

# RCN

RECUMBENT CYCLIST NEWS

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AND  
HALUZAK  
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R E C U M B E N T C Y C L I S T N E W S

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**RCN Notes**

- ✓ **RCN HAS RELOCATED**—We have moved our offices to the sleepy Victorian Seaport of Port Townsend, Washington. Port Townsend gets a lot less rain than Renton and offers exceptional year round cycling. There are even a few recumbents in town. While we are getting all of our systems set-up, there may be some communications glitches. Our new address is PO Box 2048, Port Townsend, WA 98368. All mail from Renton will be forwarded for six months. The internet is the best way to communicate with us—our new email is info@recumbencyclistnews.com
- ✓ **MYSTERY TRIKE**—The trike (on 2 wheels) pictured in the RCN#52 editorial is a Cycle Creations Chaise 3 tested in RCN#46.

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**Cover Photo** Photo courtesy of Rans and the Mochet Family and all involved in the Velocar article

**Fine Print:** RCN is published by Bob and Marilyn Bryant & family in Port Townsend, Washington. We are a two-person company. We publish from our home office. We have no employees, only dedicated volunteers and friends who work cheap. We are as far from a corporate affair as you can possibly imagine. This magazine is published by enthusiasts, for enthusiasts—because we love recumbent bicycles. We are the voice for the enthusiast recumbent world since 1990.



## The Best Customer Service

Robert J. Bryant, DrRecumbnt@aol.com

I am spoiled. In 1987, I bought an Easy Racer Tour Easy via mail order direct from Easy Racers, Inc. in Freedom, California. At that time, there were no Easy Racers dealers in the state of Washington and recumbent dealers were scarce anywhere back then. I guess you could say that this purchase changed recumbent history. I took my purchase seriously. I went beyond the call of duty. I bought a bike stand, manuals, tools and was ready to be 100% on my own without a dealer's support. Luckily, my purchase experience was fantastic.

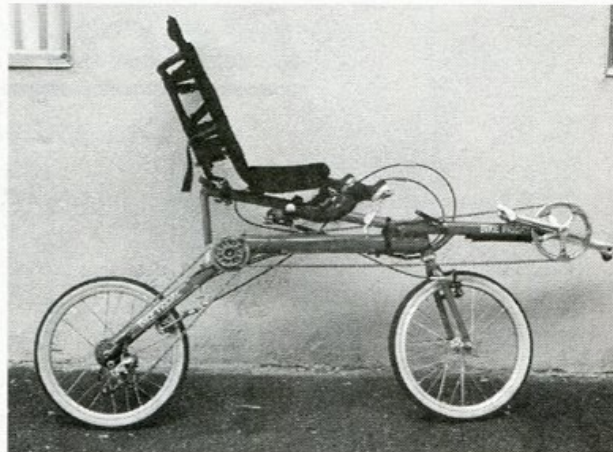
In the tradition of Easy Racers, there is a new kid on the block who also believes that customers are #1 and seeks long term customer relationships. Owners are part of an exclusive club. They will feel appreciated, and special. Most models come with identification plates that say, "Custom made for..." attached to the frame. Dealing with this company was an exceptional experience.

The Bike Friday model is an upright New World Tourist (my only wedgie). The bike order was taken by one of the knowledgeable experts at Greengear in Eugene, Oregon. I outlined my riding style, body size, and a few rants about components and upgrades and that was it. I was given a delivery date. Not a ship date mind you, but a date on which the bike would be delivered to my door. So, they weren't exact, but it arrived via Fedex before I could call. And their intentions were good.

The box was small. As most Bike Friday's are shipped in suitcases. I happened to be home spending some time my son, Dan. We opened the case and were amazed at how carefully the bike was wrapped and placed into the suitcase. We picked up the bike and pulled it out of the box looking for some instructions. I don't usually get my hopes too high as with most recumbents, we are lucky to even get an owner's manual—let alone a well put together package of every bit of info I could hope for—as came with my Bike Friday.

First we found a video. We headed off for the VCR to watch, "a bike movie." The Bike Friday video music is a mix of an original score with a James Bond theme. The video walks the new owner through opening the box, removing the suitcase, the vital wrapped parts, the TOOLKIT (yes, the bike has its own toolkit, providing every tool I will need to set up my Bike Friday). Any place some part of the Bike Friday might get scratched is carefully wrapped in felt or specially cut plastic pieces. The video was 55 minutes long. It went through the different models, how they differ in assembly, and even a carefully choreographed lesson in how quick releases work. Next the video discussed accessories, special features and the really cool Bike Friday suitcase trailer kit and hitch (these cool trailers will work on any recumbent and have an ingenious bolt-on hitch).

Next we got into the packet of printed goodies: First came the warranty card which lets me rate the bike (yeehaw!); I got an invitation to a Bike Friday Rally; Two brochures for European tours; A brochure on the suitcase the bike came in; A cool Bike Friday manual written in MY language about how to take care of my 3x7 hub (now who else does this?); A color brochure on the bikes; A color brochure on the options; A Bike Friday Newsletter; A BicycleR Evolution trailer brochure; Another bag full of component instructions; Some extra parts (6 spokes); Some cool stickers to personalize my Bike Friday; And yet another note about quick releases, with an invitation to call Bike Friday if I had ANY questions whatsoever. Last, but certainly not least is the 28-page owner's manual, complete with Polaroids of MY bike in its case and personalized with my name and bike's serial number. There are some cards so that owners can get a commission on other Bike Friday's and even a Bike Friday pen to fill out the warranty card.



Rick Pope's beta Sat R Day

After watching the video, Dan and I set up the Bike Friday, installed the cool one-bolt 20" Bike Friday (Apex) fenders and 10 minutes later I'm zooming down the road.

On top of all of this stuff, Bike Friday has a service hotline and people on call to get you the parts you need if you are out on tour with a problem, need a part or even a tire or tube. Greengear guarantees resale value in trade anytime you want to upgrade to a new model. This keeps the prices of used Bike Friday's strong. This is my kind of bike company. It wouldn't be such a bad idea to suggest that recumbent manufacturers buy a Bike Friday to see how customers *should* be treated when they are spending big bucks on a bike and to check out their customer-friendly manuals, tools, parts, and accessories.

So, was the experience PERFECT? Well, you know me. Nothing is *perfekt*. I think Bike Friday welders could use a course in *TIG Welding as Art*. The weld beads weren't as beautiful as the best we see, though the bike was perfectly adjusted and has worked very well. My bike has a wayward, sometime-squeak in the folding mechanism. My call to Greengear's 1-800 service was answered politely. I was told that somebody would call me back soon. After a few hours of waiting, I got impatient and called them back. Service made the diagnosis and offered to send parts that (hopefully) would solve the problem, though I may have to send my bike back to Eugene if the current solution doesn't work. They also told me this was a rare problem. I assume that it was because I wasn't broken down in some far off land that I didn't get the really FAST service, though it was better than most.

As for Greengear's new Sat R Day Recumbent, we are expecting a current version of the Sat R Day recumbent any day now. We understand that it has gone through several changes in the past year. We've heard from one reader who loves his (better than his V-Rex and Altitude), though we've heard of some glitches as well. We can only hope that the Sat R day will be as good as the Greengear Bike Friday upright models.

Viva Recumbency  
Bob Bryant ☐

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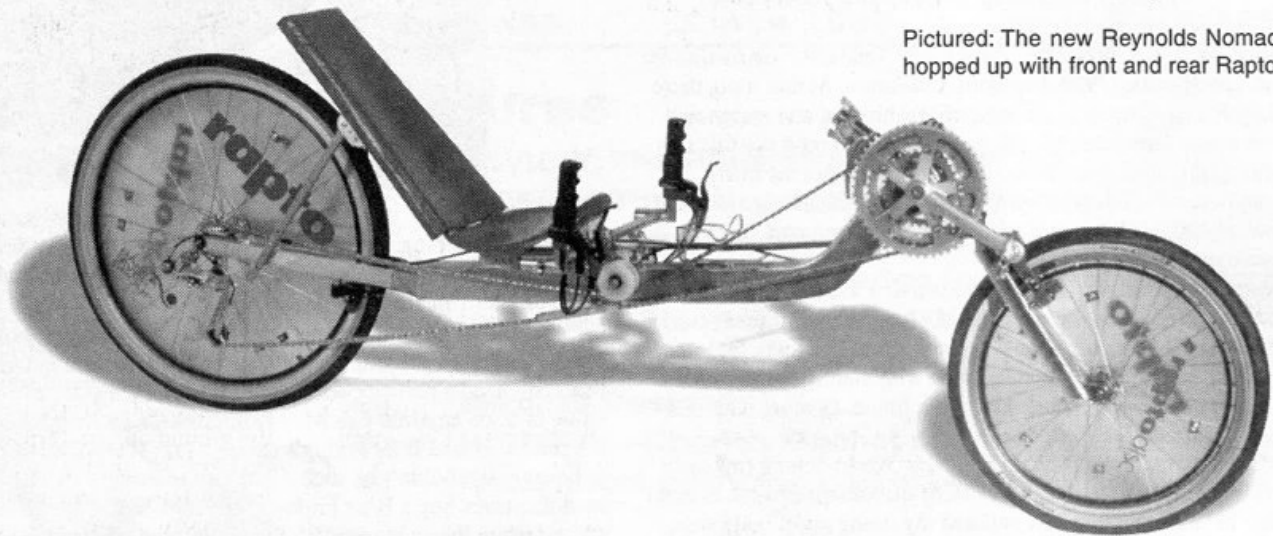
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# Recumbent News

September-October 1999 RCN#53

## News Releases with Speed and Performance In Mind



Pictured: The new Reynolds Nomad CLWB hopped up with front and rear Raptodiscs

### Reynolds Nomad CLWB

For the recumbent enthusiast under 5'8" tall, the Nomad Compact is not only low-laid back, ergo, aero and comfy, but has great streamline potential.

The mono-tube frame is hand-formed from CroMo sheet, creating a recumbent that is strong and light. The no-flex Nomad will maximize your power, outcoast and routinely out-perform any sub 20-pound road bike.

For the committed nonconformist cyclist yearning for the ultimate ride, Reynolds new Nomad will give pacerline performance on an unfaired bike.

### Want to go faster? Raptodisc.

The Baker River Group of Salem, NH has recently added disc wheel covers to its performance products division. This rigid disc wheel cover is available in a semi-clear fiberglass construction which is highly durable and has excellent resistance to heat, cold, moisture and impact. Installation is fast and simple, utilizing fixtures borrowed from the automotive industry. When installed properly, these rigid wheel discs are fast and quiet, adding between 1 to 4 mph to your average speed.

Rigid disc wheel covers have many advantages over other aerodynamic options. Disc wheel covers allow you to keep your traditional spoked wheels affording you the comfort of *flexibility* when riding over varied terrain. This reduces the tendency to bounce in the recumbent seat as compared to a road bike where you can simply stand off the saddle.

Take a quick look at other wheel options: Composite wheels and radially-laced wheels are too rigid for general road conditions—especially on a recumbent. Solid disc wheels, also rigid (as opposed to disc wheel covers) can add as much as 5 pounds per wheel to your ride. Raptodiscs range in weight from 9.6 oz. to 23.7 oz per wheel. Lastly, fabric covers are simply too fragile to compare in the area of both performance and reliability.

Raptodisc prices range from \$64.95 to \$74.95 per wheel, and provide the aerodynamic advantages associated with the most slippery wheels. A simple and affordable upgrade to your Reynolds Nomad or any recumbent.

For more information on these products contact: Reynolds Weld Labs (603) 432-7327 or the Baker River Group (603)645-4551. □

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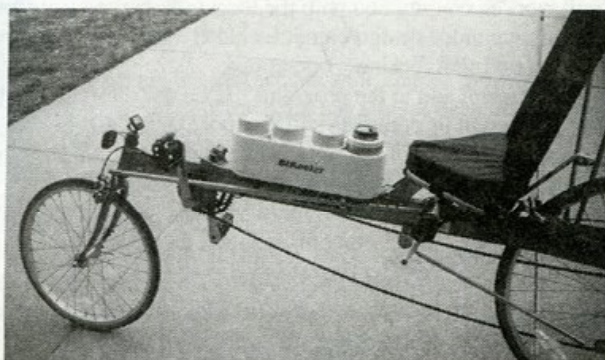
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## Custom TurboCat Lights for Recumbent Cycles

Recumbent cyclists have special lighting needs, including longer-than-standard battery cables and handlebar switch wires. We have begun supplying custom systems for recumbents with detachable, extra long high beam switches and battery wires. This special wiring allows the lights and batteries to be removed while the wiring stays securely on the bike. These are true quick-release systems, quick and easy on and off. Each recumbent customer specifies exact lengths for custom wiring, and the systems are made to order and shipped within two days.

All TurboCat bar-mounted lights and batteries are available with custom wiring, at an additional cost of \$20-\$30 retail, depending on the system. Details about TurboCat lights can be found at the company's website, [www.turbocatusa.com](http://www.turbocatusa.com), or by calling 800-869-7618. Be sure to tell them you read about it in Recumbent Cyclist News ☐



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### Randy Rack For Your BikeE

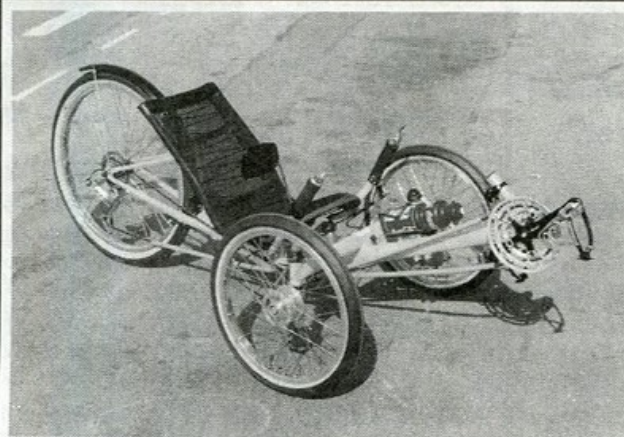
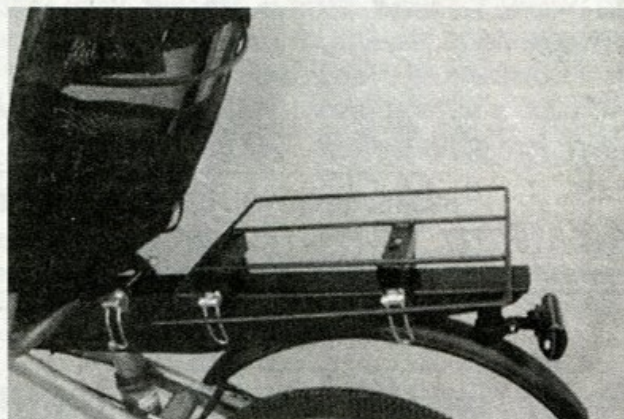
Two BikeE enthusiasts, Randy & Linda, realized the need for a sturdy rack to carry their stuff on biking adventures. So, Randy built...the Randy Rack. This 1/4" steel rack is rugged and light. The rack mounts to a BikeE frame using BikeE Accessory Mounts. A dual taillight/flag holder is in the works. For more information, contact Randy & Linda at Tel. 954-974-3325; email [RLTUCKER@aol.com](mailto:RLTUCKER@aol.com); web: <http://members.aol.com/backracke/page/index.htm> ☐



## TerraCycle, Inc. Announces the New Terra-Za SWB

The new Terra-Za is a high-style, hand-crafted recumbent built with CNC technology. This bike blends the best of old time bicycle craftsmanship, like silver brazed reinforcing lugs and hand finishing attention to detail, with today's high-tech precision CNC technology. A new SWB recumbent designed from the ground up, the Terra-Za's precise, secure handling and well planned ergonomics take cycling pleasure and performance to some new levels. All models are custom built for each customer, to their specifications, including their choice of colors, frame detailing and all components. Each customer even gets the initials of their choice machined into the dropouts. TerraCycle, Inc., founded in 1996 builds recumbent bicycles and specialty parts in Portland Oregon. For more information: Tel. 503-231-9798. Email: [patf@terracecycle.com](mailto:patf@terracecycle.com), web: [www.terracecycle.com](http://www.terracecycle.com). ☐

**Editor's Note:** See the Terra-Za road test in RCN#54.



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# Recumbent Rumors & Rants

**PHAROBIKE—LOW FAT NEWS:** Dan Duchain reports that **Zach Kaplan Cycles** and **People Movers** are now offering Low Fat "kits" (frame, seat, boom) and component "kit" which makes it into a complete bike. Suggested retail is \$1775. This is the really cool low bike that we rode at People Movers Rally last September.

**AEROLOPE LIVES!?** Somebody on the hpv list pointed us to the Glas-Tec website. Apparently Aerolopes are available at \$4995 and there is a three wheeler at the web site as well [www.gt-aerolope.com](http://www.gt-aerolope.com). We are aware that the Hostel Shopped has one in stock.

**BIG BOY RUMORS** In a recent VeloBusiness magazine, industry analyst Jay Townley was quoted in saying that Cannondale is moving to introduce three recumbents this summer and that Schwinn would have recumbents in stores before Interbike (Sept. '99). We (RCN) have heard the rumors that Cannondale and Schwinn will have recumbents for 2000. Cannondale bikes sound especially good with an aluminum 24-speed Compact, a dual suspension SWB and a carbon/aluminum LWB ASS. We have not been contacted by either company as of yet.

**Cannondale and Schwinn responded** to VeloBusiness: Schwinn's national sales director, Carolyn Meyer, denies that the company has any recumbents in the works. "Schwinn has no plans to market recumbents for the 2000 model year," she said flatly. Cannondale's marketing director, Paul Tus, says the company's hands are full with current projects. "We're watching the market, certainly, he acknowledges, "but we're not introducing any recumbents any time soon. I'm not sure if we ever will." In related discussions Adventure Cycling's John Schubert says, "while I hope a recumbent becomes an every day choice for consumers, I think high single digit market share is most likely the limit." "Recumbents are just too weird to fit in."

**Trek's Brad Wagner** told VeloBusiness, "I think even 3 to 5 percent of the overall market in five years is very ambitious." So the question was asked, why is Trek in recumbents in the first place. Fred Clements of the National Bicycle Dealer Association told VeloBusiness, "Recumbents aren't anything like mountain bikes," and he sees the market topping out at a 5 % market share. He also said, "maybe if someone invents a downhill recumbent and it's on the X-Games, then the market

will really take off." **REBIKE** has pulled the plug on dealers and is concentrating on Sears stores and internet sales. The sales numbers we've heard (RCN) for ReBike range from 2000 (VeloBusiness) to 30,000 (Townley). Jay Townley continued, "we show ReBike alone doing 30,000 units globally" Townley expects the market to double every year with 800,000 units by 2003. **ReBike** has basically disappeared from the enthusiast recumbent scene over the past year and is selling ReBikes for \$399 to \$499 through Sears chain stores and the Internet. The **Hostel Shoppe** of Stevens Point, WI has a new email accessory catalog at their website ([www.hostelshoppe.com](http://www.hostelshoppe.com)) that allows "shopping cart" style 24-hours per day/7-days per week shopping. □

## Youth Apprenticeship Program: First of its Kind in USA

The Center for Appropriate Transport has received a \$28,000 grant from the Oregon Economic Development Department for training high school youth for the bicycle and metal working industries. The Bicycle Apprenticeship Program will work in conjunction with the local industry and will provide training in computer aided design/computer aided machining, metalworking and in associated shop/business operations.

This program will add to the programs the Center offers all youth in the community through its contracts with School District 4-J, and the Bethel and Springfield School Districts. Three complete CAD stations have been set up and air filtration equipment and safety systems are in the process of being installed. New machinery will also be acquired.

For further information please call Jan VanderTuin at 1-541-344-1197.

## 1999 EVENTS CALENDAR

SEPTEMBER 4, 1999

THE MAIN EVENT ROUND 5—PEOPLE MOVERS  
ANNUAL RECUMBENT RIDE/RALLY  
Orange, CA. Contact People Movers at 714-633-3663.

SEPTEMBER 3-6, 1999

MIDWEST RECUMBENT RALLY  
Midland, MI Contact: [irpavlo@aol.com](mailto:irpavlo@aol.com) or  
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MICHIGAN RECUMBENT RALLY—WEST  
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Curious newcomers and recumbent enthusiasts alike are invited to join us for a non-competitive weekend of recumbent fun! On Saturday, recumbents will gather for demos, short rides, and swapping stories. The following day, the recumbent contingent will join in the Vineyard Classic Bicycle Tour which starts in nearby Paw Paw.

Contact: Paul Pancella, [Paul.Pancella@WMich.edu](mailto:Paul.Pancella@WMich.edu)  
Tel. (616) 353-0125 (Kalamazoo) or Bob Toft at  
The Speed Merchants Bike Shop tel. (616) 866-2226  
<http://www.speedmerchants.com>

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# The Rans Stratus Revisited

by Robert J. Bryant

DrRecumbnt@aol.com



**T**he Rans Stratus is Randy Schlitter's original recumbent whose design dates back to the mid 1970's. The Stratus has always been considered an excellent bike—though has been overshadowed by the more popular and arguably more refined Easy Racers.

For 1999, the Stratus has been tweaked, dialed and refined. Many consider this the best Stratus ever. And I agree. The dialed T-bar addition is probably the most important player in this new update. Additional features include the same fork rake and front-end geometry as the newer Rans Gliss design and the frame has been reworked to be a bit stiffer. The only arguable feature of the new Stratus is the frame sizes. Previously, there were three, now there are two (35 & 40).

## ■ FRAME

Rans frames are among the best we have the chance to review. The welds are nearly artistic, the paint has always been vibrant, colorful and better than the competition. Our '99 Stratus was no exception. It has a finish that looks like it should be on a new Lexus or Infinity. The dark green powdercoat looks like a wet-spray and is another color that we jokingly label, "another shade of black."

For 1999, the Stratus received a frame geometry update. The fork and steering geometry is taken directly from the Rans Gliss LWB. The BB was moved forward and a bit higher ever so slightly. This allowed for the deletion of one frame size. The '99 sizes are a 35 and 40. At 6' tall/44.5" x-seam, I can ride either, though neither fits as good as last years 37 frame size (ideal for 6' riders).

The Stratus officially received T-handlebars this year as well. With the new geometry, the bars fell into place and adjusted to my liking superbly dialed in a matter of minutes. The T-bars have a vertical as well as an aft adjustment. The controls are noticeably closer to my body than with the Easy Racers bikes. I also prefer the semi-flat MTB-style bars. They allow use of the Rans supplied Mountain Mirrycle rearview mirror that I can see through (more difficult on Easy Racers due to the swept back handlebars).

Our Stratus was one of the last built in Hays, Kansas. Stratus production has now moved to Taiwan. The Taiwan-built Rans bikes that we have seen look great (Rocket, Tailwind and Wave), so where the bike is built doesn't really matter that much (finish quality-wise, anyway).

## ■ DRIVETRAIN

It doesn't get much better than this. The drivetrain works on par with the best recumbents. The 105 triple crank and front derailleur shift smoothly and look great. The ESP 9.0 9-speed shifts clean, crisp and superior to any recumbent we've tested thus far. The ESP grip-shift throws are shorter than the competition. Gears are usable for regular folks and the full range worked flawlessly, though I would have liked a lower granny low. The new frame geometry seems to have optimized the chain line. There is a little bit of chain noise, and you barely know there is a chain idler—especially compared to other Rans models.

## ■ WHEELS & BRAKES

I'll admit to being a V-brake whiner and complainer. What's my problem? They remind me of cantilevers, are difficult to adjust and I can't adjust them to meet my own personal standards. Many of the V-brakes seem to need adjustment, spring tension set or they squeal. Well, the tides may have finally turned. The Stratus is the first bike we've tested with SRAM ESP V-Brakes—and I love them. They don't squeal (several of our test bikes' brakes scream like a banshee), have this really neat doo-hickey red tab that makes cable noodle removal easy and they stop great. The Stratus also has ESP 9.0 levers—which feel better on my hands than any other brake lever we've had here recently.

## ■ COMFORT—A NEW RANS SEAT

With Rans' ramping up production in Taiwan, and making their seat available to other manufacturers—they had to move production out of Hays, Kansas. The '99 seats are taller than the last years' mid-back, and are supposed to be shorter than the tall-back, though they look about the same—and they're too tall. The seat back is still the best in the business. The tightly wrapped mesh is breathable and ergonomically shaped to fit the human back. Riders can push into the lower section of the seat for excellent power generation—far superior to most mesh seat backs—and the mesh doesn't flex much (much less so than some of the competition).

The seat base is another story. The seat shell is now made of molded ABS plastic. The underside is ribbed for strength and there is a CroMo frame under the plastic. The seat base does feel different when compared to the previous model. It is definitely smoother and they have done away with the sharp edges of the previous fiberglass version. The seat foam is cushier than ever before. It is like sitting on a big thick pillow. The foam is molded to the shape of the seat base. It is rounded and contoured. It has a very soft gel-like, almost squishy feel to it.

New riders seem to love the Rans seat base due to the immediate comfort that it offers. However, the new base and foam do not offer as much of an ergonomic—or "cupping" feel as the previous seat did. We have heard a fair amount of criticism about the new seat base/foam/cover—especially from seasoned Rans riders. The ABS base does flex more, though the culprit seems to be the new thicker base foam and more slippery cover. When it's too thin, people rant. Now it's too thick, people rant. It has to drive Rans crazy. This is still a great seat. I expect that Rans may tweak the seat foam/cover again for 2000.

The Stratus as a model predates the Rans seat and this seat has never worked as well on low-BB (bottom bracket) Rans designs (it was designed for the V-Rex). LWB low BB ASS bikes beg for relatively upright riding positions, and the Stratus is no exception. An under-seat base frame cross support infringes on the upward angled seat track and does not allow as much recline as the SWB Rans models (that the seat was originally designed for).

## ■ RIDER ERGONOMICS

I have always been a fan of the LWB ASS design. It offers comfort, user-friendliness and stability beyond reproach, however, the upright seat/more erect riding position puts more weight on your hiney which makes for the possibility of the dreaded "recumbent butt" (sore butt after a few hours for some riders) which seems to be directly related to how upright a riding position is. This seat helps deter Recumbent Butt.

The seat back is relatively upright on the Stratus. More upright than a Tailwind, Wave, or Gliss, though less so than an Easy Racer Cobra. The only Stratus pressure point was an occasional thigh chafe (backside/ from the low BB/pedal riding position) which is less apparent on the new ABS seat base. Positioning the seat more upright makes this go away—though each rider will need to find his/her sweet spot.

The Stratus riding position is classic LWB ASS. Rans LWB design has surpassed this classic stage with the newer models. The Tailwind, Wave and Gliss ergonomics rock the riding position up and back with a slightly raised BB/pedals. This can offer better comfort, however, the Stratus steering geometry and ride qualities are better all around.

With the longer T-bars and more comfort-based character, the Stratus ergonomics are just not as aggressive as that of the Tour Easy/Gold Rush Replica—though I am more comfortable on the Stratus. The Rans T-bars, frame and seat seem to offer a more comfort-based (flex) design over the comparably stiffer Easy Racers. Easy Racers' still wins in performance in my opinion. The low BB/pedal classic LWB ASS riding position is alive and well with the Rans Stratus.





*The 1999 Rans Stratus—a wonderful classic long-wheelbase (LWB) above-seat steering (ASS) recumbent. This model is tried and true—the flagship of the Rans line. The Stratus offers superior comfort, performance and style. Most owners will be set for life. We love this bike.—photo courtesy of the Rans company.*

## ■ THE RIDE

LWB ASS recumbents ride like sport touring/luxury cars. They are comfortable, predictable, user-friendly and stable at speed. They fit most sized riders and everyone can have their feet on the ground at a stop. With sold out production runs and waiting lists from the likes of Rans and Easy Racers. It is amazing why somebody else has come out with a really affordable LWB ASS (say a \$995 Tailwind with a 26" rear wheel). This style of recumbent is far easier to design compared to a SWB—and most riders will feel more stable and have better performance.

The Stratus ride is as good as it looks. I quickly became comfortable with this new bike as it became the favorite in my RCN test fleet. The new Stratus is much the same as the previous, though feels more dialed and further refined—most notably in the steering geometry. Ergonomically, it felt better than any LWB ASS low-BB/pedal recumbent. The bike accelerates well and is totally predicatable at nearly any speed. LWB ASS newbies will find low speed handling bordering on ridiculous as they get accustomed to the length. One added bonus is that there is no heel interference or a high BB to deal with.

The burning question has always been, "does it handle as good as a Tour Easy." The answer is.....a prequalified *YES!* If you are a casual, recreational rider, tourist or comfort-based recumbent rider, the Stratus will be a better choice than either a Tour Easy or Gold Rush Replica. If you judge a bike by its aggressive handling as you push hard corners—stick with the Easy Racer or wait for the new Rans V2. This is not an aggressive bike, but I've never been more comfortable on any LWB ASS low-BB recumbent.

## ■ CLIMBING

The last time I tested a Stratus I raved about its climbing ability—though this bike has never been known as a strong climber. My reasoning involved climbing *REALLY* steep hills and being so close to the ground (if you do lose balance, you won't have very far to fall) and after low speed falls on a few SWB bikes, the Stratus breezed up steep hills—no problem.

Move ahead two years. I have just tested the Gold Rush/Stratus/

Tailwind/Wave and Gliss in a six month period. The Rans LWB all have similar handling these days. They offer a raked-back fork and head-tube angle, long T-bars and a more rearward center of gravity than some other LWB models. What I love about the flat land cruising on all of these Rans LWB bikes, is exactly what I dislike about their climbing abilities. The Stratus is *VERY* stable at all speeds, except very low-speed climbing. The bikes like to go straight, or steer in wide sweeping turns. Low speed stability is fine, though low-speed climbing switchback turns are a royal pain—thus climbing maneuverability stinks. The only way to conquer hills on a narrow bike path is to point the bike straight and **POWER UP** the hill.

This lack of low-speed maneuverability is what gives LWB recumbents a bad name in climbing. You can compensate for the designs' shortcomings by becoming a strong climber—though most "average" riders will feel like they climb better on a V-Rex or Rocket or other comparable SWB (though average speeds may be faster on the LWB).

## ■ OPTIONS & ACCESSORIES

An MTB style rear rack fits the Stratus, though will require a pair of c-clamps to adapt. The Rans bag snaps onto the seat back and works flawlessly. The Rans bag is not as high quality as the BikeE bag, but is smaller and quicker to come on and off. It has a small outside pocket to squeeze your keys and wallet into. A sturdy kickstand is available and the bike comes with a Mountain Mirrycle rearview mirror. We found that accessories adapted wonderfully to the flat T-bars.

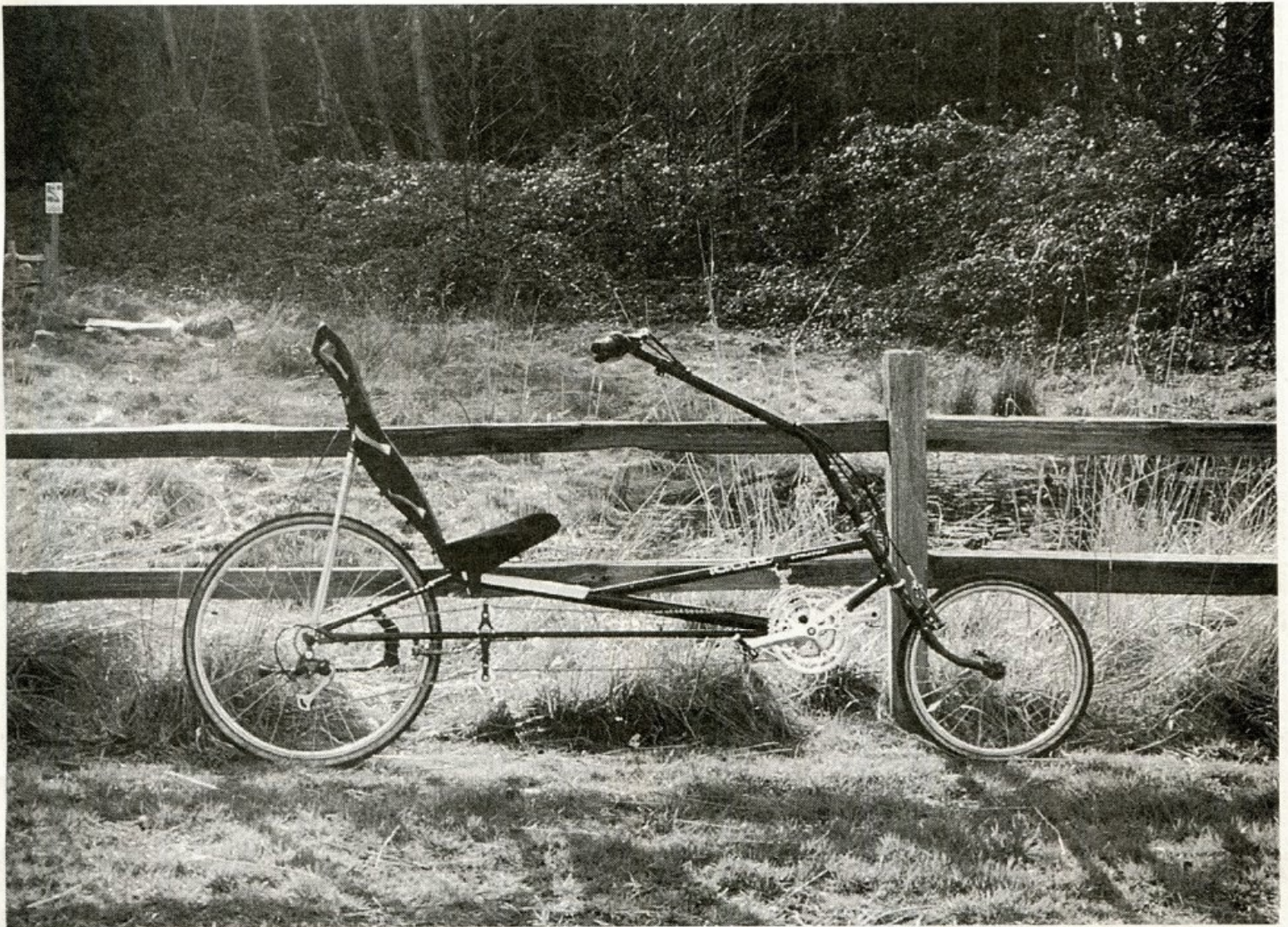
A Zipper fairing can be adapted. Rans is working on upper mounts as of this writing—though we have yet to see them on any Rans model. The fairing will not be a factory option. You will be required to buy the fairing mounts from Rans and the fairing from Zzip (or let your dealer worry about and order the whole package from the dealer).

It will be a welcome addition to have a fairing that fits the Rans T-bars for the Tailwind, Stratus and Gliss.

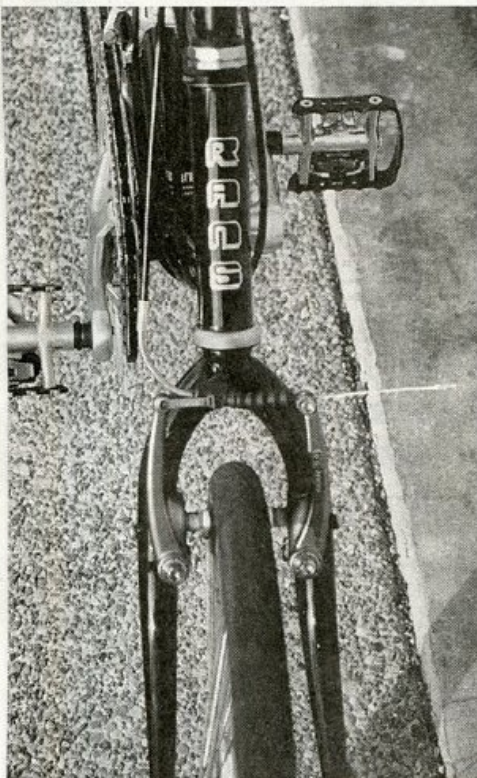
## ■ RANTS & WOES

We have a *RANT*. Rans worked hard getting factory optional fenders that





Okay, we swear that this is the last, well maybe the second to the last time we take a photo at the farm here in Kent, WA. The bike is a wonderfully perfect example of the 1999 Rans Stratus. This 9/27-speed bike shifted superbly. Note the seat position. The seat is all of the way back for a 6' tall rider/44.5" x-seam on a 35" frame. I would have preferred the pre '99 37" frame size. Rans says I will fit on a 40" frame as well and that is what I would chose over this short 35" model.



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universally fit all of their models. Unfortunately for Stratus riders, one-size does not fit all. If you like the factory 1-3/8" Primo Comet tire set and only occasionally ride in the rain, the stock set may do you just fine. If you want to go with big fat tires (like a Avocet Cross rear and Fasgrip or Comp Pool front), you'd better find your own fender seat. Tire size is not the only issue. The front fender is really cut for a more upright head tube angle (SWB). The problem is that with the laid-back LWB head tube angle, the fender hangs low and barely covers the top half of the front wheel. When I rode in a downpour, the rain was directed straight up into the air, and came back and splashed the T-bar with water (and maybe the rider).

On our test bike, we replaced the stock front fender with an Easy Racers fender. An Angletech Esge set is probably your best bet, though tell whomever that you want coverage over 3/4 of the top of the front wheel. NOTE: Rans is in the process of solving the front fender situation for the Stratus/Gliss/Tailwind—at least for Primo Comet equipped bikes.

#### ■ VERDICT

Our early '99 Stratus test bike had a USA-built frame. Sometime later this year, frames will be built overseas. We do not expect this to be an issue given the quality of the other Rans imported bikes.

If you read my recent writings (RCN#48 editorial) with my new personal comfort based, cycling for fun, recumbent mission—I love this bike. I've always thought there were too many SWB models and not enough LWB. Besides this, the SWB are overhyped. For a regular rider like me, the Stratus is everything I've ever wanted in a recumbent. It has the traditional and time-proven triangulated Stratus frame—the original recumbent that chief Rans Guru Randy Schlitter designed back in the mid-70's—with an updated geometry and state-of-the-art recumbent componentry. On top of all this, I was surprisingly fast on the Stratus. Like I always say, if you are comfortable—you will be fast.

I can't say for sure which size you should buy. If you are 6' tall and have an x-seam around 45 inches, you can ride either the 35 or 40. Go with your instinct. Get fit by your dealer and then decide whether you want a compact (and lighter) bike (35), or to be stretched out on a road limo (40). If I were going to tour, I may want to stretch out on the 40. Luckily only people my height will have to make this decision. Rans says the 35" model accepts riders with a 39-49.5" x-seam and 41.5-51" x-seam for the 40" Stratus. I miss the 37 size from Stratus' past.

The Stratus truly is the classic model of the Rans line. It is a smooth and graceful bike with lots of appeal. I do think the modern Rans LWB geometry (Tailwind/Wave/Gliss) is more advanced and arguably the shape of LWB bikes to come, though there will always be a market for the classic Stratus design. A low bottom bracket pedal position is a natural bike riding position that new riders adapt to easily and seasoned riders love.

#### ■ THE COMPANY

Rans has become the industry's preferred enthusiast recumbent builder. What makes the Rans bikes exceptional is the company's roots in aviation—which has finish quality superior to most of their competitors. The bikes are designed for and by enthusiasts who really ride. Another difference is that Rans is very proactive and the bikes are always evolving (which can be a curse as well). And then there is the Rans seat—consid-

#### New For 1999

- ◆ New Seat foam, cover and base (ribbed ABS plastic)
- ◆ Rans Gliss head tube angle and steering geometry
- ◆ Shimano 105 road triple crank
- ◆ ESP V-Brakes & levers
- ◆ Wider gearing

#### Pros

- ▲ Best Stratus ever
- ▲ Modern up-to-date 9/27 speed ESP drivetrain
- ▲ Ride comfort similar to Gold Rush Replica (& better seat)
- ▲ ESP 9.0 Brakes/levers are the best V-brakes we've tried
- ▲ Very smooth, stable and comfortable LWB ASS ride

#### Cons

- ▼ KMC Chain is fine, but not our first choice on a \$1600 bike
- ▼ Flex: the handlebars, seat base, seat foam all do it!
- ▼ Limited seat recline due to frame design & control reach
- ▼ The Stratus likes to go in a straight line (handling is excellent, though not quite as good as an Easy Racer.
- ▼ Paint-wear woes on some US built '99's.

#### COMPONENT SPECS

MODEL.....	Rans Stratus
TYPE.....	LWB above seat steer (ASS T-bar)
WHEELBASE.....	66" & 70.25"
SEAT HEIGHT.....	21.5"
BOTTOM BRACKET HEIGHT.....	13.25"
WEIGHT DISTRIBUTION (Mfr.).....	approx. 65-70%rear/30-35% front%
WEIGHT.....	32 pounds
FRAME.....	TIG welded triangulated 4130 CroMo
FORK.....	CroMo Unicrown
STEM/BARS.....	Rans T-bar ASS with height, fore/aft adjustments
SEAT.....	Alum.frame, mesh back, foam covered ABS plastic base

#### COMPONENTS

CRANKSET.....	Shimano 105 Triple 30/42/52
BOTTOM BRACKET.....	Shimano 105 Sealed
HEADSET.....	Ritchey Logic
DERAILLEUR-REAR.....	SRAM ESP 9.0
DERAILLEUR-FRONT.....	Shimano 105
SHIFTERS.....	SRAM ESP 9.0 9/27 speed
CHAIN.....	KMC Z9000
CASSETTE.....	Shimano 11-32 9-speed
WHEEL-REAR.....	559 26" x 1-3/8, Alex Rims, SS spokes, Primo Comet Tire
WHEEL-FRONT.....	406 20" X 1-3/8", Alex Rims, SS spokes, Primo Comet
HUBS.....	Shimano Deore LX 36 hole
BRAKES/LEVERS.....	SRAM ESP 9.0 V-Brakes
PEDALS.....	Wellgo
WARRANTY.....	Lifetime: frame; seat 1 year
GEAR INCH RANGE.....	23-118 (could stand to be a bit wider on both ends)
COLORS.....	Lazer Black Jade (shade of very dark)
PRICE.....	\$1595

NOTES.....Check out the new Rans web site: [www.rans.com](http://www.rans.com)



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ered the best by RCN and many others—most recently the Trek Corporation. Angletech and new manufacturers Barcroft and Terracycle use the Rans seat and several companies offer a Rans seat as an option.

#### ■ ACCESS

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#### ■ RATING

✓Comfort — B +

✓Design/Style — A -

✓Drivetrain — A -

✓Chain Management (Noise/Vibration) — B

✓Brakes/Braking — A

✓Finish Quality (welds/paint/preassembly) — A -

✓Performance Potential — A -

✓Rider Ergonomics — Upright seat, low bottom bracket, limited recline adjustment due to upward sloping frame/seat track. Seat position is fairly upright due to frame design, thus limiting seat recline.

✓Best Use — A wonderful all around performance/sports tourer/commuter recumbent with a classic heritage. Will work great for most riders in almost any situation.

✓Best Rider Type/Size — Fits most riders. Gap seems to be upper 5'-6" in former 37" frame range. 6' tester did not like fit of small frame. Large is too large. Just because they say it fits, doesn't mean it fits right.

✓Comparison to Market Competition — Directly comparable to the Easy Racer Tour Easy. Add a Zzipper and the Stratus should perform similar to the Tour Easy as well. Easy Racers specializes in LWB and that still shows. Easy Racers are also still built by hand in the USA.

For more recreational riders, or those who do not tour and are in the mid-upper 5' height range, a fixed up Tailwind may actually be a better performer, an easier bike to manage and definitely less expensive option. The Tailwinds are very popular with internet recumbent newsgroup members.

✓Weak Points/Upgrades — This is a wonderful bike. We prefer SRAM chain (especially on an ESP drivetrain). The new seat is a bit too cushy and being that the mesh back seat is an afterthought to the Stratus design, recline adjustment is limited. We would like to see the elusive T-bar Zzipper fairing. The lack of availability, difficulty of obtaining fairing/mounts is definitely a detriment to Stratus sales.

This Rans model is also a bit on the rare side (like most high-end Rans models). Stratus' are difficult to find, and have great resale value. If you are looking for one, we suggest that you contact RCN advertising Rans dealers for availability. LATE NOTE: Rans reports that availability for the Status is particularly good this fall.

✓RCN Performance Potential — B +

✓RCN Value Rating — B+

✓RCN "Bob" Rating — A -

## The Wonderfulness of 1999 9/27 Speed Drivetrains

Have they made your bike even more finicky to adjust, or does this stuff offer some kind of benefit?

The bike industry just couldn't resist. They are making bike parts like computer software. Planned obsolescence: outdate parts groups every year, drive customers crazy and make them think that they should re-spec or buy a new bike to get 27 speeds.

For 1999, Rans has integrated SRAM GripShift ESP across their line. Our Stratus and Gliss both arrived outfitted with 9/27-speeds. They shift great, but can be temperamental.

Frank Berto in Rivendell Reader #13 and an editorial in a recent MTB Action came to the conclusion that there is no benefit to 9-speed drivetrains for non-racers. The retrogrouch in me is concerned about 9/27 speed bikes, though I'm even more concerned about 8/24 speed bikes as this drivetrain is certain to be outdated in 2000.

The potential downside to 9-speed rear ends is tighter tolerances, faster wearing parts, more finicky indexing, more indexing adjustments and built-in planned obsolescence. After trying most of the drivetrains, the Shimano undoubtedly works the best and seems the toughest. Begrudgingly, we would opt for the 9/27 speed because it is current and there are parts available. I still prefer bar-end bar cons to Rapid Fire or twist grips and still long for the days of 6/18 and 7/21-speed drivetrains and parts that interchanged without the use of a consultant.

#### ■ FROM THE INTERNET HPV LIST

*While wrenching on several large charity rides this summer, I have seen quite a few 9-speed equipped bikes. The 9-speeds are a lot more sensitive to adjustment. I found that even a significant temperature change can be enough to make the shifting go a little out of alignment. The cogs are thinner and will wear faster. A bent derailleur is a real pain to get working due to the tight tolerance. They work smooth when set up right, though in the real world, things don't stay perfect for very long. Remember when chain was cheap? It can cost \$100 to replace the chain on the 'bent now—Chris Siano.*

While we're at it, let's take a shot at V-Brakes. The majority of modern V-Brakes have some squeal. Some manufacturers have quietly expressed their grief at being unable to set them up properly. Others have said they, "didn't have the time." Is bicycle technology really your friend? Ask those dealers and customers who make multiple trips back to the bike dealer for adjustments.

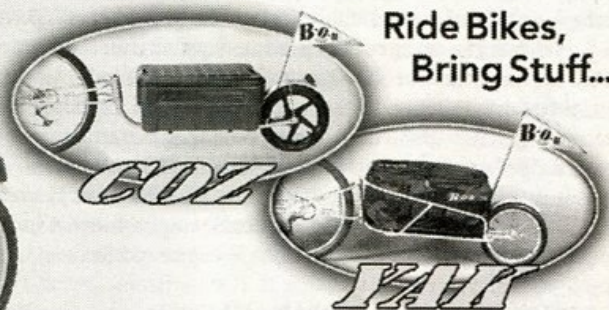
There are still some old retrogrouches (yep, manufacturers and writers...) telling people to stick with 8 speeds while they can. Harry at Wheel & Sprocket even offers a friction shifting Trek 200 (with bar-cons). However, there is a good argument to outfit your bike with what is current, and that is 9/27-speed...and the rumor of 10 speed rear ends coming down soon to a recumbent bicycle dealer near you. □

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# The Haluzak Horizon Revisited

by Robert J. Bryant

Casual under-seat steering recumbent tourists are an extremely friendly—though fairly quiet group. They don't seem to be arguing about whose bike is faster, lighter, better—they seem to enjoy riding more. Could this be the under-seat steering recumbent riders' well kept secret? The Haluzak SWB USS is a comfortable, understated and refined recumbent for those who like a rather stable and predictable feel to their SWB. I know many of you may not have known such a bike existed. Read on.

## ■ FRAME & STUFF

The design is very unique. The frame is built of 1.75" .049 diameter CroMo main tube (2" is optional for XL riders) connected to CroMo tandem fork blades as rear stays in a monostay layout (no triangulation). New for '99 (as of March) are Breezer dropouts replacing the previous Nova dropouts. The frame is simple, elegant and nearly artistic in design. The fork is an off-the-shelf unicrown design similar to what other manufacturers are using. Haluzak does build a custom lighter weight fork (springier) for the Hybrid Race. It will work for riders under 220 pounds and is a \$100 upgrade on the Horizon. Keep in mind that Haluzak offers two standard frame sizes, one for direct sold bikes and one for dealers. Factory ordered bikes are custom sized to the owner (available from dealers as well). Custom sizes are available to fit riders up to 6'7" and 360 pounds.

The seat frame is a two-piece aluminum (built as one piece and then cut in half) that slides together and connects, held to the mainframe with the seat material section—very similar to the former Counterpoint Presto. This system works very well and it is an easy way to tell if your seat is 100% perfectly true (which every Haluzak seat we've tried is (and all are). The seat frame has a natural finish unless you opt for the optional black powdercoat (looks nicer—\$50 option).

The CroMo unicrown front fork is the same mediocre fork that is used by all of Haluzak's competition (the J & B fork). Haluzak offers an upgrade path to the custom Haluzak-built light CroMo fork from the Hybrid Race (\$75 option).

Haluzak uses an indirect steering linkage that connects from a false head tube out to the fork. The linkage and design is executed well and all of the parts are exceptionally well made. The linkage USS pivots on Teflon-impregnated bushings on a chrome spindle. They have yet to see one wear out.

The direct USS is for advanced high performance riders. It is said to work best with the 700c/451 20" wheel size on a Hybrid Race.

An above seat steering unit is a \$75 option (a great deal), and there is a direct USS option as well. Both are slated more for the performance oriented rider, however, keep in mind that it is Haluzak's linkage USS that gives it the slow and stable feel unlike any other SWB.

Haluzak has an excellent lifetime warranty on the frame that is even transferable. For \$50 a potential owner can pay Haluzak or a dealer for an inspection of the bike, which when the bike passes, the warranty extends to the new owner. No other manufacturer offers this service. We have not heard of any Haluzak frame failures.

In a very unique situation, we found the Haluzak Horizon to actually weigh LESS than the suggested weight. It came in just slightly under 29-pounds with two water bottle cages and the seat bag.

## ■ DRIVETRAIN/CHAIN MANAGEMENT

Another Haluzak strong point is the exceptional drivetrain and component selection. Haluzak didn't scrimp on this one. The Deore LX/105 drivetrain runs throughout, including the headset and brake levers. Ultegra bar end (bar con) shifters round out this notable spec list. The chain management is borderline perfection thanks to the dual bearing

idler and frame design. Bill Haluzak designed this bike with a good chain line high on his list of attributes. The drivetrain is also nearly silent. Recumbent enthusiasts will appreciate the flexibility in the ordering process. If it works—they seem to be willing to do it.

## ■ WHEELS & BRAKES

Haluzak's wheels are built in house and are very good quality. Sun CR18 rims are laced with 36 spokes to Shimano Deore LX hubs in a standard format on the exceptional wheel combo choice of 559mm 26" rear and 406mm 20" front wheels. The quality of the wheel build is better than most—probably more on par with a custom-spec builder. Our bike had the skinny tire option with Schwalbe City Marathons 1.25". The rear has a kevlar bead. These are high quality tires with a light tread and capped in a "V" shape. Our tire expert, Zach Kaplan, says, "These tires have a very high rolling resistance, are too skinny and have a stupid tread design." I asked Haluzak's Jeremy Lewis why they didn't use the Primo Comets, he said, "they are flat tire magnets." I have to admit to having a fair amount of flats with the Comets—though ours might have been caused by the poor quality Kenda tubes (outfitted on some Vision and Rans recumbents).

The brakes are wonderful—high quality Deore LX V-brakes that will stop on a dime. These days, any recumbent that doesn't have a V-brake will seem inadequate, though they seem to work better on some bikes. They work great on all of the Haluzak SWB models. The front V is mounted on the back of the fork—and works great. We did not experience rear wheel lockup as on our '99 Vision R40—which is good for peace of mind on high speed downhills on mountain passes.

## ■ COMFORT

The roots of the Haluzak seat come from the Counterpoint Presto. Haluzak's version of the full sling/mesh seat is better. It is higher on the back, does not push through as easy and is the most comfortable full sling/mesh seat made. The seat material section is expertly made by Sew What of nylon mesh and seat-belt type strapping held on via very adjustable velcro straps.

The Haluzak seat is very comfortable. A quick test ride does not do it justice. Haluzak's Jeremy Lewis says, "allow 150-200 miles for seat dial in. You need to first set your recline and then adjust the tension on all of the straps. Over time our seat will fit you like a favorite pair of leather shoes." Five years ago sling/mesh seats were the benchmark of comfort. These days many have gone to contoured composite bases covered with foam. This offers better "test ride" comfort, though you'll never convince a seasoned sling/mesh rider that they are more comfy.

The Haluzak seat has four seat recline settings, set 4 degrees apart. I have found that the seat works best in the middle adjustments (more upright/closed riding position). As you recline the seat, the base raises up and it creates a chafe situation on the back of your thighs (if reclined too much). Reclining the seat also makes the base height even higher and makes the bike less adaptable for shorter-medium height riders. Because the Haluzak seat does not have a cut-away base design, a similar seat height to that of a Rans or Vision seems higher. In saying that, Haluzak offers a Leprechaun for shorter riders and the Hybrid Race (700c) works better for taller riders who don't mind the additional altitude in favor of a few more gear inches and skinny tires.

## ■ RIDER ERGONOMICS

Haluzak has done the SWB USS better than anyone. Either direct or indirect (linkage), owners get completely adjustable bar-end extension with both shifters (bar-cons) and brake levers mounted on the extension. These help solve any reach concerns—which are more prevalent with



USS bikes. The downside to Haluzak USS is the ultra-wide stance at 28 inches.

The mono rear seat support and flared out base frame seat design make for limited recline adjustability. This also makes for an especially closed riding position. Combined with the high bottom bracket SWB, it is probably less ideal for everyBODY. We find that the higher the bottom bracket and the more closed the rider position, the less user-friendly the design is, and the more limited the market is. We measured the pedal angle at approximately 110-120 degrees (line through seat back and second line from seat back/base out to bottom bracket spindle, then measure angle). This is very similar to a Lightning P-38 in ergonomics. Similar Rans models offer more open pedal angles of 115-125+ degrees. Vision pedal angles are even more open at 120-135 degrees.



A USS Horizon ready to go for a ride—Bicycles By Haluzak

#### ■ THE RIDE

Steady and stable are the best words to describe the bliss of a very comfortable, totally manageable SWB USS bike. Was I fast—not that fast—about the same as other similar SWB USS models—but who cares. The Haluzak feels light and agile, though far more stable on the road than other SWB machines (the direct steering livens things up a bit we're told).

The wide stance of the bars pretty much nixes your aerodynamic advantage, though if it is important, Haluzak does custom bars too. Their performance aspect can be improved through either a Zzipper fairing or homebuilt tailbox (RCN#44)—both offering similar results.

With the laid back headtube angle, longish boom and wide bars of the USS, there is some pedal steer in the handling. This means that if you are not a super smooth pedaler accustomed to your own bike, you may have pedal induced steering movement. For the uninitiated, this may make you look like you're doing a slight weave down the road at first.

The ride of the Haluzak is suspended—without shocks, bumpers or pumps. The monostays offer a passive ride that is smooth. On a steep climb I noticed that as I pushed on my downstroke, the underside of the bike (at stay/maintube junction) was noticeably flexing—thus, your very smooth ride. We have noticed this before on Vision R44/45. An optional (heavier) suspension fork (\$150) may round out the comfortable ride—as the front-end of the Haluzak is the stiffest part of the frame. Lighter riders (under 200 pounds) may want to opt for the Hybrid Race fork upgrade (on any wheelset) for the smoothest of rides (though we still favor fat tires instead of the skinny ones). If a sweet, stable and smooth ride is your aim—this is your bike. If you prefer a stiff, on-track ride, stick with a Rocket, V-Rex or P-38. Even though SWB bikes look the same, they can ride very different—and this is the case with the Horizon.

#### ■ THE COMPANY

Bill Haluzak doesn't have any race records and wasn't in the bike business prior to building his first SWB recumbent. He is a pretty ingenious guy who is a general contractor in Santa Rosa, California. He looked into recumbents, liked what he saw, he wanted to go bike riding, so he built a recumbent. Bill builds bikes for others who, like himself, want to comfortably ride a high quality SWB recumbent bicycle.

Bill has a devoted staff. Oren is his excellent welder, who is top notch

and does some of the finest work in the recumbent business and Bill's very devoted sales/custom service rep Jeremy Lewis.

#### ■ OPTIONS & ACCESSORIES

Haluzak has a list of options and accessories including a rear rack, lights kickstand, seat bag and waterbottles/cages. Haluzak also makes a nice fender/light mount that adapts to the head tube. The Haluzak seat bag is small and simple. It velcro's to the seat frame. It has no external pockets, though works nicely. It is smaller than a Rans or Vision bag, and a lot smaller than a BikeE bag (which may fit on the Haluzak if you have the seat upright or a rear fender.... Fairings—There is a Haluzak SWB Zzipper fairing that is not available from Haluzak, but is available from Zzip Designs. There is also some question as to whether the Vision Zzipper adapts. Fendersets are now available.

Some other neat upgrades worthy of mention are a Chris King headset (the best and great for SWB), Race Face cranks, Custom colors, suspension forks (painted to match your bike), and powdercoated seat rails. Haluzak can also build you an optional custom wheelset in any size with any parts to your specs. This isn't a custom spec dealer—this is THE manufacturer.

#### ■ RANTS & WOES

Direct Customer Rant: Haluzak *does not* set the bikes up for the new owner. I have given them my x-seam every time I've done a test, because I detest setting chains and sliding booms. And every time I get a bike, I have to spend an extra 40 minutes messing about with adding chain (no quick link, though extra links are included) and properly setting the boom length—all the while cursing the invention of the SWB sliding boom. With today's new chain technology, and the problems that adding/cutting chain can cause for a novice, don't even think that this is easy, or that you can adjust your boom for your friends and family at a whim. Boom bolts are a necessary evil for some SWB builders and definitely have a lifespan (maybe a half-dozen adjustments?). If you buy a bike with a sliding boom, set the damn boom once and leave it alone. In defense of Haluzak, their boom arrangement is better than most.

Granted, other manufacturers who sell direct like Easy Racers don't set the leg length either, but four bolts under a seat is much easier to mess with than chains and booms.

A slightly arrogant pitch with a definite Bicycles By Haluzak



superiority complex is rampant in the Haluzak sales force (a very knowledgeable and ultimately helpful Jeremy Lewis). What I have learned from as a lifetime bike rider and over ten years of recumbent experiences is that no one design is not correct for everyBODY.

### ■ RAIN RANT

During our off-season test, the Haluzak turned out *NOT* to be a rain-friendly bike. The friendly folks at Haluzak must think their customers don't ride in the rain. At this time, they did not offer optional fenders. The quick release loaner fenders that they sent with the bike *DID NOT* work. The Horizon requires a custom full-length fender set or **YOU WILL GET WET**. The lack of a rear triangle makes any fender have to ride high (from the chainstays) or hang low unsupported. An upper brace would be difficult as well unless you tied into a rack. A front fender would be easier to install, however, the Haluzak has plenty of heel overlap with the front wheel which makes for some close tolerances.

After the test bike was returned, Haluzak announced an optional fenderset for the Horizon.

### ■ VERDICT

Bicycles by Haluzak build some of the nicest recumbents we've tested. The quality is exceptional, and this is custom build/custom spec without the hefty price tag. These guys just have higher standards than some of their big shot competitors. In this review I have come down hard on them for a few items—both of which have been issues in previous tests.

If you're looking for a V-Rex clone forget it. Haluzak SWB have their own character—and they are *different*. The rider position is fairly forward though weight distribution is still pretty good, the head tube is at a more relaxed angle and the boom is long and the frame flexes for a passive almost suspended ride. The bike was designed around a proper chain line. You know it, too. The Horizon has a very quiet and refined chainline routing—much better than most. One might ask why not use two seat stays, move the rider rearward, and shorten the boom. That would take away what makes the Haluzak different.

The Haluzak crew are all gear-heads, they live, eat and breath bikes and they build the highest quality SWB recumbents, with the best customer service available today. The difference is simple. Rather than sell you a "stock" model. Haluzak will work with you, be very flexible to build *YOUR* perfect SWB recumbent.

### ■ ACCESS

Bicycles by Haluzak  
Address: 70 West Barham Avenue  
Santa Rosa, CA 95407  
Tel. 707-544-6243.  
www.haluzak.com  
Haluzak's web site is excellent and has a dealer list as well.

### ■ RATING

- ✓ **Comfort** — A -
- ✓ **Design/Style**—A
- ✓ **Drivetrain** —A
- ✓ **Chain Management** (Noise/Vibration)—A -
- ✓ **Brakes/Braking**—A
- ✓ **Finish Quality** (welds/paint/preassembly)—A
- ✓ **Performance Potential**—B
- ✓ **Rider Ergonomics**—Relatively upright seat with limited adjustment range, moderate bottom bracket height = fairly closed riding position.
- ✓ **Best Use**—Wonderful multi-use bike or set up to suit your needs.
- ✓ **Best Rider Type/Size**—Fits riders in the mid 5' range on up to over 6'. (I am 6' with a 44.5" x-seam and the boom on our test bike was borderline too short).
- ✓ **Recommended Weak Points/Upgrades**—Opt for the powdercoated seat frame. We'd like to see Bill & crew work on the seat frame lower rails. They flare out and make the seat seem higher than it is, making reach to the ground an issue for some riders. We like Haluzak's flexibility in spec and custom features. They are doing better than most manufacturers in this respect and factory custom ordered bikes can nearly be compared with custom-spec shops such as Angletech and Zach Kaplan Cycles.

### New For 1999

- ◆ Breezer Dropouts
- ◆ Shimano Bar Ends and upgraded component spec
- ◆ Optional Transferable factory warranty—better than most
- ◆ KMC Chain has been added as a mid-'99 replacement

### Pros

- ▲ The BEST USS controls
- ▲ Very Comfortable Sling/Mesh seat
- ▲ Modern up-to-date 9/27 speed Shimano drivetrain
- ▲ Stable confidence-inspiring SWB handling
- ▲ V-brakes work great (no rear wheel lockup)
- ▲ Lots of options, upgrades and custom features
- ▲ One of the best reputations & builds in the industry

### Cons

- ▼ Seat takes a while to dial in comfort/limited seat recline
- ▼ No manual, instructions, etc.
- ▼ Closed riding position (upright seat/moderate BB height)
- ▼ Handling might be too slow and stable for some enthusiasts (optional direct USS and ASS)
- ▼ SRAM Sachs chain replaced by KMC chain

### COMPONENT SPECS

MODEL.....	Haluzak Horizon
TYPE.....	SWB above seat steer (ASS)
WHEELBASE.....	40.25"
SEAT HEIGHT.....	23"
BOTTOM BRACKET HEIGHT.....	24.5"
WEIGHT.....	.29 pounds (RCN)
FRAME.....	TIG welded 1.75" CroMo
FORK.....	Unicrown CroMo or optional custom Hybrid Race
STEM/BARS.....	Linkage USS with bar-end extensions; optional direct ASS or USS
SEAT.....	Aluminum frame, 100% full suspended sling mesh

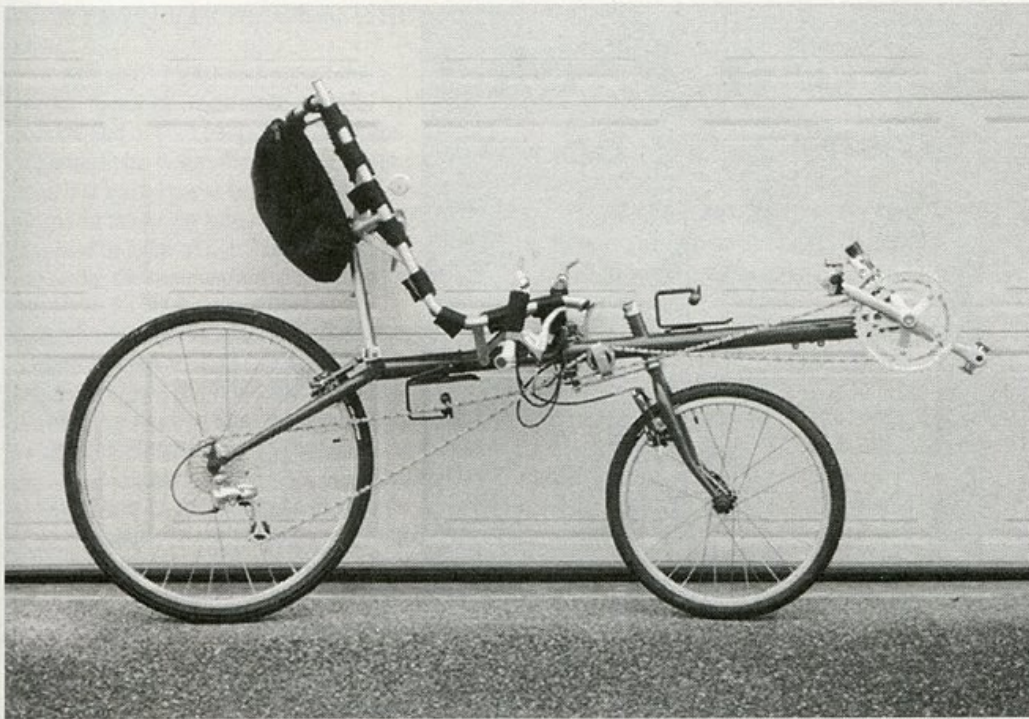
### COMPONENTS

CRANKSET.....	Shimano 105 Spline Triple 30/42/52
BOTTOM BRACKET.....	Shimano UN72 sealed
HEADSET.....	Tange Levis CDS (optional Chris King)
DERAILLEUR-REAR.....	Shimano 105
DERAILLEUR-FRONT.....	Shimano 105
SHIFTERS.....	Shimano Dura Ace Bar-End 9/27-spd
CASSETTE.....	Shimano HG50 11-28
CHAIN.....	KMC (our test bike had Sachs...they just changed.
WHEELS.....	.559mm 26" x 1-3/8" and 406mm 20" X 1-3/8"
RIMS.....	Velocity Razor 36 hole
TIRES.....	Schwalbe City Marathon or optional Continental Grand Prix
HUBS.....	Shimano Deore LX
WHEEL BUILD.....	In-house laced with spoke prep & pre-stressed
BRAKES.....	Shimano Deore LX V-Brakes
WARRANTY.....	Lifetime frame (can be transferable)
COLORS.....	Midnight (blue), Moss (green), or Valentine (red) powdercoat or cust.
PRICE.....	.....\$1595

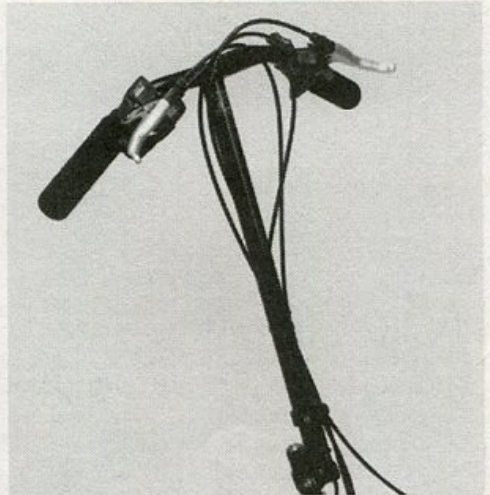
**NOTES**...Indirect USS, direct USS or ASS and suspension fork are options. The Horizon can be outfitted with the optional Leprechaun wheel combo (26" 559mm/16" 349mm) or upgraded to Hybrid Race spec (Ultegra with a Campy Racing Triple crank). A Ritchey headset upgrade is available for \$25. A Chris King (the BEST) for \$95. A suspension fork is available for \$150. A lighter Haluzak-made Hybrid Race fork upgrade is \$100. The Horizon is also available with a fat tire option including an IRC Metro and ACS RL Edge. The HD rider option is no charge. Riders up to 360 pounds can fit Haluzak recumbents.  
**Haluzak Weight Limits:** Horizon—#250; Horizon HD—#360; Traverse—#260; Hybrid Race .049 frame/custom fork—#220; Hybrid Race .035 frame—#200  
**NOTE:** This is for bike, rider and cargo. Haluzak frames are designed to maximize the flexibility of the CroMo (passive suspension) without compromising strength.

- ✓ **Comparison to Market Competition**—Vision R44, Rans V-Rex, Trek R200. The Horizon offers superior build to that of their competition.
- ✓ **RCN Performance Potential**—B
- ✓ **RCN Value Rating**—A
- ✓ **RCN "Bob" Rating**—A

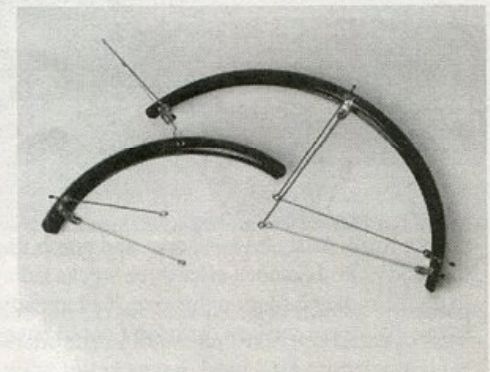




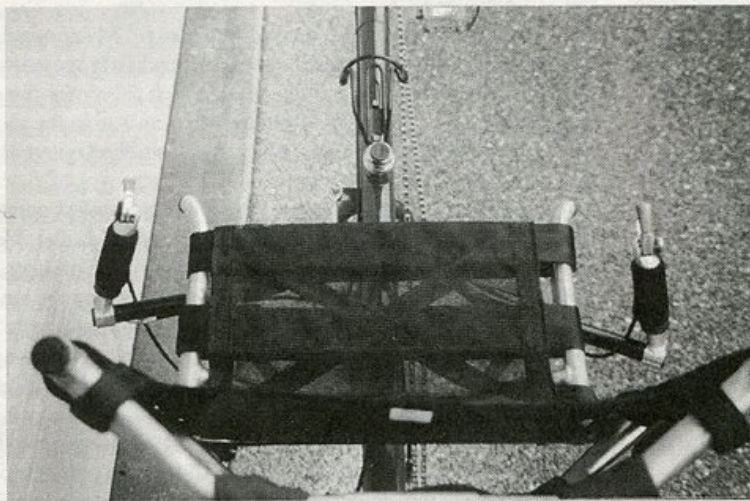
Our Horizon test bike. Note the upright seat and average SWB BB height. This is what we found to be the most natural riding position for this bike, however, many riders may find it fairly upright and rather closed. One problem with the Horizon is that when you recline the seat, the seat nose rises, as do the flaired out seat tubes—making stand over height a problem for even taller riders.



Optional above-seat steering (ASS). Also known as over-seat steering (OSS) and most recently above-seat controls (ASC) and probably a few more.



The new RCN-inspired Haluzak fender-set



ABOVE: The Horizon seat and controls. Note wide bars.  
BELOW: The Haluzak seat bag is smaller than many, though is finely made.



ABOVE: Optional front suspension fork  
BELOW: Computer/light mount for derailleur post





# Get Your Kicks On Route 66

Story and photos by Lienhard Huster

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(or Lienhard.Huster@de.nestle.com)

**M**y wish to see the United States went far back. But by bike, and in the given time schedule, impossible ... Until I found a book of a bicycle tour from coast to coast ("From South Carolina to California", in German, by M. Winkelmann). But a coast to coast tour with about 4000 kilometers is too long for a years' holiday. Then I remembered the song "Get your Kicks on Route 66". That's it! Eventually I found a travelog ("Cycling 66", in German, by T. Schröder) and half a week later the travel date was fixed and the ticket ordered: outward Munich - Chicago and return Los Angeles - Munich.

## ■ THE BIKE

Four months before I started the route 66 tour I saw a recumbent bike, which I liked at once. It was an LWB, and I bought it at once. It was a German make, a Pichler LWB USS "Relax" (what it really is!!!), wheel base 1,65 m with a 20" front and a 28" rear wheel, 28/38/48 chainrings and a 11, 14, 16, 18, 21, 24, 28 cassette. It looks like the Ryan Vanguard, the seat is similar to the Linear mesh seat. From my bike tours in Europe on my upright trekking bike I knew about the problems of stiff neck, aching back, wrist and hand sore and numb fingers after 5 or 6 hours in the saddle. So I decided after three weeks riding my new recumbent bike to do the route 66 tour on this one. And already after the first day I did know that it was the best decision I could have taken.

## ■ THE ROUTE

The route was planned from Chicago through the neat and clean farmland of Illinois to St. Louis. After passing the Mississippi it should go partly on the old Highway 66 along the woods and lakes at the northern edge of the Mark Twain National Forest. After touching a corner of Kansas it should take me through the far stretched farmland of Oklahoma with its deep red-brown soil, through the prairies of Texas and the badlands of New Mexico to the Continental Divide. Then in Arizona, along the Petrified Forest National Park and the Painted Desert National Park, and finally to the National Coconino Forest at the bottom of the San Francisco Mountains, to Flagstaff. Because of the time schedule I would go from Flagstaff to Los Angeles by Amtrak, to catch my plane back to Germany.

## ■ THE GEAR

As little as possible. Besides some spare parts for the bike, spare tubes and spare tires for each of the wheels, a tool kit for the bike and, not to forget, my Swiss Army knife. Moreover a stove and cookset and a set of fork, knife and spoon. And in addition to the shorts, jersey, underwear, shoes and socks I wear: a pair of nylon pants with (by zippers) detachable legs and two sport shirts, a sports jacket, swim trunks, a pair of underwear and socks, and a tracksuit—as pajamas, for cold nights in the tent - and I did need them! Launder was necessary every day. Personal toiletries and - in case of sleepless nights in the tent, but I didn't need it—a small radio. Also very important: credit card, traveler's checks and some cash. Then pen and note paper, camera, some US state maps and a book—for rainy days. To become independent from motels I had a lightweight tent, sleeping bag and a self inflating air mattress.

## ■ THE TOUR

Apart from the drizzle, when I arrived in Chicago, a heavy thunderstorm at the Chain of the Rocks just before St. Louis and a thunderstorm, which caught me in the early morning after I had left the motel in Yukon the weather was dry. That meant, that I got a lot of sun, I helped the sun cream dealers to make a good business these days. Disregarding one day

with a slight tailwind and five days, which were calm, there was a lot of headwind, especially gusty in the plains of Texas, in New Mexico and in Arizona gusty. Together with the heat it dried me really out (the orange juice and water and soft drinks consumption was high on those days!) and I missed a good fairing, which would have helped a bit. In the meantime I equipped my "Relax" with a Zzipper fairing.

The first problem I met was already in Munich, when I drove in the early morning by the underground from the city to the airport. Because of technical reasons the traffic on my route was interrupted and the passengers were asked to leave the train and to continue by bus. This was impossible with my recumbent. But my wife, accompanying me to the airport, found a taxi driver (everybody looked in this situation for a taxi, but my wife convinced him, that he had to help me!!!) and he changed the rear seats and made it possible to get my LWB into the car! The next problem I met at the counter in the airport, when they became aware of my long wheel base recumbent. But after a short discussion we could also solve this problem, and instead of one plastic bicycle bag I got two of them, and soon my Pichler "Relax" disappeared in direction to the freight compartment of my booked airplane. (Thank you, guys of the Munich airport!)

Safely my bike and I arrived in Chicago. My stomach was filled with all my goat cheese and some of my sandwich spread, which my wife had given me to take along as sandwich filling for the next 10 days or so. I ate it all on the plane because of I was told in the airplane, that no food would be allowed to be imported into the United States. And I was too stingy to throw it away.

After I had unpacked my bike, fixed the panniers and the small black luggage box and put on rainproof pants and jacket, I left the Chicago Ohare Airport as the last passenger. And a bit later, when I rode south, to a motel in Countryside, I was motivated by a young mother with two small kids, coming from shopping (a lot of plastic bags in her car told me) when she gave me a thumbs up (crying "brave boy" —to me—a boy of 62 years of age). A nice welcome in the United States.

At two o'clock I got up (in Germany it is nine o'clock in the morning), and at three o'clock the tour starts. It is warm and moist outside. On the Archer Avenue I leave Chicago. Soon I passed a wood, a smell like dates was in the air. First rest in Dwight. The temperature was already at about 30° C. Another short rest in Odell. The first day ended in Pontiac. The weather forecast for the next day on the TV sounded good.

Half past four in the morning breakfast: a sandwich and a cocktail of magnesia and a vitamin mix dissolved in cold water instead of hot coffee and toast. On the old route 66 highway I left Pontiac. Parallel to the Highway was the Amtrak line Chicago to Los Angeles. It was my Highway, I was the only one. Just after about one hour I saw the first car. That was really great! When I passed Chenoa, the sun drove the warm morning mist away. In Normal-Bloomington people collected to a parade, it was Labor Day. After I passed Normal-Bloomington I was again on the old route 66 highway. I found a headscarf, lost most probably by a motorbiker, which I put on my head to avoid a sunburn. Here the old route 66 highway was a frontage road to the Interstate 55, and the Harley-Davidson bikers there greeted me by waving their hands. Soon I passed a wood of maple trees, and in the shadow, close to Funks Grove, I had my dinner, consisting of canned peas, which I enriched by a bit of soy oil. It tasted like hell! But I needrd some calories! In the early afternoon I reached Springfield, Illinois, the birthplace of Abraham Lincoln, who became the 16th president of the United States. After I had about a liter of ice tea and a shower the world



looked friendly again. No problem to fall asleep!

At five o'clock I had some bread and my morning magnesium-vitamin cocktail and at six I passed the outskirts of Springfield. It was the morning rush hour. But soon I came on a small road, the traffic in my back and clean and nice farmland in front of me. The sun rose, and so did the temperature. At noon it was about 38° C. I passed Litchfield, then Edwardsville. Just after Edwardsville a thunderstorm approached. Up on the ride side of the road, in a clearing of the broad-leaved forest, it looked as if there was a campground. But an older lady answered my question negative. So I went on. Suddenly I was in the thunderstorm and a heavy rain started. I rang the bell of the next house and asked, whether I might take shelter in the garage. I was allowed. After about three quarters of an hour the thunderstorm was over. Ten minutes later I found a motel. There I planned the route for the next day, had a shower and a meal.

Early to bed and early to rise... at a quarter to three I started the new day with my special cocktail, packed, and off... The waning moon lighted the street and St. Louis lighted the sky in front of me. Soon I arrived in Granite City and in a sideway I had my breakfast. After a short look to the Chain of the Rocks Bridge in the dark I arrived at the Mc Kinley Bridge, which crossed the Mississippi, still in the dark. It was 5 a.m. According to my information they accepted bicycles to pass the bridge. But the black lady in the toll house of the bridge had another information: I was not allowed. I could understand, because of the lanes were small and there was a lot of traffic, the morning rush hour. But how should I cross the Mississippi? When I rested a bit helpless, outside an administration building at the bridge, a pickup stopped close to me, obviously street sweepers, who seemed to be going to cross the bridge. My big chance! I asked the driver to give me and my bike a lift to the west bank of the river. And I got it! On the other side of the river they refused to take some money for their help. Thanks a lot, guys! At about half past six I passed the Gateway Arch and rode in a southwestern direction. There was heavy traffic, and it took 75 kilometers to come to the old and calm route 66 highway. Now it went up and down, left and right the road there was a park-like forest. A weak tailwind helped me to go on and in the late afternoon I arrived in Cuba, where I would stay overnight.

Breakfast at four, departure at five. Blue sky, calm, and rustic idyll, my way went through the foothills of the Ozarks: forests, small rivers, lakes, sun. After Rolla I touched the edge of the Mark Twain National Forest and the old route 66 became again a highway, an empty one, because the Interstate was not far away. In Lebanon I stayed overnight.

The mornings became more and more routine: Getting up early, that is between four and six, preparation of the special vitamin and minerals cocktail, packing the panniers, departure. The sky was clear as usual, no clouds. I had a late breakfast just before I passed Springfield, Missouri. The route went through woods, then pastures. Dinner just before Halltown (canned vegetables, enriched with soy oil). Sometimes, when I passed small towns, I was accompanied by dogs. They would run beside the bike and bark, but they were friendly and had fun to race with the recumbent biker. And I always drew attention because of my fine recumbent bike. Often I heard "Hey, it's a cool bike!" And from car drivers I got many thumbs up on my tour. The sun set as I arrived in Carthage, Missouri.

At my seventh stage, I rode through three states: from Missouri to Oklahoma, touching an edge of Kansas. The weather did not change, but



*A test at the Continental Divide, 50 kilometers east of Gallup, New Mexico*

the wind did: headwind. And after I had passed Baxter Springs the ascents became a bit less steep than the day before. The landscape changed into plowland. Also the color of the soil changed, from light brown to full red brown. Behind Vinita, Oklahoma I found a nice camp site at a small lake. In the night I could hear several times the horn sound of the railway locomotive from far away.

The next morning I had to pay for the nice camp site: the tent was wet from the moisture of the lake. The weather looked like rain, but the clouds disappeared after I had passed Tulsa. The landscape became now as I had wished and dreamed of: pastures and prairie. The road kills changed from snakes to armadillos. Oil extraction pumps popped up. Today I afforded on a big vegetable pizza at Pizza Hut. The cook recognized me as German and told me that he did spend some years in Germany and also in Switzerland. In a motel in Bristow, where I stayed overnight, I dried the tent, which was still wet from the last night.

When I left the motel the next morning, I observed flashes in the south west: thunderstorms. The route went in the direction of Oklahoma City. After 15 kilometers I missed my small transistor short wave receiver. So I turned back to Bristow and checked the motel room. Nothing. I checked the panniers again. There it was! So I lost one and a half hour. In the meantime the thunderstorm had disappeared. The sky was again blue and the sun burned. In Arcadia I saw the well-known Red Barn. Later in Oklahoma City I had problems to find my way. I ended up on Broadway, in the rush hour. The traffic was terrible. And a thunderstorm gathered. Finally I left the city in the direction of Yukon. I had to speed up to find a motel before the rain started. In the night I heard the rain.

The next morning I was early on the road again. After half an hour there came a rain shower. I found an old shed, where I waited until the rain abated. A headwind came up. After I had passed El Reno the clouds became darker, it flashed and thundered and a strong wind came up. Like a rolling pin, the clouds were rolled up by the thunderstorm. It looked strange. And out of the pin, over the whole length, it flashed. It looked great! But I needed a shelter. Some minutes ago I had passed an entrance to an experimental farm of Fort El Reno. So I turned back, fought against the heavy headwind. About 15 minutes later I reached a shed. It was dense. And soon it began to rain. But not long and the thunderstorm disappeared to the north east and soon I could go on. Since the day before I had problems with my left knee. So I took care of the left leg and tried to





*Writing postcards to my family at Meteor Crater, AZ*



*Old Route 66 at Devils Elbow, Wayneville, MO*

use only the right one. The frontage road of the Interstate 44 winded up and down. After about 80 kilometers it was time for breakfast. I was really hungry. In a small cafe near Hydro, Oklahoma I had coffee and a sandwich, and not much further I had the next stop and rest: in Lucille Hammons small filling station. She is an "institution" for the route 66 cruisers (normally not on bike but on motorbike). She and her husband had opened the filling station in 1941, and she still is there. After a coffee and a talk with her I signed the visitor's book, bought a souvenir route 66 coffee mug, made a photo of Lucille beside my bike and went on. Soon I was in Clinton, Oklahoma and because of the problem with my left knee I decided to end up here for today, already in the early afternoon.

At the early morning hour the next day it was chilly, the sky was covered by clouds. Soon I passed Elk City and Sayre and had a break in Texola, which was a ghost town. After I had visited the one-room stand-alone native rock prison cell at the end of the town I rode again on the frontage road, which winded up and down, and on the left-hand and right-hand of the road the prairie spread. Suddenly in the afternoon the pain in the left knee ceased, I couldn't believe it yet and went on to pedal, as good as possible, only with the right leg. In Shamrock/Texas I found a motel, but no beer was available, I was in a dry county. So I had to go to bed without a nightcap.

A blue sky, but crosswind the next morning, I rode on the Interstate 40 to McLean. Here I had breakfast. In McLean I saw a nice reconstructed Philips 66 filling station. When I continued, the crosswind changed direction, and became a strong headwind. At eleven, close to Groom, I had dinner in the shadow of a bridge—vegetable mix with soy oil, delicious! After I went on I caught sight of the largest cross of the western hemisphere. The headwind did not calm. And it was hot, my water consumption increased. At five in the afternoon I came to Amarillo, where I stayed overnight. Happily the left knee was still okay.

At a quarter past six a.m. I was ready to go on. Just past Amarillo I looked out for the famous Cadillacs, but in vain. A quarter of an hour later I saw them from far away, from the Interstate, and took a distant photo. For a snack I stopped at a roadhouse ("Oldtime Grannys Kitchen"). Then I passed Adrian. It became more hilly, I got bathed in sweat. Near Glenrio, I rode through a ghost town, equipped with a business loop. I passed the state line to New Mexico. I didn't find the correct way but landed on a field path, which lead me too much to the south. In front of me it looked like a thunderstorm gathered. The surface of the path was covered with a thick layer of dark red soil dust. When I tried to speed up the wheels turned through. If it would start raining the dust would transform into a red mud. A farmer, who crossed my way by a tractor, informed me about the correct way to San Jon. Sometime later I was again on the frontage road of Interstate 40. The thunderstorm turned away to another direction. The air was dry and it was hot, the ups and downs steepened. The sun burned my skin. Finally! San Jon came into sight. I felt weak today. After I had checked in the San Jon Motel I had to rest for 10 minutes on the bed

before I could take a shower. But after I had a snack in the closeby truck stop of the Interstate I felt strengthened again.

When I left San Jon on the old route 66, it was calm. I speeded up and soon reached Tucumcari. In a supermarket I got food and water, then turned to the NM 104 and crossed the railway, heading toward Conchas. The road was a dream now: long drawn out slopes, prairie, a blue sky, a landscape like in a western. No traffic! But hot again. And from around the horizon in front of me it looked like thunderstorms. I felt great on my bike. The loneliness, the landscape, it was like a dream. That was what I looked for when I had planned the tour at home! I took a room in the Lodge of Conchas Dam, rather than in my tent because of the thunderstorms, which gathered and looked as if they would come up here in the afternoon. The window of my room was to Lake Conchas, a storage lake of the Canadian River. Around the Lodge in Conchas Dam were a camping site, a picnic area and a small shop. There I got a map of New Mexico. Before I went to bed I planned the route for the next day.

At two in the morning I got up, drank my special cocktail of vitamins and magnesium minerals, packed the bike and left the room at half past two. I took the NM 104, then NM 129 toward Newkirk. A starry sky. And when the moon sets the stars shine in an intensity I never had seen before. I switched of the front light of the bike. The stillness of the night was now and then only interrupted by the rustle of an animal. No trace of human presence on the earth. I was reminded of the Roswell story, and in the mood I was in this night with this breathtaking starry sky I think I would not have been astonished if a Flying Saucer had appeared and had come down just before me. But nothing happened until about two hours later when I observed far below an illuminated trucker driving on Interstate 40. From the height of NM-109 it made it look like a fun park. Arriving in Newkirk I found a frontage road to the Interstate, which I chose. Orion faded when the sky behind me lightened more and more by the sunrise. In Santa Rosa after more then 60 kilometers I had a late breakfast. Then I continued, passing San Ignacio, Milagro, the Flying C Ranch and arrived at Clines Corner. The sun, the light headwind, and especially the many ascents got me down, so I had planned to sleep in my tent at Clines Corner. But because it was a very crowded place and the Interstate with its noise was too close, I decided after a coffee break to go on to Moriarty. After each ascent my knees became more and more weak. Suddenly, like a miracle the Wagon Wheel Motel appeared. After I had found the proprietor in the neighbored filling station and he found a can of beer in the fridge, I forced myself to the necessary shower, then I fell into bed and at once into sleep. What a wonderful world!

Refreshed, I awaked the next morning—at seven o'clock. Blue sky, but in front of me dark clouds. Calm, yet! Off it goes! Breakfast in a Taco Bell in Moriarty. And get food. The salesperson, a young women, asks me, where I come from and where I go to. "Oh my dear, you have seen much more of America than I did, and you are foreigner!" And she tells me the name of her college. After I leave the town on the business loop I don't



find a frontage road to the I-40. So I have to go on the Interstate, toward Albuquerque in heavy traffic. A lot of trucks. But the dark clouds in the west have disappeared. About 15 kilometers before exit 167 all the gained height is lost by strong grades. At the Tijeras Canyon the right trail is closed. A heavy accident. When I pass I see a truck, completely smashed at a rock face. The police do not care about the biker. Soon I reach Albuquerque, a very clean town, the buildings in Mexican style. No multistory houses. I pass the Rio Grande. At the west end of Albuquerque I lodge in the "Westward Ho" Motel.

After a small breakfast and my vitamin-mineral-drink I left Albuquerque in the direction of the Nine Mile Hills along Central Avenue. Just at the entrance to I-40 the bike reacts strangely: a flat tire. At five in the morning. In complete darkness. I push and carry the bike about 500 meters to a streetlamp at the entrance of a camp site, where I can change the damaged tire and install a new one. After 30 minutes I can go on. In Laguna I have breakfast. The landscape around me is magnificent! Prairie, yellow rocks, only a little traffic on the NM-124. The route went up and down, but more up than down. I passed Cubero, San Fidel, McCarty's, Grants, Milan. The sun burned my skin. In the afternoon there were some gray clouds: it looked like rain. After I passed a big lava bed I arrived in Prewitt, where I put my tent on a camp site.

What I did not take into my considerations was the elevation of Prewitt (the night was very cold), I-40, which crossed very close to the campground (it was a terrible noisy night) and the Amtrak line (every 30 minutes a train, which gave signals at each railway crossing, and there were several).

The tent was completely wet the next morning from rain, but when I got up at seven there were no more clouds. A bit later I could see a magnificent sunrise. In Thoreau I had breakfast. The route went up, towards the Continental Divide, which I reached soon, at 7,275 foot elevation. I deserved a rest in the shop there. Then I passed the Church Rock. In Gallup I had a look in Hotel El Rancho, where I looked at the pictures of the movie actors and actresses who had lodged here in the past. But I could not spend much time here, because I had to bike another 90 kilometers to Chambers, the next and only motel. The headwind became stronger. When I passed the Arizona state line, it swirled the brown dust into the air and into the eyes. About twenty kilometers from Chambers I was powered out and had to have a break. In a small resthouse I ate something, had coffee and iced tea, and after I had gathered new power went out in the heat and went on to the Chieftain Inn in Chambers (a "town" consisting of the motel, a filling station and a post office. I read "no vacancy" at the motel. No, I could not go on. According to my information this motel was the only accommodation for the next 100 kilometers. So I went in. "No vacancy" I was told by the young lady. With all my charm I tried to convince her, that it will not be possible to go on by my bike, and finally I got the last room, reserved for emergencies (I was the emergency). After this hard day I allowed me a tub instead of the shower, ate a sandwich, drank two or three cans of soft drinks and fell asleep.

A quarter to three I got up and started, as—nearly—always, in the darkness and enjoyed riding in the calm, passing the Petrified Forest National Park and the Painted Desert National Park at sunrise. At a truck stop just before Holbrook I had breakfast, then I rode on. The next rest I had at the Jack Rabbit Trading Post. In the meantime the headwind got up in the same intensity as yesterday. There is no frontage road, so I had to ride on the Interstate again. The surface at the side was rough and there was a strip of about three feet with transverse furrows, not easy to ride on. I passed Winslow and Leupp Corner. The temperature rose again to about 38° C. That means my water consumption is high. After a short rest at a recreation area I reach the Meteor Crater RV Park, where I put up my tent. In the west I could see the San Francisco Mountains. Thunderstorms move over them from north to south, and I saw the veil of the rain and the



End of the road at Playa Del Rey Beach in Los Angeles

flashes from the thunderstorms.

At half past three I got up. A starry sky, the thunderstorms had disappeared, it was calm. I passed Two Guns and at sunrise Twin Arrows. After days through prairies and semi-deserts I rode through the National Coconino Forest, which borders around Flagstaff. And then I left Interstate 40 and continued to Flagstaff on the old route 66. There I got the Amtrak night train to Los Angeles.

The finale of my tour was my last Sunday in United States, when I drove to the Crystal Cathedral in Garden Grove. I lodged in a motel in Culver City, and to catch the morning worship there I had to set off early in the morning. As usual the last three weeks. About 30 minutes after I had left the motel without a map. I could hear a lapping noise. Could it be ocean waves? I had gotten lost in the dark of the Sunday morning at half past four, and did come to the beach. Two watchmen of a housing estate (gated community), examining me a bit suspiciously, gave me guidance to how I will come to the Pacific #1. And soon I passed the International Airport. I drove on, the time passed by, but I could not see any signpost to Garden Grove. So I asked a taxi driver at a filling station about the right track. "Impossible by bike," he told me. "I need one hour with my taxi, and I drive the highway, so you know how far it is." And he continued: "Besides you have to pass some dangerous suburbs, where you can thank them, if they only steal your bike." But after all he confirmed, the direction I took was okay. After I had passed Hawthorne, Lawndale, Torrance, Lomita, Long Beach and Westminster I approached Garden Grove and the Crystal Cathedral in time, and I found it to have been a crowned termination of my route 66 tour. In the late afternoon, after 160 kilometers, I was back in Culver City and was convinced, that not many people go so far to participate in a church service!

Route 66, the motherroad, is an extraordinary adventure, regardless of which means you drive it. The tour on my Pichler LWB recumbent bike exceeded all my expectations. To come back to the heading: "Get your kicks on Route 66," I got them! It was a real treat, to bike a long and hard tour so comfortable as I never did before. Not to forget the grades in New Mexico and elsewhere, and the sun (it was HOT most of the days), and the gusty headwinds I had several times, it was hard, but it was also as comfortable as a bike tour could be. It would have been much harder by a wedgie! What else? On a recumbent you see only smiling or laughing people! And you have to answer a lot of questions. And photos are taken.

By the way: my body weight decreased from 82 to 68 kg. But I felt great! Unfortunately I could not keep this weight! □



### ■ Ride Stages

Date	Stage	Km	Remarks
8/31	Chicago/Countryside/Illinois to Pontiac	167	Calm
9/1	Pontiac to Springfield	170	Calm
9/2	Springfield to Chain of Rocks	152	Thunderstorm / weak headwind
9/3	Chain of Rocks, Illinois to Cuba, Missouri	200	weak tailwind
9/4	Cuba to Lebanon	157	Calm
9/5	Lebanon to Carthage	178	weak headwind
9/6	Carthage, Missouri to Vinita, Oklahoma	137	Headwind
9/7	Vinita to Bristow	163	Headwind
9/8	Bristow to Yukon	181	Weak headwind
9/9	Yukon to Clinton	128	Thunderstorm / headwind
9/10	Clinton, Oklahoma to Shamrock, Texas	141	Weak headwind
9/11	Shamrock to Amarillo	147	Headwind
9/12	Amarillo, Texas to San Jon, New Mexico	169	Gusty headwind
9/13	San Jon to Conchas	94	Calm
9/14	Conchas to Moriarty	201	Weak headwind
9/15	Moriarty to Albuquerque	91	Headwind
9/16	Albuquerque to Prewitt	164	Headwind
9/17	Prewitt, New Mexico to Chambers, Arizona	149	Strong and gusty headwind
9/18	Chambers to Meteor Crater	166	Strong and gusty headwind
9/19	Meteor Crater to Flagstaff	63	Strong headwind
9/20	By Amtrak from Flagstaff to Los Angeles	-	-
9/21	Los Angeles/Culver City to Garden Grove	160	Calm
Total kilometers		3344	
Average kilometers per day		152	

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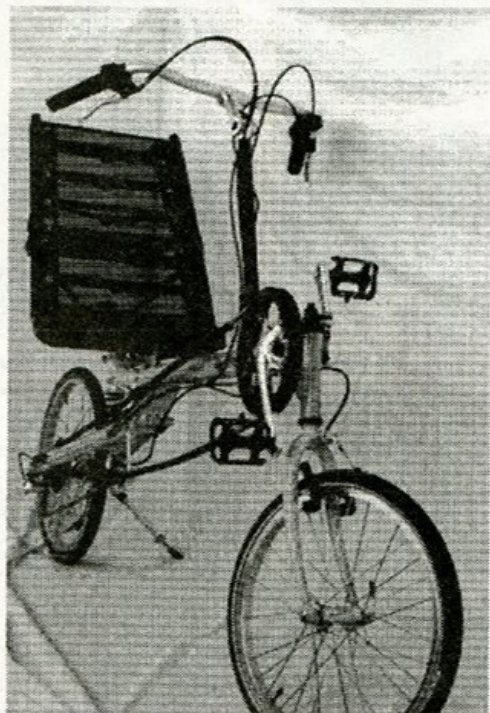
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# Underseat Steering

## Steering for Laid-Back Riders

by John Riley  
johnriley1@home.com

I like a crisp apple about as well as I like a juicy orange. I more or less feel the same way about above-seat-steering and below-seat-steering on recumbents. It is an apples and oranges thing.

When I bought my first recumbent in 1982, the current myriad of choices did not exist. A favorable review of the Avatar, a long wheelbase, under-seat-steering bike, appeared in the June 1980 issue of *Bicycling* magazine. I bought one some time after reading about it there. The reviewer, John Schubert, hardly mentioned the USS. I never thought it was weird or unnatural. To the contrary, it always felt very relaxed to have my arms at my side. You will have to make up your own mind about that. In any case, I bought one of them, and have subsequently owned several other USS bikes, so I think I can comment on some of the characteristics of the type.

Safety is of course a very important issue. But in the absence of data, not much can be said with any certainty. That same article in *Bicycling* had a sidebar that quoted Avatar co-designer David Gordon Wilson, one of the godfathers of modern recumbency. He definitely feels that it is safer to not have anything in front of you. His view is that you might injure yourself in an impact with the bars and that an automatic reaction to tightly grip something that is in front of you might compound the problem. Safety is a key reason for using USS, in his view.

Fortunately I have not crashed very often, but in both cases that come to mind, something interfered with the front wheel. In one case it was an errant rider and in the other a street car track. In both cases, I fell forward and to one side, taking the impact mostly on one knee and hand. I think that once I sense that I am losing control, I no longer try to hang on to the bike. I try to get my foot and hand down and out to protect myself. I don't see hand vulnerability on the USS bars as an issue in a crash, because I seem to have always taken my hands off the bar to catch myself. David Gordon Wilson says he has the same reaction. Both of us wear gloves year 'round. It is not my intention to claim anything here. This is definitely one of those areas where you just have to listen to the stories and make up your own mind.

Hand vulnerability may be an issue when riding through tight spaces, like between the posts at the end of a bike trail or between rows of cars.

This issue of pulling up on the bars is almost as controversial as safety. I think all bike makers advise against pulling up on the bars. This is good advice for two reasons. First of all, when many people get on a bike with USS, they tense up and grip the bars tightly. Steering control takes only a very light touch, so this death grip is counter-productive. Secondly, most, perhaps all, USS bikes are not designed for pulling up on the bars. Doing so might cause the bars to fatigue and break.

That said, I owned a Defelice LWB USS bike when I lived in San Francisco. It had bomb-proof USS. The center portion of the bars was a solid bar of aluminum. It had a thick steel pin press fitted at the center. This rode in upper and lower needle bearings that were supported by a massive two piece aluminum clamp that attached to the frame in two places. The builders were first-rate machinists, so this polished aluminum mechanism was prettier than it sounds.

Typical of bicycles of this type, the Defelice had an open riding angle; the BB was fairly low and the seat was quite laid back. When pressing hard on the pedals, there was a tendency to ride up in the seat. (This would be much less of an issue on a bike with a closed riding angle.) Climbing the hills of San Francisco, I had plenty of opportunity to press hard on the pedals. Pulling up on the bars enabled me to resist the tendency to ride up in the seat. It solidly anchored my hips so I could push with maximum force. Many people claim that on conventional bikes, they are able to use their upper body. A properly designed USS

bike allows this as well. Unfortunately this aspect of USS seems to get overlooked by designers and riders alike.

The opportunity for tiller-free steering is another USS feature that is not exploited by some USS designs, including my Vision. In the case of the Vision, this can perhaps be forgiven, since no other single bike can be configured in so many different ways. On the other hand, it would not be that difficult for them to provide a bolt-on mounting for the USS. I have had one made for my bike. The 99 Visions will have even more tiller than my older bike.

Tiller refers to the distance between the hand position and the steering axis. The greater it is, the more the bars are swung side to side, rather than being rotated around the center point of the bars. Having to swing the bars side to side is awkward, especially on a USS bike. The movement can be restricted by the seat, and hand position may be less than optimal. Many people do not seem to mind the tiller effect on ASS direct steer LWB bikes, but it does introduce compromises.

When a linkage is used, as is the case with all LWB USS bikes and some SWB USS bikes, the designer has the flexibility of separately optimizing the geometry of the fork and headtube and the location and configuration of the handlebars. I think a properly designed USS LWB bike is a better low speed handler than a typical direct-steer ASS LWB bike because of this. (Note that some ASS LWB bikes, like the Vision, have a linkage and thus have no tiller.) The trade-off is the additional complexity.

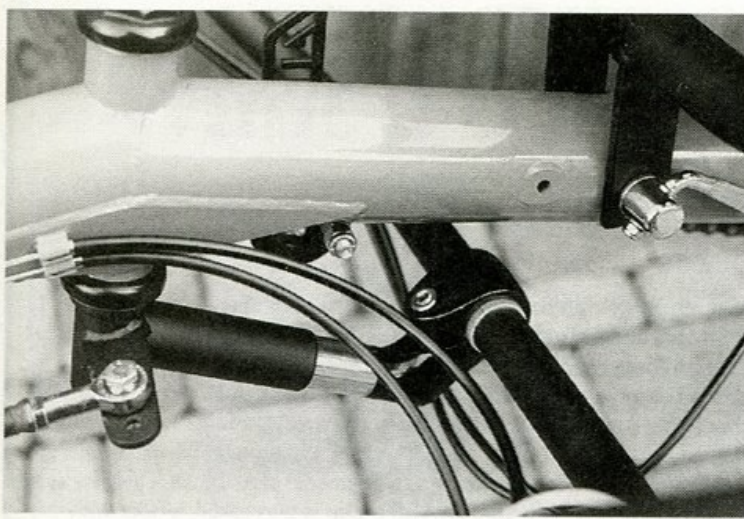
One common criticism of USS bikes is that they are less aerodynamic than ASS bikes because the arms stick out further. This seems logical, although I do not remember it ever being quantified. The difference may not be that great. One should also remember that the overall aerodynamics of any given bike are influenced by many things, including hand position, bottom bracket height, and seat back angle. Front and rear fairings would probably help, but all other things being equal, the USS bike may still be slightly worse than the ASS bike with similar fairings. Although David Gordon Wilson points out that the Bluebell, a fully faired version of the Avatar, was a successful racer. Wilson also points out that, unlike the Bluebell or his current bike, most current production USS bikes have wide seats. He says that he has designed a seat for his Viento that allows him to have his elbows and hands behind his back.

I have to admit that until Richard Drdul brought it up in his article about steering, the issue of excessively sweaty armpits with USS had never occurred to me. I even use the side handles on the recumbent exercise bike at the health club. I sweat buckets on that thing, but never felt like it was a particular problem. Perhaps the issue is this: with properly positioned USS, your arms should be relaxed and slightly bent at the elbow. It might be that some people's arms are too short or that some bikes aren't set up right. In any case, if this was a problem for someone, it seems to me that the more arms-out position of a LWB or CLWB with direct ASS would be the way to go.

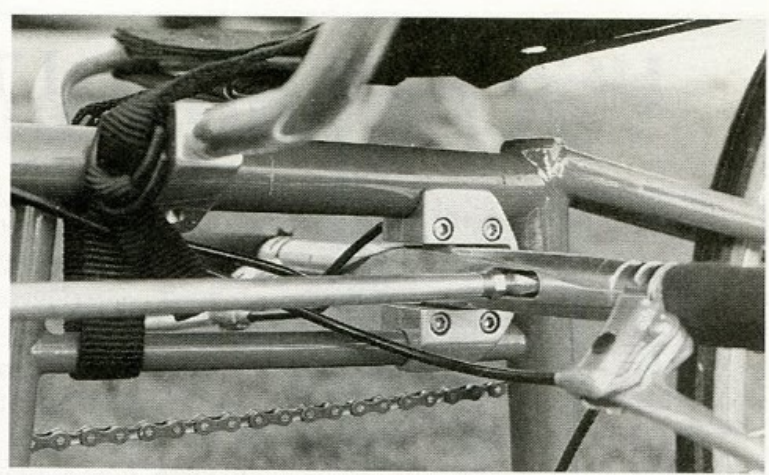
I also found it interesting that Richard's idea of a distraction was for it to be awkward to look at a computer. I suspect I am probably in the minority on this, but I find it a distraction to have to look at a computer at all! I wear a wrist watch, but the bike itself is a microchip free zone. No Y2K worries for my bike.

I realize that many club rides have cue sheets that assume you will have a computer, but I don't go on many of these. My idea of a group ride is RAGBRAI, where you just follow the crowd. The funny thing is, that when I did RAGBRAI on a regular bike, I was in such pain that I was deeply concerned about how much further it was. Once I started doing it on a recumbent, I hardly cared any more.





The Vision LWB USS steering linkage—John Riley



The beautifully machined DeFelice USS linkage/bars—John Riley

People with USS bikes generally find ways to mount what ever they want. Mirrors go on the helmet or glasses. Lights go into the derailleur post, head tube, or helmet. Bottles or computers go on top of the main tube. I am not particularly flexible or coordinated, but I have never felt like it was a problem to get to the water bottle that I have always kept behind my seat. Many people now use water bags fixed to the back of the seat. Still, if you are the sort of person that likes to have lots of gadgets to look at while you ride, they are much handier on the ASS bars.

Richard says that he doesn't get the claim that the view is better and that there is less distraction with USS. Perhaps it is best not to take this too literally. I think it is more of a feeling of openness with USS rather than an issue of an actual visual obstruction. In fact, the whole issue may really be one of personality type. Computer-reading control-oriented riders (dare I say uptight?) like SWB ASS bikes. Laid back go-with-the-flow types like USS bikes. Like the old joke says, all generalizations are false, including this one. Both types seem to be represented among Tour Easy riders. Still, I think there is something to be said for having a bike that matches one's riding style.

The majority of recumbents come with some form of ASS. Perhaps that is because it meets most people's needs better than USS. But it can't help the USS format that there are many fewer choices, and that the most common USS bike, the Vision, does not take full advantage of this configuration. It will be interesting to see if current producers of USS bikes, perhaps especially newcomer Gregory Peek of Longbikes, maker of the Ryan, can breathe new life into this design. It would be a shame if the USS format disappeared. Apples and oranges are both good. □

**Special thanks** to David Gordon Wilson, Dr. Paul K. Nolan, M.D., and Richard Drdul for their input on this article.

**EDITOR'S NOTES—USS:** Of all of the under-seat steering systems that I have tried, that of the Greenspeed trike is probably the best. A close second would be the Dragonflyer trike. Trikes you say? Well, as an above seat-steering fan on two-wheelers, I see no performance penalty with USS on trikes.

Of the two wheelers, the Haluzak with their bar-end extensions seem to work the best ergonomically—though it is wide. There is little chance of a control "reach" problem when bar-ends are used. As long as Shimano makes bar-con shifters, bar-ends with bar-cons will remain at the top of my list. The system loses its ergonomic prowess once Twist Grips are added to the bar-end extensions.

Here are some items to that create ergonomic problems with USS. Pay attention and be aware. Make sure there are actually benefits to the USS system you are testing out.

✓ **Controls are too far away from rider:** This is the biggest taboo for USS. Any possible benefit to the relaxed "arm-at-your-sides" position is quickly lost if you are hyper-extending to the controls. This seems to happen when wheelbases are lengthened and/or systems are improperly designed.

✓ **Steering-sticks are positioned skyward:** This makes for an ergonomic mess. Add Twist-Grip shifting and things get even worse.

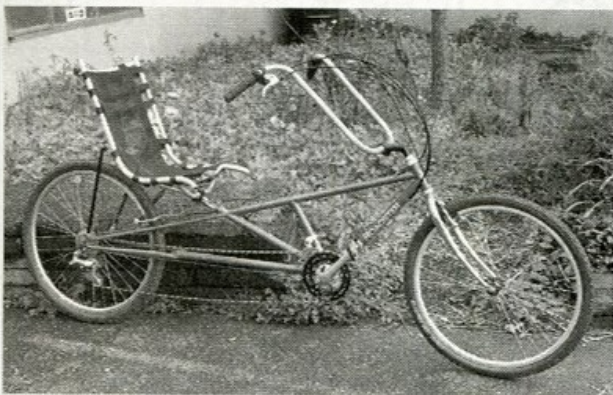
✓ **Controls too close to the seat:** I have rubbed my knuckles raw on a fiberglass shell seat before.

✓ **Under-seat tiller effect:** This happens when the wheelbase is lengthened on a direct steering USS bike through the use of a long stem.

Hand Position: I prefer the slightly forward facing bar-end approach. Vision has hands-at-the-side and S & B, Blackbent, Linear and others have straight MTB style USS bars. Find what works best for you.

It is unfortunate that USS is losing ground in the new, more mainstreamed recumbent world. Many designs are losing ground. Lets hope that a new enthusiasm for USS can change this. □

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# USS and Carpal Tunnel Syndrome

by Paul K. Nolan, MD  
AKA "The Bike Doc"

Your bike buds just called you to join them on a phenomenal ride through some shaded lanes in the rolling hill country but you reluctantly decline because of a nagging buzz that has been developing in your hands when ever you ride for more than ten minutes. What's that buzz? You may be afflicted with a common malady called carpal tunnel syndrome.

The wrist contains a tunnel formed by the carpals (wrist bones) and the transverse carpal ligament in which the median nerve and the flexor tendons of the fingers pass. Excess compression of the median nerve in this area can lead to pain, numbness and tingling from the thumb to ring fingers, occasionally the entire hand. In some individuals pain can radiate up the forearm and rarely into the shoulder. With prolonged compression, the muscles served by the median nerve become weak and begin to shrink. This is manifested by weakness in the thumb with shrinking of the thenar muscles at the base of the thumb on the palm side. Additionally the numbness and pain to the fingers will persist around the clock.

Things that can cause compression in the carpal tunnel include acute trauma, arthritis, premenstrual swelling, local tendonitis, repeated trauma, endocrinologic disorders such as diabetes and hypothyroidism. Repetitive activities such as flexion, pronation and supination (turning of the palm downward and upward) can bring on symptoms in afflicted individuals. Symptoms can flare in the middle of the night while sleeping, possibly due to positions the wrist may assume while asleep or due to a shift of retained body fluids from the legs where they tend to collect during the day to the rest of the body including the arms when laying down. The constant vibration and pressure on the wrists that can occur while cycling can be a trigger for carpal tunnel syndrome.

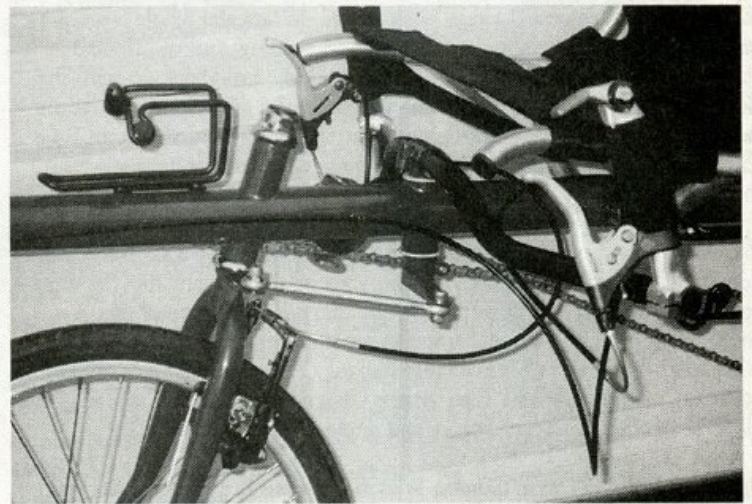
Management depends on the severity of the symptoms. If there are no signs of permanent nerve injury such as pain, numbness or thumb weakness around the clock, conservative medical management is pursued. This can include splinting of the wrist at bed time and when performing activities that typically bring on symptoms and taking anti-inflammatory medication such as ibuprofen or naproxen. If symptoms are more severe sometimes a local injection of an anti-inflammatory steroid into the carpal tunnel can bring relief. If there are signs of permanent nerve injury or if there is inadequate response to conservative management, surgical intervention is indicated. Surgery consists of releasing the transverse carpal ligament.

The ultimate solution for road riders who experience intolerable symptoms of carpal tunnel syndrome sans surgery is to change from a conventional road bike (wedgie) to a recumbent road bike with underseat

steering. USS with bar ends such as on the Longbike (formerly Ryan) Vanguard and Haluzaks in which the bar ends angle approximately 30 degrees fore of vertical puts the hands in a neutral position and minimizes flexion and extension at the wrist. Bar end (bar con) shifters should be used instead of twist shifters as the wrist have to repeatedly flex and extend with twist shifters which can aggravate carpal tunnel syndrome. Above Seat Steering can aggravate carpal tunnel syndrome in some individuals, so before an ASS set up is purchased, a rider with this malady should try some long rides on an ASS setup. If an ASS setup is chosen, set the bike up with thumb or bar con shifters for the reasons previously noted.

For those wedgie riders who happen to chance upon this article, recumbents are also the ultimate solution for saddle sores, sore shoulders, pains in the neck and back as well. I was converted to recumbent riding in the summer of 1995 after 33 years of wedgie riding and my body has not thanked me enough since.

If you do have symptoms of carpal tunnel syndrome get a medical evaluation and try some of these tricks. You too may find yourself no longer getting "buzzed off" your bike. □



Our Haluzak Horizon has a most unique USS system. It is a SWB with indirect (linkage) steering. A false head tube houses the handlebar stem/bearings. The handlebars are inverted tourist style bars. The controls are mounted on bar-end extensions. Note the retro bar-con shifters. This is an excellent system.

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—Bob Bryant, RCN

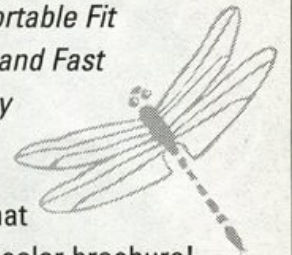
➤ Distinctive Features

➤ Comfortable Fit

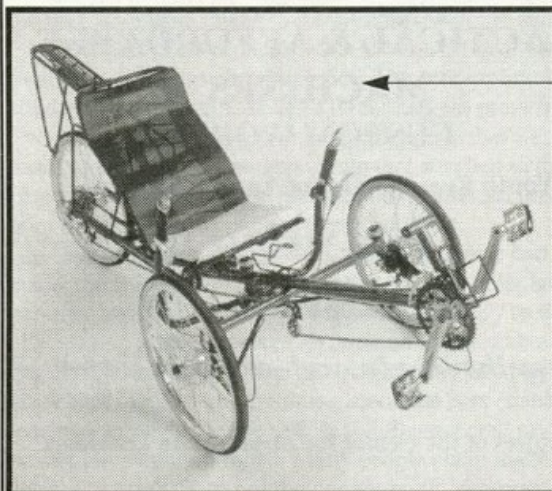
➤ Safe, Stable and Fast

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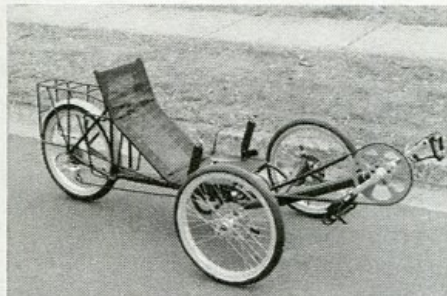


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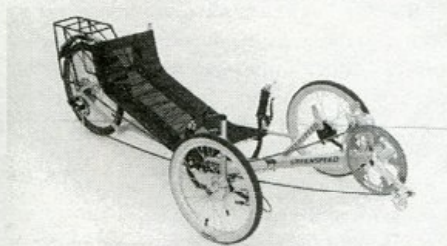
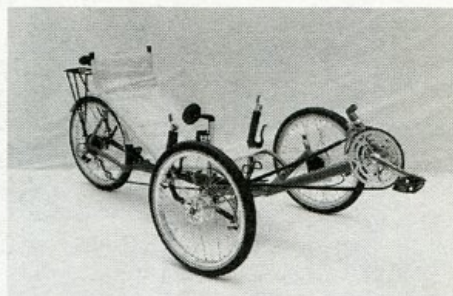




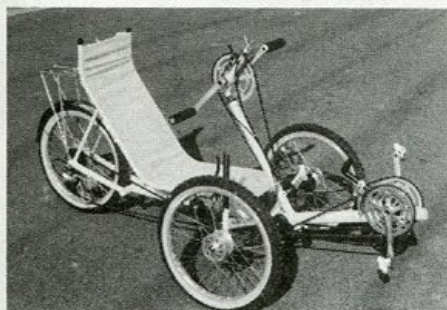
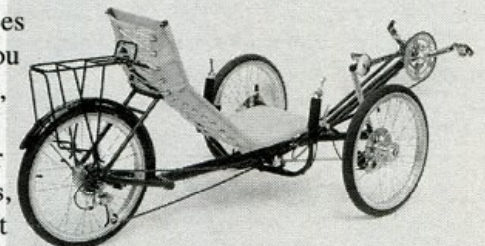
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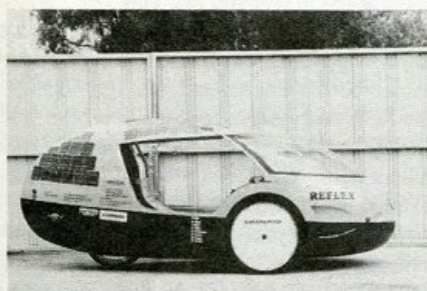
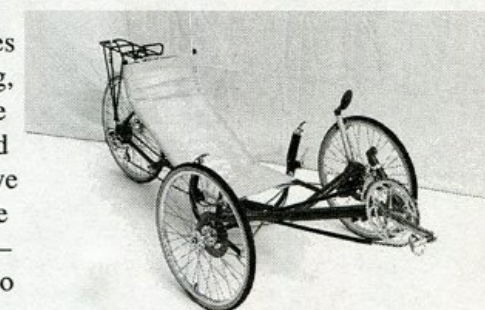
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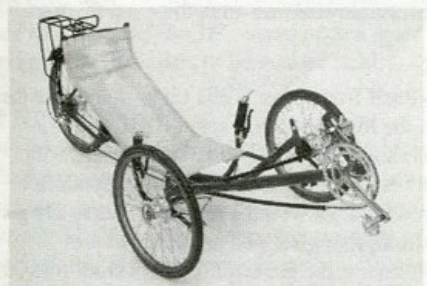
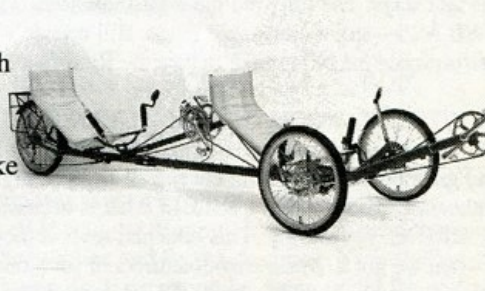
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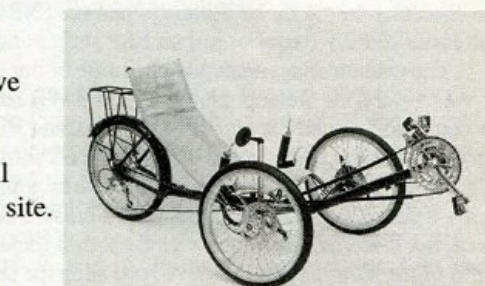
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# The Barcroft Virginia

by Robert J. Bryant

**B**ill Cook is a long time Washington, DC (WHIRL) rider and recumbent enthusiast. He has been building SWB recumbents for several years. The Barcroft Dakota has actually pictured in an issue of RCN a few years ago. Barcroft is Barcroft Human Powered Vehicles, Inc. of Falls Church, Virginia. Bill's past career was as a writer for US News and World Reports Magazine. Barcroft is the name of the neighborhood (Lake Barcroft) in which Bill lives and rides.

The Barcroft Virginia has its inspirations in the Rans V-Rex, Lightning P-38, WHIRL riders, and Bill's pal Mark Colliton (V-Rex co-designer) has had some input into the designs. As much as Bill doesn't seem to want to admit it, this bike even has some Counterpoint Presto inspiration in the bent mainframe tube and ASS unit (we still love the old Presto).

The idea for the bike is that of a fast, comfortable and elegant custom built SWB with high end components and an attractive curved maintube. A low bike for the fast performance rider looking for something less mainstream than what is currently available—and most importantly likes to lay their seat back in an extreme reclined position.

## ■ FRAME & STUFF

The Virginia is low and sleek and unlike any SWB on the market today. The smooth and rounded lines make it more difficult to produce, and make for a very stiff and strong frame. The 2" CroMo maintube is custom mandrel bent for Barcroft for both looks and performance. The frame tubes are TIG welded. Our beta test bike's welds were satisfactory, though not as nice as ones we rave about (Rans & Haluzak). Bill says the production models will be improved.

The forks are off-the-shelf unicrown CroMo—unless you specify the pricey optional AMP suspension fork. The seat is a 1999 Rans mid-back seat with full recline capabilities. The seat rests on a special Rans seat channel mounted to the main frame. The Rans sprint braces bolt into the seat stays. The fully recline-adjustable Rans Flip It is state-of-art SWB ASS—still the best unit made. Bill couldn't have picked better performance hardware than that of the Rans Company of Hays, Kansas.

## ■ DRIVETRAIN/CHAIN MANAGEMENT

The drivetrain is exceptional. The mix of XT and 105 is a hard working and great choice for recumbent riders. Bill is a high-performance enthusiast, who also has a sense of what is necessary for durability and TOURING, yes touring. This bike had several thousand touring miles on it when we got it. Many manufacturers of such bikes look too hard at the bottom line rather than what will work best on the bike. I am curious why the choice of the "Attack" shifters, when the ESP 9.0 offers such better and faster shifting (requires just an ESP shifter and rear derailleur).

The chain management and chainline of our beta test bike was a problem—and the weak point of any low SWB recumbent. Bill is a bit shorter than I. When I set up the test bike—and slid the seat back into position—all felt pretty good. The first time I shifted into granny low to climb a hill the drivetrain sounded like it was going to saw the frame in half—a godforsaken loud buzz-saw of a noise. People stared in bewilderment. So, it seems as though I was the tallest (deja vu Vision R40 test 1/99) of the Virginia test riders. As you slide the seat back on the track, the seat gets lower and moves into the path of the chain—thus the chain started sawing a path through the Rans seat base. Bill and I decided that a BikeE chain tube would temporarily solve the problem for this 6' road tester. Barcroft production models will have the idler moved rearward a few inches—which should solve this problem.

I should mention here that the chain path and tolerances are pretty tight on this bike. At rest, the chain rests on the chain stays. Under power—all seems fine, though very close, indeed. The idler is a modified

cartridge sealed chain idler wheel with two grooves routed into it—one for the upper chain, one for the lower chain, in an "X" over-and-under format. The idler also slides on its mount as the chain moves side-to-side during shifts.

## ■ WHEELS & BRAKES

Bill has been my nemesis on the internet HPV list ([www.ihpva.org](http://www.ihpva.org)) when I have ranted about my dissatisfaction with V-brakes (adjustments, etc.). I did feel vindicated when the beta Virginia's V-brakes squealed like a banshee under full power. Bill responded that they were just out of adjustment. I rest my case. Bill's bike has exceptional Shimano Deore XT V-brakes that stop this bike on a dime. Some may argue whether this much braking power is necessary—though most people like it in contrast to the wimpy recumbent brakes of the past. Though I really do like V-brakes these days—just make sure they're adjusted before you send them up to RCN for testing.

The Barcroft wheels are a very durable 559mm 26" rear (our favorite full size recumbent back wheel) matched with a 349mm 16" front wheel. Barcroft hand-builds all of the wheels, so they should be on par with the high-end and custom spec guys. What is a trade-off with the Virginia is the 359mm 16" front wheel. The matching Primo Comet tires are a fine tire set, though are not the most durable tires. And with the 359 16"—this is your ONLY choice for a decent front tire. If this concerns you, bag out on the Virginia and go for the 20" front wheeled Dakota (a taller bike).

## ■ COMFORT—THE RANS SEAT

Rans uses it, Trek uses it. Angletech uses it, and now Barcroft. The ergonomically shaped mesh back is comfortable, breathable and you can really push hard into it without much "give" or push-through—which separates it from most recumbent seats. The seat base is a high-tech tractor-like seat base that is curved to cup your rear end.

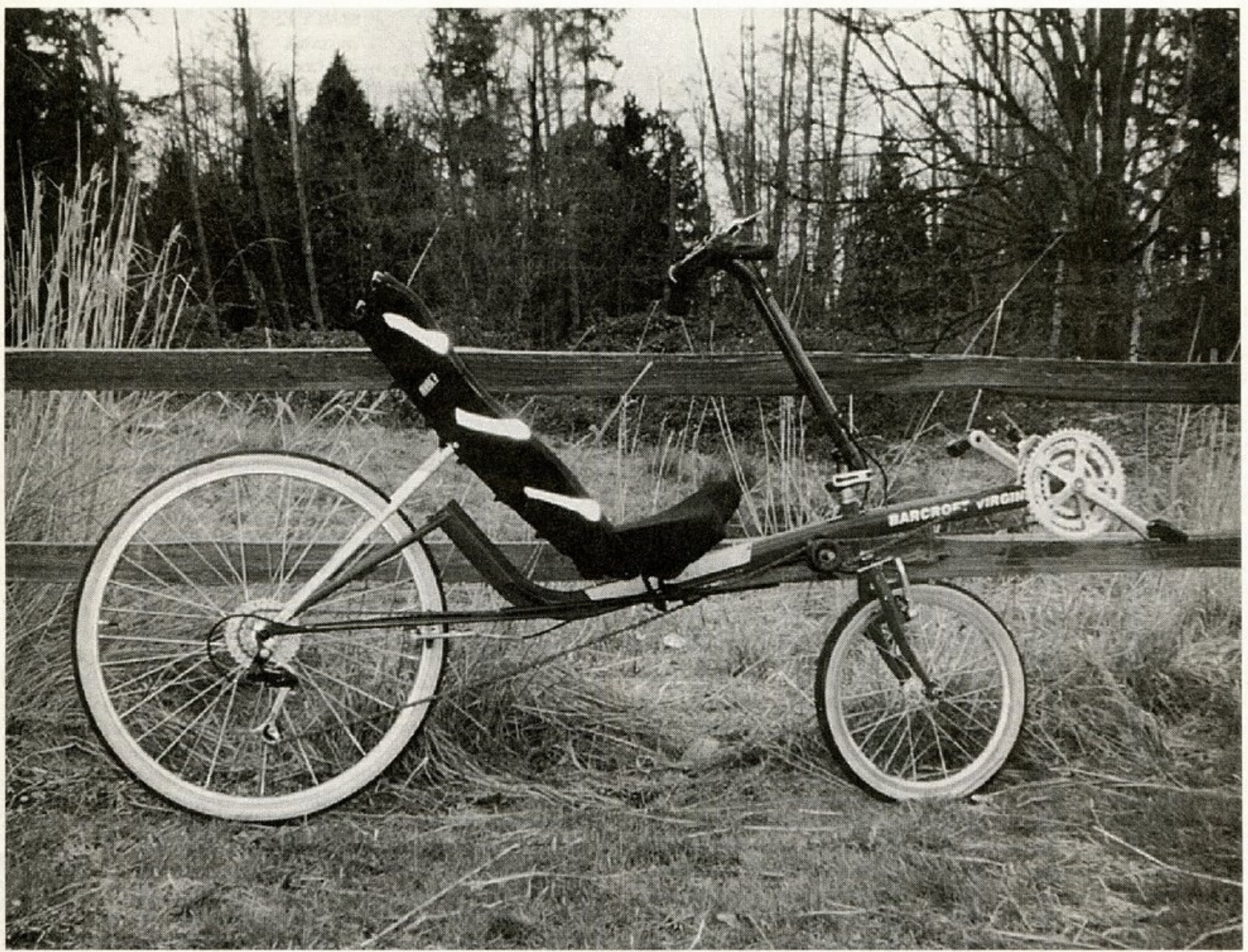
There have been some changes for '99. The built in Taiwan seat has a formed and ribbed ABS base, new padding, cover and it is even more comfy than before. The new foam base is thicker and more gel-like. We heard from a few long time Rans seat riders about the new base foam. One commented, "I hate the seat base foam. I rode it seat for 30 minutes and it gave me recumbent butt." Bill Cook responded, "I think some hardcore riders won't like the new foam as well as the old (I personally use a very thin pad). But everyone who has ridden the new seat likes it better. Not everyone is a hardass." Rans' John Schlitter says that they are looking into the foam and seat cover issues at this time. The Rans seat remains a very comfortable seat and an enthusiasts favorite.

## ■ RIDER ERGONOMICS

Where the Barcroft separates itself from other SWB bikes that utilize the Rans seat (and Flip It) is with the high bottom bracket (BB). Bill is a high-BB advocate and it is his thing. Personally, I have problems with high BB's. Toe numbness, foot circulation issues, and lifting your feet up 5.5" above the seat just doesn't work well for me. Most riders can get accustomed to this riding position, though if you are prone to toe numbness and foot circulation issues, the Barcroft may not work for you.

If you do like the idea of high, extreme and euro-BB's—your're going to love the Barcroft Virginia. In saying all this, I will admit that the Barcroft is far more adjustable than many high-BB bikes. The seat is fully reclinable—thus still offering a moderately open (to a closed) riding position. Another aspect of this bike to keep in mind is that as you recline the Rans seat, the forward tip of the seat base rises up in the air—making a high BB almost necessary. If you have decided that a high BB is for you—the Barcroft ergonomics are excellent.





Our Barcroft Virginia test bike at home in Kent, WA. We promise to find another photo spot.

#### ■ THE RIDE

Recline the seat way back. Recline the Flip It Riser back some more. Climb down into the saddle. Lift your legs way up, and hit the gas. The Barcroft Virginia flies low to the ground. The handling at low speeds is not as lively as many other SWB bikes—primarily due to the low center of gravity, high bottom bracket, longer (short) wheelbase and heel interference (front wheel). However, once you are rolling, the Barcroft slips into hyperdrive and you are quickly cruising at warp-speed in a new experiences that is unlike your old 3-foot wheelbase SWB machines. The Virginia is an able and stable handler—at just about any speed you dare take it up to. The 16" wheel adds a spirit of liveliness that many riders love and the bike likes to be pushed hard.

#### ■ THE COMPANY

Bill Cook's Barcroft Human Powered Vehicles is a brand new company. The first production bikes have just been built. Barcroft is a two-man company, hoping to build high-end high-performance recumbents to extreme kinds of riders (who may not find what they like in the current market). Bill is outsourcing frame building and painting of the Barcroft bikes—though will personally do many of the aspects of building and selling bikes.

#### ■ OPTIONS & ACCESSORIES

At this point, there are few options and accessories. The most notable upgrades are a custom modified AMP suspension fork and the choice in models between 16" front wheel and 20" front wheel. The drawback is that the low seat, seat recline and full size rear wheel do not allow the use

of a Rans seat bag on the Rans seat. Rack mounting may also be a problem. This is a sport bike—tourists will need to bring BOB.

#### ■ RANTS & WOES

We had chainline problems due to the low seat and close tolerances of the design. Initially, the chain was sawing a path in the Rans seat base. We solved it with a BikeE chain tube. Barcroft has repositioned the idler which is said to solve the problem and fix the chainline. Nevertheless, the chainline tolerances between the large maintube, stays, under the seat and over and under the "X" path idler are very tight.

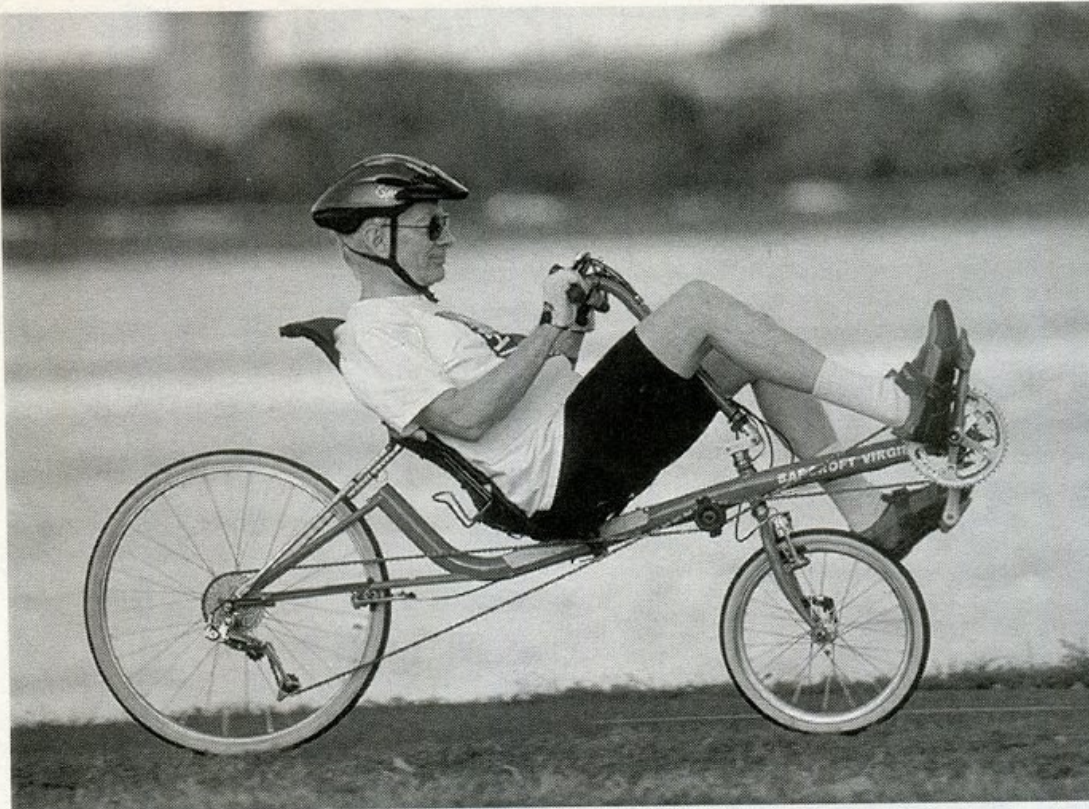
#### ■ VERDICT

The Barcroft is *not* exactly an affordable bike, nor is it an exceptional deal. And the company is brand new with no track record. What you do get is a bike unlike any other built today. This low, stable, high performance ride is alone in its class—going up against the likes of Tim Brummer's P-38 and the (less extreme) Vision R45, Haluzak Horizon and the V-Rex.

The component selection is exceptional with just two minor rants in the tiny 2-finger brake levers and 16" Primo Comet front tire. The Comets have been a recumbent gift from above, but they are a high performance tire (read wimpy)—and the 349mm front wheel locks you into a Comet as your only tire choice. And then there are those V-brakes. We love them when they work perfect, and hate them when they squeal or have a tizzy fit when we try to adjust them. And don't think it's just my lacky wrenching abilities, I've heard V-brake squeawks from the best of 'em.

This test bike was a preproduction prototype. I don't like to test prototypes, but made an exception with the Virginia. The bike appears





Bill riding the Barcroft Virginia in Virginia on the Potomac

tough and sound and has the proven Rans systems. Pal of RCN, Mark Colliton, was looking over Bill's shoulder many steps of the way in design—and this is good. Barcroft subcontracts every aspect of the build. The paint, welding and finish quality is excellent. The welds are on par with the Hays-built Rans bikes.

Don't expect lots of hand holding with a Barcroft. There are no dealers, no owners manual, only a few past customers, and only a hand full have been shipped yet. What you will get is a cool bike from an enthusiast who loves fine recumbent bikes—and his mission is that you will share in his view of the perfect SWB.

The SWB arena is overflowing with recreational and sport touring models. This one is truly different than the rest of the pack. It's low, has a longer wheelbase and a flat out real world performance mission. So, if you're feeling low-down and extreme —this may be your new bike. □

### ◆ New For 1999

◆ New Model

### ▲ Pros

- ▲ Mark Colliton (co-designer of the V-Rex)/Bill Cook design
- ▲ Proven Rans seat comfort
- ▲ Proven Rans Flip It stem/bar/riser
- ▲ Modern no-excuses 9/27 speed Shimano drivetrain
- ▲ Low fast and stable SWB handling
- ▲ Finally a worthy front suspension fork (optional AMP)
- ▲ A Low SWB to compete with the P-38!?
- ▲ High speed handling is great—flying low

### ▼ Cons

- ▼ Low SWB=chainline woes/close chainline tolerances
- ▼ Shimano/SRAM doesn't shift as fast or as precise as ESP
- ▼ Brake levers are for small hands
- ▼ High bottom bracket not for everyone
- ▼ New small company
- ▼ Yet another new and expensive SWB (yawn)
- ▼ Low speed handling only okay

### ■ ACCESS

**Barcroft Cycles**  
 Bill Cook  
 Tel. 202-955-2493  
 Email: bill@barcroftcycles.com  
 www.barcroftcycles.com

### ■ RATING

- ✓ **Comfort** — B +
- ✓ **Design/Style**— B+
- ✓ **Drivetrain** —A -
- ✓ **Chain Management** (Noise/Vibration)—C (since improved)
- ✓ **Brakes/Braking**— B - (small brake levers & V-squeal)
- ✓ **Finish Quality** (welds/paint/preassembly)—B+
- ✓ **Performance Potential**—B +
- ✓ **Rider Ergonomics**—Fully reclinable seat + very high bottom bracket=extreme/advanced riding position
- ✓ **Best Use**—Serious, advanced high performance riders doing club rides and light touring (16" wheel limits touring).
- ✓ **Best Rider Size**—Medium to tall. The one-size frame fit me perfect.
- ✓ **Recommended Weak Points/Upgrades**—Our bike was a beta, we'd like to see how the chainline and chain management works on the new production

version (word is that it works great). Consider limited tire availability (front 16") and Grip Shift "Attack" shifters as *not* being state-of-the art.

- ✓ **Touring**—Poor load carrying options and 16" front wheel make this one a credit card tourer or tow a BOB trailer.
- ✓ **Comparison to Market Competition**—More expensive than a Haluzak Hybrid Race, more affordable than a Vision R45 and a better value than a P-38 (though a heavier bike).
- ✓ **RCN Performance Potential**—A -
- ✓ **RCN Value Rating**—C+
- ✓ **RCN "Bob" Rating**—B+ (more if you like extreme riding positions—high bottom brackets)

MODEL.....	Barcroft Virginia
TYPE.....	SWB (short wheelbase) above seat steer
WHEELBASE.....	47"
SEAT HEIGHT.....	19.5"
BOTTOM BRACKET HEIGHT.....	23.5"
WEIGHT.....	est. 28 pounds
FRAME.....	TIG welded 2" dia. 4130 CroMo with mandrel bend
FORK.....	CroMo unicrown
STEM/BARS.....	Rans Flip It ASS
SEAT.....	Rans mesh back/foam covered composite base
<b>COMPONENTS</b>	
CRANKSET.....	Shimano 105 30/42/52
BOTTOM BRACKET.....	Shimano 105 sealed
HEADSET.....	Ritchey Logic
DERAILLEUR-REAR.....	Shimano Deore XT Super Long Cage
DERAILLEUR-FRONT.....	Shimano 105
SHIFTERS.....	SRAM Grip Shift Plasma 9/27 speed
CASSETTE.....	Shimano 11-34 Mega 9
GEAR INCHES.....	22-118
WHEELS.....	559mm 26" rear and 406mm 20" front
TIRES.....	Primo Comet
HUBS.....	Shimano Deore XT
RIMS.....	SunM14A SS spokes
BRAKES.....	Shimano Deore XT V-Brake
WARRANTY.....	Frame: lifetime orig. owner/seat 1 year
COLORS.....	Guards Red Powdercoat/Clearcoat
PRICE.....	\$1995 Factory Direct + shipping
NOTES Barcroft will also be offering a 26/20 SWB with a similar frame called the Barcroft Dakota, same specs in white (color) with a seat height of approx. 20.5". The aluminum AMP suspension fork is a \$295 option.	



# Barcroft Design

by Bill Cook

wmjcook@mindspring.com

As some of you know who follow the internet HPV mailing list<sup>1</sup>, I've been fiddling with recumbent designs for the past several years. My riding buddies in WHIRL, Washington's Happily Independent Recumbent Lovers, have been a wonderful source of ideas, encouragement, and criticism. Mark Colliton, in particular, has been enormously influential. For example, he suggested that I look at curved monotube frames, now the distinctive design feature of Barcroft bikes.

My past efforts have been as a hobby builder, brazing away in my garage. Now my long-time friend, Will O'Neil, and I have formed Barcroft Human Power Vehicles, Inc., to build a limited number of bikes for sale. Will has been around exotic vehicles for a long time. He was one of the chief engineers for Lockheed-Martin's F-22 Raptor fighter. Paul Collier, a riding friend from WHIRL, is joining our little band as chief wrench. David Ross, who operates Outback Bicycles, Inc., in Rockville, Maryland, fabricates Barcroft frames to our specs. Tubodyne, Inc., of East Providence, Rhode Island, is mandrel-bending our tubes.

Will, Paul, and I will pitch our wares through RCN, our web site, [www.barcroftcycles.com](http://www.barcroftcycles.com), and Mark Matarella's site, [recumbents.com](http://recumbents.com). We hope to have some fun building premium-quality recumbent bikes for discriminating customers. And if we do it right, perhaps we can advance the state of the recumbent art just a bit in the process.

Barcroft's goal is to design and build recumbent bicycles that are low, fast, comfortable, and elegant. Our bikes have a simple grace and style all their own. They make a statement that recumbents can be just as handsome as fine upright racing cycles. A Barcroft Virginia looks distinctive because it is built close to the ground, the seat is steeply reclined, the monotube frame is smoothly curved, and the wheelbase is much longer than is usual for recumbents with the pedals in front of the head tube. These elements, however, are not just for style. They make the bike ride and handle exceptionally well.

The heart of the Barcroft design is a stiff, strong frame made from a curved two-inch chromoly tube. There's a slight bend at the head tube; at the rear the frame swoops up to provide mounting points for a very strong rear triangle to hold the rear wheel firmly in place. (The bikes can pull a heavily loaded BOB trailer without shimmying or flexing.) Mandrel-bending big chromoly tubes is expensive—few companies own the proper equipment—but the result, to my eye, is worth the extra cost.

The Barcroft riding position—using the acclaimed Rans seat—is

what makes the bikes so comfortable, especially for long rides. Imagine a standard recumbent with a straight up and down seat and pedals mounted lower than the seat. Now rotate the seat and pedals so the pedals are substantially higher than the seat and the seat back is more reclined. That's what we do, and there's a good reason. With the seat laid back, more of the rider's weight is carried on the back rather than on the bottom. Less weight on the rider's bottom means less chance for a sore butt. I'm not a strong cyclist, but with the laid-back Barcroft riding position I can do a century and simply be tired at the end. No aches, no pains, and, most important, no recumbent butt. There's an extra dividend: The comfortable, laid-back riding position is also more aerodynamic. More comfort and more aero is a win-win proposition.

Barcroft bikes are lower than most other recumbents, and there's a good reason for this: Low bikes look cool. Of course, there's also a practical side. A short person can easily ride a Barcroft Virginia, which has a 16-inch front wheel and seat height of barely 18 inches. (The Virginia is great for taller people, too.) The Barcroft Dakota, available soon with a 20-inch front wheel, has a seat height of 20 inches. The low frame and seat make it easy to put both feet flat on the ground while stopped at traffic signals. With the Flip-It handlebars, climbing on and off the low bikes is a cinch.

The longer wheelbase makes for more stable handling. Most recumbent bikes with the cranks ahead of the fork have rather short wheelbases, sometimes less than 40 inches. Barcroft bikes have a 47-inch wheelbase. The extra length makes the bikes rock solid on long downhill runs. Weight distribution is ideal: 50 per cent front, 50 per cent rear. The long wheelbase also means you can brake the front wheel extremely hard without fear that the bike will flip over.

Why two different bikes, one with a 16-inch front wheel, one with a 20? The same reason that Safeway carries both chocolate and vanilla ice cream. Tastes vary. I prefer the lower bike, the Barcroft Virginia, with the smaller front wheel. I understand that some people like larger front wheels, so we will build that bike, too. We won't make the same frame accommodate both 16- and 20-inch front wheels, however. Each bike has its own geometry. If we're successful with the Barcroft Virginia and Dakota, later we may introduce other models. By naming our bikes after states, we have a lot of room for expansion. □

<sup>1</sup> See [www.ihpva.org](http://www.ihpva.org)

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# Charles Mochet and The Velocar Part II

by Georges Mochet

French-English Translation by Nola Fetters

Intro by Francine Mochet

Liaison and historical consultant Emmanuel Delannoy

Story idea and original letters/questions by Dave Stephens

Photos courtesy of Georges Mochet and the Mochet family

Photo prep by Dave Stephens and Mark Colliton

Editing by Nola Fetters, Dave Stephens, Bob Bryant and Paul Arends

## ■ The Vélo-Vélocar—Francis Faure and the World Records

On October 22, 1932, with the prototype testing behind him and desirous of beginning production of this bicycle in line with the standards of the official cycling organizations, my father contacted the U.V.F., requesting the conditions that needed to be met for a machine to be admitted into competition for official record setting.

In a letter of October 27, the U.V.F. sent back a copy of the first paragraph of article 31 of the regulations for racing, which stated as follows: "The machines of all types are admitted furnished or not with accessories such as gear shift, free wheel, etc..., on the condition that it function only by the force of the rider, that it not include any apparatus designed to diminish air resistance, and that it not exceed two meters in length and .75 meters in width, in order to fit the layout of an official racing track place width and lane. This regulation applies both to racing and to the setting of records."

A thorough reading of the above rules confirmed that nothing stood in the way of manufacture and competition.

Everything approaching readiness, the process of choosing a rider began in earnest. During the exposition called Salon du Cycle 1932, various riders were contacted and candidates were discussed. Finally, Francis Faure was chosen, partly on the recommendation of a journalist whose name, I believe, was Decurgis.

Faure was a good-looking blue-eyed blond of average height. His brother Benoit Faure had already made a name for himself in the Tour de France. Faure chose the track. A racer of American, or relay races he had participated in several six-day competitions and had even won the six-day competition of St-Etienne, with Von Kempren. Although born in Ambert, Faure was called "le Stéphanois" by his peers.

Faure was a rapid rider, more a sprinter than a distance racer, and it showed in his records; his sprints for pure speed were more impressive than his long competitions. He took to the machine effortlessly and left for a training session in the Loire.

When he returned, Faure began training in the Parc des Princes where, in preparation for challenging the then-current records, he officially beat the records for two, three, four, five, and six kilometers in addition to those for 10 kilometers and on May 5, 1933, those for 15 and 20 kilometers.

## ■ L'Ami du Peuple, August 11, 1933

Francis Faure on the Vélocar has set a new World Record. In the article, it mentions that to gain 3 minutes over 77 is better than 40 meters over 45,000 meters.

## ■ l'Auto, August 10, 1933

Still the defender of the "tennis racquet" or conventional style bike, this article mentions in the title, in big letters: "Pierre Linardi has failed in his record attempt"...then in smaller typeface the most important event: "but, Francis Faure has succeeded in beating the world record in 1'3"3/5. (record of Michaud 1'6"3/5)."

With the request for official recognition of these records began nearly a year of argument among the sports cycle press on what was—or was supposed to be—a bicycle. In order to be the object of adulation of sports competitors, it was moreover to permit in the future a debate on the weight and efficiency of the thighs of the racer carried to its pinnacle rather than a vehicle permitted to evolve, to progress—the consensus was that the bike was only a machine and not a direct factor in the sport of bike racing.

From the start, the French athletes—not to be chauvinistic—recalled that Francis Faure was winning a great number of records for the glory of France; something to consider. This same reflex had the opposite effect on the Swiss and Italians, whose records were being bettered (Egg, Binda). This shows the objective spirit displayed by a National Delegate in a Congress.

On July 10, 1933, the U.V.F. was sent a request for official recognition of the records of Francis Faure as French record holder and World Record holder. The U.V.F., having set forth the rules governing the races, officially entered the results without a problem and asked that the U.C.I., in the course of its Congress of August 11, examine the dossier for official recognition as the World Record. This Congress reported its decision on February 3, 1934, the date of the following Congress. Of course, the discussion was resumed, with "fors" and "againsts" with more or less sincere and objective argument on: "What exactly was a bike?" (It wasn't the same for everyone.)

To further complicate things, on April 29 a young French racer turned in the performance of the hour on the vélodrome of Saint Fron in Belgium. His name was Maurice Richaud, and he turned in 44 km 777; which beat the record of Egg (who went immediately to measure the track to make sure) but which was inferior to that of Francis Faure.

There were thus two contenders for the record: the one, champion of the "retros" or conventional machine rider; the other, champion of the "moderns." Fuel for the polemic fire.

Another very important event in the story of the H.P.V.'s was the presentation in September of the Vélocar, a machine conceived by Riffard and piloted by Marcel Berthet. We have already spoken of Berthet. He competed against Egg before WWI for the then-current World Record, Egg having become his successor.

Berthet had in that pre-war period piloted the first H.P.V., to my knowledge. It was a classic bike with fairing in the form of a rocket hull where only the bottom of the wheels, the lower part of the pedals, and the feet at their low position penetrated the bottom of the fairing.

This machine, developed by Runeau-Varilla, was high performance and could easily have been, it would seem according the trials, able to achieve 50 km per hour with a racer of Berthet's caliber if a tentative effort had been made in that direction. This machine was called "Vélo-Torpille." It was also called "Berthet's Egg."

Marcel Berthet retained both its memory and regrets. Always on the bike; making bike saddles (Trouin and Berthet "Ideal Saddle"). At the age of 47, he decided to make a record attempt in the "Vélocar" cycle whose fairing was a conceived by Maurice Riffard—a world-class aerodynamics expert—and constructed by Caudron Airplanes. Maurice Riffard had worked with the shell and fins of Caudron Renault design, a fairing which had carried off the German Cup several times.

At the end of one September afternoon when we were at the vélodrome of the Parc des Princes, my father, Francis Faure, and I saw Bertier and Riffard arrive with their machine for trials and adjustments on a track setting. Even at first glance, we didn't think it would be faster than our design; but we were mightily mistaken because in spite of some necessary adjustments and fine tuning still to be done (for example, the rear drive later disappeared), it attained more than 50 km per hour.

My father, at the outset, had wanted to construct a faired bike. That goal had been set aside because the unfaired original model had seemed so efficient. From that moment, however, my father and Berthet became friends with the same goal: the progress of bike design and the competition of sporting adversaries, because each wanted to make the fastest



To the Congress of the U.C.I. of February 3, 1934  
The Question of the Horizontal Bicycle Open Letter to the Gentlemen of the Congress

Dear Delegate:

I, the constructor of the so-called "Horizontal pedal bike" on the subject of which the last Congress of the U.C.I. reserved in part its judgment, am taking the liberty today to direct your attention to certain facts of nature in order to clear up this question.

On October 26, 1932, having finished the trials of the new bicycle, and desirous before beginning manufacture of a series of them of their being legitimate with the organizations which regulate the cycling sport, I asked the U.V.F. which conditions were necessary for a machine to be admitted into competitions for records.

In its letter of October 24, the U.V.F. sent me back the first paragraph of article 31 of the rules for races, restated below: "Machines of all types are admitted furnished or not with accessories such as speed changing gears, free wheel, etc...on the condition that they function only by the sole force of the rider, that they carry no additional apparatus designed to diminish air resistance, and that they not surpass two meters in length and 75 centimeters in width, for machines taking up one length and one lane."

And the letter terminated thus: "This rule is applicable to races as well as to record trials." I was then reassured by the reading of the rules of the U.C.I., which are moreover drawn up in the same terms, that nothing from that point on would be an obstacle to the commencement of manufacture nor for official attempts for record setting and for the posting of such records as official.

It was with this information that I released to the press the records established by Francis Faure. You will not fail to appreciate, given the above conditions, the sense of injustice we have suffered, the disregard of the rules under the shelter of which I place myself.

Moreover, what is there to find unacceptable about this new bicycle? That the cyclist is bent back against his back rest? But the ordinary cyclist pulls on the handlebars. That his profile is reclining? But the classic cyclist's profile is reclining forward.

One has claimed that those who would compete with this machine would have an unfair advantage. But in a sport that is not uniquely athletic, in a sport where the machine has its role to play, progress is born and imposes itself each day. Isn't that natural? The bicycle is made lighter, the air-filled tire has replaced the solid one, the tubular tire replaces the one-piece, etc.... Everybody profits from these changes, and everyone is free to use a lighter bicycle, tubular tires, gear shifting, etc.... Everyone is even free to construct or have constructed bikes that pedal horizontally.

There has been talk about establishing a category and competitions especially for these machines. This concept is unjust, because competition was created to reveal at the same time the best racer and the best machine. Placed in a category apart, it would be impossible for bikes that pedal horizontally to demonstrate their superiority to classic machines. From the moment that a new bicycle shows conformation to the rules of the U.C.I., give it the right to compete by the pure and simple application of these rules. Any other solution would be contrary to the custom of "fair play" practiced in any true sport, and contrary to simple logic.

Moreover, wouldn't the elimination of the new bicycle create a somewhat paradoxical, not to mention ridiculous situation, by attributing the title Champion of the World in Speed to the one of two cyclists which would be less fast, because of the unique and bizarre motive that the slower cyclist's bicycle is of an older and more widespread model than his competitor? Two points to conclude: whether the horizontal bike is an error without a future; in this case it will disappear as it came and will be quickly forgotten; or whether, on the contrary, if as chance would have it, it represents progress, from which all cyclists moreover are able to benefit. In this last case, I am certain, however slight the progress, you would not want to undertake the responsibility of impeding its manifestation.

In this hope, please accept my sincere regards,  
CH. MOCHET



G. Mochet on a VV Parc des Princes 1934

This Congress made official as World Record the performances achieved by Francis Faure on his horizontal bicycle. On the other hand, it envisaged changing the rules: a commission charged with that purpose was to establish for the next congressional session of April 1, a new definition of the bicycle.

A certain partisan so-called sports press of the conventional "tennis racquet" variety was bemoaning the fact that Maurice Richaud was not granted title of record man of the world, omitting to say that he had not been. His performance was inferior and later than that of Francis Faure. It is also important to acknowledge that another faction of the sports press, attached to the respect of the rules, felt the decision was just.

We therefore await the reunion of April 1 in order to see which definition of bicycle will issue from the congress of international experts.

During these years which ran from our first sports researches, for us personally, everything was going well except the health of my father, which began to deteriorate around the beginning of 1934. The Vélocars were selling well, and the business headed by my father, my mother, and my cousin Alexandre was prospering. During this period, I was at university. The customers for the four-wheelers and the two-wheelers were satisfied, and were recommending us to others. Another chapter will be dedicated to these cordial relationships established during this period.

Here is what appeared in the newspaper of L'Union Vélocipédique de France on June 7, 1934—the new definition of the bicycle: "Following the vote of the international cyclist union, conforming to the decisions of the Congress of February 3, 1934, the following is decreed:

Article 2 of the rule of World Records will be amended as follows:  
World Records Article 2 The world records recognized are the following for three categories of records, to wit: First—records made without anyone in front to reduce wind resistance. Second—records with human aid. Third—records with mechanical aid.

Translation note: the problem lies with the word "entraîneurs"

machine but both were true sportsmen.

The events that I relate happened more than 60 years ago, and fortunately, to refresh my memory, I have many newspaper cuttings from that period and the complete correspondence between my father and Marcel Berthet.

I will return later to the Vélodyne, when discussing the records it achieved and the reasons there were for the Ets Vélocar to take them up again. After the "Richaud and Berthet" interlude, it is necessary to come to the Congress of the U.C.I. of February 3, 1934, and to know what was decided there. A little before the Congress my father had sent to the members a letter from which I have already cited a few passages but which merits being reproduced in totality:



which normally means coach. Emmanuel thinks in bike terms it means with no one in front to reduce wind drag. Here, though, either definition seems like nonsense. Of course, maybe that's because the rule modification was nonsensical and meaningless.

For the records in categories one and two, the only bicycles that can be used are those derived in article three of the rules for racing.

For the records in category three, the only bicycles that can be used are those defined in article 2, paragraph C of the rules of the World Records.....One cannot officially recognize as world records distance less than one round of a track....."

The following was also inserted: Free Records Article 13—In addition to the regulation rules established in article 2 of the present rules, the U.C.I. recognizes the free records, whatever the type of bicycle used, but on the condition that it be at all times exclusively under human propulsion by muscular power and that the method for preparation for these record with human or mechanical aide be that provided by the rules of the records.

Article 3 of the rule of races will be from this period revised as follows: Article 3: Machines of all types are admitted furnished or not with accessories such as gearshifts for speed changing, free wheels, etc... on the condition that they function only by the sole force of human power, that they include absolutely no mechanism designed to diminish the resistance and the penetration of air and that they take up a space no larger than two meters in length and .75 meters in width for machines with two wheels and one seat.

These machines must from this point correspond to the following characteristics (translators note: drawing on page 19 of photocopies is at this point) a) the distance between the axis of the pedals and the ground (E-B) be 24 centimeters at the minimum and 30 centimeters at the maximum. b) the distance between the verticals passing by the metal tip of the beak of the saddle and the axis of the pedals (A-B) will equal or be greater than 12 centimeters. c) the distance between the verticals passing by the axis of the pedals and the axis of the front wheel (B-C) must be a minimum of 58 centimeters and maximum of 75 centimeters. d) the distance between the verticals passing by the axis of the pedals and the axis of the wheel AB (B-D) must be equal to or less than 55 centimeters.

All propulsive action, whether circular, alternative, or whatever determined by the means of the hands, is forbidden. The use of protective screens, windcutters, fuselages or any other means of diminishing air resistance when in forward motion, is forbidden as described above."

Joy reigned supreme among a certain sports press, as shown in a headline from "l'Auto:" "Maurice Richaud once again becomes official World record holder of the hour."

In the other camp, a more sporting sports press disapproved this new definition of the bicycle. The article of Sébastien Guichard, appearing in June, 1934, sums up this position rather well:

"Halt to Progress" Is it in doubt that we are in a period of constant evolution? A motorcyclist recently broke the world record for speed at more than 220 kilometers an hour. Cars have surpassed 400 km per hour and it is no longer unusual to see them surpassed 200 km per hour in certain speed trials; airplanes knife through the sky at considerable speeds; ferryboats fight for supremacy of speed on their ocean runs and track-driven vehicles show that railways can also give birth to records. In order to do this in all domains, one refines the first elements that have enabled the first steps on the path to progress. With the automobile, one tries sometimes sensational solutions and one always searches for and finds something new. Provided that certain principles be respected, the results obtained have their worth. Evidently, one could parallel the performances of the airplane and that of the automobile, because these two have an element in common—the motor. But one is satisfied when a front-engine vehicle gives better results than a rear-engine vehicle and one does not dream of establishing a difference of classification because the new permits a faster time than the second.

All this is preface for our state of mind in the presence of the new definition of the bicycle just coming from the Union Cycliste Internationale. This definition quite simply rejects the horizontally-pedaled bike which has permitted Francis Faure to beat the hour world record.

On general principles, who wants solely to consider as bicycle a vehicle with two wheels, moved by the muscular force of man, and using

absolutely no mechanism to diminish air resistance, to which are added measures that have no consequence other than to freeze the current shape of the bike with absolutely no possibility of improving it from the sports point of view.

In a completely arbitrary manner, the congress has frozen requirements for the distance between the ground and the pedals, between the pedals and the seat, between the seat and the rear wheel, between the pedals and the front wheel: the limits accorded once attained, absolutely no progress is possible except perhaps that which consists of replacing the circular movement of the pedals by a balance movement up to the day when the rules will then be revised in favor of the former method.

This cult of the old things is, frankly, disconcerting and one is surprised that people who call themselves athletes—having therefore by essence the love of progress—make it shown to the contrary than they are characterized by the spirit of routine.

I remember that at the Salon of 1932, a well-known manager in the world of road cycling soon determined the advantages of the horizontally-pedaled bike and predicted a great future for it if its inventor placed it in sports events. The results obtained confirmed the opinion of someone experienced in these things. Everything in the conception of the constructor comes from actual progress.

The negation of progress, contrary to all civilized tendencies—that is what the Union Cycliste Internationale has done for us in establishing its "definition of the bicycle."

Have we left the 19th century to walk backwards in our own footprints?

In this same issue of June 7 of the Journal of the U.V.F. an obituary article informed the public of the death of Monsieur Charles Mochet, inventor and constructor of the Vélocar and of the Vélo-Vélocar.

In this period the family had more immediate concerns than the right definition of the bike and the projected modifications were set aside Francis Faure figured on passing the 48 km per hour on a more dynamic track than the Parc des Princes.

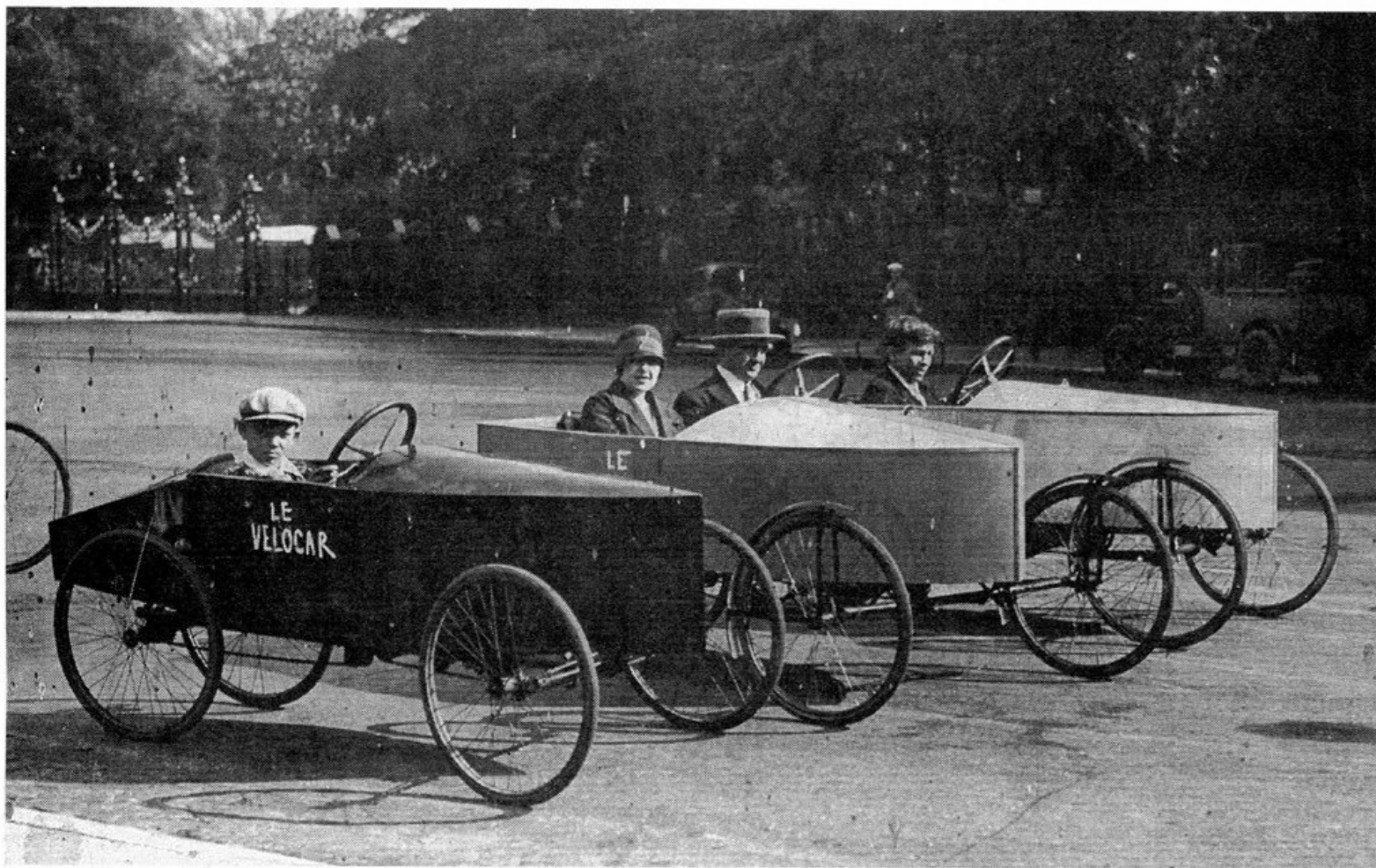
I left school in order to work in the business with my mother and my cousin Alexandre, and I also had two years of military service to do.

One good point to the Union Vélocypédique de France was that it did not change its ruling, which meant that for a while the standing French records were superior to a dozen among them; and more important, to the world records. Also the French competitions remained open to horizontally-pedaled bikes along with the other bikes. It must be acknowledged that the horizontally-pedaled bike had caused a great stir among the competitive cyclist milieu. At that time numerous bike races were being held each Sunday; almost all the bike sellers were sponsoring a little local team. The big teams belonged to the bike manufacturers and raced under their logos. A specialized press would publish their results.

More so than the present, a weekly or monthly press would publish a biography of one of the principal racers, their photos, and an overview of their racing statistics. The main sports newspaper, "l'Auto," was supervising the Tour de France and a few other important cycling races. It had controlling direction of the Vélodrome d'Hiver, the main French cycling track. Therefore, the U.C.I. and the U.V.F. for France were under strong pressure from "l'Auto." Any organization, including the U.C.I., has the right to change its rules; but once a rule is made to apply it retroactively is clearly inadmissible. That the true record holder, according to the regulations in place at the time of competition, be retroactively placed in a special category that did not exist at the time of the time trial, is a thing that should simply not be done. Records are not eternal and the records of Francis Faure—which were only his beginning achievements—would have been beaten anyway one day.

When recently, in French auto racing, the turbo-compressor was forbidden, the winners of all previous races who had used this device were not dropped from the statistics. The sports groups have the right to decree the change: the turbo is too fast, it has to be eliminated (evidently this seems paradoxical as the goal of any race is to go the fastest). If Francis Faure was (by reason of the new definition of a bike) deprived of his records, all his predecessors should also have been treated thus, no measures having been taken with their bikes to prove their conformity to the new rules. The cycling milieu had some good reasons to eliminate any machine that would go too fast:





*Georges Mochet, age 11 in a one seat Velocar, next to a two seater....*

- 1) All attempts for World Records would have to be made on a horizontally-pedaled bike.
- 2) All timed cycling races could only be won on a horizontally-pedaled bike.
- 3) Ditto for speeds, relays, etc....

Road races in a pack and by teams would have probably taken a few years for commonplace use of horizontally-pedaled bikes, but it would have happened.

Evidently, for many special interest groups, it was unthinkable that a large number of cyclists might want to change to the bike used by the champions.

Beyond the normal verbal sparring among cycling competitors there developed a bad mouthing campaign of epic proportions against the horizontally-pedaled bike—it didn't handle well, it wasn't comfortable, it couldn't take the hills. As for holding the road, it handled better and was safer than a conventional bike. Of course, like a conventional bike, one had to learn how to handle it. As for comfort, riders of horizontally-powered vélos are in a seat very like that of a car, with a normal view in front of them, without straining their necks like riders of conventional bikes and without suffering the pains of a conventional bike seat. As for the hills, the horizontally-pedaled bikes have as much power as on a classic bike; and on the flats they are faster because they have less wind drag. On hills, on the average, the wind drag remains important and the horizontally-pedaled bike is still faster. In climbs at more than 10% grade where the speed is less than 10 km per hour, where the wind drag becomes negligible and the speed of cyclists becomes more a ratio of weight to power (power of the cyclist and weight of the cyclist plus his or her bike), given an equal bike weight, the speeds of the two bike styles are identical.

It is obviously demoralizing (as it was for tandem makers) to have created a bike that has defeated conventional bikes ridden by stronger riders and to be confronted with a solid wall of contention that only the force of the calf muscles should dominate and not the machine.

#### ■ 1930's Horizontal-Bicycle Tourists & Commuters

I won't overly dwell on the hypocrisy of the competitive cycling set, our company having met with overwhelming warmth, friendship, and support by the other biking groups—tourist cyclists, casual cyclists, and commuters. Here are several excerpts from clients using the Vélo-Vélocar.

#### ■ "l'Intran," March, 1933

"...In the "Salon of Autumn" concourse, a first prize was awarded to Mr. Jean Auvigne, a young artist, doubtless best known for his presence on the Champs-Élysées and the avenue of Le Bois riding around on one of these new bikes on which one is practically lying down. The machine is very fast, but it sure stands out, making bystanders ask one another if he must be a disabled person required to remain stretched out. On the other hand, since they see him pass cars without difficulty, they say, "for a cripple, he sure gets around!" In reality, it's not necessary to be handicapped to get around the fastest."

#### ■ "La Pédale Touristique," August, 1933

**A published letter from Mr. Laurant, 29 rues des Férats, Marseille**  
 "As for me, I am enchanted with my acquisition. With my Vélo-Vélocar, I can overtake any conventional cyclists on the flats. On rising ground, when wind drag is a factor, I continue to have the upper hand. There is equality only when we encounter steep grades, which can only be taken slowly. I say equality because I have never found myself at a disadvantage." This letter of praise conforms almost exactly to the general tone of our client correspondence; even more remarkable is that it is understated and exact and was probably written by my cousin Alexandre, known by all for his cynical tall tales.

#### ■ "Vélo," September 6, 1933

"We asked Dr. Ruffier, cyclist and specialist in physical education, to respond to the following question: Is the position required by the V.V. harmful, harmless, or recommended from the medical point of view? Here is his response: "Any position that allows muscles to work with maximum





Morand in 1934

efficiency for a long period cannot be harmful. And that is certainly the case for the horizontally-pedaled bike.”

■ **“Républicain d’Orléans,” September 10, 1933**

**A New Bicycle: the Vélo-Vélocar Champion of the Entire World**

Interview with Mr. Dandier, secretary of the Chamber of Commerce and V.V. owner, by editor Charles L. The machine is described in the article as one of the first machines of its type because the guidance has a coupling of two bevel wheels (universal joint) the gear shifting is 4 or 5-speed (derailleur), super-balloon pneumatic tires, drum brakes.

Questioned about the possibilities of his machine, Mr. Dandier declares: “I can attain 50 km per hour in general. Without fatigue I can easily go along at 40 km per hour. These excellent results are due mainly to the effective use of muscles permitted by the design and also to some extent that the rider’s position is more aerodynamic. Thanks to the super-balloons and the spongy rubber seat, the bike is quite comfortable. As to handling, the narrow width helps. I can easily thread through encumbrances and I can stop rapidly.”

As for the time it takes to learn how to ride a VV, Mr. Dandier says: “I admit that at first it’s surprising. Then one takes to it easily—you don’t have to pull on the handlebars. I hadn’t done any bike riding for 12 years when I tried the Vélo-Vélocar. I took a little ride in order to familiarize myself with the balance and pedaling and right from the next day, without fatigue, I did an outing of 76 kilometers....”

■ **“la Pédale Touristize,” September 1933**  
**“A Little Revolution in Cycling Technology”**

“A 60-year-old bike tourist, Mr. Bourdon, has completed an itinerary from Avignon to Paris, from Lille to Paris, and to St. Etienne, on a horizontally-pedaled bike.” by Claude Tillet. Mr. Bourdon relates his first contact with the machine and his travels, all with great enthusiasm. His machine was equipped with balloon tires and a gear shift. Like the first machines, the coupling had been replaced by a universal joint.

■ **“Cyclotouriste,” November 1933 (Lyon) Article by Mr. Descamps**

“This evening, while returning from a meeting of Pavési, I was seized with the need to write these lines to the glory of the horizontally-pedaled machine of which, to my knowledge, I am the only owner in Lyon, if we except our devoted secretary who is always out on his four-wheel model.

Certainly I expected a more complete return to the road, circumstances having obligated me to sacrifice so little with this new type of bike that the hopes I had placed on the V.V. were largely confirmed. Other than I have said that this machine had arrived at the point of perfection in the areas of lightened weight and of comfort, which makes the machine useful for tourism to the same degree as the current vertical machine. On the other hand, they have pointed out that the horizontally-pedaled bike could still be improved before it becomes the ideal tourist machine. I subscribe to this opinion. The machine handles perfectly on the road—smooth rolling, comfortable position, rationally designed but lacking a few insufficient details...With my inveterate habit of tinkering, I modified my V.V. to be more useful for touring—luggage carriers, slightly lowered seat, replacing enameled wheel rims with chrome-plated ones, replacing the derailleur with a Cyclo, addition of wing nuts,...to the point that, at present, I consider it a remarkable machine.”

I will also sum up: perfect stability once the machine is underway, at least equal to the conventional bike.

On a level run, the rider is one with the pack; with equal effort, the horizontally-pedaled bike rider outdistances the vertical cyclist. On the hills: personally I have always taken the hills at my own cadence and did not think I was going faster on my vertical, in spite of the length of time between my use of the two styles. On the descent, a vertical descends much more slowly; the horizontal position makes for the impression the rider is getting there faster because he is head-forward. What’s left is wind resistance: there, no one denies the advantage of the horizontal.

■ **“la Pédale Touristique” November 8, 1933, letter to the editor**

Mr. Espersset, a teacher, writes: “V.V.—veni, vidi, vici (Latin for I came; I saw; I conquered). I came, I saw, I conquered my hesitation. After two months, I am the owner of a horizontally-pedaled bike; a very irritating apparatus for people who like to go their way unnoticed or who are easily offended by public ridicule or curiosity. The rider of such a machine is an object of dismay—even the dogs regard him or her dumfounded. If one stops somewhere, a crowd forms around him; before being allowed to leave, the rider must furnish explanation upon explanation and sometimes furnish a demonstration. How many times have I repeated the same phrases, answered the same questions, refuted the same objections. What is said in the ads and the brochures is true: less effort, more speed, more comfort. In difficult terrain, I have improved my average time by 25% over the conventional bike.

Balance is easier than on a conventional bike because the center of gravity is much lower. After having the bike only three days, I was easily maneuvering through the most heavily-trafficked crossroads of Paris—L, Etoile, Concorde, l’Opéra. The risk of falling (I have already experienced it) is certainly much less than on a conventional bike. The V.V. is therefore clearly superior to a conventional bike.

But it has one flaw—one, but serious: it is too heavy—much too heavy. Mine weighs 19 kilograms. So much so that when on the flats it isn’t a problem but on steep hills it’s another thing entirely. One is pulling six or seven kilograms more than the conventional bike rider and it makes a big difference, while a V.V. rider could easily climb faster than a conventional bike rider if the V.V. weighed only 12 or 13 kilograms. I think that much needs to be done by the company in this direction.”

**Author’s Note:** Mr. Mochet was always thinking about the weight problem, but he wanted to address the problem carefully; little by little he lightened the weight of successive models, always awaiting the practical



results of each improvement. To have a V.V. break because it was lightened at the expense of resilience would have been a hard thing to bear.

In the second article, Barrey says: "The V.V.'s lack of success on mountain runs is an unfounded legend. Having mastery of the machine, I undertook an ascent of Mount Agel. My results were simply marvelous. More than 15 on the average on an unpaved road that was in very bad condition...."

That reminds me of a recent story. My friend Mr. Schmitz, a fan of the human powered vehicles, had made a run similar to that of Francis Faure, on Schmitz's home mountain, Ventoux. Schmitz's 18-year-old son had taken with him a sports writer outfitted with a fine conventional racing bike for the mountain outing. They went up together; and as there was a strong wind they noticed that on the switch backs in a head wind the V.V. gained several lengths and had to wait, in spite of the best efforts of the conventional bike rider.

Schmitz, who had begun to be unfavorably influenced by the sports writing milieu about the V.V.'s difficulties on mountain runs, was very happy with the above result. I find it amusing and diverting to compare some of modern day events with those of 1933.

The Vélo-Vélocar demonstrated its superiority against contemporary world record holders and in racing circles. Outside the commercial and competitive milieu, other trials were made by customers participating in cycling rallies and amateur races. Of those we are less well informed, but what feedback we did get was satisfactory and, it being impossible to keep everything, not a trace of these letters remains.

A tourist cycling event, organized by the U.V.F. offered as first prize a touring model Vélo-Vélocar offered by the Mochet company. The event was called the Easter Egg Cyclotourists, which took place on Easter of 1934 on a designated route from Avallon to Auxerre.

Below is an overview of this event which lends a positive note to one of the most agreeable forms of bike riding. "The gathering took place at Auxerre between 7:00 and 7:45 a.m. at the Chalet D'Or. From there, the participants, after having followed the Yonne valley route through the towns of Vincelle, Cravant, Turcy; some by way of Mailly-le-Villeand others by way of Mailly-le-Château, met up at the butte of Saussois after a short racing sprint the group reached Chatel-Censoir where a supervising control point was set up at the Hotel of the Train from 10:00 to 11:00 a.m. There the participants had a snack before taking on the hard hills that come before the town of Vézelay where the fastest competitors began arriving at the Hotel of the White Horse. Some took the opportunity to visit the tourist spots of the town of Vézelay and then all began the descent towards the towns of Saint-Père, Pierre-Perthuis, Menade, Pont-Aubert and finally arriving at Avallon by way of the beautiful Cousin valley. This formed the 73-kilometer itinerary for day one.

All the contestants left Avallon the next day between by 8 a.m. in order to get to the scenic point of Saint Moré. There they visited the butte and the footpath at the exit of the tunnel. Then a long visit to the grottoes of Arcy, then on to Lucy, to Vermenton, and To Cravant for lunch. Then the return towards Auxerre, for a total of 52 kilometers for the second day.

The bike tourists, after having followed the valleys of the Cousin, the Cure and the Yonne, then headed towards the Cafe of the Chalet d'Or."

I wanted to give you the precise accounting of this itinerary in order to show you what a cyclotourist event in 1933 was like. If you like using bikes for the possibilities of outings and visits to scenic regions, there is nothing to stop you from using as your own outing this particular itinerary, universally as interesting over 60 years later.

### ■ The End

In this period in the life of the Vélo-Vélocar ends June 3, 1934 with the death of its creator, Monsieur Charles Mochet. It did not content itself only with beating the world records on a racing track—other sporting variants having taken place—we recall its crushing victory at the Tour de Longchamp which, with many twists and turns and one severe switch back and a rather long climb, was more a road race than a track race.

After these records, Francis Faure was approached by the directors of the Vélodrome d'Hiver for several competitions. The first was against one of the amateur teams which frequently used the Vélodrome d'Hiver. In February and March, 1934, it was an "Omnium," a three-event trial with Lemoine and Plassat. The first trial was an individual run by a 3 kilometer point. The second trial was one kilometer against the stopwatch from a standing start. The third trial was a pursuit race limited to four kilometers.

### ■ The Final Laps: "le Jour," February 14, 1934

"The 'Omnium' goes to Lemoine over Francis Faure and Plassat. The rivalry among bike styles is far from over, each side bitterly entrenched. In the individual trial, Lemoine and Plassat conspired to prevent the Vélocar from passing, pushing it to the rails and finally causing it to fall. In the kilometer from a standing stop, Lemoine's time was marginally the fastest (1/5 second). In the third trial, Francis Faure took an easy lead on his competitors; Lemoine caught up after 9.252 kilometers and Plassat after seven turns around the track."

In the first trial, an abnormal agreement between the two conventional bike riders falsified the result. Lemoine was actually booed by the public for his lack of sportsmanship while at the same time he was being congratulated by the cycling "professionals."

As for another pursuit match with Maurice Richard (who was considered the best of the competitors specializing in this event) no comment is necessary as well, since Richard did not overtake Faure until the last four turns of the track.

### ■ Morand in 1934

The Paris-Contre race took place on June 3, 1934. After the success of the VV on track runs and its many successes as a town vehicle, we wanted to take on road racing. Some rather encouraging trials were taking place among amateur racers to who were using the VV's and they acquitted themselves honorably in the many small competitions that were held each Sunday.

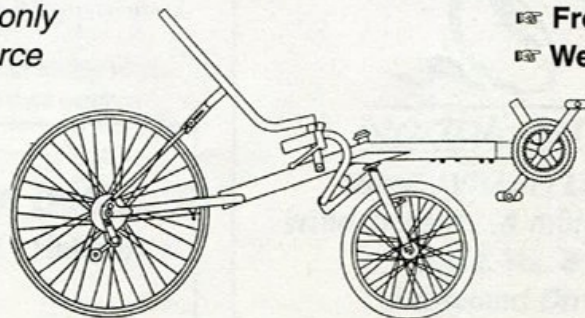
While each time these racers had been the sole recumbents participating at each test, it was easy to see that they were having absolutely no difficulty keeping up with the pack; but our company had no notion of the athletic prowess of these amateurs, certain of which I think were quite



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Francis Faure in training in front of the well-known city hall of Ambert



Morand in 1934

good. Mochet Company therefore decided to sponsor a professional cyclist and to allow him the time to adapt to the bike and to undergo training before entering him in a rather long road race with top competitors.

This racer, a Spaniard nicknamed "Morand," had come to try his luck in France; and as luck would have it the difficulty he was having finding a place in a team made him available to us.

He adapted easily to the machine and took training seriously; he would ride out around Longchamp rather often (near where the Vélocar factory was located). I accompanied him quite often; he was a good rider—hardly a sprinter, but courageous and steady.

Here is an account of the Paris-Contre race made to me by my cousin Alexandre Laurant who followed the race on which we had placed a certain amount of hope. "Shortly after the depart, Morand took off and led the pack. The sports directors of the teams competing had a quick consultation and decided that at all costs it was necessary to overtake Morand and that all the teams would relay their riders at 100 or 200 meter segments. After valiant efforts to resist, Morand was overtaken 50 kilometers from the finish and still was a strong finisher."

Soon after Morand's race, the U.V.F. in following the regulations of the U.C.I regarding the definition of the bicycle prohibited any recumbent participation in such races.

Since Morand was still under contract, he participated widely in the period when he was still authorized to race—around ten road competi-

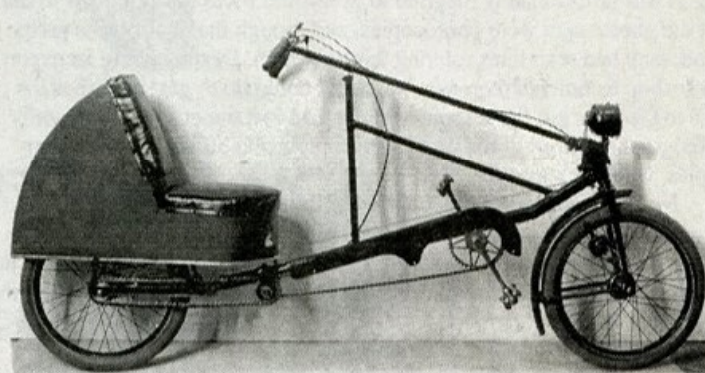
tions, notably one from Paris to Angers. On every occasion, he did well as a single rider against the teams, with no major problems and not a single accident, finishing honorably in all the races he entered.

I don't know what came of him after his contract ended. Did he give up competing? Did he find a place on a team of classic bike racers? He disappeared into cycling anonymity.

#### ■ EPILOGUE

Mochet's company stopped trading in 1960. Two wheeled LWB recumbents were made from 1929 to late 1939. About 400 2-wheelers were built in total. From 1929 to 1939, about 4,000 4-wheelers were built, very few with auxiliary engines. From 1940 to 1960, another 4,000 4 wheelers were built, all but a few motorized (actually sold as light cars).

Many of the unmotorized 4 wheelers sold after the war were sold to military veterans who became blind while fighting, so they could ride while another person was



Vélo-Vélocar tourist type, one of the first for the general public

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actually driving. 30 motorized 4-wheelers are still around. Georges believes about 20 2-wheelers and 30 unmotorized 4-wheelers exist today.

#### ■ THE ARTICLE

I'm really glad this piece of history is being printed in all its details for the first time. What perplexes me is that no one has delved very deeply into this story before. I had read Armfried Schmidt's article, "Why Your Bicycle Hasn't Changed in 106 Year," though I knew there was a lot more to the story or I wouldn't have worked so hard to get it.

This was a fair amount of work for me and the people who helped bring it to the English language and it took a year to accomplish. After my lucky contact with Emmanuel, he endeavored to translate it from French to English. Emmanuel's grasp of English is pretty good but just wasn't quite doing the job, and his busy career prevented much work from being done very quickly.

Finally I asked him if it was ok to try and find a translator which was fine with him and he wanted to be involved in helping with the details of that work. A plea to the internet brought several responses, but finally Nola Fetters replied that she was a retired French teacher and wouldn't charge anything to do the work. I jumped on that offer right away.

Emmanuel sent me the manuscript and a personal letter from Georges which was unfortunately illegible to everyone! I was disappointed to find out the photos sent were photocopies, and though the quality was pretty good, they had scan lines running through them. Despite being an expert Photoshop technician there was nothing I could do to get rid of them. A plea to Georges got the response that he had lost the originals! The only photographic record of the great Velocar epic and all we have is photocopies, what a tragedy!

Nola proceeded to work on the translation a page at a time and emailed it to me in pieces. Emmanuel helped with some difficult French words particular to the field of bike racing. Translation is somewhat of an art form and Nola did several revisions of the same pages trying to get the

most accurate meanings from George's writings. Even so, reading the piece you can tell the original is in another language, some phrases and ways of putting words together don't translate directly to good ol' American!

Due to my being busy with my career as graphic designer/art jeweler, it took me some time to put all the pieces together and scan the photocopies, trying to get it all in one finished package. Even so, it needed editing for sure. Eventually I contacted Bob at RCN and told him it was finally finished and here it comes, ready or not. I'm so glad that Bob sees the historical value in this tale; I had tried to interest Smithsonian Magazine in it earlier and they had absolutely no interest. It really irks me that the general public can get excited about a guy pedaling an HPV airplane across the English channel but could give a damn about the actual roots of the technology.

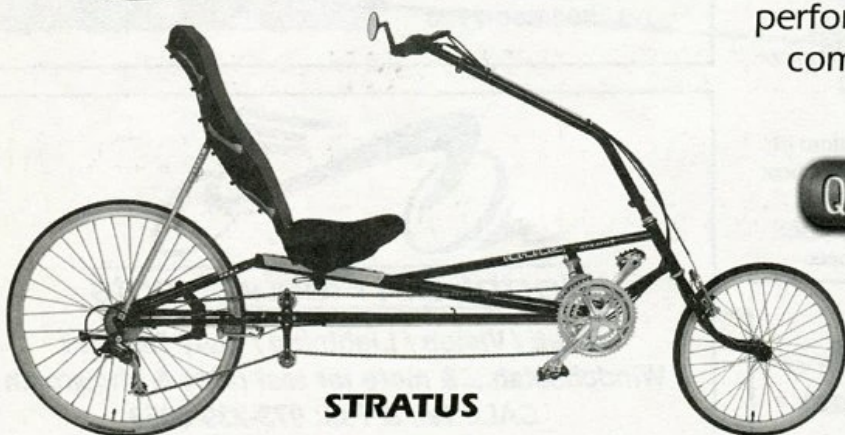
Finally, I've taken heat on the Internet HPV list for saying this before, but ladies and gents, those recumbents and trikes you all are riding are the direct descendents of the Velocar. We owe them much with their work with fairings also. The Mochets fathered our recumbents and created the legend. Today we still fight the battle that they lost in the 1930's, but now we are more accepted and those of us who ride recumbent owe the Mochets a huge thank you for their truly inventive genius that started this all. Georges co-founded HPV France and has been active up until fairly recently trying to make the perfect bike. Some say the recumbent was invented much earlier and this is true, but those early trikes etc. never really caught on and never created the explosion of interest, nor broke speed records that the Mochets did. I am extremely proud to have helped this article happen and my friend Georges.....merci...

Dave Stephens. □

**Editors Note:** Dave Stephens can be reached at [dave@kickassdesign.com](mailto:dave@kickassdesign.com) (please cc to [publisher@recumbencyclistnews.com](mailto:publisher@recumbencyclistnews.com)).



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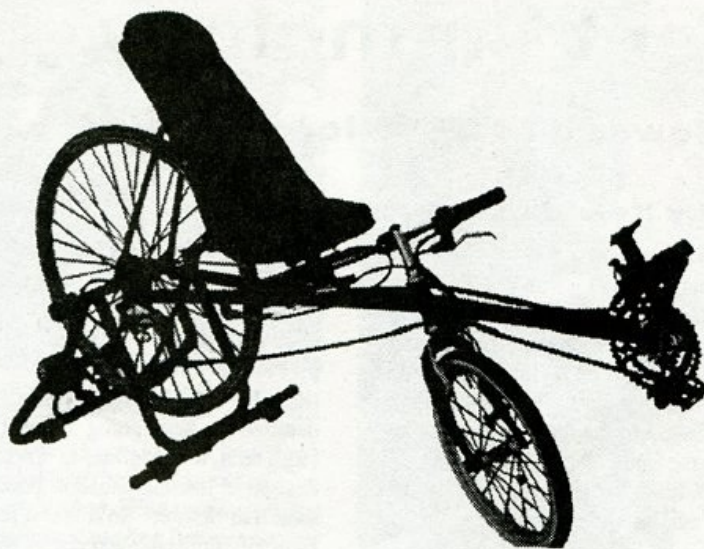
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# Recumbent Anthology

Grant Bower of ATP Vision

by Kelvin Clark



Kelvin and the new MC<sup>2</sup> at CABDA

**KC:** Tell me what's going on at Vision this year.

**Grant:** Well, it's kind of hard to say what's going on this year. The way things work where we are, we are constantly doing new stuff. The model year concept is kind of forced upon us only by the shows. This year, as far as products go, we're concentrating on refining the line. We have everything from what we call the medium wheel base through the 40 series, having hard tails, front suspension, up to the 45 with the STI and the HED wheel versions and of course, the tandems. We were overwhelming people with too much information. We pared it down to just the top selling models and the ones the customers are asking for.

**KC:** What's your job?

**Grant:** My job evolves constantly. It's a typical small business problem, but, I would say that Joel and I share the visionary part of our business. We are the ones that just naturally find better ways to do things, and that can include building bicycles, and can include designing bicycles and how we make them in our shop. My focus and my strengths I believe are in that area—the idea machine sort of thing. You know, it's hard for me to not think up new ways to do things and new products and so my job is mostly taken up with trying to sift out all my ideas to find out what can be best to bring to the market.

**KC:** What is your favorite layout of bike?

**Grant:** I personally prefer riding short wheel bases (SWB). I definitely will be riding one of these most often. I don't think that there is any one bike there that I wouldn't have fun riding. I tend to ride whatever prototype I'm building.

**KC:** So when you say ride, what do you do?

**Grant:** I have about a 14 mile round trip to work and it is a beautiful ride through downtown Seattle and through the University of Washington. I ride year round, in fact it's a rare week when I don't get at least four or five days, maybe I'll only have to drive one day. I think you can see that in the kind of products that we have too, the fairing and the poncho came out of my wanting to ride daily. Especially in Seattle, and that's why the bikes have always offered racks and all the other accoutrements that go with it. Before I started the company with Joel and Greg, my wife and I would typically put three or four thousand miles a year on our recumbents doing tours. We've done all the roads and pretty much every mountain pass you can think of in Washington. In fact my wife has climbed up Stevens Pass and the North Cascades five months pregnant, both times. I towed my kid over Washington pass once when she was five months pregnant.

**KC:** You mentioned before ATP, so take us back a few years. Where are your roots in general, even outside the bike thing?

**Grant:** Well I grew up in Seattle, went to the University of Washington. I graduated in about 1981 and went to work for the Hewlett-Packard company down in Loveland, Colorado. I was not really that much of a bicyclist at that point, I rode my Peugeot U08 all through college, it was my main form of transportation. But I've never been that comfortable on a bicycle and I've always had problems with the seats and the handle bar position, so I never really rode seriously. In Colorado, I never really did either. I was out there for about a year and a half. The division I worked for moved back up to Seattle in about late '83. It really

all started because of the Strawberry Festival up in Marysville. Hewlett-Packard wanted to become

part of the community, and every year they had a trike race, an adult trike race. And so there was a group of about 6 of us engineers who decided we were going to build the ultimate Hewlett-Packard trike. High tech, it was going to knock off their socks. In the course of design, it just happened to become a recumbent design and I had never seen that before. So it was a recumbent trike, rear wheel steering, it was basically unridable except by me, I was the only guy who could really ride that bike, but we had some success. After the first year we changed the design and that one did real well for us. But as a consequence of having a trike and practicing it around the plant, a buddy of mine said, "I have a bicycle you ought to try," and he brought in what was a Hypercycle at that time. Of course the real SWB with the fiberglass seat and it was kind of strange looking with the stayed bicycle tube frame. But I loved it immediately when I jumped on it. I loved the concept. There were obviously some problems with that particular design, but the thought of being able to sit on a real seat in a bicycle, I hadn't really made that mental leap until I got on that Hypercycle. I also was back in Seattle and was starting to acquire some tools and shop things. Before I didn't really have much of those things, as I was moving around. I'd always been tinkering around in my dad's shop so this seemed like a real good excuse to buy a set of welding tanks. I learned how to weld. I'd never done that before. So I bought a set of welding tanks and I bought some old bicycle frames and started hacking them apart and putting them back together, first prototype, and ended up building my first bike in '84. My first true recumbent, my own design. It was a model 2 design [Bowerbike], very similar to what we sell now. It was a single, 2 inch back bone tube. As an engineer, the keep it simple stupid thing, was foremost in my mind, and I didn't like the idea of taking a 1-1/8 inch bicycle tube and staying it with a couple of others, it looked like a kluge to me. So single tube, a sliding front bottom bracket, I really didn't know much about recumbents at all at that time, I really didn't have any concept at that time. I built this bike and did some things that I knew needed a change from the Hypercycle, put some weight back farther and make the design simpler and quicker and basically just had a blast on this project. And as a consequence of building this bike I found that there were other people doing this.

Tom McDonald was one of those people. In fact he was starting up a Northwest human powered vehicle club. Tom and I hit it off pretty well and started riding and enjoying some local rides and at that time the big human powered vehicle association meet was going to be in the Canada EXPO in 1986. In '86 I started working on a design. I got enthused about building a practical bike I could ride year round. And for Expo I built a version of my bike that basically had a total fabric fairing around it. It looked like a big umbrella from the front, star pattern, and my concept was you could take this thing off and fold it up and carry it along with you, and went up to Expo with that thing in '86. They had a lot of neat bikes up there at Expo '86. You were probably there.

**KC:** Yeah, it was a big deal!

**Grant:** They had the practical vehicle competition which I entered, and





Grant Bower's suspended Bowerbike with commuter package. Note custom aero-pannier and trailer/hitch. This photo was taken at IHPSC Yreka, CA 1992

actually took third place honors in that. So I knew I was kind of on the right track. It was working well. I continued riding them. About that time I met my wife, started dating, so we soon started doing touring on the recumbents and riding them. I had never done any touring before because I could never last on a regular bicycle touring. So in '88 we actually took a tour called the Washington State Sampler. It was a private tour, 100 cyclists, it was 600 miles, 9 days. We went from Seattle over Chinook & Cayuse Pass to Yakima over to Ellensburg, over Blewitt Pass, then up over the North Cascades back home. It was a wonderful tour. Supported, so we didn't have to carry anything, although we ended up carrying 20 or 30 pounds a day just in extra clothing and food, because we didn't want to get caught.

**KC:** And this was on two of your recumbents?

**Grant:** Yes this was on two recumbents. By that time I had been experimenting with suspension and I've always liked saying that the ox cart and the bicycle are the only forms of transportation left that don't have suspension as a standard feature. There are real good engineering and comfort reasons for doing suspension. Riding as much as I was around Seattle and on the tours, I realized there were a lot of road conditions that were kind of hard to ride on with a bicycle without some form of suspension. So I started experimenting with the suspension. My first design was, the front was what they call a leading link suspension. Basically you pivot out behind the front wheel, and as a material for springing I used bungee cord. Bungee cord as an engineering material is almost a dream. It has fairly linear spring characteristics and, unlike a metal spring, it self damps so that it doesn't go on forever. On any suspension system you're going to have to have spring, but you also going to have to damp that spring unless you want to be boinging down the road all the time. So I actually went to Boeing Surplus and got some surplus aircraft shock cord. They don't call it bungee cord, but its the same stuff basically. And actually I ended up using shock cord that you buy from these aircraft supply houses as landing gear springs for Piper Cubs. Its been used in the aviation industry for the same reasons I use it. It's lightweight, durable, and it works. To the rear I also did an elastomer, that was basically the shock cord to the Piper Cub. I did a couple of them. The first design I built, the front suspension worked pretty well from the beginning, but the rear suspension I had a little learning to do. There were all sorts of problems that crop up when you do rear suspension. One of them being, how do you put a rack on the thing; because of course I was touring ... so I had a lot of structure to do that and also how do you get the bungee cord into the right place. And there is issues about where should your pivot point be. It was an interesting project. I ended up building about three different suspension prototypes over the years and these were basically about every year I would come up with a new design. My goal always was to get on the new bike and then feel like the other bike was completely obsolete. If I did that I felt that I was doing pretty good. I always managed to do that. This tour that we took in '88 really showed the value of suspension. We road over every kind of road



Grant Bower and the Bowerbike at a Recumbent Muster in Seattle circa 1987

imaginable. In fact we road over some washboard gravel road for about 20 miles at one point. And all the other cyclists there were doing the hand shake bit and you could tell they were all getting pretty tired of it, but it didn't hurt us at all. About the '88 time frame is when I met Joel Smith too. My brother had been involved in an automobile accident in about '84 or '85 and he was hit in the head. He was actually hit by a train and had a head injury. His body was okay except for a slight paralysis on the left side of his body, so he could not ride a bike, yet he wanted the exercise. He was always in great shape. So I ended up designing one of the tricycles at that time, I don't know if you remember the old Brike. The center steering Brike, a neat concept of a tricycle. I've always had problems with tricycles because their tippiness is a big problem. This Brike solved that problem by leaning the person over in the turn, plus it had a drive train up front and all that, so I actually built a what I would call a performance Brike, the Brike was a pretty low end bike, of course.

**KC:** Two wheels in back/lean steer/coaster brake/front wheel drive?

**Grant:** Yeah right, so I built up a Brike basically with some refinements on it and he still rides it today, actually. It does have a few problems that I never really did iron out because it wasn't really for me. I got to a point where my brother could ride it well and it was safe. But as a consequence to the whole thing, Joel Smith had moved out to Seattle. I think it was about 1988 and he was also interested in recumbent vehicles. I met him through the Human Powered Vehicle Association. He got my name. He just happened to be building a trike that was a center steering trike at the same time. So the thing I noticed right away was that, gosh darn it, he built a much simpler frame than I did. This guy was a good designer, which was fairly unusual in the recumbent business at that point. It had grown out of its tinker stage a little bit, but not a whole bunch. There were only a few people making well thought out designs and it was very rare to find engineers in this, because they weren't as sexy. Bicycles aren't as sexy as building an airplane or a car or something like that. In fact, I was an electrical engineer. I knew electrical circuits instead of doing this as a real job at that point, but it was weird to find another engineer who could talk on the same terms, we could talk about the designs from an engineering sense and what made sense. We struck up a friendship and kept in touch over the years and about 1989 or '90 Joel actually built a SWB bike called the R20, intermediate drive. Really nice bike. It handled very



well and he was wanting to get into the bike business of building them for a business. I myself had been asked ever since '84 to get into the business to build people bikes, but I realized my limitations. I was a great idea person but I couldn't do it all. I couldn't do the marketing, I couldn't do any of the business end of it. That was a bigger job than just one guy could handle. About that time I left Hewlett-Packard in '91. I was tired of the computer rat race, and I didn't really know what I was going to do. I was going to go back to school and become a teacher. Teach in a community college or whatever.

**KC:** What were you going to teach?

**Grant:** Well, probably some science, math, physics all that stuff. I love all that stuff. Any engineer worth his salt probably does. I met Joel at one of the Bike Expos in Seattle, I think it was probably '92's Bike Expo and I just got to thinking about it. I'm looking for something to do, and Joel was just killing himself trying to do these recumbents on his own. Then I said, "You know, we ought to go into business together." We both realized that there was room in the market at that point for a company to come in that designed the bike with not only the usability features that we knew we could do, but also production capability. Make it efficient, because making things is an art in itself. We were both advocates of the "just in time" manufacturing process. We talked the same language and so we kicked it around for a while and decided in the summer of '92 that we were going to do this. We brought my brother Greg on because we also knew that we needed some business marketing and spent that summer basically designing the first R40. Later that year after we incorporated in September of '92 and started the design of the R40, we had gone to Yreka Human Powered Vehicle Championships together. He brought his R20 and I brought my current prototype for that year down there and there was a lot of excitement in recumbents. The questions started changing from "what the heck is that?" to "where did you get that?" More interesting, maybe I could try that. All that stuff, my not having a real job at that time and looking for something to do and having a feeling about the recumbent market and saying let's give it a shot. So we started in '92, incorporated in '92 and our first R40's were produced in 1993. I was a consulting engineer for Precor at the time. Joel was working for Boeing full-time. Greg was working property management full time. We were all doing typical start up out of the basement stuff, you know. As a matter of fact we built the first bikes in my basement and we actually had a company up in Everett building the frames for us, Rail Makers, they made boat rails for Bayliner, so they know how to do tubing. Basically they were all handbuilt. I built all the first seats. I built the first 100 seats in my basement, had a TIG welder. The office was my basement, all the phone calls came to my own phone, it was a pretty bare bones start up at that point. We sold 125 the first year. Handbuilt by all of us. It really started taking off. The second year we actually moved the production to an old carpet warehouse, the basement was still our office. We started building a lot more bikes, it kind of overwhelmed the group that was building them up in Everett. One of the employees by the name of Jerry Larsen wanted to build the frames. He thought he could do a better job. He wanted to be his own boss too, so he actually broke off and started his own welding shop, we were basically his only customer. He was making the frames for us.

One of the problems we had with Rail Makers was that they didn't quite understand the bicycle industry's need for exactness and proper jiggling, and quality and that stuff, so with Jerry we were able to go in and build jigs that were necessary to build them in an efficient process. We just about tripled that year. We started having some real success. Started picking up a lot of dealers. We've always sold through dealers. In the first year, if there was somebody in Alaska who couldn't get one through a dealer, we would sell it there, but since the second year it has all been through the bike shops. We actually started getting some bike shops on line. We started to sell into the market that was regular people, not just the techno guys who wanted the neat new stuff. About that time frame we moved into a top of a store down in downtown Seattle, in the Lake Union area, for the assembly and office. This was truly out of our basement roots now, we rented a facility up in Everett to do the frame preparation for Jerry's welding. At that point, we actually brought him in house, so now we owned the whole process. We started building the bikes as our own

and those two years we doubled each year also. It was a fun time. And about the 1997 time frame we really started getting the feel that we were starting to take off.

The dealers have always been about our biggest road block. It's one of the strange industries where your distribution channel is probably your worst enemy. Because the typical bike shop owner is a enthusiast. They got in the business because they just love bicycles. Of course, they are pretty biased to whatever drew them into the cycling world, whether it be road bikes, or mountain bikes. The industry had the same problem when the mountain bikes first came out. Mountain bikes, the customers were clamoring for them, the shops finally came to them, just completely took the market. Well, first sales of the bikes were pretty tough, they didn't even want to touch them. I couldn't even get them to talk to me. "No, I had a Hypercycle and I didn't like it, it was terrible. Yada, yada, yada." So about '97 we started sensing a little difference in the dealer attitude. They started coming in and they would say, "You know I've got a lot of customers asking for these bikes, I guess I'm just going to have to carry them." I'm really sorry I'm going to have to make you money but... So the last two years really have been a turning point. I think we are really starting to see the knee of the curve start there. If you look at the growth of mountain bikes, it was all the sudden it just exploded exponential in '84 and '85. I think you're going to start seeing that now in recumbents. It's an exciting thing to be in and its been a real wild ride. I mean starting your own business is a trip that I'm really glad that I did. A lot of people wouldn't enjoy it but for me, the dynamic nature of it, the rewards are very tangible, you know that what you did this year, you had a huge impact on it. It's not like a big company where you might, you know, maybe your work got canceled. It would never get canceled in a small business. It always changes and of course I love the innovation of it. This year, the customers have finally spoken and the bike shops are finally coming around. And when you see the Trek bike come out, you're getting noticed. The volumes must be getting to the point where the big guys are talking. The next three years are going to be extremely interesting. It's going to be defining years for the recumbent industry. You're going to see recumbents become a real legitimate market, your going to see in another three years journalists telling you how the recumbents are the great new thing, and we'll be right on top of it. It's going to be real fun to read about it from the people who have been in it like you and me for years. But that's okay, because we'll be there.

**KC:** So, when you see the big players, that's a legitimacy thing, not a threat. It's opening the door.

**Grant:** Oh, it's a very healthy thing. To be honest with you, I couldn't have written a better script for the way the company's going, the way the market's gone. We keep doubling every year and if you talk to anyone in the manufacturing business, that's almost unheard of. It takes a lot to double every year. 10% growth is considered pretty fast in the business. We couldn't grow any faster if we wanted to.

**KC:** So the process has been a gift along the way. Without any planning of how it was going to go?

**Grant:** If Trek stepped in four years ago and decided to go real hard at it, I would have been real worried. Now it's real great because Trek is going to do a lot of advertising for us next year. The bike, it's obviously a competent bike because they are Trek, but it's been designed by people who don't ride recumbents, they ride upright bikes and they'll learn. They will sell a few because they are Trek. But it won't be the bike, once you get them next to ours or RANS or BikeE. It's not going to be like it goes out the door right away, if they have other ones. I'm not trying to say they won't ever get there, but for us what it is going to do is all those dealers are going to say, if Trek is doing it, it must be a real market now. So we no longer have to sell the dealer on the concept of the recumbent bike. It's a much simpler job of selling them on our particular bike. That's a much easier job to do because the bike can be selling itself while we go ride it. Trek coming in is a Godsend for us at this point. I just hope that they do well enough that they don't think and feel like the market must not be there. Because it could do some damage if they did do that. I still have the feeling that even if they did, the train has left the station. I can feel it running down the tracks.



**KC:** Tell me about the name Vision. Advanced Transportation Products was ATP but then Vision happened.

**Grant:** When we first started the business back in '92 we brought in a fellow who did all of our brochure and marketing materials. A commercial artist. Joel was a great graphic designer and he is the one who came up with the design. We wanted to come up with a name, and we had many, many meetings about names. To somebody who has never done it before, you can't imagine how hard it is to come up with a name for a bicycle or anything. The big guys spend tens of millions of dollars researching their car names. We had all sorts of wild names that I won't even repeat them, because some of them are really just terrible. Joel was the one who came up with that. He came one day and said, "How about Vision..." It was like... the skies opened up and the clouds went away because we wanted a name that caught a sense of the technical end of it because we are a technology driven company. We wanted a company name with that feeling of innovation and design leadership and yet wasn't some hokey name that you couldn't get your mind around it. Vision just naturally settled to us. And so we had already named ourselves Advanced Transportation Products. That was the name Joel was working under and then when we incorporated we used that one as name, but the Vision became the name of the bike and was the name of the bike line. I can't believe how hard it was to get and how natural it seems to us now, but it was definitely a very hard process to come by.

**KC:** What does Grant do to keep himself sane.

**Grant:** I don't know if I keep myself sane or not, but I have a lot of varied interests. The number one now is my family. I have two daughters, six and eight—just wonderful kids. I have a wonderful marriage to my wife, Debbie—really blessed actually. She is another engineer. We met at Hewlett-Packard. She is an excellent bicyclist. The family things are a big part of my life. I'm a private pilot and have been flying since I got out of college. We managed to do a lot of airplane trips. I've been a boater ever since I was about five. My dad had a boat. We have a boat that we go out on. We bring the bikes with us and we do some riding around the San Juan Islands. We have tandems now. In fact that's where the idea for the tandem came from is that my daughter got too big for the trailer. So I'd been working on a tandem knowing this was going to come. I built the tandem for her and myself and I took it to ATP to show it off, and the next thing I know they're all around me saying, "You better start working because we're going to have these."

I have a wide range of interests. I do a lot of snow skiing in the winter. My other love is music. I'm a woodwind part, I play saxophone. I have two bands I play in in the Seattle area. I play in, am the musical director, and lead off on a 25 piece stage big band orchestra. I play Tommy Dorsey and Glenn Miller, 40's type hits. And then I have a quintet that we practice every week. My wife, Debbie, also plays the grand piano, we have a grand piano and the kids are starting to get into it. I have a

motorcycle. I've been a motorcyclist since college, too. I have a Triumph 1200 right now. I go out and eat up the backroads with a friend of mine. He's another crazy guy. A lot of people find that kind of funny, but blasting around the back roads pushing a motorcycle and yourself for me is relaxing—a cleansing experience. I guess you could say that almost everything I do is that way. I mean the flying is that way, I'm an instrument pilot—and that's the same thing. Concentrating 100% on this vehicle, becoming one with the vehicle.

**KC:** Anything we haven't talked about that you want to talk about?

**Grant:** No, I think its a real fun business to be in—bicycles. It's been real fun with the recumbent industry. I love being in this business to death. I used to design network and spectrum analyzers up to about 200 MHz. You didn't understand a word of what I said unless you're an electrical engineer, I can guarantee you. Now when I tell people what I do they can understand it and they think it's kind of neat. I like that. I love building products for people. It makes me happy. When I go out to the rallies and see the customers, those are my most favorite times. They come up and I just see the smile on their face and I know they're doing something that they might not have been doing if it had been on upright bikes because they wouldn't have been able to, they might not have been comfortable enough. The business is growing in leaps and bounds. Its been real gratifying to see recumbents finally taking hold and our jobs are going to become easier now. In fact, right now we are getting into the gravy. The next five years this business will be growing like crazy, we will be able to innovate as much as we really want to and there won't be a commodity market yet. We're positioning our company, we don't want to become the next Trek. It really is a commodity at that point. Both Joel and I and the rest of the company really want to keep it smaller than that. We're on the cutting edge more. I think that our company will always try to stay high end, high performance, cutting edge stuff. We don't necessarily see ourselves as only a recumbent bicycle company. In 10 or 20 years, who knows what ATP will be doing. We really see ourselves, as our main strength, efficient production process. Lower volume, but yet innovative well engineered products. That could be in the bicycle industry, it could be racks, it could be boat davits. That niche market, I'm sure that recumbents will always be our first love. I mean that's what we really love doing, but I think you're going to continue to see from ATP and Joel and myself new thinking. We try not to be stuck in the same niche. If you look at the bikes over the six or seven years we have been doing it, they are radically different. I can't give you absolutes, but I think the overall philosophy of the company is making things that work well and we're not going to put doodads on there because it's a doodad. If it really makes it work better and it's simpler on the customer end and manufacturing. That's a total package.

**KC:** Thank you for your time . □



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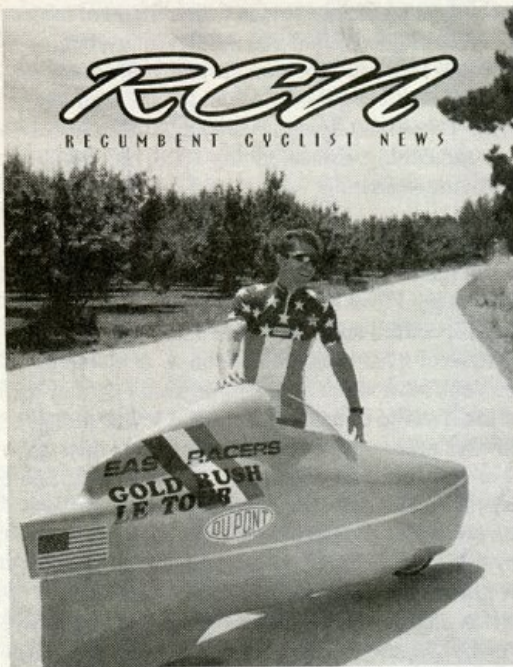
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# Recumbent Mail

If you have a something to say, a differing viewpoint or experience—we want to hear from you! **Please limit letters to 300 words.** Sorry, we cannot accept requests for charity ride sponsorships. RCN reserves the right to edit submissions for clarity, content and space limitations.

DrRecumbnt@aol.com or RCN, PO Box 2048, Port Townsend, WA 98368

## ◆ How I Became Bent (or It's Bob Bryant's Fault)

I have a problem and it's your fault. The sooner you admit that it is your fault the sooner you will be able to figure out how to help me out. First I will explain why it's your fault.

1. You are the publisher/editor of RCN. If it wasn't for your magazine I never would have been able to gather so much information and opinions on recumbent bicycles so quickly and easily.

2. You suggested that I go and visit Kelvin at Angletech. Like a fool I did. No pressure, lots of test riding time, multiple questions answered. You knew that once I actually got on a recumbent I would be hooked and it would only be a matter of time before my real problems would begin.

3. After reading articles printed in your magazine I got the idea that I could actually talk to recumbent riders and they would be relatively normal. Once again, like a fool I believed you. So, in early June I am riding up Wolfenburger hill with my wife and two daughters during the annual Elephant Rock ride in Castle Rock, CO. Wolfenburger is a long hill with lots of people walking by the time you get to the top. Anyway, along comes a recumbent (Lightning P38) and I decide to talk to the rider and ask some questions and see how they actually climb. Turns out I am riding with and talking to John Cunningham (See RCN #42/Slumgullian article). One thing leads to another and I mention that I am saving my money to get a custom V-Rex from Angletech. John tells me that Kelvin has a '97 V-Rex with Gripshift 9.0SL, Ultegra triple crank, suspension fork, XTR rear hub and Control Tech brakes. The only difference from this bike and the dream bike I had specced out in my head were the brakes. The recumbent I wanted was already built up, ready to test ride and for sale without waiting. On Monday morning I called Kelvin and set up a visit for Friday. Since this is your fault you can guess what happened. I bought the bike and put the family budget into total disarray.

Now I have five weeks, including two business trips, before our big three day Courage Classic ride that covers a little over 150 miles and includes Fremont pass (11,331 ft.), Vail pass (10,666 ft.), Tennessee pass (10,404 ft.) and an option to go to the top of Loveland pass (11,990 ft.). Should I ride the recumbent with less than enough training or stay with my road bike? I'll bet you know the answer to that question as well. After a few rides on the V-Rex it was evident that I would never be on my road bike again. Well, I made it to the top of Loveland Pass on my V-Rex. No I wasn't the fastest and I could not climb as well as I could on my road bike; but, I was fast enough and I am still getting stronger on the climbs. And I found out that if I want to really irritate a Roadie, all I have to do is pass them on the way up a pass and comment on what a nice bike they have. More than one jaw dropped when riders realized they were being passed by a recumbent. I got stronger each day and my legs never where really tired or fatigued.

Some general comments on becoming "bent." It took me about 200 miles on the bike to get fairly comfortable and get the seat angle and location dialed in. On moderate climbs I still can not keep up with other riders. On shallow hills or the really steep stuff I do fine. Next year it will be better since I will be able to train all spring on the recumbent. I was having trouble riding in a straight line; but I bought a set of rollers from Nashbar and after only 25 miles on the rollers my ability to ride the edge of the pavement has improved dramatically. So now for my problems that are your fault:

1. I'm broke. The V-Rex wasn't cheap and I had not saved up enough money to pay for all of it.
2. I now live with a wedgie-butt wife. (Do you think calling my wife "wedgie butt" when we are out riding will have any detrimental effects?)
3. How do I get my "wedgie-butt" wife to try out a Rans Screamer? She's happy on her upright bike and sees no reason to lay back and ride relaxed.
4. How do I convince my "wedgie-butt" wife that a Rans Screamer is just as important as braces for the kids? After all, they are young and learning to wait is a virtue that they need. We are getting older and shouldn't have to wait. Ok Bob, you got me into this mess, how are you going to help me out?

Tony Fischer  
Louisville CO  
afischer@lucent.com



Tony Fischer riding his V-Rex below the summit of Loveland Pass at 11,990 feet (note no trees) on the Courage Classic. Photo courtesy of Tony Fischer © Dave Anderson Backcountry Images

## ◆ PRIMO/KENDA PROBLEMS

The comments on page 9 in RCN#51 were very interesting. Here are two more data points. I just switched to a Primo Comet on front of my Gold Rush Replica on Aerospoke wheels (451, 20 x 1 3/8"), with a 1 1/8" tube, inflated between 85-90psi. It exploded after 1 mile! I took tire and tube to Calhoun Cycle, and Luke couldn't see any tire cause for blowout. I bought two more tires and tubes. The second one exploded in the house before I even got the pump off the tube. In both cases I was careful to make sure the tube wasn't being pinched between tire and rim. I could find no rough spots on rim. The first tube rip (about 4" long) was about 9" from stem. The second equally long rip was at the stem. After reading RCN, I checked tube manufacturer — all were Kenda! You can bet I'll be calling around to see who sells Cheng Shins, as you advised. Why not ask for reader feedback on this one.

Robert Frey, mmmmpc499@pop.isd.net

Okay, you heard the man. If you are having Primo Comet flat tire problems, check to see if the tubes are made by Kenda and let us know—Bob, RCN

## ◆ DICK RYAN RANTS

Why has it taken so long for recumbents to catch on? One word sums it up. "TESTOSTERONE," A bike shop employee once told me, "To be a real



cyclist you have to be willing to endure pain and suffering.” Over the years I have heard many similar statements from people in the bike business. These people control the bike industry. They work in every bike shop in the country and in every R&D, marketing and sales departments of every major bicycle company. They are responsible for the sorry state of the bike industry, (conventional bikes). Those of you who have been to industry trade shows have seen them, most of them can't get through the metal detectors at the airport without removing their heads. I know of one company that was convinced by these people that the future of the company lay with DOWN HILL RACING! Wow, I'll bet that there are at least a couple of thousand people interested in down hill racing. The last few issues of the trade magazines have been filled with obituaries and stories of layoffs and people leaving the industry. Like many industries the bike industry is consolidating. By the end of the year there will probably be four or five major bicycle companies. The good news for the consumer is that Trek, Giant/BikeE, Cannondale and Schwinn will all have recumbents on the market. (This may or may not be good news for all the small recumbent manufacturers).

I assumed that Bentan Pist's comments were tounge in cheek, if not I guess that he is another one of those people who doesn't have a clue as to what is involved in a small business. I especially love comments about the prices charged for recumbents. An example of why our bikes cost so much. Paint \$13, liability insurance \$40. That's \$175 per unit before we turned the lights on. Mr. Pist knows nothing about economy of scale or the laws of economics.

The future for recumbents? Eventually recumbents will almost do to the diamond frame market what the diamond frame bike did to the high wheeler market. Diamond frame bikes are not going to disappear but I do think 70% of the bikes sold ten years from now will be recumbents.

Dick Ryan, ryancycles@erols.com

#### ◆ DISLIKE SPORT CYCLISTS

The mail from Amy Babich in RCN 51 struck me as so odd that I decided to tender a reply. My first observation is that she never identifies how “sport” cyclists are rude; I'll wait for more on that one, but I don't see just what Amy dislikes about “sport” cyclists: they're getting some exercise, enjoying going fast (which is a better cardiovascular workout), and don't care to use bicycles for transportation. Am I missing something? I don't see what's wrong with this. I was a “serious” cyclist in high school, then took about a 15-year break, and have since returned to the “sport” (that word again!) about five years ago. I ride both a road bike and a recumbent, and ride around town, in the country, on bike paths—pretty much everywhere EXCEPT the business district. Should I not be allowed to ride because I'm not using the bike for transportation? (Gee, would it be too much to ask whether MOTORISTS ever use their cars for anything other than transportation? In any case, Webster's defines “transport” as simply “to transfer or convey from one place to another,” so anytime anyone rides a bicycle, “transportation” is occurring; apparently it's the gratuitousness of recreational cycling that is objected to here, not the supposed lack of transportation.) However, to respond to Amy's professed “amazement” that “sport cyclists don't use their bicycles for transportation,” I would only add that it is precisely the fact that the bicycle IS used for recreation rather than for transportation wherein the attraction lies for the vast majority of us. (My hunch is that motorists—and perhaps “transportational” cyclists as well—dislike this conspicuous having of fun on the part of recreational cyclists, particularly if the motorist is headed to or from work.) Most perplexing I found Amy's statement that “Motorists...dislike spandex-clad...cyclists because they are using the road as a playground rather than as a transportation route.” First off, I think this is simply wrong. SOME—not all—motorists dislike cyclists—and they dislike them, I think, for the same reason they dislike any SMV: they force the motorists to share the road, to potentially REDUCE SPEED and EXERCISE CAUTION (potentially sacrificing their CONSTITUTIONAL RIGHT to meet or exceed the speed limit). Ever notice how people in the country are more tolerant of SMVs (I include bicycles in this category), people in the city less tolerant? Well, perhaps it's not about cyclists after all. In any case, the hidden assumption in Amy's “argument” here is wrongheaded: under the law, bicycles are vehicles and are entitled to the road just like cars (except where prohibited, like on freeways, obviously). OK, a few cyclists are rude, but so are more than a few motorists; why place the blame on the former? Clearly, the cyclist has more to lose in an interaction with a car, as two cyclists in my hometown learned last year (killed in hit-skip).

It is precisely the motorist's (some, again) belief that he or she “owns the road”—that the road is for “transportation, not recreation”—that places the lives of cyclists in danger. I've never been hit by a car, but I can count on being honked or gestured at on every ride. Is this my fault for not using enough, as Amy suggests, “flags, lights, glitter, and reflective tape” to make myself visible “from several blocks away?” I don't think so. The problem these drivers have

is not that they can't see me; they just don't WANT me on “their” road. And your attitude, Amy, is basically the same as theirs when it comes down to it, since you also object to the use of OUR public roadways for recreational cycling. If you want to make the roads safer for cyclists, ride like most of us do and don't give motorists the excuse that one of us wasn't highly enough decorated for them to see while they were changing the disk in their CD player or dialing up the cell phone.

Jonathan Lawrence, Columbus, Ohio

#### ◆ QUESTIONS

While reading RCN a few questions came up.

- 1) What is numb foot syndrome? What is the cause and/or remedy?
- 2) What is “recumbent butt”? What is the cause and/or remedy?
- 3) On page 5 of the May/June issue of RCN you are riding a trike: what type is it and where do I get more information regarding same.

Thank you for your time and assistance with these questions.

Michael J. Makofski, MMAK2@aol.com

*Michael, The trike is a Comfort Cycle tested in RCN#46 and discussed recently because they went out of biz. Recumbent butt comes from a bad seat, seat base that you don't acclimate to, from riding too long in the saddle and/or having too upright a riding position—or any combination of the above.*

*Numb toes can be caused by a high bottom bracket on a SWB, trike or low racer. Many mfrs don't acknowledge that this exists. I suffer from this and it is BB height related. Sometimes clipless pedals can solve the problem. A long test ride to find out if it bothers you may help, but sometimes if you ride a high BB bike you will acclimate to it.*

*When I discuss “recumbent butt” with an Easy Racer, I think that this is just the trade-off of this great design. When I discuss “optimum ergonomics” this means a BB that is higher than an Easy Racer, but lower than the seat, which allows you to recline your seat enough not to get recumbent butt.*

#### ◆ IN DEFENSE OF UNDER-SEAT STEERING (USS)

Regarding Richard Drdul's article on above seat steering and Bob's invitation for responses. I'm certainly not one to join into heated arguments, especially those with the possibility of devolving into a religious war, and I wholeheartedly agree with Drdul's “to each his own” philosophy, but I'm happy to contribute my two cents' worth.

My recumbenting experience started in 1982 when I built a pair of Easy Racers from plans for a friend and myself. Back then I was looking at recumbents from both a novelty as well as a performance point of view. I put a lot of miles on that bike, never quite achieving the increased performance that I dreamed of but enjoying both the novelty and the increased comfort from the laid-back design. While the bike was eventually retired and stripped of parts for other projects. I remembered one thing very distinctly years later as I started looking again for a comfortable ride: I hated the hands-high steering position. After a ride of even medium length my arms and shoulders would be tired. This was a different kind of arms and shoulders discomfort than I got from my upright wedgie bikes, but it was still uncomfortable.

Now it's almost twenty years later and I've started feeling more and more discomfort while riding. Rides of even ten miles result in shoulder and elbow pain that lasts for the rest of the day, to say nothing of the dreaded numb crotch. The solution is to go back to the idea I investigated way back when: recumbents. Quick test rides confirmed what I remembered: recumbents were much more comfortable than the wedgies I usually rode, but I still didn't like the above seat steering (ASS). Under seat steering (USS) felt so much more comfortable and relaxed, which is, after all, the reason for doing all this.

But to each his own. I can certainly understand the arguments that Drdul makes for ASS, and he's probably had the opportunity to test ride more ‘bents than I have, but for me USS is preferred. It all depends on what you're looking for in your ride. I'll reply to his list, point by point.

More aerodynamic. I agree that ASS can be more aerodynamic, but if that's what I was looking for I'd get an upright Tri-bike with aero frame, wheels, and bars. If you're looking for a performance recumbent you should absolutely get ASS. But don't forget the neon-colored lycra jersey and shorts, and some cool looking shades to complete the ensemble. For me, I'm turning 40 this year; I want to be comfortable. Yes, under seat steering, with arms dropped to the side “to catch maximum wind” (as I read in someone's Ryan review somewhere) is much less aerodynamic, but for me it's the most comfortable way to ride. There's no tension at all on my arms and shoulders; everything from the waist up is perfectly relaxed. I ride not faster, but farther because I'm much less tired.

Better steering control. Maybe. It does take a bit to get used to the new steering position, but that's because you've been riding all your life with the handlebar in front of you. The fork/wheel steering geometry is going to be the



We plan to quote you on our Amazon.com page, if that's okay with you.

I also want to thank you for your great magazine. Recumbent Cycling News is like a breath of fresh air in a stifling world. I have a Comfort Cycle, and riding it makes me feel like a carefree three-year-old. Very renewing.

Brook Landor, Zinka Press

#### ◆ MIDWEST RECAP

I just returned from the festivities at the Midwestern Recumbent Rally held at Stevens Point and Amherst, Wisconsin. The host LBD, Hostel Shoppe, estimated over 250 attendees, frankly amazing! Representatives from Trek, (3 brand new spanking R-200's ridden by employees), and Vision (all the way from Seattle), were on hand to answer questions and assist test rides. A neat 1/2 mile test circuit was provided for sampling the many bikes.

This is the largest gathering of bent enthusiasts I've ever seen. Five separate rides were ridden Saturday and Sunday. Each route was different and introduced new terrain. Routes were clearly marked and easy to follow. Vast majority were production models manufactured by Rans, Vision & Bike E, (in no particular order). Trikes were well represented with about 10 riders.

It was joy to ride with so many benters in one location. Many questions regarding racks, how to carry stuff, accessories, etc. were answered just by walking around and checking out the hpv's. The friendly and jovial atmosphere persevered throughout the entire event. If you are ever in search of a mega-gathering of easy going, recumbenters, rides with varying terrain, and fun-filled activities, this is one great event to attend. Thanks to the Hostel Shoppe and all who made this rally memorable. Tailwinds and cheers,

Ed Gin, Chicagoland Recumbent Riders  
www.mcs.net/~gkpsol, gkpsol@mcs.net

#### ◆ RCN'S PLOT AGAINST USS

I enjoyed your editorial and your review of the Vision R32 in the June/July 1999 Recumbent Cyclist News (RCN). RCN is a fine publication that provides much useful information to the recumbent enthusiast.

There seems to be a recurring undercurrent, though, against under-seat steering (USS) in RCN in many of your articles. This undercurrent is so constant, in fact, that it sometimes seems as if you would like to drive USS out of the bicycle marketplace altogether as a choice for recumbent consumers. It was nice to hear, then, at least a small concession to USS in your editorial on p. 5 of the June/July RCN, where you admitted that USS may be acceptable for a few riders — those who are short and light.

Despite this concession, the apparent death wish for USS goes on in other parts of the magazine. In the June/July R32 article, you state of Vision and the R32 design, "Gone is ... the allegiance to USS." (Actually, Vision never held any allegiance to USS in the type of bike that the R32 represents. As we know, the predecessor Metro also had OSS (ASS), so what "allegiance" are you writing about and how is it gone? I contacted Vision and they confirmed to me that they have no intention of abandoning USS.)

At another point in the publication you refer to USS as "awkward." But we never read any references to OSS (ASS) as "twitchy," "unstable," or "view-obstructing." Indeed, in all the issues of RCN that I have read, it always seems like OSS (ASS) is the holy grail of recumbent cycling. My point, of course, is not to attack OSS (ASS), but simply to plead for more objectivity in

your analysis and presentation of recumbent bicycles, especially as your analysis relates to the steering system.

It often seems as though you take a patronizing attitude, too, toward USS, as, for example, when you suggest that USS may be best for short, light riders or that USS is for "passive" riders and is not suitable for performance cycling. You seem to struggle intellectually to find an acceptable place for USS in the recumbent world.

I own a SWB Vision R-44 with USS. I am 6 feet tall and weigh 205 lbs. I have never owned such a wonderful, comfortable, or well-performing bike. USS works great for me even though I am not 5'9," do not weigh 140 lbs. (the optimal weight/height for USS that you suggest on p. 5 of the June/July RCN) nor am I a "passive" cyclist. I feel that height and weight don't have a lot to do with the efficacy of a particular steering system, as you contend. I think that the steering system is primarily a matter of the rider's personal preference. That's how you might treat it in RCN, without all the characterizations of for whom and for which specific purposes USS and OSS (ASS) are best. I don't believe that USS and OSS (ASS) can be so neatly and cleanly classified, since they are subjective choices of a rider's personal preference. Nor do I believe that either one makes any significant difference in performance.

I also question whether the slightly wider profile of the USS rider vs. the OSS (ASS) rider has any major effect on aerodynamic drag, as you argue. Conclusions like this might better be based on scientific evidence. For example, you might do some wind tunnel tests on the coefficient of drag at various wind speeds of, say, an R-45 with USS vs. an R-45 with OSS (ASS), before you conclude that USS slows a rider down. And, of course, many people ride recumbents for comfort, not to break speed records, so that, even if there is a slight difference in aerodynamic drag between USS and OSS (ASS), it may be irrelevant. Because of the influence that you wield in the recumbent world, I think that you need to ask yourself whether your views on USS are based on rational evidence or whether they simply represent your prejudice against USS.

ATP Vision is the leader in wonderfully comfortable, SWB USS bikes, yet, in the past, Vision products seem to have been underrated in your publication perhaps because of the company's leadership in USS bikes. On the other hand, Rans, which makes only OSS (ASS) bikes has appeared your strong favorite.

I think that an ideological obsession with one type of steering system and a preference for one recumbent manufacturer is not the best way to promote the recumbent cause in America. The beauty of recumbency is its diversity of choice. Your publication has done wonders to advance recumbent cycling in our nation. Please, "live and let live" in RCN. USS and OSS (ASS) are not black and white issues. Please try to take a more open-minded and balanced approach to OSS (ASS) in general and to USS leaders in the industry, such as Vision, specifically.

Wilbur Thomas  
wilbur.thomas3rd@worldnet.att.net

Wilbur, Thanks for writing. As you can see from this issue—USS is getting equal billing. You give me far too much credit for controlling the marketplace and are reading way too much into my opinions. There is no such anti-USS plot.

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You will see our very positive Haluzak article in this issue. I have written positive reviews of the under-seat steering models, including: Haluzak, Ryan, Linear, Infinity, Greenspeed, Earthcycle and we have more to come.

I don't expect readers to agree with everything written in RCN. All I can do is give you equal space to respond and state your case. Nobody is right or wrong, this is about different opinions. If you don't like what I have to say—write your own article for RCN. We pride ourselves on not being afraid to print pointed opinions—good, bad or indifferent. If readers wanted a more mainstreamed, nambie-pambie, non-opinion, non-rant, reformatted ad-copy publication, just tell us so....it would be a helluva lot easier than the path we've chosen and probably more profitable—Bob, RCN.

◆ SOO HOO TRIKE IN RCN#52

Regarding the photo/caption of my trike in RCN (issue #52, page 9). My trikes are independent lean and steer. They are multimode. They operate predominately as virtual bicycles. They can also operate as fixed and semi-fixed trikes to suit conditions such as skid, low, speed and trackstanding on demand. The one thing they don't do is lean steer.

Wayne Soo Hoo (non-subscriber) □

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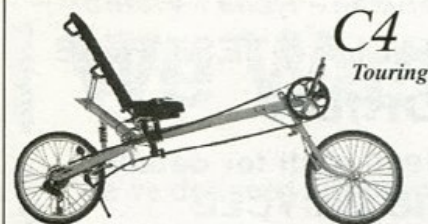
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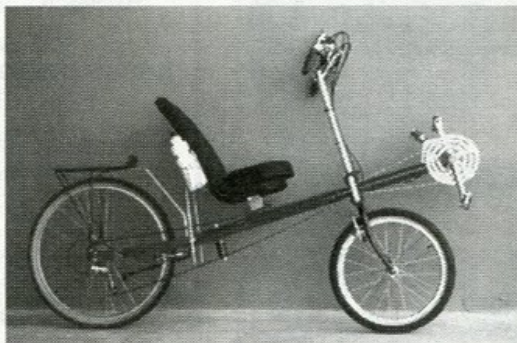
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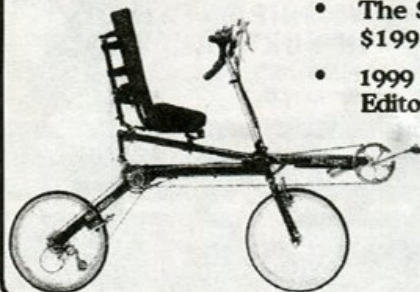
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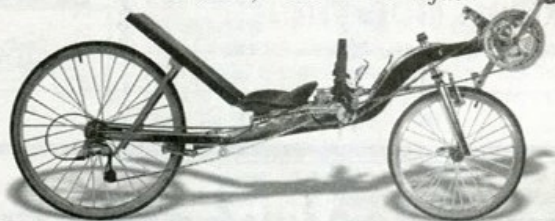
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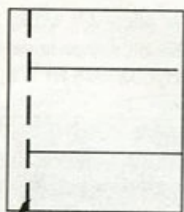


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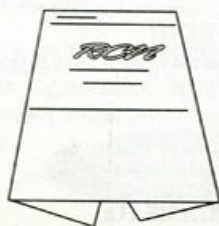
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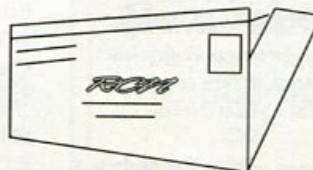
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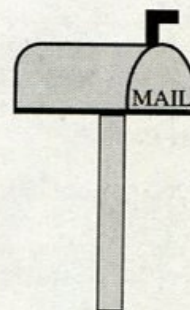


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In each RCN issue you will find—44-68 8.5"x11" pages full of the following:

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### ■ RCN BUYERS GUIDES & BACK ISSUES

Our most recent recumbent buyers' guides/issues were printed in the first half of 1998 with a 1999 update (RCN#49). The back issues below are in stock and available as of May 1999. See prices & packages below:

- RCN#52** Road tests of the Vision R32, Lightning R84; Living with a Leitra (velomobile); Maine to Washington on a Gold Rush; Gearing; Charles Mochet and the Velocar part 1.
- RCN#51** Road Tests on the Greenspeed GTS Trike; ICE Trice trike; ZOZ 26 FWD; Venice to Rome; and the Cannonball Chronicles.
- RCN#50\*\*** OUR 50th ISSUE! Reviews of the BikeE NX and CT; as well as Brompton folding recumbent; Cambie Recambini; and an interview with BikeE's Paul Atwood. (There are only a few copies left of this issue.)
- RCN#49** 1999 Season Preview—an companion update to our 1998 Buyers Guide Series (RCN#43-46). Plus reviews on the new Vision R40 with updated geometry, the Bike Friday Sat R Day and the new Trek R200 SWB recumbent.
- RCN#48** Easy Racer Gold Rush Replica test.
- RCN#46** '98 Buyers' Guide (BG): Trikes/Tandem; Dragonflyer trike test.
- RCN#45** '98 Long wheelbase (LWB) BG; Tour Easy.
- RCN#44** '98 Short Wheelbase (SWB) BG; Rans SWB.
- RCN#43** '98 Compact BG; 1998 Awards; How to buy a...; BikeE AT test.
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# RECUMBENT RIDER GROUPS

- ▲AL—Hokes Bluff: First Sat/Mo 9am, City Hall, Dave ☎ 205-492-3454  
 ▲AZ—Tucson Area: Bruce Tucker ☎ 520-299-7146 BentOne@aol.com.  
 ▲AZ—SW AZ R'bent Riders Montage (SWARRM) Meets in Sonoita, AZ, once/mo. Robert Miller: n4nrk@theriver.com William Sykes: wdbsykes@juno.com  
 ▲CA—Fresno R'bent Society: Bill Bruce, 923 W Santa Ana, Fresno, Ca 93705 ☎ 559-225-3551, bilbyke@psnw.com  
 ▲CA—LA Area: 3rd Sun/Mo 10 am@ Burton Chace Park, Mindanao Wy, Marina Del Rey. Chris Broome ☎ 310-823-2464, cbroome@usa.net  
 ▲CA—Orange County: 2nd Sat/Mo People Movers ☎ 714-633-3663  
 ▲CA—San Dimas: Larry Scheetz: lscheetz@access1.net and Ed O'Donnell: eodonnell@earthlink.net  
 ▲CA—San Luis Obispo: Carole Leone ☎ 805-466-4111, translo@fix.net  
 ▲CA—SF: 1st Sat/Mo 10am@ Mill Valley Plaza Zach Kaplan ☎ 415-381-5723 or zakaplan@earthlink.net  
 ▲CA—San Diego: Last Sat/Mo Mission Bay Visitors Center Bill Volk, bvolk@inetworld.net  
 ▲CA—Sacramento: Rides along the American River. 1st Sat/Mo. Dave ☎ 916-483-4435 or SacBent@aol.com  
 ▲CA—Ventura: First Sun & Third Sat, 9am from Cycle Scene, 2893 Johnson Dr., Ventura, CA. Contact: Barry ☎ 805-650-9338 or Barry@cyclescene.com  
 ▲CT—Yankee Pedalers: 2nd Sun/Mo @ 9am. Dave Tipping ☎ 203/484-2937 or nz1j@juno.com  
 ▲FL—LASERR: Weekly rides. Ed Deaton ☎ 904-224-4767, edde@freenet.tl.h.fl.us  
 ▲GA—Moreland: ARC - Atlanta R'bent Cyclist First Sat./Mo 10am. Ben ☎ 770-578-9380 or VrexBen@aol.com.  
 ▲ID—Sun Valley area: From the True Wheel. Bob or Reggie ☎ 208-788-5433.  
 ▲IL—Chicagoland R'bent Riders, www.mcs.net/~gkpsol, Schedule & locations www.mcs.net/~gkpsol/ridingschedule.html, Ed Gin ☎ 773-237-6624 rides year round.  
 ▲IL—Champaign/Bloomington: Tom Smith ☎ 217-351-7305 or tsmith4@students.uiuc.edu or www.mtco.com/~webstwl/circ1.htm  
 ▲IN—Ft Wayne: Wendell Brane ☎ 219-749-5610 or WBrane@Ctlnet.com (51)  
 ▲KS—Lawrence: John Dreiling, Box 1342, 66044-8342. ☎ 785-832-9757 or Robert Levins at rdlevins@earthlink.net.  
 ▲KY—Louisville: Last Sat/Mo @ 8am Central Park (6th & Magnolia). Rain cancels. Mike Reilly ☎ 502/491-0328 or mreilly@bellsouth.net  
 ▲MA—North Shore + SE NH: Bob Hicks ☎ 978-774-0906  
 ▲MA—Boston: 2nd Sat/Mo 10am at Herter Park public Theater, 1175 Soldiers Field Rd., George Reynolds ☎ 603-432-7327.  
 ▲ME—Falmouth Recumbents ☎ 207-781-4637 (VM)  
 ▲MI—MHPVA: Wally Kiehler 1027 Hawthorne, Grosse Pt. Woods, MI 48236 or Kiehler@Juno.com, www.lmb.org/mhpva  
 ▲MI—SE: Wolverbents 2nd Sat @ 9am—Willow Metropark Pool shelter, @ 9am (Mar-Nov). Bob Krzewinski ☎ 734/487-9058, BobMich@compuserve.com  
 ▲MN—Minneapolis: MnHPV Minnesota HPV Assoc. 2nd Wed @ 7pm Lk. Nokomis Com. Ctr. Ride 6pm - Mar.-Oct. Mark Stonich ☎ 612-824-2372.  
 ▲MO—St Louis: SLABS St. Louis Area R'bent Society, John Werner ☎ 618-931-0557 or bentrus@usa.net (55)  
 ▲NE—Omaha: County Cruisers Armand Gibbons ☎ 402-553-4472  
 ▲NM—Albuquerque: Absolutely Recumbent ☎ 505-345-7736  
 ▲NJ—Metro Area: 3rd Sun/Mo—Geo. WA. bridge (NJ side) John Tetz ☎ 973-584-6481 or jgtetz@aol.com  
 ▲NY—Rochester: R.A.R.E. Weekly rides. Hank Walck ☎ 716-217-9450/Michael Berisson ☎ 716/461-5084/Dave Larson ☎ 716-235-4116 /Brian Managan ☎ 716-872-1751.  
 ▲NY—Western: Monthly starting March 20th, 3rd Sat, 2pm@ Bikeway on N. Forest Rd. (N. of Maple Rd.) at the Amherst Audubon Golf Course Ed Weiss ☎ 716-634-9660 www.bluemoon.net/~padelbra/the\_recumbenters.htm  
 ▲OR—Portland: Oregon Human Powered Vehicles, ☎ 503-617-1759 Rides: Jeff Wills ☎ 360-254-3736 or jwills@pacifier.com (99)  
 ▲TN/GA/AL: Easy Chair R'bent Bikes ☎ 423-886-1499 or easychairbikes@att.net  
 ▲TX—North: 4th Sat/Mo www.rbent.org  
 ▲TX—Houston: 2nd Sun. @ Katy HS. Pat ☎ 281-347-3627 (D)  
 ▲TX—Refugio (South): R-BEST R'bent Bicycle Enthusiasts of South Texas. Bob Dillard ☎ 361-526-2977, wildlife@write.com, http://pages.prodigy.net/bobexotic  
 ▲WA—Kent: Rides from Lake Meridian Park. Email DrRecumbent@aol.com  
 ▲WA—Snoho Co. AARC: (All R'bent Riders Club) 3rd Sat/Mo Harvey Field in Snoho Cty. ☎ 206/632-6955 or bradrick@serv.net ☎ 206-632-6955.  
 ▲WA—Spokane: 2nd Sat/Mo @ 9:30am —SIRTI pkg lot E of Fairfield Inn, E/Z RIDER Cycles ☎ 509-725-4249 or jmingini@famrc.org  
 ▲WA—Vancouver: See Oregon  
 ▲WA—SE: WRTW<sup>2</sup> Two Wheeled, Recumbent Riding Trombone Teachers of Walla Walla. Bill Gilbert VonBruno@bmi.net  
 ▲WASH. DC AREA: W.H.I.R.L. 8am Sat (9am-winter) @ Viers Mill Rec Center. www.recumbents.com/whirl (99)  
 ▲WI—Milwaukee: Sunday am rides from the Hales Corner Wheel & Sprocket store. Demos available. ☎ 414-529-6600 (99)  
 ▲WI—Milwaukee: SE Wisconsin Recumbenters www.recumbenters.com Tony Hunter ☎ 414-475-9081 Rides generally start in the suburban Milwaukee area.  
 ▲CANADA—Calgary R'Bent Rider Group: Sol Candel ☎ 403-250-7588 or mail@moviepostershop.com  
 ▲CANADA—Toronto: HPVs of So. Ontario (HPVSO) www.hpv.on.ca, Bruce Buttimore, bruceb@inforamp.net ☎ 416-449-6731 Ext. 289 6pm to 8am EST.  
 ▲Human Powered Vehicle Association Contact: www.ihpva.org mail to: president@ihpva.org ☎ 877-333-1029 (toll free)  
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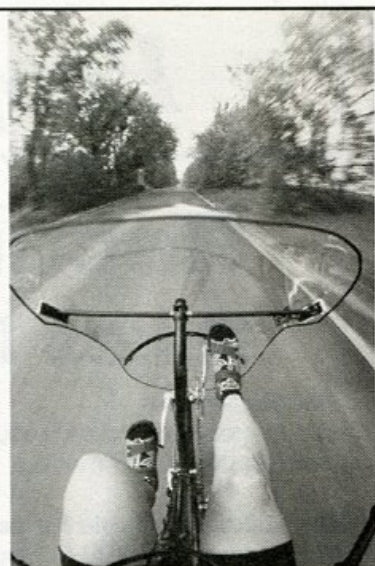
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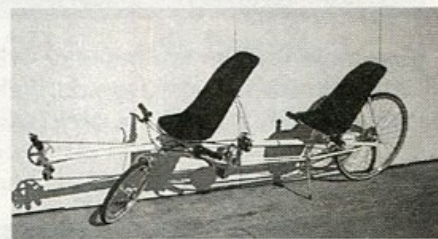
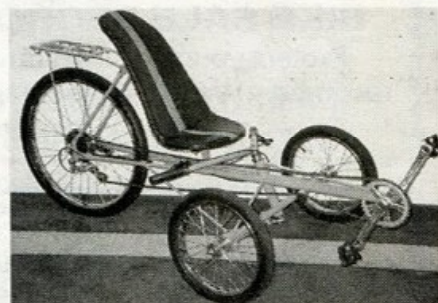
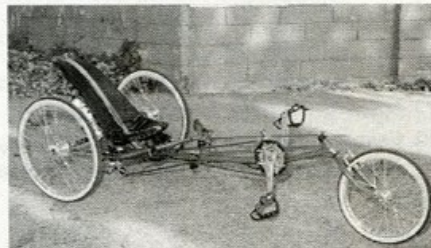
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# People Movers News Vol. 53

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## People Movers Annual The Main Event Round 5

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Registration begins June 1st and is limited to 200 participants. There will be new games, ride and prizes and a lots of food.

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# Easy Racers: Our Customers Speak

## NEW GOLD RUSH - I'M IN HEAVEN (Another customer/friend speaks)

This past Wednesday I drove down to Freedom, CA., to pick up my beautiful new white Gold Rush. I have owned a BikeE AT XL for the past year or so, unfair or not, that is what I have as a comparison. I have only put about 50 miles on the GRR but it has made such a strong impression on me that I have to share it.

I have to start with the buying experience. Gardner Martin will treat you royally. He gave me a full tutorial on the bike from adjusting the derailleurs to truing the wheels. Here's probably the biggest name in recumbent bicycles and he is accommodating, friendly, down to earth, and absolutely chock full of recumbent knowledge. He takes his time with you and makes sure that you are completely satisfied and comfortable with the bike.

Ah, the bike. The bike is a revelation, a marvel, one of life's gifts. I knew that it felt good from my test rides but now that I have ridden it on my familiar bike paths I have a much better feel for it. Is it faster than my BikeE? Whoa baby, this thing kicks ass! It feels like the hand of God has come down and given me a push. There is an overpass near my house with a gentle descent. BikeE — 29.5 mph, GRR 33.4 mph without fairing.

The Gold Rush Replica Black Gold—RCN#45



This morning I put on the fairing. I then took a ten mile ride on a very familiar loop where there is a three mile stretch that is flat and straight. I normally ride it at 20-22 mph pushing pretty hard. I spun up to 20 mph on the GRR and was astounded at how easy it was. I pushed a little harder, looked down at the speedo and I was cruising comfortably at 25 mph.


At that point I must have broken the world's record for recumbent grins. I pushed a bit more and was sailing along at 27 mph. Now I am beside myself and even though I knew the Gold Rush was

good I had no idea it was this good. I backed off a little to enjoy the ride and when I got home my average was 20.2 mph. This included a few stops and one small climb and as we all know the computer average is not the cruising average so I am ecstatic. It has been a goal of mine to average 20 and event though this was a short ride I feel good about it.

I am also very pleased by the ride quality of the GRR. It is one smooth bike. I was curious if I would notice more road shock being used to my suspended bike but the long wheelbase soaks up the bumps wonderfully. I have also had no problems with maneuverability zipping around posts and going around sharp corners. The bike handles beautifully.

One final note is how well the GRR climbs. There is one very steep hill that I climb often. It is only 2/10 of a mile but it must be about a 12% grade. I go up it fine except for the part about being near death at the top. The first time up it on the GRR was shocking. I just spun right up and not even in the lowest gear. I was breathing hard at the top but not gasping like I usually am.

A 47 year old stable family man probably shouldn't have such passionate feelings about an inanimate object but if anyone will understand, you guys will.

Posted to alt.rec.bicycles.recumbent  
by Michael Cvetich. 

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