use recumbents since the widest tyres available in this size are 23mm wide. They tend to be high quality, expensive tyres but not wide enough to hold up to recumbent use. 571mm tyre availability is poor outside of shops that cater to triathletes.

◆ 622MM

This is the common road bike 700C size also used on hybrids, cyclocross bikes, tandems and some mountain bikes. Road tyres are readily available in North America and Europe from 18 to 37mm wide in this diameter. The 622mm size isn't as common or well supported as the 406mm and 559mm size though, particularly in other parts of the world. Mixed use hybrid type tyres are available up to 47mm in this diameter and WTB recently introduced a full fat off-road mountain bike tyre in the 622mm size which they are calling 29". Not many new recumbent designs are using the 622mm size because there is relatively poor selection of medium width road tyres in this size and no wide road tyres available. The 622mm rear wheel also takes up more space and is inherently weaker and heavier than a 559mm rear wheel, all important considerations on recumbents as the rider can't unweight the bike for bumps and recumbents already tend to be longer and heavier than conventional bikes. The two advantages of a 622mm rear wheel on a recumbent are that it makes it easier to get a higher top gear without resorting to oversize chainrings, intermediate drives or internal gearing, and all else being equal the rolling resistance will be lower than a 559mm rear wheel. For this reason the only recumbents still using 622mm rear wheels are the high performance designs such as models from Easy Racers, Lightning and the M5 Low Racer. These bikes all have very effective fairing options which would cause them to run out of gears at the top end if used with standard drive trains and 559mm drive wheels.

◆ WHAT WIDTH TYRE SHOULD I USE?

The optimum width of tyre to be used depends on a wide variety of factors such as road conditions, rider weight, bicycle weight distribution, suspension status, and if it is a front or rear wheel. In general the tyres recumbents come with from the factories are too narrow for the average weight recumbent rider (typically in the 200 lb. range) to ride on average roads (occasional cracks and potholes) with an adequate safety margin. The narrow tyres do make the bike feel lighter when you pick it up and may accelerate noticeably faster than heavier tyres but in real life use narrow tyres on a recumbent are generally slower than wider tyres due to increased rolling resistance and rider fatigue and having to slow down

more for road hazards and rough sections of road. When one looks at overall average speed including stops the wider tyres become even faster after you factor in the time spent fixing punctures and picking yourself up off the road after a blowout or going out of control due to a road hazard.

My rule of thumb for SWB recumbents is unless the rider is super light and the roads super smooth the widest front tyre which fits the bike should be installed. With a 406mm wheel this will be 54mm or 2.1". That might sound like a huge, heavy tyre and not the sort of thing you'd want on your high performance recumbent but once you've ridden a tyre this wide on the front of a SWB you won't go back to the stock skinny tyre. If you've ever had a front blowout on a SWB you'll know what I mean. With the wide tyre rough roads can be taken much faster and much more in control. The additional weight is slightly noticeable when accelerating but the actual time difference would be hard to measure on any sort of climb. Most people will experience a higher overall average speed with a full fat tyre in addition to a smoother ride and better control plus better floatation if they hit sand or gravel on the road. I've experienced first hand how switching from the stock narrow tyre to a full fat front tyre completely changes the feel of a particular SWB recumbent from a twitchy ride that takes a lot of concentration to ride at speed on rough roads to something very smooth and stable. This is even more important if one rides at night, in heavy traffic, in the rain or has a front fairing, all of which make it harder to see and avoid road hazards.

The rear tyre of a SWB experiences much lower impact loads and is less critical for staying upright and in control so one can go narrower on the rear if weight savings is considered more important than ride quality and durability. The stock 32mm tyre may be wide enough for the rear, especially if the rear wheel is a 559 or 622 which rolls over bumps better than a smaller diameter wheel and doesn't go as deeply into potholes. If the SWB has front suspension I would recommend the widest rear tyre that will fit to make the bike feel more balanced going over bumps without pinch puncturing the rear tyre.

LWB recumbents, due to their rearward weight bias, experience much lower impact loading on the front wheel than a SWB and as such most riders can get away with a front tyre as narrow as 32mm on a LWB and 28mm is no problem for a lighter rider on a relatively good road. There is more of a performance reason for using a narrower tyre on the front of a LWB since the front tyre is the first thing out there rotating in otherwise undisturbed air. A narrower tyre means less frontal area and better wheel aerodynamics. On a SWB the front wheel is set back in the turbulent zone behind the rider's rotating feet so tyre width on a SWB has relatively little effect on the aerodynamics.

Most riders on a LWB will want at least a 35mm rear tyre. The rear wheel of a LWB is subject to higher impact loads than the rear wheel of a SWB but a rear blowout on a LWB's less critical than a front blowout on a SWB. On rough roads many riders should be using a full fat tyre 54mm tyre on the rear of a LWB. Unfortunately very few LWBs have clearance for both a full fat rear tyre and a rear mudguard. The RANS Stratus and Rotator Pursuit are rare examples of LWBs with adequate tyre clearance.

If you are buying a recumbent that uses 406mm or 559mm wheels it would be a good idea to make sure the frame has clearance for the widest tyres available in these sizes plus an additional 25mm clearance for mudguards. Surprisingly few recumbent manufacturers provide enough clearance. There is really no reason they shouldn't be as a slightly longer fork and chainstays would add hardly any weight and greatly improve the versatility of the bike. Many people have had to make the unhappy decision between fat tyres or mudguards. Others have had to modify mudguards in potentially unsafe ways to accommodate fat tyres.

For best tyre support, aerodynamics and run flat ability the rim should be as close to tyre width as possible. The narrow rims used on some recumbents don't support wide tyres well. While the tyre will fit the rim it bulges out to the sides quite a bit. The lack of support is most noticeable when cornering with very low tyre pressure such as the pressure that would be used to provide passive suspension on a rough or dirt road and also in the event of a sudden air loss. Luckily wide tyres have enough air volume that they usually don't lose all their air at once in the event of a puncture. Some riders have also reported the sidewalls on the lightest weight rims permanently deform from running fat tyres at high pressure. This is mainly an issue with a heavy rider or a tandem running something like a Maxxis Hookworm 53-406 at the rated 110 psi. Most riders won't

need so much pressure in a tyre this wide.

◆ WHAT TYPE OF TREAD PATTERN DO I NEED?

A tyre used entirely on the road should be completely smooth or smooth in the middle with siping at the edges for dealing with sand in a wet corner. A tyre with a slick rolling surface uninterrupted by grooves will have better traction and lower rolling resistance than a tyre with a block pattern or grooves going across the middle as there will be more rubber in contact with the road and less squirming. Siping at the edges which normally doesn't contact the road can be useful in rough conditions such as wet sand or mud while cornering. For an example of a tyre with such a rational tread pattern see the Ritchey Tom Slick.

For riding off-road a block type tread pattern as used on the hybrid tyres and freestyle tyres will give better traction. Width and floatation are more important than tread pattern in the dirt road conditions which would be the extent of most off-tarmac recumbent riding.

◆ BLACKWALL OR SKINWALL?

Black sidewalls are more resistant to cracking from ultra violet exposure than unpigmented sidewalls, they don't show brake dust and they don't show irregularities where the black tread meets the sidewall so blackwalls are preferable. Car and motorcycle tyres switched to blackwalls many years ago for these reasons. Most mountain bike tyres are now blackwall. The holdout has been road tyres, though this is changing. Blackwall Primo Comets will soon be available. Blackwall road tyres from Schwalbe, Continental and Specialized are already available.

◆ WIRE OR KEVLAR BEAD?

Most tyre beads are made of steel wire. An option on 559, 571 and 622mm tyres is a Kevlar bead. This allows the tyre to fold for carrying as a spare and typically reduces the weight of the tyre by 50 grams. Kevlar beaded tyres are more expensive than their wire bead counterparts and can be harder to get on the rim. While Michelin and Mitsuboshi have made Kevlar beaded 406mm BMX tyres in the past there are no 406mm tyres currently produced with Kevlar beads.

◆ KEVLAR BELTS?

Some tyres have an optional Kevlar belt under the tread in the casing designed to reduce the chances of a sharp object penetrating the tyre and causing a puncture. Kevlar belts add weight and significant rolling resistance for a fairly small increase in puncture protection. Sealant filled tubes and tyre liners are more effective at reducing the need to stop to fix punctures and sealant filled tubes don't decrease performance as much as a Kevlar belt. Some riding conditions require all the protection one can get though and a Kevlar belt may help the casing stay together better after glass or a similar hazard has penetrated the casing. Currently the only Kevlar belted small tyres available are the Schwalbe Marathon 37-349 and the Schwalbe City Marathon 32-406 though Primo will soon have Kevlar belted versions of the 349mm and 406mm Comets.

Ed. Note: Zach prefers to use the European spelling for tires (tyres) and we respect the his choice to do so. ☐

ZACH KAPLAN CYCLES

**Maximum Performance Recumbents for Transportation
Meticulous Service Unequaled Custom Modifications**

FAIRINGS SUSPENSION LIGHTING SYSTEMS
WIDE-RANGE GEARING AND LUBE-INJECTION
CONVERSIONS MANY BRANDS AVAILABLE
INCLUDING IMPORTS

Telephone: 510-522-BENT (2368)
1518 Buena Vista Ave., Alameda, CA 94501 USA
Serving the SF Bay Area and mail order
E-mail: zakaplan@earthlink.net
Web: www.bikeroute.com/zach

The Midwest's Leading Recumbent Shop

The Bike Rack

Lots of bikes in stock and ready to ride

Rans • BikeE • Linear • Vision • Trice • Easy Racers • Penninger • Longbikes

Home of Creative Mobility

Mobility Solution Specialists: Hand Powered Bikes • Wheel Chairs

Trikes • Custom Fitting is our Specialty • Full Service Shop

We Ship World Wide

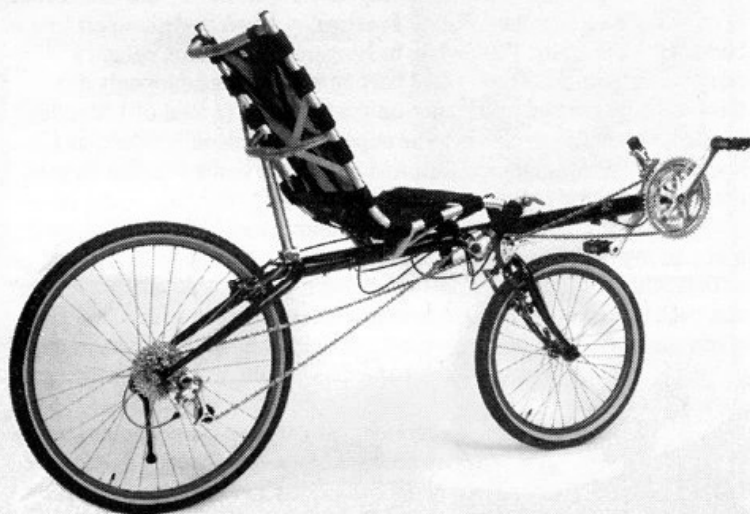
800.711.BIKE

Campton Hill Rd. & Rt. 64 St. Charles, Illinois 60175

See us on the web at: <http://www.thebikerack.com>

The Horizon...

Is the ultimate Short-Wheelbase touring Recumbent



Here's Why:

- Smooth, stable handling
- Non-twitchy linkage steering
- Shock absorbing rear stays
- Breathable full sling/mesh seat
- 26" (rear)/20" (front) wheels
- All models hand crafted in the USA
- Anatomically correct under-seat steering with bar-end controls
- We can fit riders from 5' to 6'8" and to 380 pounds!

Bicycles by Haluzak are custom crafted for the individual rider as well as competitively priced. Let us build the perfect recumbent for you! Call today.

BH

Bicycles by Haluzak

70 West Barham Ave.
Santa Rosa, CA 95407
Tel. 707-544-6243

On the web: www.haluzak.com

RSD 24 Hour Challenge

Article by Alan Thwaites
Photos by Steve Robson

It's three o'clock in the morning, and I'm cycling as fast as I can along a deserted country road. The temperature has dropped from yesterday's high of 95F to about 78F, but the humidity's still up around the 85% mark. This being summer in rural Ontario, the clouds of mosquitoes are so thick I'm breathing them.

Although I'm moving at a steady 18 mph (not bad after almost 10 hours of riding), I'm occasionally passed by pacelines of three or four riders doing 25 mph or so. It's a thrill to watch them blast by, but a little nerve-racking, too.

My legs still feel strong, and the bike is doing everything it's supposed to do. But I'm so sleepy that I can't quite see where the road is, a real hazard considering the long, fast downhill I'm approaching. So I decide to take it easy until I get to the main checkpoint, then call it quits.

■ My first 24 hour bicycle race is over

The event was the RSD 24 Hour Challenge (www.spaz.com/rsd/), held in Wyevale, Ontario on July 17 and 18. It's one of a series of ultra-cycle events held all across North America each cycling season, and is a qualifier for the legendary RAAM (Race Across America) event. I didn't enter to try for a RAAM position, just to see how far I can push the limits of my body and my bicycle.

Because this was my first ultra event, I decided to enter as part of a two-man team. My partner Tom Thompson and I, both members of Human Powered Vehicles of Southern Ontario, a local recumbent club, joined fellow HPVSOers Dennis Taves, Carey Chen, and Rolf Thiele (each riding as a solo entry) as we mix it up with the 80 plus other riders in the event (all of whom are on traditional upright bicycles). Only Dennis had ridden events like this before, so the rest of us weren't sure what the ride would bring.

The ride started at 8:00 AM on a hot, sunny, and humid Saturday morning, and was run entirely on public roads, through cottage country and farmland, alongside sandy beaches and through shaded woodlands, with terrain ranging all the way from flat to extremely hilly.

The course consisted of three loops. Loop One was 103 miles in length, and had to be ridden once. Loop Two was 20.5 miles, and was to be ridden as many times as possible before dark. It closed at 7:00 PM, when the 5 mile long Loop Three opened up. Riders rode Loop Three all through the night, until the race ended at 8:00 on the following morning. At checkpoints on each loop, riders got their route cards stamped, and volunteers handed out water, orange slices, and energy bars.

Considering our lack of experience, Tom and I didn't do badly. Together, we covered a total of 275 miles—somewhat less than we'd planned, but respectable for a couple of middle-aged guys. We did that by splitting Loop One, doing two circuits each of Loop Two before switching off to the other rider, and four circuits each of Loop Three. I started out for us on Saturday morning because I'm a morning person and Tom isn't. That meant he got the nasty hills on the second half of Loop One (part of the plan, since he's stronger and faster on hills). My own contribution to the effort was a total of 151 miles, at an average speed of 15.3 mph.

Here comes Checkpoint Two, 55 miles into the event. This is where Tom and I will change places—I'll take a four-hour break, while he makes time on the roads. The checkpoint is a small marquee tent, staffed by a couple of volunteers. One takes my route card and stamps it, the other offers me a cup of water and points me toward the container of orange slices. I grab a couple of pieces (nothing like natural sugars to get your energy levels back after a good ride), and bring Tom and Shelley, our team's crew member, up to date.

The first two sections of Loop One were an interesting combination of bumpy cottage roads, a long, grinding hill up to the first checkpoint, and an exhilarating 2 mile fast downhill through Awenda Provincial Park.

The only mishaps I've had were getting lost for a mile or so just before Checkpoint One, and dropping my chain on a fast downhill. (Because of

my lowracer recumbent's design, which involves a long chain routed around a Z-bend frame, it has the disconcerting habit of occasionally dropping the chain, when it hits a sharp bump at speed. When that happens, I simply stop, get the chain back in place, and pedal on. It's a bit unnerving, though, to lose a chain at 40 mph, which is how fast I was going down the Awenda Park hill.)

Tom takes the route card, climbs onto his P-38 Lightning, and soon disappears from sight. I learn from Shelley and Dave, another HPVSO member doing volunteer duty, that the morning hasn't been without its drama. Dennis's highly modified Taves Lightning broke a mid-drive shear pin early on in the first section, forcing him to walk up the steep hills on that part of the route. At Checkpoint One, he borrowed Dave's Rans V-Rex, and Dave drove back to the main checkpoint to pick up Dennis's spare bike, a Doppler. Carey seems to be getting lost a lot—he came in very late to Checkpoint One, having gone deep into the country, losing some valuable time.

I've pushed myself hard, so I turn toward the beach behind the checkpoint, and walk straight into the cold, refreshing water. Ah, that's the stuff—wonderful and refreshing! Then, it's back to the checkpoint, to greet Dennis, Rolf, and—much later—Carey as they ride in.

I decided to do the RSD 24 Hour Challenge after hearing from Dennis Taves about his experiences in the previous year's event. I like riding long distances, and was keen to see what I could manage in a competitive event, so paid the registration fee, got a course map, and started planning.

My training for the Challenge consisted of building on a base of my regular weekday riding, onto which I layered longer rides on weekends, with an occasional ride specifically targeted to prepare for the RSD.

I don't own a car, so my Outlander lowracer recumbent is my daily vehicle. On it, I do an errand ride of between 20 and 30 kilometers each weekday, going to meetings and doing chores. HPVSO has a very active ride schedule, so most Sundays before the RSD event, I was off on HPVSO group rides, which are usually between 45 and 55 miles in length. (Because I cycle to most of these, though, my usual distance for an HPVSO day is between 80 and 125 miles.)

Three weeks before the RSD Challenge, I'd ridden from my home in Mississauga (just outside of Toronto, Ontario) to Niagara Falls, where I met recumbent riders from Ontario, New York, Maine, and Connecticut at the Niagara Recumbent Rally. Together, we then cycled to Fort Erie and back. After the Rally, I cycled up to Niagara on the Lake, caught a ferry to Toronto, and then cycled back to Mississauga. Not only did this ride, put some good distance on the lowracer, (a total of 170 miles for the day), it also gave me some experience riding in the dark, as I had to leave Mississauga at 1:30 AM in order to reach Niagara Falls in time for the Rally's start.

Good nutrition played a part in my training, too. Not that I changed many of my daily habits, just that I paid more attention to the details of balancing carbohydrates and protein in my daily diet, and made sure that each utility and training ride saw a proper balance of the two. In addition, I continued my daily intake of spirulina, which serves as an excellent immune-system builder and antioxidant, as well as keeping energy levels up.

A new part of my training regimen was creatine. Some months before the RSD Challenge, I'd read an account of a research study done in the United Kingdom, which noted positive effects in the areas of muscle strength and joint elasticity for subjects on a short-term program with creatine. I followed up with research on the Web and in a couple of health and fitness publications, then did some testing of my own.

This consisted of taking recommended doses of creatine for a five-day period before long rides (the trip to Niagara being one of them). My research was purely subjective, based on how I felt during and after a number of 125 plus mile rides, but it convinced me to make creatine a part of my preparations for the 24 hour race. Taking creatine for a five-day period before a long ride meant increased strength on sprints and hills,

plus a minimizing of stress on my knees.

It's 7:45 on Sunday morning. I've slept for a couple of hours, but the excitement accompanying the end of the RSD Challenge is too much of a draw. So I get up, find my fellow HPVSOers (all of whom called it quits a while ago too), and head down to the main checkpoint to cheer on the cyclists who are still on the road.

As we get to the 8 o'clock finish time, there's a definite feeling of celebration in the air. Sure, we're all dog-tired. The effort of riding through a day and a night are obvious. Crew and volunteers have stayed up with us, being there when we needed food, tools, lights, and—most of all—moral support. Some of us have met the goals we set out to achieve, while others have had to cope with disappointment. But we're all here to cheer on the survivors, the cyclists who have covered incredible distances to ride all the way to the end of the 24 hours.

■ **The 1999 RSD 24 Hour Challenge is over**

Will I do it again? Definitely! In fact, within hours of completing the RSD Challenge, I was already making plans for next year's event. Some involved changes to the bike (a full fairing, different gearing), others were about a more focused training regimen (more hills, concentrated speed work, and more high-speed 250 plus kms rides). I want to refine my nutritional program, too, so that I'm totally prepared—physically as well as psychologically—for the race.

I'm going to come back in 2000, as a solo entrant, and aim at completing 225 miles. Whether I meet that goal or not, I know I'll enjoy the demands and rewards of another wonderful ultra cycling experience. □

Alan Thwaits is a freelance technology journalist, member of the HPVA Board of Directors, and ListOwner of three recumbent-related mailing lists. Alan maintains the Digital Cycling Web site at www.praxcomm.com/, and can be reached at nomad@praxcomm.com



Alan Thwaits (lowracer) and Tom Tomson plan strategies for the RSD Challenge



Dennis Taves, on his Doppler prototype, passes the main checkpoint on Loop Two of the RSD Challenge



RSD Challenge Awards (left to right): Dennis Taves (gold medal solo recumbent); Rolf Thiele (silver medal/solo recumbent); Alan Thwaits and Tom Thompson (gold medal/two-person recumbent team)

bikepartsUSA.com

bike parts, bikes, accessories & great prices

BOULDER BIKES

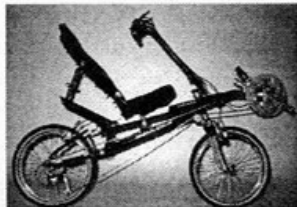
WORLD'S FINEST

FULL SUSPENSION RECUMBENTS

ALUMINUM / FOLDABLE

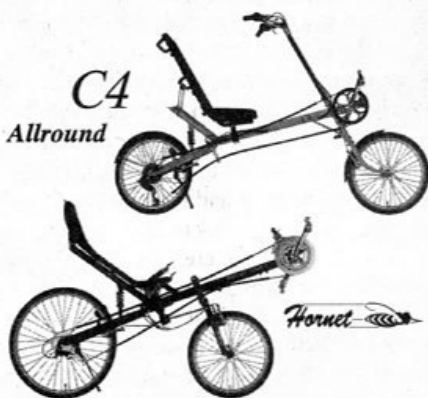
GALAXY - SINGLE
SIRIUS - TANDEM

303-823-5021
P.O. BOX 1400
LYONS, CO 80540



GALAXY

Come see us on the web at:
www.boulderbikes.com



Radius
recumbents
USA
www.radius-recumbents.com

buchanan bikeworks llc
170 charles street
garfield, NJ 07026
Tel.: 973 - 340 - 9006
Fax: 973 - 478 - 8175
email: RadiusUSA@aol.com

A German legend...
Now available in the US

How Miss Piggy 'Bent the Sante Fe Trail

by Kimberly L. Childs
kimcarl@sulphurcanyon.com

After thinking about this tour for years, last year, I decided to do it. I trained for nine months—and here I am standing beside my bike in Santa Fe at the stone marker that commemorates the destination point of the historic Santa Fe trail. Around me are 44 cyclists who have assembled from around the nation, 6 from England, intending to put their energies towards this tenth annual September migration to New Franklin, Missouri. The median age is well over 50. At a word from event founder and co-cyclist, Willard Chilcott, the group surges down Old Santa Fe Trail and is out of sight. I am left struggling with my 2-day-old recumbent, a Rans Tailwind. After riding a classic Raleigh Professional racing bike for 25 years, in my 50th year I decided to slip into something comfortable and purchased a BikeE recumbent. However, I soon discovered that I could not climb the formidable mountains of New Mexico as well on this bike. Upon the recommendation of Hester Balsam at Absolutely Recumbent in Albuquerque, I purchased a beautiful Rans which has three lower gears for getting up hills and a reclineable seat. Now I am in a Laz-E-Boy on wheels, wearing the exotic sheik flap and other sun protecting clothing. But as comfortable as this bike is, it's no match for a light upright or "wedgie" in which one can stand in the pedals.

This is when I realize that the spirit of Miss Piggy is guiding our tour. My husband has agreed to follow me in our new camper van. As an avowed non-cyclist, this is the least he can do. We have stocked the little refrigerator with wines, cheeses, chocolate and other staples. We have made reservations at camp grounds with clean showers, plenty of hot water and where we can plug in the van to activate the air conditioner, heater, microwave and TV. None of this camping on a high school lawn and showering in the gym for "moi." Now I want him to wait at every intersection to point the way and play me Pavarotti on our 2-way radios. And did I mention he should pick me up when I become too hot or tired or need the port-a-potty? If I have sacrificed speed for comfort by riding a 'bent then I am going to become a sybarite.

▲ Santa Fe to Las Vegas, New Mexico

The day is bright with golden light and azure sky so unique to New Mexico autumns. Yellow chamisa and purple asters bloom along the road. A wind cools my face and the sun is on my back. Now that I refuse to worry about keeping up with the pack, the day is mine. I pedal over the Glorietta Pass, pausing at Civil War battle sites for respite, and up into the Pecos Monument. 32 miles, that is enough for today, let the others pedal the weary 72 miles to Las Vegas but I will tarry here with my chauffeur, cook, and lover. We eat sandwiches made with tomatoes from our garden and stroll around the adobe ruins of what was once a huge Anasazi site. The mountains roll away from us on every side while shadows of clouds slide over them.

I have not yet mentioned a significant member of our expedition: our 10-pound shitzpoo, Tippi. He has recently been groomed and blue bows adorn his silky ears. He definitely adds a touch of class to our entourage. The wind ruffles his golden hair as we enjoy the distant views from an overlook.

Carl drives us to a Kampgrounds of America outside Las Vegas, NM while a threatening sky builds to the West. Lightning streaks down the horizon and, as we pull into our camp site, rain drops patter and then deluge. I feel for the cyclists caught in the rain. I have experienced the wet shoes and sudden chill of a downpour. We are snug stretched out on our velour couch in the van. As we drive towards Las Vegas to eat with the group at the venerable Highlands University cafeteria, the sun emerges and a spectacularly vivid double rainbow arcs over us. Rain or no rain, everyone made it in, they had to. Mr. Chilcott has informed us that this is a non-commercial, minimum cost tour and there would be no coddling. If you break down, you fix it and pedal onwards. Again, I was thankful we had the van and both recumbents because if I break down, we

will have to locate the nearest bike shop. Neither of us could be called a bicycle mechanic by any stretch of the imagination.

Later, as we all snuggle under the electric blanket on the full size bed in the van, I think that, as much as I thrill to the exploits of those intrepid souls who cycle around the world carrying their possessions in their panniers, I much prefer the comforts of home and loved ones while I do my adventuring.

▲ Las Vegas to Wagon Mound, New Mexico

When we crawl out of our cocoon the next morning, it is damp and chilly. After breakfast with the group, Carl deposits me and my 'bent on the road and I pedal off with the cyclists quickly passing me. Soon, I develop a painful cramp behind my right knee that makes me wince at every stroke. What to do? I could tough it out and develop my character but maybe I have had enough. Besides, there is that cozy van manned by two creatures who would be delighted with my company. After 8 miles I allow myself to be scooped up and transported to Fort Union. We tour the extensive ruins of the military post created to protect travelers on the Trail (whose wagon ruts are still visible) and which was later to see the decisive victory that prevented New Mexico from falling into Confederate hands. We press audio buttons which enable us to hear the sounds of Conestoga wagons being unloaded and repaired after their long trek or of the bugler awakening the troops to the notes of reveille.

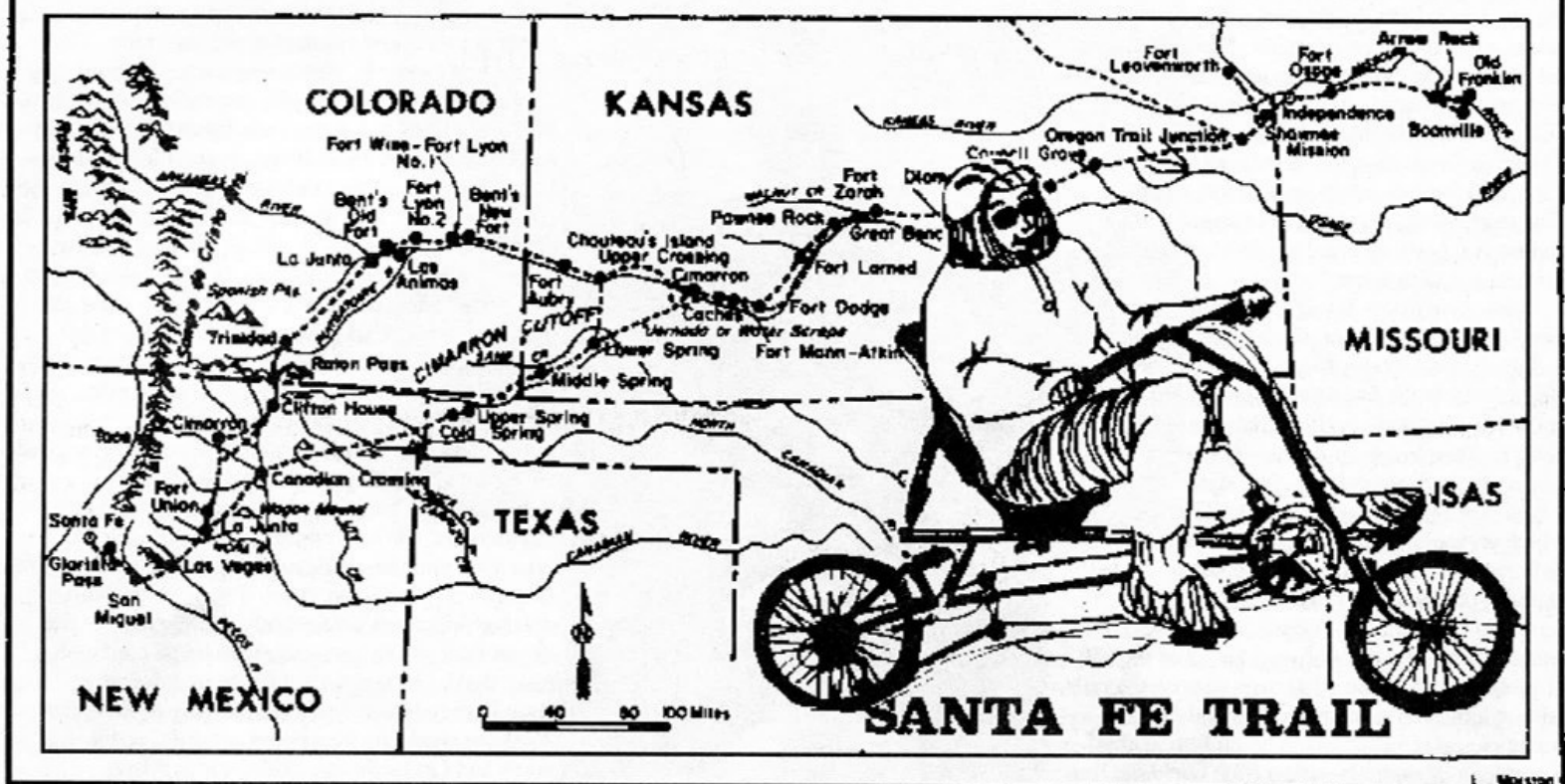
After a leisurely lunch, the sun emerges, brightening the grassy mesa over which the Fort once presided. I decide to try again but after a mile, the pain has returned so I wave down the van and switch to my original training 'bent, the Bike E. Ahhh, this is better. The familiar angle of the seat, the level of the pedals ...the pain is still there, but bearable.

I am cycling into a stiff head wind but the landscape is incomparable. The wind moans in my ears and I recall from my Fort Union tour that soldiers' wives complained about the omnipresent blowing. The scenery is what I would expect of Kansas—rolling grasslands ringed by blue mountains. There is little traffic, so Carl and I leapfrog; he keeping up an encouraging patter into our 2 way radio. We turn onto the frontage road along I-25 and the wind is at my back, the hills rolling. What could be better? After 16 miles the pain under my knee intensifies. I try my Zen techniques of noticing the quality of the pain, when it is less, when more. I try merging with the pain but there is the van, so I hop in.

We drive to the tiny town of Wagon Mound and plug in at the high school. The town was named for a dramatic butte that rises out of the plains and looked to travelers like a wagon. The sight of it let them know that they were closing in on their goal of Las Vegas or Santa Fe. There are no campgrounds or motels here. I shower in the communal gym locker and am returned to age 16 again. We are served dinner in the cafeteria by the extraordinarily polite students. (May they never have to encounter the real world!) A group of us walk through what is left of this almost ghost town to the only functioning business—a restaurant where the best home made pies are baked. I have pecan pie a la mode, hoping that my knee relaxes tomorrow so I can work off the calories from the second piece I take with me. The café's walls are adorned with what to my New Yorker's eyes look like graffiti. I discover, however that they are brands from the hundreds of ranches in the area. We amble to our White House on Wheels under the glowing colors of a New Mexico sunset. I plug in my laptop and Carl watches a Boris Karlov movie. Biking Ms. Piggy style definitely suits me.

▲ Wagon Mound to Cimarron, New Mexico

We are served an early breakfast by the eager students. While chatting with others on the ride, I discover that many of them are repeaters. Rita, the leader of the English contingent has been organizing other Brits to come over for several years. I seek counsel on my cramped leg and Blake



offers a boron tablet and lots of advice. After I swallow it, I jump up and cry, "I'm cured, I'm cured."

Carl deposits me on the frontage road along I-25 and we are off on our day's adventure. The group, garbed in fruit-colored wind breakers passes me and is lost in the distance. I feel as if I'm inching along on a child's tricycle in this vast rolling grasslands. My leg still hurts but the sky is too huge, the air too sweet and filled with birdsong to stop. Eventually the pain becomes a mere background noise. Carl has found that if he waits for me at the top of the next rise, I am less tempted to climb into the van. After all, if I have climbed up the hill, I might as well enjoy coasting down.

The road rolls out before me, with long sloping descents. The only traffic are the mowers and flocks of small birds pecking at fallen grasses on the road. Carl is keeping up a rambling monologue into my radio, and, since it is not convenient for me to answer, he concludes that this is form of psychotherapy. As I once was a therapist, I find this is a fine solution to the confinement of the therapy office.

After 26 miles, we reach the village of Springer. I am happy to get off the bike and eat lunch at historic Brown Hotel. Mr. Chilcott has, unfortunately, neglected to give advance warning of the cyclists' arrival and they are out of pie, a serious oversight. After, we stretch out in the van, which is parked under a venerable cottonwood, for a nap. We awaken, much refreshed and drive toward the Philmont Boy Scout Ranch where the group is staying. Ranches dotted with cattle, horses and a pronghorn antelope line the road. We see what we take to be several osprey and read a sign about a water fowl sanctuary nearby. Grey clouds mist the rimming mountains and rain drops patter against the van.

We pull into the impressive Boy Scout Ranch Museum and view the beaded Plains Indian collection and Boy Scout memorabilia. The 145,000 acre ranch was donated by philanthropist Waite Phillips. A lovely field guide depicts the flora and fauna of the area. Since it is a similar altitude range to San Diego Canyon, much is familiar. We find the group housed in army tents, sheltering from the chill rain. We drive into Cimarron and pull into a modest RV park. As I walk to the washroom, a small child peers at me from the sliding glass doors of a luxurious fifth wheel. I am puzzled that such a vehicle would be parked here but a friend explains that many itinerant workers, such as those in construction, live this way.

▲ Cimarron, New Mexico to Trinidad, Colorado

I awaken to the sound of raindrops pattering on the roof. Outside the air is sweet but misty clouds veil the summits of surrounding mountains.

We discuss whether I will bike this morning over an omelette in a local coffee house. Now the rain is coming in sheets and I opt not to (it would never do for Miss Piggy to get wet). I see the intrepid cyclists pedaling by. Out on the road we pass them while waving encouragingly. The road rolls on in a straight line before us but heavy clouds press down. We drive briefly through Raton and return to I-25 where the cyclists will pedal over the 8,400 ft. Raton Pass. As we climb, I cringe to think of them sliding along the shoulder in rain and poor visibility. The group is followed by a Ryder truck and multiple bicycle racks that are an option for those who can't ride (Mr. Chilcott is not as heartless as he would have us believe). I hope they choose that and don't try to be heroes.

The ride sheet calls for a rest stop at a scenic overlook but the clouds are so low and the rain so driving that all views are suspended. We drive on to Trinidad. We pass a Super Walmart and buy ponchos because we had seriously under prepared for this much rain. Autumn in New Mexico is usually a dry season. Later, I will hear complaints about how the super stores have driven out local businesses and signs in other towns protesting, "No Super Walmart." While we are there we also purchase videos and CD's. We want to be entertained during this endless deluge. We pull into the RV park and plug into the electric outlet. Our little van looks like a flea on the rear of an elephant in comparison to the gigantic rigs parked beside us. But we are very snug. Carl naps while I write postcards. We talk about making cheddar broccoli soup from a mix in the microwave but the rain stops and the sun emerges. Needing to stretch our legs and walk the dog, we amble to a nearby restaurant. Carl keeps repeating how much he is enjoying this...the freedom to come and go as one wishes, yet the comfort and self-sufficiency. I am amazed and delighted to hear these accolades. We had fought for several months over the purchase of the van to the point where I wondered if our marriage could stand the stress. Carl had seemed so sure that the experience would be fraught with anxiety, while I knew I would love it. Neither of us had ever experienced RV-ing before. Now, Carl is saying those sweetest of all words, "You were right!"

We plan to visit the campground where the cyclists are camping, but there are thunder claps that send Tippi searching for the smallest spot to squeeze into and more rain comes pelting down. I go to shower and discover that a hot tub is available to guests. I gladly submerge my battered body in the foaming hot water. We microwave some popcorn and I hunker down with the laptop. Later we watch "Return to Snowy River" on the built-in VCR.

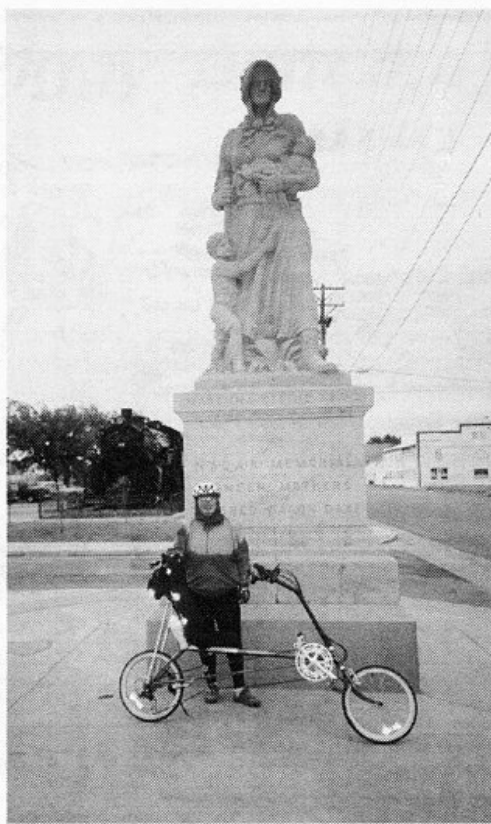
▲ Rest Day in Trinidad, Colorado

We awaken to mist drifting off the landscape to reveal white capped mountains. Not too far away the previous day's rain had been snow. We have a leisurely breakfast and buy newspapers which I read as I do our laundry. A hurricane the size of Florida is threatening the East Coast, a gun-man has slaughtered teenagers at a prayer meeting. This touring life, out of reach of phones, email and news reports, is peaceful. Who needs information of this sort?

We drive to the Trinidad Museum and take a tour which encompasses two houses: the Blooms' and the Bacas.' These Anglo Methodist and Hispanic Catholic families built neighboring houses and became wealthy cattle barons in the 1860's. Their houses are lovingly preserved and give a glimpse into differing life styles. An adjacent museum tells the story of Trinidad, which grew along with the Santa Fe Trail and the rail road that followed it. I learn about Uncle Dick Wooten who carved a 26 mile toll road across the difficult Raton Pass. When the railroad wanted to buy the right of way, he opted for \$50 of groceries a day and a life time pass on the rails. Also exhibited is an embroidered and fringed riding coat given Kit Carson by an Indian chief. I purchase 2 books: *What's a Nice Girl Like You Doing in a Place like This or The History of Prostitution in Pueblo and Trinidad, Colorado from 1860 to 1910*, and Marian Russell's account of her life on the Trail. I read the prostitution book first, finding such titillating details as that the madams initiated a tram running a direct connection from the coal mines to the Houses of Ill Repute. Then they created a rest home for the "soiled doves." I thought it was the least they could do.

We drive up to Trinidad Lake State Park and find the cyclists drying out after their ordeal in the rain. The English contingent seems to have weathered it well. Rain, after all, is what they are used to. Others, wisely (in my opinion), rode in the van. We locate a picturesque spot with a picnic table and dine al fresco. I am amazed and delighted that Carl is enjoying this as much as I when previously no amount of begging could induce him to picnic.

Jan and Bill, a couple who live in Florida and who are also driving a camper van point out that there are electrical units here. Although we have prepaid for our spot at the RV park, this spot is free and I like to be part of the group, so we plug in. That evening, after a catered dinner in front of a roaring fire in an open pavilion, I pull out the marshmallows and suggest we toast them. Some of the English have never experienced this before and I watch as they tentatively taste the hot, melted sugar. Later, Carl and I snuggle under our electric blanket and watch the video, "Twins."



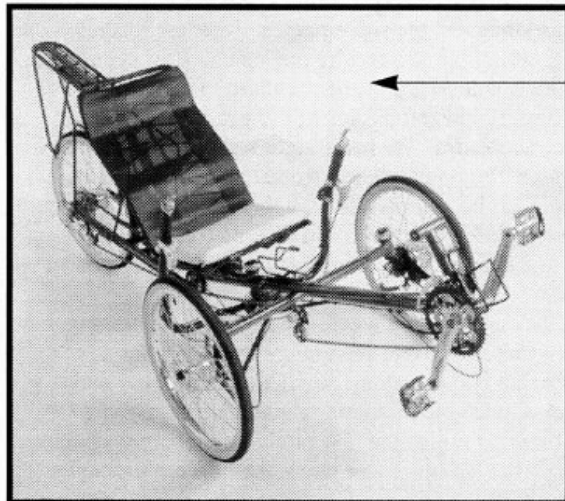
Kimberly with Rans Tailwind in front of "Madonna of the Trails" in Lamar, Colorado

▲ Trinidad to La Junta, Colorado

We awaken to a chilly clear morning. Both my knees are sore now because somehow I have managed to jam my other knee, not to mention bang my head several times on the low ceilings of the van. I offer the Rans to Larry to ride for the day because he is interested in recumbents. Later, I learn that Larry is signed up for "Odyssey 2000" an around-the-world bike tour that will take a full year and visit 52 countries. I take off on the BikeE and am halfway down a steep hill when I have a blowout and slide to the ground. The bike tire is oozing green slime and looks terminal. Carl picks me up and we begin looking for the bike shop that is said to open at 10:30 am. It is now 8:30 and there are 80 miles to the next stop. I am feeling despondent but we see Ann pumping up her tube in front of a beautifully restored Victorian home. A young man that we don't recognize is helping her. We stop to see if she needs anything but she is ready to go. We ask about the bike shop and the young man says it is closed. Before Carl can stop me, I ask Brian if he is up to fixing another tire, since we are both incompetents in this department. With great expertise on this unfamiliar bike, Brian changes both the tube and tire which have huge gashes. Luckily we are carrying replacements. As Brian works he throws out several God bless you's and God willings. Although he refuses remuneration, I am not surprised when he asks us to pray. His prayer, which asks that we be able to

request help when we need it or that we learn to fix our own tires, seems most apt.

Then, amazingly, I am pedaling out of town along a farm-lined road. My legs seem to be functioning and so is the bike. There is a pleasant cloud cover, the scent of sage is in the air and hawks are floating overhead. What a wonderful day it has turned out to be! We turn on Rte 350 and the road stretches out straight into an endless grassland. The road gradually descends for 80 miles so that the cycling is effortless. I listen to the wind humming in my ears and the occasional bird call. This is like sitting zazen only with less pain and better scenery. We pass abandoned towns, one called Delhi and the other Model. I see on the road shoulder: several dead birds (one a road runner), a spoon, dead raccoons, plastic bags caught in the barbed wire fence (useful for telling the direction of the wind), a child's sandal, clouds of sulphur yellow butterflies and a big, hairy tarantula. The cars that pass are moving 80 mph. Their furious energy leaves me peaceful and alone under the huge sky. I can easily picture the wagons moving along this route, with, perhaps, Comanches descending from the distant, low mesas. Occasionally I pass a weathered barn or cattle who stare at me with matching white faces. Musings about my life float through me, I am filled with a wide compassion for those who have hurt me. Carl begins transmitting Karl Hass's music appreciation radio



Earth Cycles™ Dragonflyer™ Trike

"The most comfortable trike I've ridden—
a smooth, predictable ride."

—Bob Bryant, RCN

➤ Distinctive Features

➤ Comfortable Fit

➤ Safe, Stable and Fast

➤ Quality Componentry

The Earth Cycles Dragonflyer trike delivers state-of-the-art features at an affordable price. To see what we mean, visit our web site or contact us for a free color brochure!



612-788-2124 • info@earth-cycles.com • www.earth-cycles.com

program and the measured strains of Beethoven's Minuet in G float around over this empty, ancient landscape.

After 65 miles the sun is low on the horizon and I am developing "recumbent butt" and have had enough. We whisk through 15 more miles of grasslands and suddenly we are in the green oasis of La Junta, the crossroad. This is a bustling, prosperous community filled with SUV's, motels and a movie theater. The cyclists are camped at the junior college which houses an impressive Indian museum. I view the beaded moccasins, war bonnets, baskets and bowls. There is a theater built in the round to resemble a kiva with interlaced beams for the ceiling. How sad that these rich cultures were destroyed in order for Europeans to prevail.

We eat at the cafeteria with Jan and Bill who, after finishing this trip will drive back to Florida and go off to Virginia for another 2-week bike trip. I have visions of Carl trailing me across the country.

Carl has booked us into a Holiday Inn because all the campgrounds are full. What luxury to have one's own shower and a king size bed.

▲ La Junta to Lamar, Colorado

We get a late start and Carl drives us straight to Bent's Fort—a mandated stop a few miles away. I am keen to see it because the first book I read about the Santa Fe Trail emphasized the contributions of the Bent brothers. Charles Bent was one of the first merchants to realize great profits by hauling goods from St. Louis to the Mexican outpost, Santa Fe. Others soon followed and then the pioneers picked up the route. Today, most of the Santa Fe Trail is under asphalt as major highways and frontage roads follow the old path. After establishing the Fort, a major Indian trading post, with his brother William and partner St. Vrain, Charles Bent would become first territorial governor of New Mexico, and be assassinated in Taos by insurgents who wanted to remain part of Old Mexico.

The Fort is a massive adobe, 2-story hacienda. Some rooms are furnished with traditional trade goods such as beads and furs, while others are living quarters with army cots and wash stands. Outside, long horned cattle and covered wagons complete the picture. The Arkansas River runs south of the Fort and was, at one time, a boundary between the U.S. and Mexico. We follow a tour guide around the many rooms and he gives a vivid demonstration of beaver trapping (too vivid! The species was at the brink of extermination but was saved when the fashion in tophats changed to covering them with silk instead of beaver). In the large courtyard, a huge press was used for compressing buffalo, beaver and other pelts into manageable bundles. On the way back to the van we pass a cemetery where some of the lucky ones who were fortunate enough to be interred in a communal place are buried. I get on my Bike E and Larry on the Rans. He is really enjoying it and is toying with my suggestion that he buy it. He doesn't need another bike because Odyssey 2000 includes a new bike for each rider, to make parts replacement more efficient. But he can make the Rans move and is quickly out of sight. It is 11:00 am and the sun is hot. The route follows a 2-lane highway on which large trucks zoom by at terrific speeds. Small farms line the way with corn and haystacks that look like loaves of whole wheat bread. In between traffic noise, the whine of cicadas starts up. We have descended to 3500 feet and it feels as if we have slipped back into high summer. I pedal 15 miles, we eat sandwiches under a shady tree, then go another 15 and have had enough. The heat and the rushing trucks have sapped me.

Carl drives us to a Kampgrounds of America where I shower and we nap. We drive to the community college for dinner with the other riders. Larry is falling in love with the Rans and I tell him that I had better ride a bit more before I am sure I want to part with it. The village of tents that the cyclists have erected looks cozy but they are beside a slow-moving river and the air is thick with mosquitoes. I'm happy to get back to our



Kimberly and Rans Tailwind backed by Native American ruins at Pecos Monument in New Mexico

campsite with air conditioning and without the hungry bugs.

▲ Lamar, Colorado to Lakin, Kansas

I awaken in a body pile with the dog shivering against me. Against the evening heat, we had left the windows open and put on a light cover, now it has turned cold. We eat breakfast with the group at the college. I notice a heavy bank of clouds assembling in the Western sky. Blake, who is training for the Senior World Bicycle Trials, tells us that during the night some kids came through the camp, slapping tents and trying to steal a bike.

By the time I set out, a strong, damp headwind is blowing. I struggle with the Rans, wiping moisture from my eyes and nose. It

is Sunday morning but semi trailers are already passing me on the road. I notice a statue of a woman and her children and motion for Carl to stop. It is a tribute to pioneer women called, "Madonna of the Trails." I seem to remember there was some controversy because there is no tribute to Indian or Hispanic women. Whatever the political considerations, no one can deny that the pioneer woman, who gave birth and eased some to death along the Trail, was a stalwart.

We turn down 196 and lose the traffic. Now there are corn and alfalfa fields stretching to the horizon. The sky is a grey ceiling and the wind moans in my ears. I imagine a scene out of Wuthering Heights with Cathy and Heathcliffe around the next rise. I adjust the seat back on the Rans Tailwind and find I can move faster and more comfortably than on the BikeE. Maybe I won't sell it after all. The cold wind has me moving at a smart pace but after 21 miles, I am happy that Carl insists he pick me up. The club has a brunch date at 10:30. A family whose 120 year old house is beside the Old Santa Fe Trail hosts a meal for the group every year.

An excellent picnic is spread out under the trees but everyone is clustering around the hot coffee or going inside to see the charming stone and half-timbered house. In talking to Ann, a slender middle aged woman who cycled over the Raton Pass in the rain, I discover that she has no permanent address...meanders across the country at whim. This lack of need for home and hearth fascinates me, as does her mental toughness.

After brunch I am in no mood to tough it out. I get into the van where Carl pours some white wine and turns on National Public Radio. We ride past cyclists with the van heater warming my cold feet. Gusts of wind blow the van about and I wonder what it does to a bicycle. A light rain descends as I nod off to sleep.

We had made reservations at the Santa Fe Trail Inn in Lakin, KS. Due to an error they put us in the older section and charge us \$10. The room is warmed by a gas heater to the point that sweat rolls off me and the cold outside is obliterated. I read Marian Russell's memoirs of her 5 trips along the Santa Fe Trail, then nap. At dinner time we give Blake, who is also staying at the motel, a ride over to the high school where the group is eating dinner and camping in the gymnasium. The meal is catered and is a fine one. Jan tells me that the draft from a passing semi trailer blew her off the road. We let Tippi out of his carrier bag and all those who are missing their dogs line up for a pet. He is not very accommodating and hides in his carrier bag until a man passes holding what our little beggar takes to be snacks. Someone says that an article on the tour is in the Albuquerque Journal. After the meal, the curator of the Lakin museum opens it just for us.

The antiques are grouped in what seems to be endless themes of pioneer life: a parlor, nursery, soap making equipment, milliner's shop, saddlery complete with all tack and branding irons, dentist's and doctor's offices, wedding dresses, World War I uniforms, a complete Conestoga wagon and a country store. Patricia has worked on this for 10 years and the amount of memorabilia is overwhelming. I am most impressed with the country store, because my grandfather owned one when I was a child

and I have created a miniature replica which stands on a shelf at home. We peer into the wagon, complete with its bright paint and the wagon maker's signature. Mrs. Russell writes that she rarely rode in the wagon on her trips because it had no springs. They used it to haul goods and to sleep in or underneath. I examine the intricate lace on wedding gowns made over a century ago. All these brave pioneers, carrying possessions that reminded them of home over the endless prairie. I hope to be worthy of all their effort and sacrifice.

▲ Lakin, Kansas to Taos, New Mexico

We are awakened by a knock on the door. We had forgotten that we had crossed into Central Time Zone and it was an hour later on the clock. We throw everything into the van and drive Blake over to the high school for breakfast. It is an excellent meal but too early, dark and cold for me to anticipate cycling. Willard Chilcott sits opposite me. I thank him for his superb organization of the tour but he says it is the riders who have done it. I sense that under his crusty exterior is a caring, dedicated man. This is to be my last day cycling. We plan to leave the group at Dodge City. The tour ends in one week at New Franklin, MO.

Carl puts me on the windy, dark road. The lowering grey skies remind me of the winters I spent in Chicago. I have wrapped tube socks around my ears in an attempt to stay warm. The semi trailers whoosh past me, blowing me in their back draft. I am cold, frightened and hating every minute of it. I have covered only 5 miles. The van is just ahead and I get in. I tell Carl to forget Dodge and take me back West where there is topography and blue skies.

As Carl re-crosses the endless, flat plains of Kansas, I fall asleep in the comfortable captain's chair. When I awaken, I discover that we are retracing the southern or Cimarron Route of the Santa Fe Trail. We stop for lunch in Clayton, NM. The Hi Ho Cafe is a popular place, with the talk around me being of cattle and oil prices. Then we are on the back roads, passing through small towns that we have often flown over but, until now, never taken the time to see. I am heartened to realize that small town America is still alive and flourishing.

Distant mountains appear out of the mist as we roll Westward. As we drive through Cimarron Valley, the sun emerges, lighting the most spectacular mountain scenery. Aspens are beginning to turn gold and

swollen streams glitter in the sunlight. The rolling green mountains are pristine and we are delighted to be out of the flatlands. We drive through the mountain towns of Eagle Nest, Angel Fire and stop in Taos. In the golden afternoon, we stretch our legs browsing the charming shops. We dine al fresco as the sun sets red on the sacred Taos mountain. I have tasted a little of what the pioneers experienced on the Santa Fe Trail. Now, it is good to be going home. □

ABSOLUTELY RECUMBENT

Sheik Flaps
made of Sun
Protective Fabric
\$11.99

**"Lawn Chair
ON YOUR LEFT"**
T-Shirts
\$12.99



2104 Charlevoix St. NW
Albuquerque
New Mexico 87104
Tel. 877-243-5105
absolutelyrecumbent.com

bikepartsUSA.com

bike parts, bikes,
accessories & great prices

Coventry Cycle Works

Oregon's Recumbent Headquarters

- Easy Racers
- Vision
- BikeE
- Haluzak
- Lightning
- RANS

2025 SE Hawthorne
Portland, Oregon
97214



Tel. 503/230-7723
www.coventrycycle.com

JAY'S

PEDAL POWER BIKES

512 E. GIRARD AVE, PHILA., PA

Tel. 215-425-5111 • Fax. 215-426-2653

We offer products from Vision, Linear, BikeE, Rans, Haluzak, Easy Racers, Santana and many more.

We ship worldwide. Many models in stock now.

FREE catalog by request.

www.jayspedalpower.com

In the Greater **Toronto** Area, Get 'Bent with:

Rans ♦ BikeE ♦ Easy Racers ♦ Lightning
Vision ♦ Trek ♦ Haluzak ♦ Greenspeed

The Bicycle Spokesman

10212-A Yonge St., Richmond Hill, Ont.
(905) 737-4343 Toll Free: (877) 426-2368
email: spokes@idirect.com
www.bikeroute.com/BicycleSpokesman

BIKE FRIDAY® Goes Bent!

The Sat R Day™



- Starts at \$1795
- Fits in a Suitcase
- Rear Suspension
- 1999 Bicycling Magazine Editor's Choice Award

Call for free brochure & info
800-777-0258
www.bikefriday.com
Dealer Inquiries Welcome!

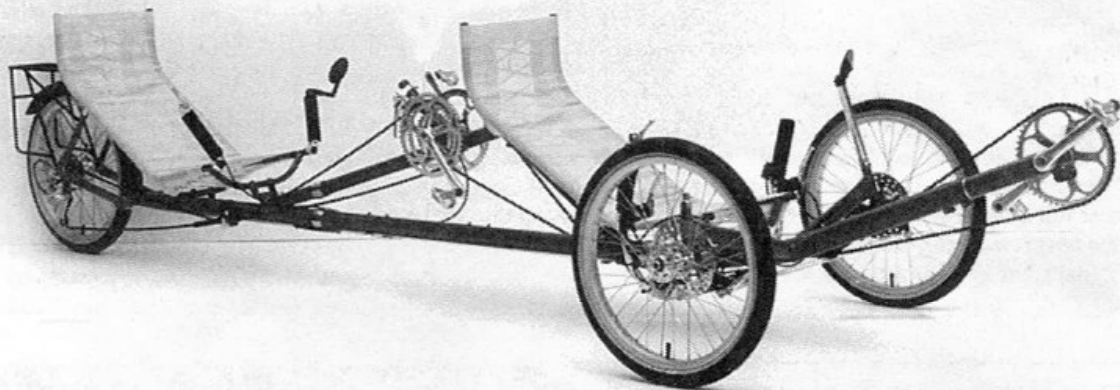
K-Mart or Katmandu.

Whether your riding your 'bent to the grocery store or to the top of the world, you've got stuff. And we have the gear to carry it. Click on *Touring and Bags* on our web site to see our unparalleled collection of fine seat bags, panniers and trailers.

Calhoun Cycle | Recumbent Specialists

3342 Hennepin Ave. S. Minneapolis, MN 55408 (612) 827-8000 www.calhouncycle.com

How about TWICE the fun?



The Greenspeed GTT Tandem Trike

GREENSPEED RECUMBENTS

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

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

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

Development of the Practical Lowracer: The Pharobike Low Fat

by Dan Duchaine

What is a lowracer recumbent? It usually means that the seat is very low to the ground, and most of these designs are short wheelbased ones, with above-the-seat steering. Rather than have a hard and fast seat height cutoff, us lowracer aficionados will call any design that has a seat base height below the wheel axle height (the biggest of the two wheels) to be a recumbent lowracer.

So what's the difference between a lowracer and a "practical" lowracer? Again, no ideal definition. But in my mind, a practical lowracer has complete front wheel clearance so there is no interference either between the crankarms and (more importantly) the drivechain with the front wheel. In the real world, you should be able to pedal the lowracer at a low speed and still have enough turning radius of the front wheel to execute a U-turn. The majority of lowracers, since they are considered off-road (for the track) machines, allow chain interference, sacrificing maneuverability (and safety) for less friction losses from the extra of pulleys needed to hike the drivechain over the front wheel.

Why would anybody want to ride a lowracer over a more conventional recumbent design? Anyone who has ridden a lowracer they'll tell you: they feel....more fun. Being close to the ground imparts a sensation of great speed, even at low speeds. Also, there is a great sense of security being so close to the ground. The reality is, all bike riders eventually fall down. On a lowracer you don't fall far. Additionally, because your center of gravity is so low, and you have so much bike ahead of your body, on panic stops, you never have the sensation of launching off the front of the bike. And don't disregard the "coolness" factor. When I used to ride my Presto and V-Rex on the bike path, most of the people looking at me thought I had just won some drunk circus clown's trick bike in a poker game. I started getting respect with my Rotator Pursuit (18-inch seat height), but my Lowfat, my practical lowracer, who would stop auto traffic, with drivers who had never been on a bike for years, would inquire: where can they get one. Why? Because they thought that it would be fun and cool. Not the kind of bike that only a trained bear would ride. The ultimate "lowrider."

I couldn't find a lowracer that was in commercial production that I liked. So I decided to build my own design. Since I had just built a Caterham 7 sports car, and a complex loudspeaker system, a bike project wasn't scary. But building them in quantity was a nightmare. What's the old saying: "How do you make a small fortune in the recumbent business? Start with a large fortune." Everything started with me buying a set of Peter Ross's Festina lowracer full scale drawings. I pinned it up on my bedroom wall. And over the next few weeks, I would scrutinize the drawing and ask myself "What's wrong with this picture?" I'm sure Peter would reply, "Nothing you bloody ingrate!", but remember these were the early version of the Festina drawn in 1996.

In a practical sense, the first thing I wanted to fix was the drivechain issue. As routed, the rider would only have a few degrees in each direction to turn the front wheel before the drivechain hits the front tire. Granted, on a track, and/or enough speed, one can steer passably by leaning. But there is no such thing as low speed maneuvering unless the drivechain is routed up and over the front wheel. I had seen a photograph of the Lightning M5 lowracer, and saw how Tim Brummer had just doubled up his Lightning P-38 pulleys to route the chain over the front wheel. So I borrowed (okay, stole) that idea and pencilled it in.

Next, I was not terribly happy with using a 20-inch front wheel. I do like the practicality of having similar wheels front and back, but it was obvious that any lowracer with a 20-inch front wheel was going to fit only riders at about 5'9" and above. If I ever wanted to sell this lowracer, it had to fit more people, hence, the use of a 16-inch front wheel. At this point I had to make a decision on which 16-incher: the more common juvenile

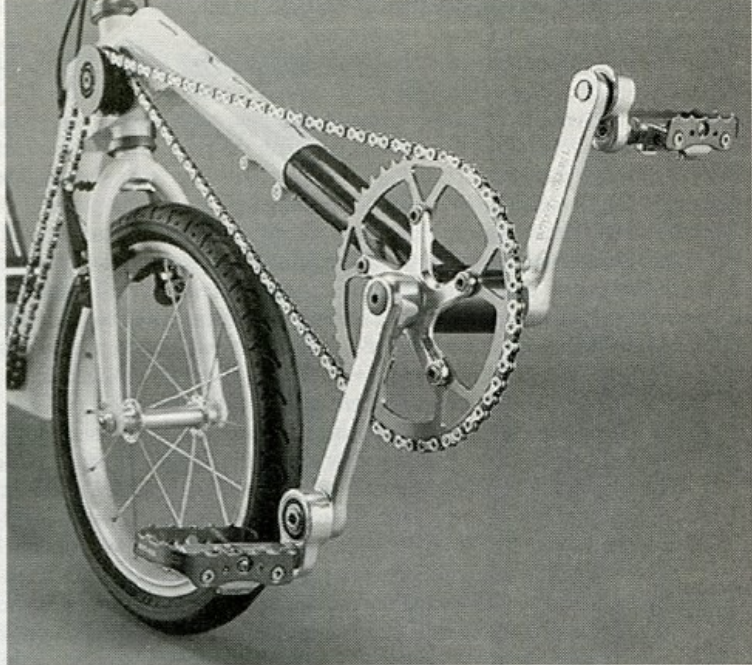
305mm one, or the recumbent-friendly 349mm size that had the better tire selection. My gamble was to use the 305mm size for two reasons. I had found a fairly okay semi-slick tire made by LHR, with a corresponding size in the rear 20-inch size (I like things to match). And I was thinking that Bike E was doing so well in their sales, that they would probably find a way of getting better tires made in their 305mm/406mm sizes, which they have done. We now have LHR, Primo V-Monsters, and Primo Comets, all in both 305mm and 406mm sizes. If only we had a Conti Gran Prix in 305mm...

Some other recumbent designs got their best features "borrowed." I loved my Kingcycle seat more than any recumbent seat. So I duplicated the dimensions. I liked how Rans had closed their mesh backs with stainless steel rod and plastic zip-ties, so I grafted that feature onto the Kingcycle seat. I thought the way that the Presto and Haluzak put their seat frames through the frame, with the mesh holding the two seat halves together, was pretty tricky, so I rigged the seat the same way. I liked how Rotator used round forkblades for his rear chainstays, but I liked the elegance of Haluzak doing the same thing, but using a tapered wishbone seat stay for both his front fork and rear chainstays.

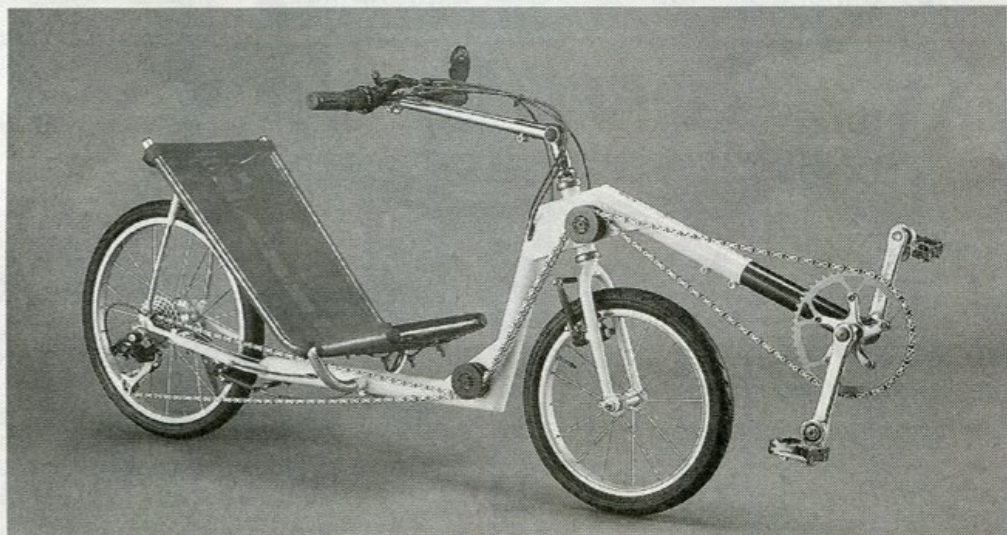
With all these neat modifications to the basic Ross Festina in my head, I bought adrafting table and lots of graph paper. And I started drawing my lowracer. The only other major departure from most other lowracers I did, was tightening up the bottom bracket-to-seat bottom distance. Most lowracers like to see at least a 10 inch difference (or more) between the seat bottom and the centerline of the bottom bracket, where the cranks are. But from the discussions on the HPV e-mail discussion group, most riders complained with such a high bottom bracket height. My compromise was allowing no more than 6 inches between the two. This was approximately the distance that Mr. Brummer used on his P-38, and not too many people complained.

Bill Haluzak welded up the first prototype. He did a great job. And he was infinitely patient with me. How did it ride? Great. Almost perfect. What was wrong? Only two things structurally: because the pulleys were doubled, side by side, the drivechain would graze the upper inner right thigh. The first solution was to increase the width of the pedals away from the crankarms (called the "Q" factor) with a little spacer set called Kneesavers. And on the redrawing of the second prototype, I placed the seat further away from the front of the bike, so that the upper inner right thigh was away from the drivechain. This modification would usually mean that the shorter rider wouldn't fit on the bike, but a bit of blind luck bailed me out of this problem; more on that later. The other flaw from the first prototype was having to raise the seat height by one inch. Otherwise, the drivechain would cause a buzzcut through the seat mesh bottom when the chain got on the 28-tooth cassette sprocket.

The next step was to outfit the bike with components. I knew that I couldn't compete with the big recumbent companies if I was going to get the usual bike dealer wholesale prices. So I attended Interbike, and I walked around with a gram scale and a calculator, and kept telling the component companies "I'm an OEM." I got some great prices. Of course I had to buy 50 or 100 of every piece. My goal was to find the best components for the job, but they had to be light (lighter than Shimano) and inexpensive. Since I was always a bike lightweight weenie (I had a Teledyne Titan in the 70s), I think most recumbents are too damn heavy for the price you pay. My goal was a 25 pound lowracer, at under \$2000 retail. Lots of components came out of Taiwan, directly imported by me via DHL. Rims were from the Czech Republic (the only company that would make 24-hole, 20-inch rims). Brakes were from Portugal. I'd pick a really inexpensive Dotek crank, which was the lightest I could find, but pair it with a TUV-approved and rebuildable bottle bracket and Vuelto



The late Dan Duchaine



laser cut chainrings. I made sure that all the bolts on the bike were either anodized aluminum or stainless steel.

And one day I stumbled onto this odd gizmo called the Power Saver, a little extension that dropped your pedal down below the pedal hole. Shimano did the same thing years ago with some road pedals. I wanted them simply because they spaced the pedals out about the same distance as the Kneesavers and were (at the time) about one-fifth the price. The biomechanics involved is this: in reality, a bicycle rider doesn't pull "up" on the passive leg when the other leg is pushing down on the opposite pedal. In reality, your so-called "pulling leg" is actually pushing as a counterbalancing force from two things: simple gravity, and the plyometric muscle rebound stretch from the passive leg hamstring. So if you are exerting 200 pounds of force on your power leg, and your passive leg has a counterbalance of 40 pounds, the actual force on the crank is 160 pounds. In the case of the Power Savers, I use very short cranks (either 140mm or 150mm), because at full extension, the Power saver adds 20mm extra length. Your "power" leg feels it's pushing on a regular-length crank, except the passive leg gives you an effective passive crank length of about 120mm.

The Power Savers do four very important things for a lowracer:

- 1) They increase the Q-factor to clear the drivechain from the inner thigh.
- 2) They cause more power because they lessen the passive leg plyometric hamstring rebound.
- 3) Since the passive leg is not drawn as far back (remember, the crank length has 20mm less millimeters) your handlebars can be adjusted very low, below your face.
- 4) Using shorter cranks allows a very short boom extension with no crank/front wheel interference. Most lowracers use a boom extension of 18 inches or more. The Lowfat, because of the short cranks and PowerSavers, can have a boom distance as short as 13 inches (it is an adjustable boom). This allows riders down to 5'6" to ride this lowracer.

Bill Haluzak welded up the second prototype. Since I was using very thinwall (.035) tubing, some of the key stress points are reinforced with sheet metal gussets. The aluminum inner adjustable boom and the seat frames were both heat treated to T-6 hardness. The pulleys were injection molded, rather than the heavy and expensive lathe-turned ones that Lightning uses. The pulley bolts are hidden inside the frame with custom stainless steel inserts. All cables were now routed inside the frame.

I'm very particular about things matching on a bike: same rim extrusions, and tires front and rear. Seat mesh, its piping, cable housing, brakes, handlebars, chainring, and even the zip-ties, are all color matched. Most of the aluminum parts are hand-polished. Little details like this show the potential purchaser that the recumbent is from a real bike company, and not some mongrel experiment out of a garage. □



SPECIFICATIONS:

- Wheelbase: 41.25"
- Seat height: 10"
- Bottom bracket height (5'10" rider) 15"
- Weight (without pedals): 25 pounds.
- Rear wheel: 20" (406mm) rim with 24 spokes
- Front wheel: 16" (305mm) rim with 16 spokes
- Gearing: 21 speed
- Rear Hub: Sachs 3X7 with 11-28 cassette
- Rear derailleur: ESP 9
- Crank: Dotek 150mm/140mm w/ 48 t.
- Handlebars: adjust., detachable, with 18" width
- Brakes: Vuelto canti all composite (& levers)
- Tires: LHR semi-slick, blackwall
- Custom options: It is possible to build Lowfat that weighs 21 pounds.

TANDEM TOPPER™



One Person Loading!

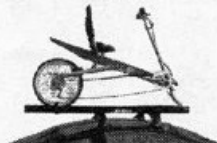
TOPPER LOK™

Fits any 9mm fork mount



Give your rack a security upgrade

BIKE TOPPER™



Models to fit any size 'bent

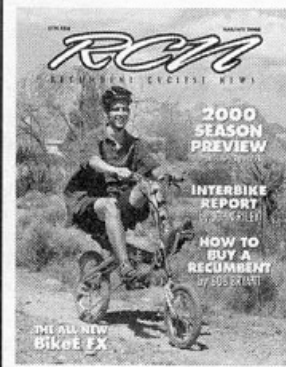


ROOF RACKS TO FIT ANY TWO WHEELER

(800) ATOC-021 <http://www.Atoc.com>

TOPPER™
Rack Products

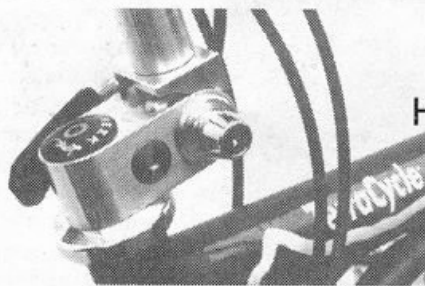
Have you received your RCN#56 yet?



All active subscribers should have received this issue. If you have not, give us a call at 253/630-7200.

TerraCycle

High Tech Hand Crafted Recumbents



Looking for a fine quality recumbent that's got it all? Check out the acclaimed new **Terra-Za!**

Handling • Comfort • Craftsmanship • Style



1-800-371-5871
(503) 231-9798

www.terracycle.com
Portland • Oregon

Remembering Dan Duchaine

Saying goodbye to a friend of recumbency

by Bill Volk

I'm not a religious man, but I thought it would be appropriate to say some words about one of our club members, Dan Duchaine. I first met Dan when I moved to the San Diego area in 1994. We met at the People Movers first annual ride. He had a V-Rex that he was modifying to improve its handling. He had switched to a smaller rear wheel and done a bunch of component changes. Dan was an influence in the refinement of that design.

I didn't know much about Dan at first. He didn't make a big deal about what he did for a living, other than to say that he trained body builders and wrote on matters of nutrition. Actually Dan was an icon of the body building world. If I asked someone at a health club if he knew this Duchaine fellow I cycled with on occasion, the response would be like if I told some cyclists that I played golf with Lance Armstrong.

Dan was not one to suffer fools or mince his words. Back when I met him I was trying to lose about 100 lbs of excess weight. Dan's advice was always direct and to the point. Even on that first ride he made some observations about my diet that were pretty darn on target. Dan was also continually working on improvements to his various recumbents and folding bikes. He even sold me a tall Rans seat because he had switched to a shorter one that fit him better.

I remember when Dan picked up a Kingcycle and proceeded to do a complete rework of the design. What he ended up with was a beautiful machine that was a major improvement compared to the original. His advice on equipment was always spot on. No one I ever met had a better design aesthetic or attention to detail. When he decided to design his own bike, the prototype won "best of show" at CycleArt's bike event. Here's a bike builder who even color coordinated the components on his bikes.

Dan once confided in me that he suffered from congenital kidney disease. He never complained about it, but I know it caused him a good bit of suffering. I think he knew that he wasn't going to live to a ripe old age. Maybe that's why he always seemed to be intent on having a great time. I know he often showed up to our rides in the company of some exceptionally beautiful women.

His style also applied to his riding. Dan wasn't one for pushing the pace, he enjoyed conversation and the scenery. His Lowfat bike design was, to put it succinctly, amazingly great fun. It wasn't the fastest machine, but it was beautiful. Dan didn't care about building the fastest bike. He wanted to build something that people would be proud to own and enjoy riding. I know he had some plans to build additional designs that I think would have been even more spectacular.

Of course I didn't know Dan that much beyond our monthly club ride. Dan wasn't perfect, and I know he had an "interesting" past. His disagreements with people were the stuff of legend. Whatever anyone says about Dan doesn't change the fact that he was willing to stand up for his beliefs and the design principles of beauty, enjoyment, and function.

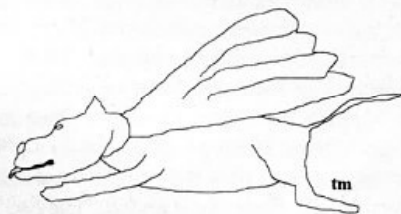
Let me close with some words by John F. Kennedy who, paraphrasing a similar quote by Theodore Roosevelt, said:

"The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood, who knows the great enthusiasms, the great devotions, and spends himself in a worthy cause; who at best if he wins, knows the thrill of high achievement, and, if he fails, at least he fails daring greatly, so that his place shall never be with those cold and timid souls who know neither victory nor defeat."—Dan passed away on Tuesday the 11th of January. I'll miss him. ☐

Valley Bikes...Indiana's recumbent source!

127 n. washington street * crawfordsville, indiana 47933
www.valleybikes.com * ddoty@valleybikes.com

1-800-730-9021

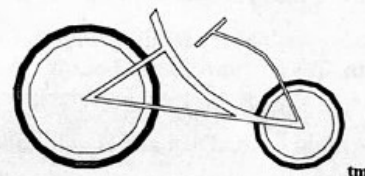


"Now what?"

* Easy Racers * * ATP Vision * * Rotator *
* Longbikes * * BikeE * * Trek * * Lightning *
* RANS * * Haluzak * * B*O*B * *

Read the Legend of Flyin' Joe!
at www.valleybikes.com (What a dog!)

To whomsoever cares: I will
confess being psychotic when
you can define reality.



Recumbent Anthology

Dick Ryan of Ryan Recumbents
(now part of Longbikes)

by Kelvin Clark



Kelvin and his super deluxe MC² SWB

Kelvin: What got you involved with recumbents?

Dick: I worked with Dick Forestall. I think Dave Wilson found Dick Forestall somehow through some mutual acquaintance. Dick Forestall was a tool and die maker. Dave had done a design contest for students for a safer bicycle and this student, whose name escapes me at the moment, came up with an under seat steer short wheelbase recumbent. Dave thought, safety wise, it was definitely an improvement over the conventional bike. Then he thought it might be commercially viable, so somehow he got hooked up with Dick Forestall and Dick and I worked together. Dick and a fellow by the name of Harald Masejewski had a business, they were importing bikes from Europe and they also had a retail shop. They sold the retail businesses, mortgaged their houses and got into building the Avatar recumbent bicycles. Dave was part of the company, but he didn't own any of it, so between Dave and Dick Forestall the Avatar came into existence. The very first couple of bikes built were short wheelbase.

Kelvin: They actually sold short wheelbase?

Dick: No, they never sold one.

Kelvin: But they built a couple of them.....

Dick: They built a few, and the lawyers said, "Don't." So Dick came up with a LWB version and that was the first long wheelbase, under-the-seat steering recumbent on the market. The bike, you've seen them right?

Kelvin: Uh-huh

Dick: They're a work of art.

Kelvin: My first introduction to recumbents was the Avatar. I sold them back then. My first recumbent sale was an Avatar 2000 to a guy named Roger Hoffeditz from Seattle, Washington, and I bought three or four over the course of a couple of years.

Dick: Oh, really?

Dick: So you're very familiar with it.

Kelvin: Yes.

Dick: We only built one hundred forty of those. And it took us two years just to build them. Dick and Harald called me in to help them physically building them.

Kelvin: So frame building was your part of the deal?

Dick: No, No. We didn't actually build the frames. We mitered all the tubing and everything. We had these guys who were real good brazers and silver solderers who brazed the frames together. We did all the machining. If you remember the thing had a million little machine parts that were all carefully hand reamed and then anodized. It was just a huge amount of labor. So after two years when they discovered that there was no way they were ever going to make any money out of it, they just folded up and went on to do more profitable things. The original idea was to interest a larger company in the product. We got led on by Schwinn and early on a toy manufacturer, a very wealthy guy who really liked the product, so he started to finance the whole thing, but unfortunately, he died. It was an older guy, and his son took over the company and didn't want anything to do with the bicycles, so that killed that.

Kelvin: So the MIT part of it is Dave Wilson. And no one else was from that background?

Dick: Right, just Dave.

Kelvin: The Avatar had some elegant things I remember, like the mesh seat with the leather webbing and the leather supported rear rack, things like that. Where did that idea come from?

Dick: Dick Forestall, mainly.

Kelvin: It was a pretty bike. So, the Vanguard thing, then.....

Dick: I thought that there had to be a way to make some money out of this so I thought I would build my own bikes in my cellar, more less as a hobby.

Kelvin: What year was this?

Dick: Probably 1985. Somewhere around there. It was a hobby. I built a few bikes. I knew all the guys from Fat City Cycles and Merlin Metalworks, they were all in one complex. Gary Helverish welded up the first ten frames and then I inherited a little bit of money and I put a lot of that money into the bike business. I had a failed joint venture with a guy down in Tennessee who was a BMX bike builder. That fell through. The I had a joint venture with Green Gear of Eugene, Oregon.

Kelvin: Right, I remember that.

Dick: That didn't work out.

Kelvin: Why don't we stop at the Green Gear thing for a moment then. So you moved to Eugene... What was the concept?

Dick: They were going to build the bikes for me and be my backers.

Kelvin: They had something called the Toyota philosophy, I believe.

Dick: Oh yeah, you read a book about Japanese JIT manufacturing. Actually they do a pretty good job of it. They do use that method. But that whole thing turned pretty sour and I ended up creating the ability to build them all myself.

Kelvin: So the concept was to price the bike at a certain level, it would create a natural law of a certain volume of sales and eventually you would make money. Was that the idea? Explain that to us.

Dick: I don't want to make it sound too bad for these guys, but I was under that impression. They built Burley tandems They actually started Burley. Hans and Alan Sholtz, they were the founders of Burley. That's a whole other story in itself. Anyway, then they became what is now Green Gear. They were building the frames of Burley tandems and they built some frames for me and were shipping them to me in Massachusetts. I was talking to them and thought it would be a good idea to do a joint venture. What I didn't understand was that they didn't really have any money. A lot of smoke and mirrors. So basically it ended. They still did work for me, but I became a manufacturer. Kurt Jensen from Eugene was one of my customers and helped finance that. He bought some machinery. We set up to build them and built them for almost two years, but then my wife was saying, either come home or don't, and my son was out there working with me. He became the chief welder and bookkeeper. He wanted to go back home, so we ended up moving back to New Hampshire and eventually back home to Massachusetts. My son decided he really needed to make a living so fortunately Mr. Peek came along.

Kelvin: From the Avatar to the Vanguard, what was that transition as far as design or philosophy?

Dick: What I tried to do was simplify the bike. The Avatar was never really meant to be a production bike and there was just a huge amount of

labor involved in it. What did you sell one for, \$1800?

Kelvin: I think it was more like \$2200. That was in 1980, which was a lot of money for a bike.

Dick: They didn't lose money. They didn't shut the business down or lose their houses or anything, but with the inability to find a large manufacturer that we could interest like Trek or Schwinn it became obvious it wasn't going to happen. They had families and mortgages and they thought they should go do some-thing they could make a living at.

Kelvin: So philosophically, the Vanguard is a simpler Avatar.

Dick: There was a couple of things I didn't like about the Avatar. I didn't like the way it handled and it had a 16-inch front wheel and very little trail. It was pretty twitchy. So I just basically cut and tried until the bike handled the way I felt it should handle. The only changes I made on the bike over the years was I moved the bottom bracket forward about two inches and made some changes in the way the seat assembly attaches to the bike, but basic geometry and everything was never changed.

Kelvin: When did the tandem come?

Dick: I don't know what year I built the first one. I built it in my cellar before I moved to Oregon and it was built out of a couple of junk Vanguard frames. I built it just for the fun of it, I never intended to build tandems. I brought the bike with me up to Oregon and we had built a Vanguard for this doctor down in Redding, California. When he came to pick it up he saw the tandem, it was in the winter time, I think it was slow, and he said, "Can you build me one of those?" So we built him one and it just grew. We didn't do any major advertising or anything, but we sold them. The second year, we did about thirty-five of them, so it became a major part of the business.

Kelvin: You called it the Fleetwood.....

Dick: Yeah, then our lawyer told us it was a copyrighted General Motors name and they could come after us, just like Rolls Royce came after us. I once got a letter from Rolls Royce telling us to cease and desist from using their logo. We renamed it the Fleetwood. I always liked the name.

Kelvin: When the Vision first came out, Chrysler had just announced the Vision automobile and they haven't come after Vision, so that would justify the different sphere philosophy. So the Fleetwood

Dick: Yeah, it became a major part of the business and I think recumbent tandems, as time goes by, are going to become very popular. Our bike, I think it has some superior aspects to it, but all the ones on the market are pretty good.

Kelvin: Now the S & S thing, that came out of it, which helps with the Fleetwood's overall length.

Dick: Oh yeah, obviously, if you want to take it on the airplane, it makes it a lot easier to do.

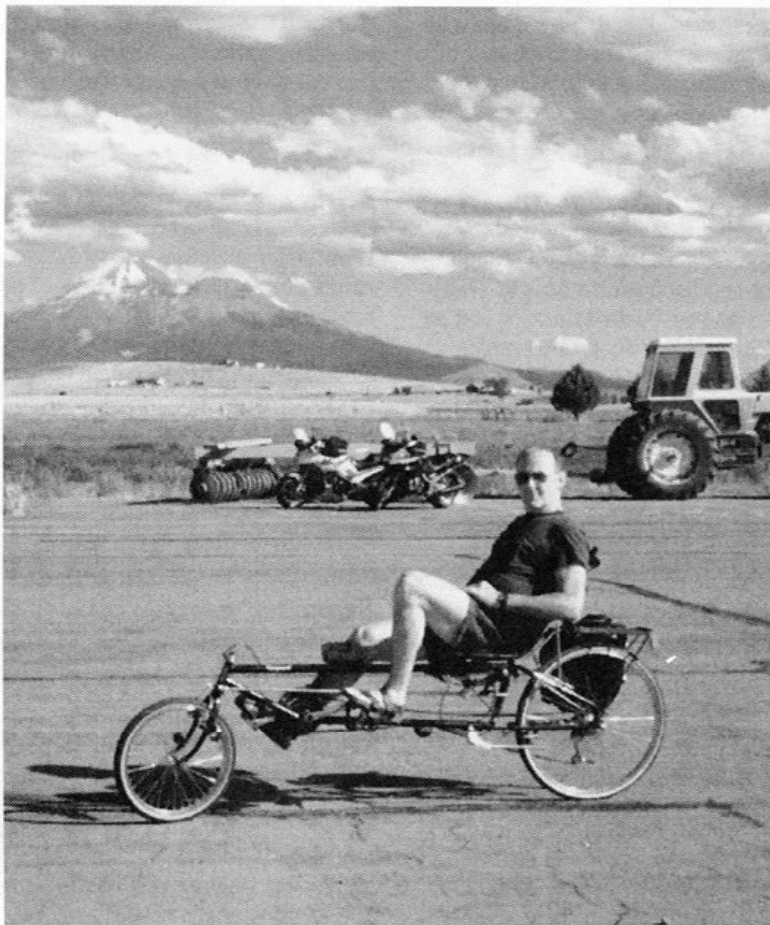
Kelvin: Is that the way most people get them now?

Dick: Most of the bikes have them. We started advertising them with the couplings. Of the last forty or fifty bikes, thirty of them had the couplings.

Kelvin: You're called the Godfather of recumbents.

Dick: You can blame Bob Bryant. I don't know where he got that from.

Kelvin: You're not Italian, I don't see any guys in dark coats hanging around you as we talk.



Dick Ryan rides the Vanguard at the 1992 Yreka, California IHPVA Speed Championships—Bob, RCN

Dick: You can blame that one (Bryant. Definitely. I certainly wouldn't have come up with it. Gardner and the Schlitters start before I did.

Kelvin: You don't think it's a presence you have or something fills the character out?

Dick: Yes, it's the robe and stail cigarette and can of beer!

Kelvin: In Oregon, wasn't the tricycle project also?

Dick: We built about a dozen tricycles. That was a pretty new but the same old problem. It wasn't profitable enough. We had to think about what we could make money with the tricycles were labor intensive. There was not a high demand for them, but it was a nice trike.

Kelvin: Is there a resemblance one that Jan Vander Tuin built?

Dick: Oh yeah, the Tritan from old Vander Tuin (Jan of HPM).

Kelvin: Right. It seems like there are some similarities there. Are you involved with that project or is it?

Dick: No, he basically just took over. He made some changes in the are pretty good. So if you want our old trikes it's now the Trita Human Powered Machines.

Kelvin: Recumbents and the press. Do you have some comments?

Dick: The press? Meaning who, RCN?

Kelvin: I'm thinking more of the general cycling press. You've had feelings I know over the years about getting coverage for recumbent

Dick: Well we've been fairly successful in getting coverage. You look back—we were in US News and World Report. We've been in Popular Science Magazine. Over the years we've managed to get a fair number of things into the press. The bicycling press over the years has pretty much ignored it. My usual comments on the bike industry—it's run by a bunch of testosterone poisoned young males, and they pretty much determine what's out there in the bicycle shops.

Kelvin: Tell us about the Recumbent Bicycle Club of America.

Dick: With the lack of coverage from the bicycle press, I decided to start a recumbent club...kind of like the tandem club of America. We ran a few ads, developed a list of names but could not pull the rest together. It was about the time that Bob started the Recumbent Cyclist Newsletter I agreed to send RCN to club members as the club publication. The club was unofficially disbanded and RCN has continued to publish. (Ed. Note: July 2000 is our 10 year anniversary.)

Kelvin: This is on the press side and the manufacturers' side then?

Dick: Yeah, well the press—for all practical purposes, Bicycling Magazine is the press. I mean who else is there now? There are like five motorbike magazines and Bicycling is the only publication that covers more than just everything. Over the years they have probably done a dozen articles about recumbents. The people who are at Bicycling Magazine over the years are all bicycle enthusiasts. Most of them didn't consider recumbent bicycles. I think that's changed quite a bit over the last couple of years.

Kelvin: Now bike shops.....

Dick: I don't want to get shot by a bunch of bike shop owners. We understand that there are 7000 bike shops in the country. When I first went up to Oregon with the guys in Green Gear, Alan Sholtz used to say "There has to be about seventy or eighty good bike shops in the country. I was, "Seventy or eighty out of seven thousand?" Well, he might not have been too far off because the experiences we had with the people

work in bike shops over the years, I can't say was all bad, but we had a lot of customers call us up to tell us these things that happened to them at bike shops. You know like going into a bike shop and being told, "Sorry, we don't work on recumbents." We just had an awful lot of people in the bike shop business who weren't businessmen. Someone comes in and they want to spend money and they say, "No, we don't want your money, we don't want anything to do with those things, don't give us your money." Just a very large number of people who were dilettantes, enthusiasts, but not businessmen. But that has changed too. It's been a big turn around. We have a lot more people in the business that are business people. What is going to happen is you are going to have to be a businessman or you're going to be gone. The old days of the Mom and Pop shops are pretty much history. You can't stay in business the way they used to do it.

Kelvin: No, you have to be pretty careful about certain things.

Dick: You've got to make sure you make a profit in what you do. You can't be giving stuff away. You can't be turning customers away.

Kelvin: There's been a turnaround in the bicycle shops' reception to the recumbents in the last two years. At least to some degree.

Dick: Oh, yeah, and now Trek's entering into it. That's going to legitimize it. And I'm sure that within the next couple of years you're going to see recumbents from a lot of the major manufacturers.

Kelvin: You went back a number of years with Trek because there was a guy named Bob Reed.....

Dick: Yeah, Bob was the head engineer and he rode one of my bikes. He had sent us a bunch of parts and we did a suspension bike with Trek parts.

Kelvin: Did you actually ship those?

Dick: No, it was in our brochure though.

Kelvin: I remember seeing pictures, but I don't remember seeing bikes.

Dick: It's sitting in my cellar. The one and only. Bob got killed in a car crash and that ended our relationship with Trek.

Kelvin: The people that are there these days on the recumbent project don't have ties to the original work with Bob?

Dick: Actually Brad Wagner does.

Kelvin: The impotence discussion the last little while.....

Dick: Oh, I shouldn't! Yesterday's USA Today. An article about Specialized on their new saddle. They sold twenty thousand in the first month. It was a new saddle that was supposedly supposed to cure the problem. The article went on to discuss the impotence thing. That's definitely helped matters a lot. We got a lot of people, a lot of customers that have called and referred to the original Bicycling article. Because as the article stated, it's a much wider spread problem than anyone in the bike industry wants to admit to. But, its curable. You can build a seat as Specialized has done that will not cause the problem. It's mostly one hundred thirty pound guys with zero body fat that are out hammering 500 miles a week.

Kelvin: Yeah. I remember back earlier in the early 90's I had customers coming in with these types of issues and we were selling them recumbents back then. It wasn't front page news but there were guys out there who had come to the wrong conclusions about wanting to stay on a bike and this was the way to stay on a bike.

Dick: There were articles back in '90 or '91 about the same exact thing. There was one done by Berkeley School of Health, in one of those health publications. There was one done back in the 80's, same subject. Nothing new. I remember there was a doctor down in Long Beach, California who wrote an article on it because he had a lot of young guys with the problem and they all had one thing in common. They were all out there hammering away on their 20-lb. road bike. Nothing new. But that Bicycling article and the 20/20 television show definitely helped that cause, except of course on the TV show they edited out our comments about recumbents.

Kelvin: I remember that. They didn't offer any recumbent solutions.

Dick: I won't watch that show anymore.

Kelvin: I heard you talking about planes earlier. Do you have aircraft connections in your life?

Dick: No, not other than my pilot's license. I haven't flown in thirty years. I had a pilot's license. I had a couple of hundred hours.

Kelvin: There seems to be some definite aircraft connections in the recumbent industry. As I've done this series of interviews I don't think I've talked to anyone yet who doesn't have a pilot's license.

Kelvin: Yeah, so it was a connection I didn't realize was there.

Dick: I was one of the sponsors of the Daedelis (flying HPV) project.

Kelvin: You've sold the company to Greg Peek of Longbikes in Littleton, Colorado. How did that happen?

Dick: After spending almost 20 years trying to find someone, unlike my competitors who have been much better at that than I have been. Steve Smilanick of S&S couplers had been talking to Greg Peek and Steve had a little interest in buying us. Anyway, he mentioned it to Greg. A couple of hours later, Greg Peek called us up and the whole thing got done in a few weeks. We had Jay Townley working on this for the last year. He wrote us a business plan and contacted every manufacturer in the world. There was zero interest.

Kelvin: Greg Peek's from the outside coming into the industry?

Dick: He's been riding a recumbent himself for he's got one he's had for many years. At least that's what he told me.

Kelvin: You've sold the company, does that free you up, do you have an agreement or anything?

Dick: I'm not going to be building any more recumbents. It's a non-complete agreement. I'll be on their payroll for awhile.

Kelvin: So you're going to contribute some ideas that have not come forth because you've been occupied building frames?

Dick: Yeah, well there's always been a bunch of little changes we've wanted to make. Mr. Peek has some ideas. One of his businesses is wheelchairs so seats are something he knows about. He's building SWB, above-seat steering versions and another tandem.

Kelvin: Is the above-seat steering thing something we should talk about?

Dick: That's something I always wanted to do, not because I'm a specific fan of over-seat steering, but a large percent of your people who ride these bikes like upright steering, and if you're going to build a line of recumbent bikes you've got to have a bike with upright steering.

Kelvin: Do you want to tell us how it's different or anything?

Dick: It's got a universal joint, so there's no tiller effect. It steers like a car's steering. It's more complex than the other bikes that are on the market because of the fact that it has a universal joint and therefore you have to support the steering tube independently instead of having a whole handlebar assembly that swings left to right. I think it functions a bit better and enables you to not have to bother with changing the front end geometry. It's the same frame, just the addition of some supports for the steering.

Kelvin: It's definitely a different idea than any other above-seat steering I've seen. It's not a clone idea from someone else's bike.

Dick: Now actually.....

Kelvin: Well..... so now this goes back to history again, doesn't it?

Dick: I've got a 1932 German Mueller sitting in my shop. It's got a patent number on it and it's got the same steering set up and a universal joint, actually it has a steering wheel. The original Velocar had a universal joint. I don't know why the hell nobody has ever picked up on it.

Kelvin: Do you have some fundamental ideas about bike design that are hard points of any kind?

Dick: Only, I've never been a big fan of trying to peel weight off. I've always been a big fan of a bike that won't break. Our bike weighs thirty and a half pounds. You start getting a really light weight, an .028 tube and taking chances with the frame design, the thing can break. It's also from a product liability viewpoint. You don't want to build something someone can get hurt on. I like a strong bike and a bike that handles neutrally. That's about it.

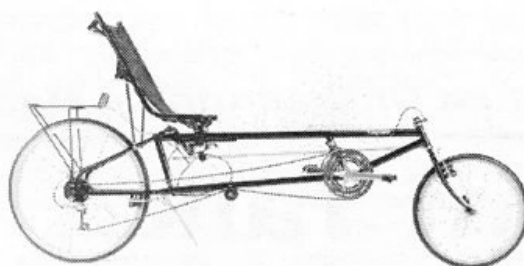
Kelvin: Do you have anything you want to talk about that I haven't raised up here so far?

Dick: We've covered almost everything in a brief period of time. The whole history of the Ryan recumbent thing.

Kelvin: Thanks.

Editor's Note: Kelvin Clark tapes these interviews live. Most are done at the Interbike tradeshow, though this one was done live at Kelvin's Woodland Park, Colorado shop. Dick was on a trip out to Longbikes and in the neighborhood. Kelvin has the interviews transcribed and does some initial editing. We receive the interviews via email, lay them out and they are edited (very lightly) by myself and Paul Arends.

Dick Ryan is one of the most colorful characters in recumbent cycling. I'm proud to have met Dick and made friends with him nearly 10 years ago. Dick has been a friend, mentor, as well as an extremely loyal supporter of RCN over the years—even with my constant bantering about how much assembly was required for the Vanguard and our ongoing 'seat



The classic Ryan Vanguard

horn' debate. Dick has among the highest quality control standards of anyone that I've met in this business. The Vanguard LWB is a very complex bike to build. The Ryan Vanguard is one of the true classic designs in recumbency with a near royal heritage. The history of this bike includes the early modern history of recumbent bicycles (David Gordon Wilson and the Avatar).

Dick is in semi-retirement in Boston, though he keeps talking about moving to Florida. We talk about once a week about the state-of-recumbency, bike dealers, industry rants, the internet, eCommerce, the future of print, magazines and recumbency as well as our mutual affection for small boats and cool places by the sea. Dick's son Karl is married, has a new baby and works in real estate in the Boston, MA area. □

JOIN THE RIDE

WWW.BIKEROUTE.COM

**ALSO HOME OF THE WORLD'S
LARGEST RECUMBENT SITE**

Recumbents.com

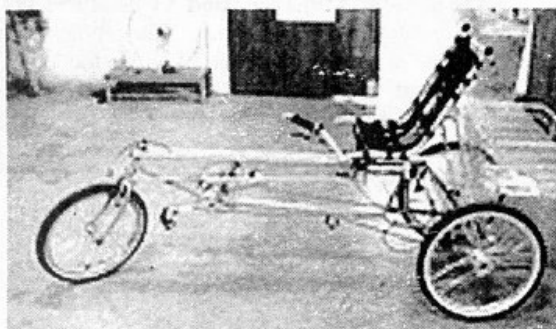
**The Recumbent Bicycle and
Human Powered Vehicle Info Center**

**A Virtual Bent Community
Research, Chat, Buy & Sell**

Now with Live Real Time Chat!



THE TRITAN



A very dignified trike

Practical and affordable machines, fabricated with the help of youth apprentices.

THE ROADSTER



Twin 26-inch wheels

Human Powered Machines is an educational program of the Center for Appropriate Transport.
455 West First St. Eugene, OR 97401 (800) 343-5568 cat@efn.org www.efn.org/~cat/html



Florida's West Coast Recumbent Headquarters

Sales • Service • Rentals
Test Rides Available

BikeE • Rans • Haluzak
Vision™ • LINEAR
Now selling Easy Racer

Top End Handcycles
Earth Cycle™
Used 'Bents

11244 Park Blvd. • Seminole, FL 33772
727-319-2453 (BIKE)
Clearwater/St. Petersburg

Conveniently located one block
from Pinellas Trail

All major credit cards accepted
Financing available

"Fast, Friendly, Family Service"

Contact us about our upcoming recumbent rally!

'Bent Talk

Words of Wisdom By Kent Peterson



"Hello and welcome to 'Bent Talk on National Recumbent Radio. We're your hosts Grip and Shift the Sprocket Brothers and we're here to talk about bents, bent repairs and why most folks ride bikes with wheels that are too big and chains that are too short. So give us a call at 1-555-GETBENT. And here's our first caller."

Caller: "Hello, this Ken from Seattle and I'm thinking of getting a Ti-Rush but I've been wondering if it's really faster than a Gold Rush."

Grip: "Ken, I understand your concern but we have conducted extensive studies in our lab here at 'Bent Talk Plaza and we can say unequivocally that you will be faster on a Ti-Rush."

Shift: "Yes, a lot of people think titanium is all about weight reduction but our studies show that you'll experience a significant aerodynamic gain as well. For example, once you buy the Ti-Rush not only will your wallet be considerably lighter, but it will also have a much trimmer aerodynamic profile!"

Grip: "Right you are, Shifty. And not only that, but sitting on that slimmer wallet will improve your muscle efficiency and lessen your chances of developing recumbent butt!"

Shift: "Thanks for your call Ken. Enjoy your Ti-Rush. Next caller?"

Caller: "Hi. This is Shari from Tampa, and I've been thinking about trying a do-it-yourself project, but I'm not sure if I should make a front fairing or a tailbox."

Grip: "Fairing."

Shift: "Tailbox!"

Grip: "What are you, nuts? Smooth the front first! Remember Professor Hein's classic brick in the wind tunnel experiment?"

Shift: "I would bet Shari is not shaped like a brick. Are you, Shari?"

Shari: "No! I'm, uh..."

Grip: "Don't answer that, Shari. Now whether or not Shari has an aerobelly isn't really the question. More importantly, what kind of bike do you have — long or short wheelbase?"

Shari: "Short."

Shift: "Aha! I'm sticking with my answer. Tailbox!"

Grip: "I hate to agree with my brother but he may be on to something here. How laid back are you?"

Shari: "Pretty laid back."

Shift: "I'm telling you Shari, a tailbox is the way to go. Since you're already laid back, your frontal area is already quite low. And on a short wheelbase bike when you're laid back, that means there will be quite a gap between the fairing and your body. The wind will swirl in there and that means drag. So unless you're talking a full body fairing, I think you'll get more of a practical gain from a tailbox."

Grip: "Well, it depends on a lot of things. For bikes like the Tour Easy or a BikeE you see a lot more gain from a front fairing. And I still think an intelligently designed front fairing will give you a good gain on a short wheelbase bike."

Shift: "Maybe, but Shari's just getting into do-it-yourself projects. And tailboxes are much easier to make. Any idiot can make a decent tailbox."

Grip: "Just finished yours, eh Shifty?"

Shift: "Yes I did, and it's a sleek black beauty."

Grip: "I was noticing that. I thought you always stole, um make that 'recycled', campaign and real estate signs for your tailboxes. This one looks almost professional. What's the secret?"

Shift: "Black duct tape. It gives my bike that stealth fighter look. I covered all the political signs with black duct tape."

Grip: "Another aesthetic breakthrough! Shari, good luck with your tailbox project. Send us a picture when you get it done."

Shift: "Before we take another call, Grippy, do you remember last week's puzzler?"

Grip: "Well... uh... it had something to do with the crusty mechanic and the 1938 velomobile?"

Shift: "No, you knucklehead. There wasn't a puzzler last week because the puzzler was off trying to convince Lucy Lawless to be the spokes-model for the new Vision Saber. But here's our exciting new quasi-interesting puzzler. A week or so ago a fellow had the YST bottom bracket lock up on his BikeE."

Grip: "Oh yeah, I remember that. The guy wound up getting rid of the piece of junk YST bottom bracket..."

Shift: "Yeah, BikeE has learned their lesson and hasn't used these things in years. But this guy had one of the older ones from back when BikeE was using unthreaded bottom bracket shells and it locked up. The fellow calls around and finds a guy that will thread the bottom bracket shell and install a Shimano BB. He and his pal pull the wheels, chain and fairing off the BikeE and load it in the back of the pal's jeep. The bike gets fixed and everything is great. But when the guy puts his bike back together and rides it around, he notices that it's developed a tendency to autoshift under load. He tweaks the derailleur settings and the cable tension but it still autoshifts. He even uses this as an excuse to replace the somewhat worn Sachs derailleur with a Shimano XT derailleur, but he still has the problem."

"He rides around and ponders the problem and eventually he figures out what is wrong. He stops, takes one tool out of his tool bag, makes one adjustment and rides off. His shifting has been smooth ever since."

"What was the tool, what was wrong and how did he fix it?"

Grip: "Ooh, this is good. Did the guy who put the new BB in screw something up?"

Shift: "No. And I'll give you one hint. The bike's owner fixed it in about three seconds using a tool in a slightly non-standard manner. If you think you know the answer, write it on the back of a coroplast campaign sign and send it to the "Fair the Freaks Fund" care of this National Recumbent Radio station."

Grip: "OK, next caller."

Caller: "My name is Bob from Atlanta. I just got new brake pads on my Tailwind and..."

Shift: "They squeal like a pig in a pork factory, right?"

Bob: "Yes, how'd you know?"

Shift: "Let me guess, you installed these yourself?"

Bob: "Yes, it looked pretty easy. I just took the old ones off and put the new ones on."

Grip: "Here's your problem, Bob, you didn't toe the brakes in right."

Bob: "Toe?"

Grip: "Brake pads have to hit the rim just right. There are a few basic safety things you have to do like making sure that the brakes don't rub against the tire or dive so low they go into the spokes, but in addition to that you have to make sure that the brakes are properly toed in."

Shift: "When a brake is "toed in" it means that the front of the brake pad rubs up against the rim just before the rear as you apply the brakes. Your brake pads probably came with these little beveled washers..."

Grip: "They look like little bagel halves."

Shift: "...these washers let you tweak the angle of the pads and then you tighten them in place. It's kind of tricky to do until you get the hang of it, but there's a tool you can get called a "toe jam" that'll help you line them up."

Bob: "You're making this stuff up about the toe jam!"

Grip: "No, he's not. That's what the tool is called but you can do it

yourself with pocket change. Here's what you do. Get two nickels and two dimes. Put a nickel on each side of your rim at the back edge of the brake pads. Put a dime at the front edge of each pad. Tighten the brake pads down so they are holding the coins snug but not too snug against the rim. Now pull out the coins (this is why you didn't want them too snug). Now you're brakes will be adjusted so the front engages the rim just slightly before the back and your stopping should be nice, smooth and quiet."

Shift: "Of course, maybe you don't want to do this. Those squealing brakes are a great safety device, much better than yelling at the moron who's just cut in front of you."

Grip: "I think Bob is more interested in peace and quiet and I'm sure they don't have any bad drivers in Atlanta, do they Bob?"

Shift: "See ya, Bob. OK, that number again is 1-555-GETBENT. Hello, you're on 'Bent Talk.'"

Caller: "Hi, this is Jeff from Waltham and I have a question about recumbents..."

Grip: "Well, Jeff, you called the right place. What's up?"

Jeff: "Well, I was just wondering. Why are they so damn expensive? I mean I've been looking around for a while and these things are cool and all but man, we're talking a lot of money."

Shift: "Jeff, Jeff, Jeff! It really comes down to priorities. A recumbent is a life-changing investment in yourself."

Jeff: "Yeah, but I really can't afford one."

Grip: "Sure you can. You may have to make a few adjustments but I bet you can do it. Do you buy a latte everyday?"

Jeff: "Well, yeah a Triple Grande."

Grip: "I'm going to let you in on a secret. 'Latte' is Italian for 'lots of milk.' You're paying three bucks a day for a big glass of hot milk with some coffee in it. Now instead of that, go to the store, buy some milk, heat it in your microwave and add some Folgers crystals. Bingo, cheap latte. Take all the money you save and in a year you'll have a thousand bucks. You can get a pretty decent 'bent for that."

Shift: "And another thing, if you've been pledging seventy-five bucks a year to National Recumbent Radio just so you can get those mugs with Bob Bryant's picture on them, stop doing that. Check out the nearest thrift store and you can probably find a decent mug for a dime. All it has to do is hold coffee, it doesn't have to make some big statement. Why the mug I use everyday I got at IBM's factory misprint garage sale."

Grip: "I was wondering where I could get one of those mugs that says 'THIMK!'"

Shift: "So Jeff, the answer is save your money and get bent! Next caller."

Caller: "This is John from Corvallis."

Grip: "Hi John, what's up?"

John: "Well, I've been riding recumbents for several years now and on reasonably long rides I've got a problem with comfort."

Shift: "What kind of problem are we talking about here? Is it your back, your neck, your shoulders, or what?"

John: "It's, umm, this is kind of embarrassing. I've got a chafing problem between my legs and my, um...plumbing."

Grip: "Oh, the dreaded ball rub! That's too bad. They never mentioned that down at the recumbent store, eh John?"

John: "No."

Shift: "So tell me John, what kind of shorts do you wear when you ride?"

John: "Unpadded exercise shorts. I figure since I'm riding a recumbent I don't need the chamois padded shorts that the wedgie riders use."

Grip: "No, you don't. It sounds like you need something to keep your equipment in line. I think you need a jock strap."

Shift: "I was thinking the same thing. Just because John is in a relaxed position, it doesn't mean he's not working. Still most folks don't have these problems. John, you said this happens on reasonably long rides. How long are we talking here?"

John: "You know, two maybe three hundred miles..."

Grip: "Three hundred miles! By golly John, you really are a jock!"

Shift: "And I bet you've got legs like a T-Rex. No wonder you're having a clearance problem."

Grip: "Buy yourself a jock strap and wear it proudly. But keep wearing the shorts as well."

Shift: "See ya, John."

Grip: "Well you've done it again, wasted another perfectly good hour listening to 'Bent Talk. Tune in again next week. Until then, don't ride like my brother."

Shift: "And don't ride like my brother. And even though Bob Bryant moves further into the boondocks every time he hears us say it, this is 'Bent Talk on National Recumbent Radio. □"

Kent's Mission: A 'bent beat from the back alleys, garages and dumpsters where new bikes don't come powdercoated and old bikes live on with the help of duct tape, hose clamps and determination. Kent writes for RCN when he feels the creative urge and has something to say about recumbent bikes—and we appreciate every article. You can find Kent on the internet at: peterston@halcyon.com, www.halcyon.com/peterston/bentkent.html.



Reynolds Weld Lab Frames

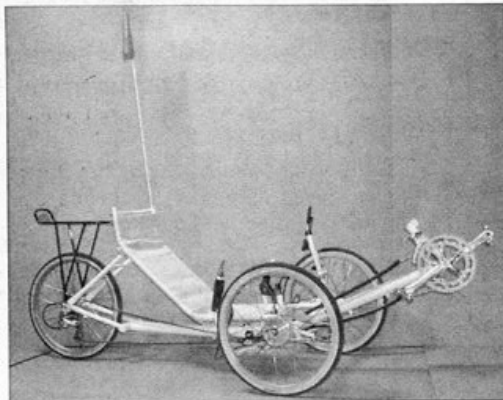
Laid back, rock solid and fast.



- Rigid, rectangular alloy steel tube frame set
- Stable at low and high speeds
- Dual 20" or 26" rear, 20" front wheel
- Frame sets start as low as \$1,250
- Full line of accessories available

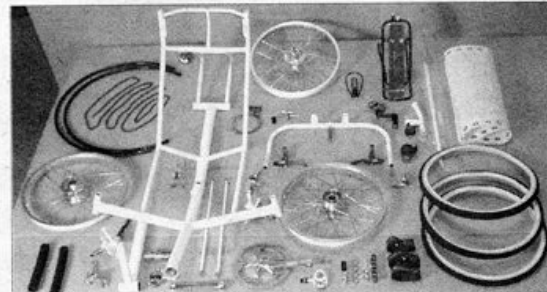
Call Now (603) 432-7327

WICKS AIRCRAFT SUPPLY



Supplier of aircraft kits for 30 years is NOW offering
TRIMUTER TRIKE KITS
Raw materials \$950
Ready to assemble \$2200
Custom fabrication parts available.

Wicks Aircraft Supply
Highland, Illinois
Fax: 888-440-5727
e-mail: aircraft@wicks.com



800-221-9425
www.wicksaircraft.com

RCN Classified Ads

Recumbents For Sale

FOR SALE: 1995 Rans V-Rex, 4500 miles, white, 26/20, 21 speed, well maintained, kickstand, rack, 1.4 inch rims, stationary handlebars, \$850. blinkpete@kearney.net; 308-237-3540, Nebraska (NE/57)

FOR SALE: EASY RACER TOUR EASY, 1998 model, medium size, black, Super Zipper, Grip Shift, 21-spd., Extras., Excellent Condition. \$1500 + shipping. Tel. 615-446-3387 (TN/57)

FOR SALE: FULL SUSPENSION HALUZAK TRAVERSE, magnificent black & chrome show bike. Aerospoke's, Magura's, XTR 8 spd, beautiful custom hand made fenders and struts, much more. Rugged and beautiful \$3,500. Will send picture if serious. Tel. 808-456-5707. millerL004@hawaii.rr.com (HI/57)

FOR SALE: VISION R45, black, USS, 20" front wheel. Excellent condition \$1000. Call 856-858-8206 or email: 233@excite.com (57)

FOR SALE: 1998 ANGLETECH ALTITUDE SWB, less than 1000 miles. Have stopped biking, but it is a great bike. Original cost \$4000, will sell for \$3000. Call John Morris at (515) 581-5756 (IA/58)

FOR SALE: 2000 HUMAN POWERED MACHINES ROADSTER LWB ASS, dual 26" wheels, 21-speed (3x7). For a tall rider. Like new. \$895. Call Bob days 360-379-6373 or drrecumbnt@aol.com (WA/57)

FOR SALE: 2000 TOUR EASY EX, med-large size (6' +/- rider), black, <300 miles, Super Zipper, rear rack, custom factory fender set, dual WB cages, plus optional upgrades: Rapid Fire 24-speed, ESP V-Brakes, Easy Racer/Sugino cranks. **SOLD** Bike is packed and ready to be shipped.

Recumbents For Sale

BIKES FOR SALE
1998 Rans Gliss, Maguras, electric blue \$1400
1997 Rans Nimbus, T-bars, size L (40). Exc. \$1100.
1997 Stratus GL24, Sharkskin, C-bar, New \$Call.
Trek R200, extra wide gearing, Maguras \$1400.
Vision R32 GL demo \$2100 value \$750.
Angletech 719-687-7475.

BIKES FOR SALE
New 1999 Challenge Hurricane, SWB, CroMo, large. Reg. \$1800 Now \$1500.
Used Rotator Pursuit LWB with Solar Fin pannier (tailbox) \$1300 complete.
Calhoun Cycle 612-827-8000

BIKES FOR SALE
Used 1999 Rans Stratus, green, med. (35) like new, Sigma computer, headlight, bell, mirror, tail light. Very clean. \$1399.
New demo BikeE RoadE, violet, tall seat \$899
EZ1 Supercruisers are IN STOCK.
Uprights: Burley & Santana tandems 1999 20% off
Atlantic Bicycles 954-971-9590

BIKES FOR SALE
 We are now importing **HP Velotechnik** full suspension SWB and **Challenge SWB** European recumbents. We will also carry the HP Streamer fairing.
Zach Kaplan Cycles 510-522-2368 or email zakaplan@earthlink.net

Recumbents For Sale

FOR SALE: 1998 ROTATOR INTERCEPTOR. Less than 100 miles. 35-spd., SRAM Shifters, Shimano STX derailleurs, Shimano V-brakes, Shimano hubs, ZAC wheels. \$2000 OBO. Robert 1-888-905-7588 mail@moviepostershop.com (Calgary, AB/57)

FOR SALE: USED FLOOR MODEL RECUMBENTS: Comfort Cycles, from \$1675; S&B \$675; RANS Wave \$575.; Just Two Bikes \$2,175. (504) 488-8991 info@laidbacktours.com

Comfortable in southern Illinois TOM'S BIKE ANNEX

Tel. 618-262-4088

All Brands & Models

More Recumbents - More Experience

BikeRoute.com/BikeAnnex bikeman@wworld.com

624 Market St. Mt. Carmel, IL 62863

"We actually ride em" 57

Power On Cycling

Quality Recumbent
Components & Accessories
www.poweroncycling.com

Tel. 813-661-6762

New Orleans

Ride 'em & Blues Tours

3-day bike & music tour.

Lay back on a recumbent trike and let the unique sights, sounds and tastes of a great city wash over you.

www.laidbacktours.com

or 1-800-786-1274

Dealers - Recumbent

The Bicycle Man Largest recumbent & bent tandem selection in NY & PA: Easy Racers, Lightning, Haluzak, Linear, Rotator, RANS, Vision, BikeE, TREK R200, RANS Screamer BikeE E2 & Longbikes tandems! www.bicycleman.com Alfred Station NY 607-587-8835

Advertise your business here

From \$50 or \$240 per year
RCNBobBryant@aol.com

A Bike Shop Like No Other

Vision - Easy Racers - Haluzak - Rans
Lightning - BikeE - Tandems - Linear
Trikes - Kids - Accessories - Frame Repair & Refinishing - Custom Wheels - Obscure Parts
Rental - Mail Order - Trade Ins - Consignments
Long Test Rides in Rural Maryland
Mt Airy Bicycle - www.bike123.com
Tel. 301-831-5151
1-888-RECUMBENT-orders only

Announcements

RCN AD SPACE FOR SALE: Use this ad space to sell recumbent bicycles, services, building plans, announce events or what have you. We charge commercial advertisers \$35 for a classified ad such as this or as low as \$168 per year (6 prepaid insertions). For more information, call Bob Bryant at 360-379-6373.

FUTURE CYCLES UK The RCN European Connection. Tel. 011 44 1342 822847 Friends Yard, Forest Row, East Sussex RH18 5EE England

2 SEAT BIKE

Drives Like a Car!

Easy to Pedal
Multi-Speed
Street Legal
1, 2 & 4 Seater

Free Literature

RHOADES/ CAR

1-615-822-2737 Ext. 16186
www.4wc.com/?16186



LaBent by LaDue



Recumbent plans & kits
For prices & info send SASE to:
1607 S. 84th, Lincoln, NE 68506
or see www.radiks.net/~ladue/

Hampton's Edge Trailside Bikes

Sale · Service · Rentals

Easy Racers · Rans · BikeE · Lightning · Vision
9550 East Atkinson Court in Istachatta, Florida
On the Withlacoochee Trail in north Central Florida
60 miles north of Tampa close to Interstate 75

Tel. 352-799-4979

Credit cards accepted

"A real hoot"
Bob Bryant, RCN



A novel by
Amy Babich

THE AGE OF THE BICYCLE

ISBN#0-9647171-2-3

\$12.95+\$3.00 shipping payable to:

Easy Street Recumbents

4507 Red River, St., Austin, TX 78751

easystreetrecumbents.com,

512-453-0438

bikepartsUSA.com

bike parts, bikes,
accessories &
great prices

Classified Ad Order Info

Subscriber/Non-Commercial Rate: \$10 for two insertions to 35 words. Non-Sub.: \$30. Must be prepaid in advance. Mail copy and payment to: RCN Classifieds, PO Box 2048, Port Townsend, WA 98368 USA

Commercial Rate: Call 253-630-7200 for a commercial ad rate sheet.

Free Classified Ads: (subscribers only) Parts Wanted. Parts For Sale, Bikes for sale-under \$699, Personal ads and Tour Partner Wanted/ ride announcements. Ads taken by mail/email.

Ad Deadline for RCN#58 is May 1, 2000



Get your hands on one - April, 2000

Check out the new Burley Limbo at our State Fair Expo March 16th thru 19th '2000!!

call or stop in ...

Recumbent Headquarters

Yes - we are open seven days a week!
 Yes - we do take recumbent trades!
 Yes - we do want your business!
 Yes - we do ship to any address!
 Yes - we probably have it in stock!



Store Hours: Monday thru Friday 10 to 8
 Saturday 10 to 5, Sunday noon to 4
 Let our 10 years of experience in selling recumbents help you to choose a bike that's right for you!

E-mail: wheelweb@execpc.com

Wheel & Sprocket

www.wheelsprocket.com

Number 1 Rans dealer in the nation.
 A leading Easy Racer Dealer.
 Nationally acclaimed recumbent sales and service leader.
 Huge selection of 'bents in-stock.
 Road tests available.

6 Wisconsin Wheel & Sprocket Locations
Recumbent Headquarters

*Hales Corners Location
 5722 South 108th St.
 414-529-6600

All the top brands:

Bike-E, Burley*, Easy Racer, Haluzak, Lightning, Linear, Longbikes, Rans, Rotator, and Trek. Coming soon: the new Trek R200-T & Bike-E tandems.
 *New 'bent brand and model for 2000!

Most Fun! Best Deals!

Toll Free 800-362-4537

Satisfaction Guaranteed!

Bikes on-hand:

Bike-E CT
 Bike-E AT
 Bike-E NX
 Easy Racer Tour Easy
 Easy Racer Gold Rush
 Haluzak Horizon
 Haluzak Hybrid Race

Lightning Stealth
 Lightning P-38
 Linear Std Folding
 Linear Std Welded
 Linear Mach III
 Long Bikes Vanguard
 Rans Gliss
 Rans Screamer

Rans Wave
 Rans Tailwind
 Rans Rocket
 RansV-Rex
 Rans Vivo
 Rans Stratus
 Trek R-200
 Trek R-200 R

Coming Soon:

Burley's NEW Limbo
 Longbikes Nitro
 Longbikes Eliminator
 Longbikes Slipstream
 Rotator Ti Pursuit
 Rotator Pursuit
 Rotator Tiger

Easy Racers: Our Customers Speak

Another Testimonial, Another Friend

You provide **the most thoughtful, responsive service** of any company with which I have ever done business. I found you on the internet and quickly **confirmed your reputation as the best.** As an owner who researched carefully and tried several I can honestly say I felt I was cheating when I cruised the rolling hills of New Hampshire and Vermont this fall with top end, spandex, and diamond frame riders while I was laid back and comfy. When I coasted down hills and they couldn't keep up cranking full out, even I was surprised when I caught up with the cars. My original reason was safety and comfort. After thorough research (I am the vice president of marketing for a technology company) I selected Easy Racers. **My original criteria for added safety and comfort have been exceeded. Enthusiasm and fun, also exceeded expectations.** I suspect I am among the most cautious, research-before-buy type of buyer. Now you have overwhelmed me with **follow up service beyond expectations.**

Cheers and thanks,
John Higley
New England



Laurie Smith on her Tour Easy. Laurie was not an avid cyclist until she bought a Tour Easy in June of 1999. By September, 1999, she had blown the doors off the long standing Vancouver (Washington) Bike Club Women's Recumbent 10 Mile Time Trial Record. Previous record 30:57.

EASY RACERS INC

Easy Racers, Inc.
PO Box 255
Freedom, CA 95019

Laid Back and Loving it!
Urgent. Call Today!
Tel. 831-722-9797 Fax 831-768-9623

Guaranteed
opportunity to save your
health.

Tooeasy1@aol.com • www.easyracers.com



RCM

PO Box 2048
Port Townsend, WA 98368 USA

Address Service Requested

*****ALL FOR ADC 760
L SWITZER 2961 33
3303 CACTUS CIR
DENTON TX 76201-8471

Presorted
First Class Mail
U.S. Postage
PAID
Tacoma, WA
Permit # 899

