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by Kent Peterson



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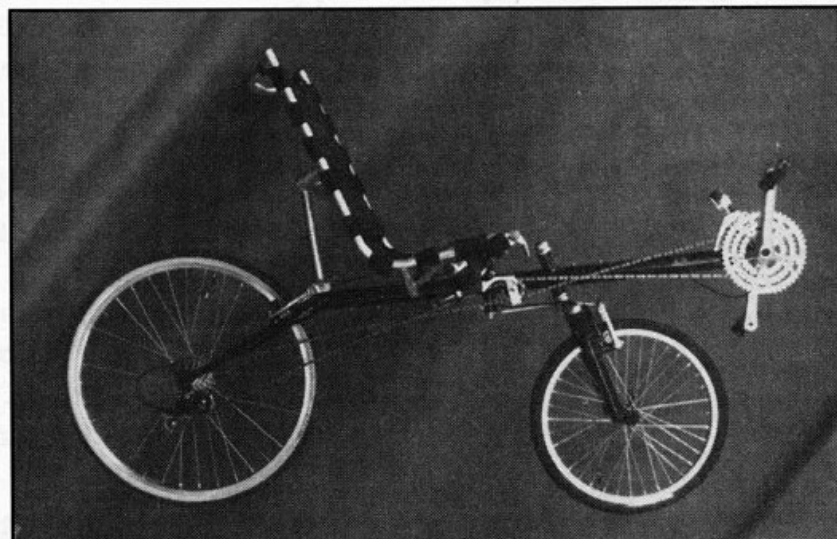
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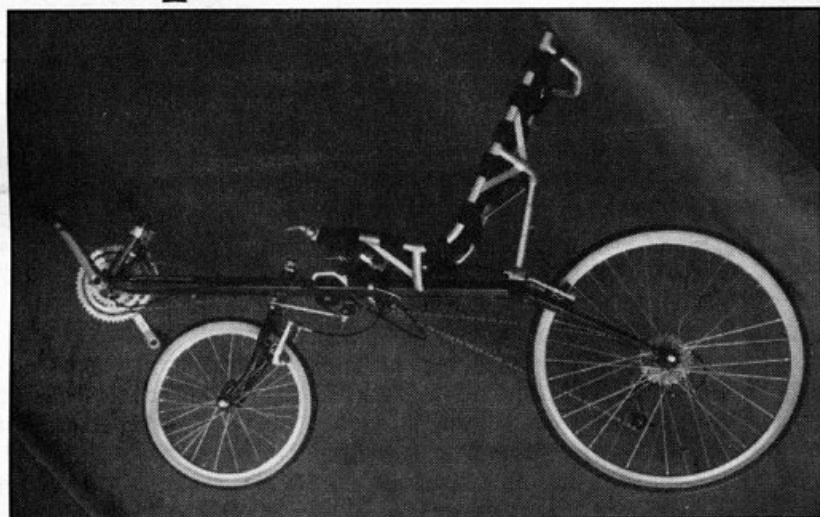
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Check out the '99 specs!

Shimano '99 105 derailleurs

'99 LX 11-32 9spd. cassette

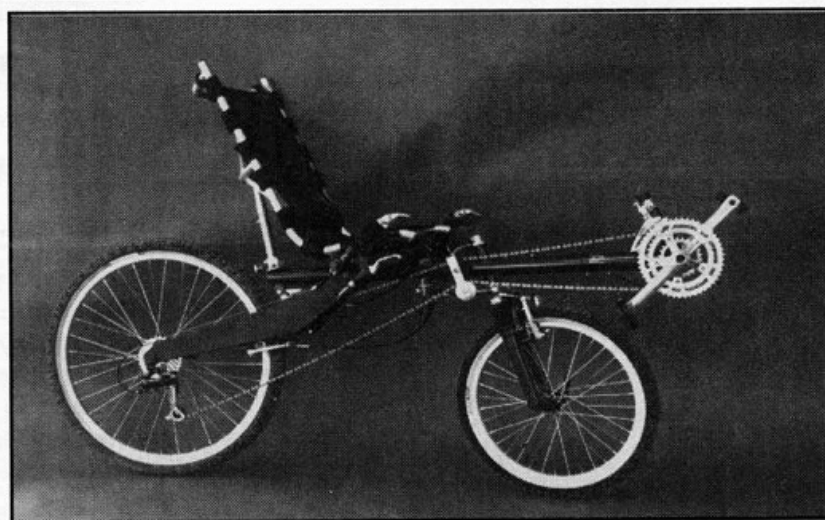
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About the Mail Service

Effective January 1999, we have stopped accepting standard 3rd class/bulk mail subscriptions. This service is primarily used for "junk mail." Replacing the missing issues had become too costly as well as tedious. First class mail is more expensive, though we feel it is necessary to make this move.

We will no longer accept outdated order/renewal forms. If you need an RCN order form, email us or call 253-630-7200 and we'll mail you one.

If you have a standard subscription and would like to upgrade, the cost is \$5 per year or \$1 per outstanding issue.

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Although we at Recumbent Cyclist News make every effort to provide useful and accurate information, we do not claim to have definitive answers—particularly with regard to safety, technique and equipment.

What We Don't Do

Due to our minimal staff, we do not: give bike-buying advice, return advice calls, take credit cards, credit card orders, overnight orders, or bill for orders. We ask that you be patient, as we do make mistakes, but we guarantee that we'll do our best to correct them if and when we do.



RECUMBENT CYCLIST NEWS

The Voice of the Recumbent World

Issue #50

Since 1990

March/April 1999

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RCN Cover The BikeE NX 5.0

Cover Photo Credit Photo courtesy Lee Eckroth of the BikeE Corp.

Fine Print: RCN is published by Bob and Marilyn Bryant & family in Kent, 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.

'Bent Folks

by Robert J. Bryant, DrRecumbnt@aol.com



The most successful recumbent rider group on the face of the earth—WHIRL. Washington's Happily Independent Recumbent Lovers meets at Rock Creek Park in Washington DC year round and attracts many riders. WHIRL member Mark Mattarella (www.recumbents.com) sponsors the yearly BIG RIDE in mid-May, last year attracting 127 recumbent riders. You can come and ride, check out bikes, hang out, talk about recumbents and ride recumbents. And you may even get to meet local celebrities Bill Cook, Mark Mattarella, Vic Sussman or Mark Colliton. So what is it that they have done right? They have chosen one spot and one time in which to meet. A loyal core group showed up weekly—and the rest is history.

Rider groups can be frustrating as well. In the NW, we have weather limitations and just when the group is really strong—it nearly dies and seemingly few care. The excuses are beyond compare. Some riders even have temperature and precipitation requirements. A rider group takes a few dedicated core members and a fearless leader. If you have a good one—be nice, because it's a thankless job, though it can have great rewards.

Some of the best people I've met in my life have come through my interest in recumbent bicycles. Many of us know each other from online, or from the "oid days" or past rides and events. I met Paul Atwood (who appears in this issue) the first time I ever came to an event. We were both hobbyists at the time.

If you attend an event, you will be amazed at the vast group. There are lycra-heads, life-stylers, businessmen, and riders from all ages from young kids to very mature riders. There are a fair number with hair (beards & pony tails) and aero-bellies. In every group event that I have ever been at the conversations have been interesting beyond compare. There are conversations about old Volkswagens, what's on Art Bell (radio show), NPR, Car Talk, guns, motorcycles, scooters, hi-tech bike vs retro, earthships, and off-the-grid living. There are car-free activists, electric car folks, people into sailing, military folks and lots of pilot. I've even had unique discussions about living in buses with recumbent riders. I've met people who didn't work at all, students, doctors, lawyers, homeless riders (by choice), lots of computer folks (video game designers to MS bug catchers), aerospace engineers, you name it—some of the most interesting people on the face of this earth are the recumbent enthusiasts! The sad part of it all is that with

Is that thing comfortable....

Did you build it yourself...

How much did it cost....

Does it climb hills....

In the name of the Gold

Rush, V-Rex and

BikeE, Amen.

The WHIRL prayer

by Vic Sussman

the mainstreaming of recumbents, this may change as we are becoming less extreme. Do your part. Show up to a ride or start a rider group in 1999.

It is time to start thinking about the 1999 season. Recumbent riders can be an independent group—but we don't need to be. Fraternizing with other recumbent riders is about as good as it gets. We won't make fun of you, ask stupid questions or pretend that you don't exist. Recumbent riders have a common bond—we are unique individuals not afraid of riding something different. We customize our bikes, stand firm on design features (and still get along—well, mostly), ride and have fun.

Many RCN readers travel great distances to hang with other recumbent riders. You are extremely lucky if you have a rider group or one of these events in your back yard. If you don't, get out your calendar and plan ahead to be there. Here are some really cool places to hang out with your recumbent (this is not a complete listing—see the RCN calendar for more):

▲WHIRL BIG RIDE

May 15-16, 1999—Washington, DC. This is a great ride. If you can't make it, get a hold of Bill Cook's Big Ride video. Go to www.recumbents.com

▲MIDWEST RECUMBENT RALLY

June 5-6, 1999—Stevens Point, Wisconsin. Many feel that this is the single best recumbent event in country. Hostel Shoppe Tel. 715-341-7414.

▲MIDWEST RECUMBENT ROUND UP

June 12-13, 1999—Milwaukee, Wisconsin. Harry says there is FREE EVENT WITH FREE FOOD! Wheel & Sprocket 1-800-362-4537.

▲PEOPLE MOVERS RALLY

To be announced—Orange, CA. Jim & Linda Wronski's event is the premier west coast recumbent bicycle event. Tel. 714-633-3663.

There are many others, but these are the well publicized serious events that have a reputation for being great shows. Please watch the RCN calendar for more events, races and rallies.

Viva Recumbency, Bob Bryant ☐

RCN TEST BIKE NOTES

The RCN test fleet consists of the following bikes:

- ✓1999 Barcroft Virginia SWB /ASS
- ✓1999 Rans Stratus ESP 9-speed LWB ASS
- ✓1999 Vision R32 MWB ASS

Our BikeE CT, NX, Haluzak Horizon, Cambie Recambini, Vision R40 and Gold Rush Replica are on their way home.

The Vision R32 MWB is now in production and available. The R32 road test will be featured in RCN#52. ☐

For Your Information...

RCN Standard Subs/Bulk Rate/3rd class mail—You may have noticed our order form in RCN#49 and 50. Due to irregular delivery (we are replacing 20 bulk mail issues per month), we no longer accept bulk mail subscription orders. You can upgrade your sub for \$1 per outstanding issue. We plan to ship RCN issues 3rd class/bulk mail for RCN#51, 52, 53, and maybe 54, after which, all outstanding subscriptions will be converted to first class. Some long term subscription renewal dates may be affected. If you have a problem with this, please let us know. If you have any question on the above, please email: DrRecumbnt@aol.com ☐

Recumbent News

March—April 1999 RCN#50

Recumbent Jerseys now available from Calhoun Cycle

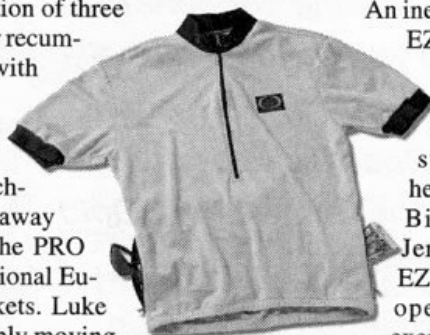
Calhoun Cycle, MN, announces the introduction of three very fine new jerseys designed specifically for recumbent cyclists. Once again they've worked with Bouré Sportswear, premier cycling apparel designers and manufacture's, to create these fabulous jersey alternatives.

All three jerseys are made of the latest technical fabrics that effectively wick moisture away from your skin to keep you cool and dry. The PRO jersey is the top of the line. It features a traditional European cycling fit and two front zipper pockets. Luke Breen, owner of Calhoun Cycle, felt that simply moving a cycling pouch to the belly wasn't effective. "It's not secure, comfortable and, well, it's not very good looking." Instead, they've come up with a thoughtful solution. They've made two large side pockets, with zippers for security, that are large enough for a couple of energy bars, map, sunglasses and yet they look great. It's available in a very hip 'lime green' and a more traditional 'power blue' and sells for \$69.97.

For women, the sleeveless ELITE Jersey has the same great pockets and fabric as the PRO. But it features narrower shoulders, a shorter body, and a flattering contour cut for women.

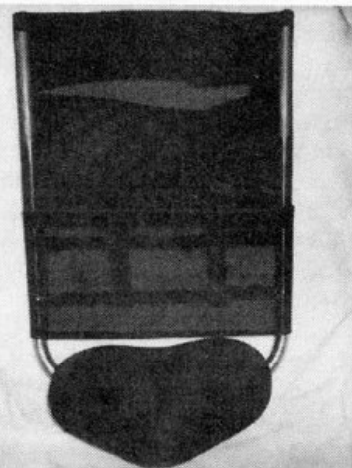
And for riders who don't require the premiere pocketry of the PRO and ELITE, they offer the SPORT Jersey. Still made of wicking, technical fabric, the SPORT Jersey is a more relaxed, looser cut and features a simple breast pocket for a few ditties. It sells for \$49.97.

In this, their fourth year of recumbent duds, Calhoun Cycle has made several improvements and additions to their collection, which includes 8-panel chamois-less shorts, bibs, atb-style double-shorts and of course the new jerseys for men and women. "Each season we learn so much from our customers, it just keeps getting better." This season they're also excited about the addition of San Francisco manufacturer Zoic to their catalog. Zoic is one of the most popular mountain bike apparel designers, and now Calhoun Cycle has worked with them to customize a double-short for recumbent cyclists. The new short has a lightweight shell which snaps down to lessen ballooning and a lightweight comfortex liner with gusseted crotch. It's a light, cool, comfortable short that is great for touring. Calhoun Cycle ships their recumbent apparel worldwide and guarantees your satisfaction. To receive a free catalog, call them at (612) 827-8231 or e-mail: bent4good@aol.com

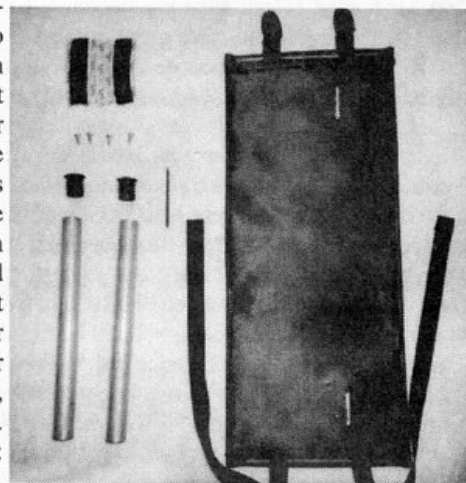


BikeE Seat Back Kit now Available

An inexpensive BikeE seat back extension is now available from EZ Rider Cycles. After receiving complaints from otherwise satisfied BikeE customers about discomfort or lack of support from the height of the standard BikeE seat back, Jeramiah Mangini of EZ Rider Cycles developed a seat back extension kit to solve the problem. The kit includes two 10" aluminum tubes which raise the backrest 6"; black mesh webbing material with straps; 4 mounting screws; 1 #29 drill bit; and two end caps. The total kit weighs less than 1/2 pound and sells for \$30 + \$5 S/H (WA state residents add \$2.28 sales tax). An additional option would be to use this kit in conjunction with the new BikeE Sweet Seat™ seat base sold for \$50 + \$5 S/H (WA state residents add \$3.80 sales tax). Those who have installed the extension kit have experienced improved comfort, support and performance on their rides. To order: EZ Rider Cycles, PO Box 896, Davenport, WA 99125. Tel. 509-725-4249; Email: ezrider@sisna.com. (See Page 14 for more info on this kit.)



Finished hi back seat



Seat Kit: 8" black mesh with velcro straps, 2-10" tubes, 2-end caps, 4-screws, and 1-#29 drill bit

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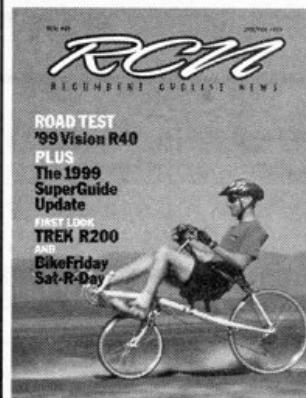
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News & Rumors

COMFORT CYCLE—It appears as though Comfort Cycle has gone out of business. The former principals of Comfort Cycle have not returned our calls, nor did they send along any '99 info. Comfort Cycle's contract fabricators in Texas will continue to sell the Chaise 3 and a new trike called the Cycle 2000 under the name of Cycle Creations Tel. 903-342-1111. The trike business in the USA seems to be difficult. We suggest that RCN readers buy trikes that are proven from manufacturers with a good reputation that have proven that they can stay in business. **WHEEL & SPROCKET**—Harry Wozniak reports that Wheel & Sprocket expects to have Trek R200's in stock for their annual "State Fair Sale" April 8-12, 1999 at the Milwaukee (West Allis) State Fairground. Wheel is well stocked in Treks for '99. **REBIKES@SEARS**—In some areas of the USA you can now buy a ReBike at Sears. The ReTrike has been discontinued. We are again out of the loop with ReBike. They expressed disappointment that we did not list

them in our *Adventure Cycling* touring recumbent issue last year. **LONGBIKES**—The sale of Ryan to Longbikes has closed. Longbikes first run of LWB models should be done by the time you read this. SWB and maybe above seat steering options are coming. They will be sold through dealers. Longbikes is currently working on an ASS version as well as a SWB. **TRUE COST OF GAS**—The actual price for gasoline used in an automobile is \$15.14 per gallon. A report prepared by the International Center for Technology Assessment (CTA) calculated this finding, which outlines the hidden costs that consumers pay indirectly by way of taxes, insurance costs, subsidies for the petroleum industry, costs of protecting Middle East oil fields (military) and environmental and social costs related to global warming. Andrew Kimbrell, the director of the CTA, hopes that the public understands how much it costs to drive. According to the World Watch Institute, if 10% of motorists switched to bikes or public transport, nearly \$1 billion annually would be saved on the US oil import bill. □

1999 EVENTS CALENDAR

▲(SEE DATE CHANGE) ENTRAL VALLEY RECURBENT RALLY

April 17, 1999—Fresno, California.
For more info: Bill Bruce, Tel. 559-225-3551; www.fresnocycling.com; bilbyke@psnw.com

▲MICHIGAN RECURBENT RALLY

May 15, 1999—Michigan. For more information: SASE to Bob Krzewinski Tel. 734-487-9058, BobMich@compserve.com or www.lmb.org/wolbents.

▲WHIRL BIG RIDE

May 15-16, 1999—Washington, DC

▲FLIRTS SANIBEL TANDEM (and/or recumbent) WEEKEND

May 14-16, 1999—Sanibel Island, Florida.
Contact: Tomand Kathy Provenzano, FLIRTS, Tel. 941-267-8641 or email: tprovenz@peganet.com.

▲MIDWEST RECURBENT RALLY

June 5-6, 1999—Stevens Point, Wisconsin.
Hostel Shoppe Tel. 715-341-7414.

▲MIDWEST RECURBENT ROUND UP

June 12-13, 1999—Milwaukee, Wisconsin. Wheel & Sprocket. Recumbent demo rides, FREE food, and rides both days. 1-800-362-4537.

▲MICHIGAN HPV RALLY

June 5, 1999—Waterford Hill, relaxed racing on a closed course. SASE for flyer. Wally Kiehler, 1027 Hawthorne, Grosse Pt. Woods, MI 48236, Kiehler@juno.com, www.lmb.org/mhpva.

▲SAGINAW VALLEY CHALLENGE

June 6, 1999—Michigan (see above listing).

▲CRATERS OF THE MOON RIDE

June 5-6, 1999—Sun Valley, Idaho. Contact Bob at the True Wheel 208-788-5433.

▲SLUMGULLIAN COLORADO TOUR

June 25-28, 1999—Gunnison, Colorado.
Angletech, Tel. 719-687-7475.

■ RACE CONTACTS:

—hpr HPV RACE Contact Info: Gary Hill, 220 Vill-Edge Dr., Granville, OH, 43023. garriehill@nextek.com. www.recumbents.com
—San Diego Velodrome Series: Bill Volk Tel. 619/824-8323, bvolk@inetworld.net
—IHPVA, PO Box 1307, San Luis Obispo, CA 93406-1307.

▲ RIDER GROUP LISTINGS

Will be printed in RCN#49, 51 and 53.

RCN#50 is our 50th issue!

DIMENSION EDGE



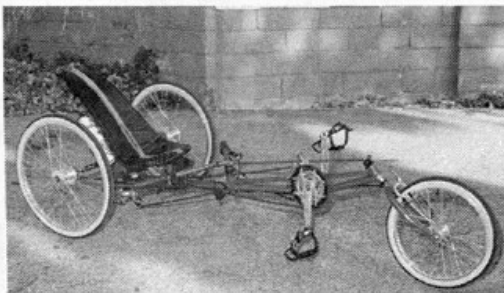
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The Next Generation BikeE

by Robert J. Bryant

Imagine my surprise when I opened the box containing our "Next Generation" BikeE NX 5.0 test bike, and it *was not* the same bike that we previewed at Interbike Las Vegas. It's a new updated, and more aggressive BikeE design! The bottom bracket has been moved higher and farther forward so it is directly behind the headtube, whose angle is 2 degrees steeper, and the wheelbase has been shortened two inches. The NX has the coolest component package on the 'bent planet, a new recontoured "Race-Tail frame," the high-back Sweet Seat and a new handlebar and top-loading stem. The new changes transform the bike from a laid back, easy-to-ride, low-to-the-ground comfort 'bent, to a more aggressive (though still friendly) medium wheelbase (MWB) performance stance.

■ FRAME & PARTS

The NX is the only BikeE that is built in the USA using a USA built frame extrusion. Since the NX has a different frame geometry, this model cannot share mainframe frame parts with the AT 3.0 or CT 2.0. The top-loader stem allows owners to install their choice of handlebar. The stock bars are aluminum with a rise and a reach to bring them closer to the rider. The swing arm and suspension technology are directly off the AT 3.0. The Cane Creek AD5 shock on the BikeE offers one of the smoothest suspended rides in recumbency. The fork is CroMo built in Corvallis with Hayes disk brake mounts brazed on. This fork is made to accept the taller 349mm 16" wheel, and it has a more attractive finish than the CT/AT fork.

In the NX R & D, designer Paul Atwood utilized "morphy," a test bike that has a completely adjustable riding position. He can tweak the wheelbase, headtube angle, seat position and BB height to find the NX perfection. And that is how the NX came to be.

■ ULTRA TRICK DRIVETRAIN

The NX offers the most unique spec and drivetrain of any bike built on American soil in 1999. The NX has an SRAM Grip Shift ESP 7.0 shifter and rear derailleur. The chain is the new SRAM chain (formerly Sachs) which is the BMW of bicycle chains. Having the 1999 ESP here alongside Shimano Rapidfire, I must waffle and tell you that I prefer the quick shifting of the ESP. However, the design of the ESP derailleur does make it more difficult to pull the rear wheel out of the dropouts.

The real sweet spot of the NX is a neat little gizmo called the Schlumpf Mountain Drive (SMD). The SMD has a two speed planetary gear bottom bracket gearing system with a one-chaining crankset. The crankset itself is just average, though the guts are incredible. The SMD can be shifted on the fly or at a stop. You just click your heels together and say, "there's no place like home..." Oops, wrong instructions. There is a neat button placed where the dust cap should be on the end of the crank spindle (axle). You just click it with your heel as you pedal. It sounds odd, but it's simple, unique and EASY to do. The gear range is very wide: the low range is 1:1 and the high is a 1:1.65 offering 16 evenly spaced wide range gears in a simple to use drivetrain. Most riders notice the drag of a 3x7 hub. There doesn't seem to be as much drag in the SMD (though more than with just a derailleur). SMD reports that the Mountain Drive is 95-97% efficient.

This is the coolest component I've tested in years. If they were cheaper and readily available, I'd have one on every bike. They currently cost about \$500 retail and require some bottom bracket modification with a special tool that I don't have.

The Hayes Hydraulic disk brakes are equally slick. They stop on a dime and we did not have any rim squeal. Wet weather braking is fantastic. They do have an interesting metallic sound to them as

they work—and disks modulate different than other bicycle brakes.

Hayes earned its name as a leader in hydraulic brakes by being the primary supplier of brakes for Harley Davidson motorcycles—and they stop better than any bicycle brake I've tried! They won't gouge your rims and they stop fantastic in the rain.

Is there a downside? Possibly. First, they use DOT brake fluid (like a car, yuck!). Our Hayes brakes were perfect for three rides over about 40 miles and then we noticed some dragging on the front disk. When I looked in the Hayes manual under "troubleshooting," it said, "re-center the caliper, and push pistons back." Well, this is beyond me. I'm still learning how to work on V-brakes.

The Hayes brakes are high tech and not every bike shop/mechanic will be able to fix them, adjust them or set them up. Disk pads will be required—so you'd better hope that they don't pull the planned obsolescence game. Are they necessary? No. I liked the low-tech Alongas on the CT/AT, so these pricey disks may be wizbang overkill for some.

The wheelset is a surprise. BikeE has a matching Primo Comet tire set in 451mm 20" (same as a Gold Rush front wheel) and a 349mm 16" front wheel (same as a Vision or Haluzak use). The jump from the 305 16" on the CT/AT to the 349 raised the BB up three inches by itself. The 451mm is quickly becoming a dinosaur. Gardner Martin (Easy Racers) will be glad to hear that somebody else is using it. This is truly the best performance wheelset the NX could hope to have. Honestly, I had to be told that the rear wheel was a 451, as Primo Comets are available in 305 and 349mm 16" and 406 and 451mm 20" tires. For all of you who disdain the 451mm size, rest assured that with the Hayes disk brakes, a 406mm/305mm NX can be ordered from BikeE (the wheelsets interchange due to the disk brakes).

■ A SWEET SEAT!

The back is tall—like a Rans seat back—with no apparent seat stays. The seat braces are expertly hidden within the structure of the seat. Our initial experience with the Sweet Seat was that it flexed and twisted on the frame more so than the previous seat. When our NX arrived—it had a new delrin pieces on the seat quick release that keeps the seat 30% stiffer on the frame. There is also an improved cross support that helps. You won't find it as stiff seats with external braces, but the slide/adjustment works great, is more user-friendly and definitely worthwhile on the BikeE. This sliding seat adjustment is better than any other on the planet. It puts other similar designs to shame and makes adjustable booms, boom bolts and adjusting chain lengths for different riders (none of which you have to mess with on a BikeE) look like an amateur hour at the recumbent design contest.

There is no visible recline adjustment; however, each of the seat quick releases have an upper and lower position. Placing the front QR in the higher position and the rear in the lower position, the seat reclines very well.

The seat base is wider and has more foam. It is cupped and flaired and holds your rear snugly. I think that this base is a marked improvement. I have heard comments that it looks the same as the old base, the new base isn't large enough, or that the new base isn't enough of a change. The bottom line for me is that I find a lot of difference in the way it cups my tail section. I am *much* more comfortable on the Sweet Seat—especially on the AT/CT (CT/AT allows the seat to be reclined more than the NX. However, I hope BikeE does come out with an XL seat base some day—BikeE seat bases have always been a bit on the small side. The Sweet Seat will be at its comfortable best on a properly sized CT/AT (tall riders go XL).

■ NX ERGONOMICS

The NX ergonomics are different than the CT/AT. The seat height is rather high for a performance bike—at 28-29", it is 2" higher than a CT/AT. The bottom bracket (BB) is 4 inches higher (though still lower than the seat) and the two degree more upright head tube places the controls farther away from the rider. The NX almost begs for a semi-lean forward performance crouch (similar to the low handlebar RoadE). With the more upright head tube, the most reclinable (laid back) position of the Sweet Seat may not be able to be utilized on the NX—at least with the handlebars on our test bike and with some taller riders (see "verdict"). The NX ergonomics are different, more extreme and more performance oriented than the more comfort cruiser based CT/AT.

■ THE RIDE

The BikeE CT/AT has a feel like a mini-LWB. The bike feels low and the controls are close, thanks to the laid back head angle. The NX's more upright headtube changes the reach to the controls—as well as the handling of the bike. It doesn't feel like any compact you've ridden before. It feels like a medium wheelbase (MWB). (Vision showed their new R32 MWB at the Las Vegas Interbike tradeshow last September. We are currently testing the R32 for RCN#52.)

The NX has a more neutral feel than the CT/AT. It has a unique stable feel about it. It is light feeling, sure footed, and nimble. This geometry is complimented by the Primo Comet tire set.

My starts and stops were initially more difficult due to the higher BB. Since I was on a standard size frame (which I officially "fit" but didn't really fit), I was getting some suspension pogo on fast accelerating starts and hill climbs. The design itself does not seem to induce pogo'ing of the suspension, though incorrect sizing will. This is one bike to buy "large" size.

I think for urban/city/recreational riding this is as good as it gets (though I might opt for the fat tire set). The bike is small, compact and offers great low, medium and high speed handling. The NX can turn on a dime and is an exceptional low speed balancer—a trait that gives it the edge well over any of the bad habits of LWB recumbents. As for SWB comparisons, there is no boom or front wheel interference with the NX. There is no boom flex, because there is no boom. The NX extrusion is very stiff, combined with the refined and cush BikeE rear air-suspension. This is one of those rare recumbents that people will be able to ride with no hands once they get accustomed to the bike.

■ PERFORMANCE

When I first read the BikeE NX press release, I wondered to myself what BikeE could do to improve performance. I personally don't think the high-tech brakes on the Schlumpf will make it go much faster, and our test example is not a light bike (though lighter than our test Gold Rush or Rans Stratus). BikeE has never been known as a builder of high performance recumbents—though this is a high performance BikeE.

I found the NX to be a good performer. Over my winter test loop, which is 13-18 miles of the Soo's Creek Trail and backroads from my house to Lake Meridian in Kent, Washington, it performed every bit as well as any recumbent I ride on this course. The NX felt more stable than most SWB, and more nimble than any bike I currently ride on this test course. The one hesitation I have is that your performance will rely on the use of the rather skinny and kinda wimpy Primo Comet tires.

BikeE's fairing will fit the NX, however, it may not fit as well (due to the more upright headtube angle of the NX). And the BikeE Zzipper has never offered as much boost as compared to other recumbents (positioned fairly upright). The NX has a more upright riding headtube, thus upright bar/stem will have the fairing more upright. The higher BB cleans up the aerodynamics. It is my guess that a tailbox would be a great add on (see Kent's tailbox article RCN#44).



Shawn O'Donnell rides the new BikeE NX 5.0. Photo by Lee Eckroth of BikeE

■ VERDICT

I give this bike a thumbs up—with some ergonomic qualifications. It is the most interesting new design to come through our doors in a while. BikeE's mission for this bike is to attract BikeE owners who love their CT/AT but are considering moving upscale, either in spec or performance (or both). The NX fills the niche for an enthusiast performance BikeE very well. However, some riders may be put off by the drastic change and may not want to change to the more aggressive NX geometry.

The components might even be too high tech for BikeE lovers. I actually shifted more with the Schlumpf, more than I would have with the stock 3x7. Also, you need to nearly stop pedaling to click the shift button—which may be annoying to super-enthusiast types. The disk brakes are very cool, but they are overkill. Especially now with the cheap and powerful Alhongas on the CT/AT.

Our most critical point (and above qualification) about the NX is with the seat recline/reach to the controls issue. On our NX, I am skirting the outside edge of an acceptable reach. When I reclined the seat to my liking I was hyper-extending to reach the controls. Some shorter riders did not have this problem. Our local AT rider, Tim Koffley, is 6'1" and has a similar x-seam to mine. He had a hyper-extension problem on

the NX as well. When we placed the Sweet Seat on his AT 3.0, he had a reach problem which forced him into riding with the seat more upright or an incorrect leg extension, neither of which is acceptable (Tim took a ride on the Sweet Seat and opted for the EZ Rider seat extension kit along with a Sweet Seat base—see pages 6 & 13).

The new "Top Loader" stem offers the possibility of easily changing out the handlebars. With our test bike's handlebars, riders in the 6' range may have a bar-reach extension problem—or possibly be required to ride in a more upright seat position than they prefer. We expressed our ergonomic concerns to BikeE. Just as we were going to press they announced that they would be using a higher rise bar that sweeps back and brings the controls closer than the one on our test bike—that brings ergonomics more in accordance with the magic 90-degree arm bend.

Unfortunately, we were unable to try the NX with the most recent handlebars. They are different than those pictured in this issue of RCN.

Our standard NX test bike accepts riders well over 6' tall. As with the CT/AT, I quickly found that the optional XL's 4" of additional wheel-base improved my center of gravity, and made things better for me. On the standard frame, my front wheel felt light, and could easily bunny hop the front wheel on steep climbs. Even so, I love the handling feel of the NX. From my past experience, the XL is the way to go if you are anywhere near 6' (or over unless you ride in flat area, are a very light rider or are bike weight/size conscious).

The promised weight loss of the NX that was supposed to aid in performance has yet to come true. Our NX was a shade heavier than its projected weight of 30 pounds (production #1).

■ THE COMPANY

As recumbent manufacturers go, I love dealing with BikeE. They are about the most proactive in the business (tie with Rans). Their response to our ergonomic concerns was incredibly fast and effective (though not fast enough for us to get the new bars on our test bike). They listen, have meetings, make updates and make our work seem worthwhile. If you have input for BikeE, I say let them know—BikeE listens. The quality

of my NX, the paint, the parts, the build quality and the way the bike went together was incredible. We just don't have trouble with BikeE's. Setting up the NX took exactly 15 minutes from box to road, complete with fine-tuning Bob-adjustments. The average time we spend for that here is probably two hours—and sometimes we get a bad one that takes days of messing with. If I did have a problem, question, concern or need an additional part, they are available on the phone or via email and things move very quickly. BikeE is a progressive company that is serious about selling good and affordable bikes at all levels of recumbency.

So, will it be faster than a speeding Colnago, Gold Rush Replica or P-38? I would bet not—but who cares. Racers on speeding Colnagos should stay on them. A real roadie is the toughest potential recumbent performance convert. It takes an exceptionally fast 'bent and rider to keep up with the peloton. The NX performs better than the CT/AT. Riders who love BikeE and want a more aggressive, state-of-the-art performance BikeE (or recumbent) will love the NX.

It will be interesting to see how many people out there are interested in this new \$2000 high-tech model. The NX left me with the impression that the \$650 3x7 equipped CT is the best deal on the recumbent planet—and the AT is a supreme bargain at \$100 over 1/2 the cost of the new NX—though the NX is an impressive new model.

I'm sure that the laid back CT/AT style will continue to be the most popular BikeE model. BikeE owns the compact recumbent style. They are more committed than any other manufacturer. They continue to refine their designs and improve their bikes. There is no doubting the fact that this is the Next Generation BikeE. □

■ ACCESS

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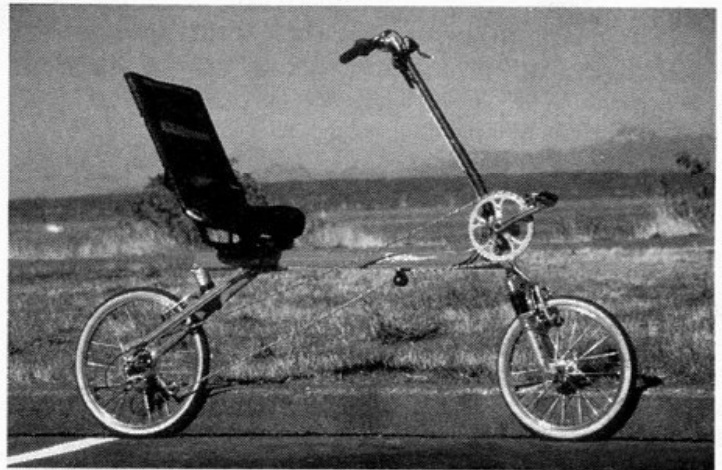
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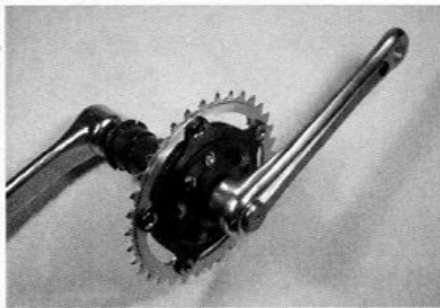
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LEFT: The BikeE NX's Schlumpf Mountain Drive



RIGHT: BikeE will be offering a 3x7 quick release option soon



The NX has changed since the Las Vegas show. The production bikes will have slightly different handlebars from the above



The best recumbent bag on the planet by BikeE. It will hang on any mesh back seat (with a frame cross support)

COOL STUFF

The BikeE bag fits the Sweet Seat, though not as well as the previous seat. It rides rather high up, rather than hovering over the top of the frame beam. In saying this, I am not criticizing the BikeE bag one bit. I find the BikeE bag to be the most exceptional recumbent seat bag that we've tested. It holds way too much stuff and can mount to just about any recumbent. It has dual zippers and a nice outside zipper pocket large enough for your wallet and keys. The BikeE bag has two water bottle holders (and the NX has one on the rider side of the stem riser, too), a nice reflective tape and stitched BikeE logo. This bag is made for BikeE by Jannd. I am certain that this bag will be the most durable as well. I have installed it on many different recumbent models. All you need is a mesh-back seat, a few zip ties and clearance over the rear wheel (or a fender). I highly recommend the use of the BikeE bag instead of a rack/panniers unless you are planning to tour.

RATING—BikeE NX

- ✓Chain Management (idlers, chain noise, chain line)—☆☆☆☆ 1/2
- ✓Drivetrain Performance—☆☆☆☆ 1/2
- ✓Drivetrain Rating—☆☆☆☆ 1/2
- ✓Brakes/Braking—☆☆☆☆ 1/2
- ✓Finish Quality—☆☆☆☆ 1/2
- ✓Comfort Rating—Back ☆☆☆☆ 1/2; Base ☆☆☆☆ 3/4
- ✓Rider Ergonomics—Upright seat, low bottom bracket=open riding position (though a higher BB, more aggressive position than the CT/AT).
- ✓Best Use—The ultimate BikeE for the compact technoweenie.
- ✓Best Rider Type/Size—Fits most riders if carefully sized (XL avail).
- ✓Recommended Weak Points/Upgrades—I do have ergonomic concerns. The new Seat can be reclined more and the headtube angle is steeper. Thus, the controls are farther away from the rider. This can be solved by different bars. I have suggested to BikeE that they develop a pull back riser (ala Rans) to bring the controls closer to the rider.
- ✓Comparison to Market Competition—Vision R32 is less expensive and has full suspension, though uses lower line componentry and a 3x7.
- ✓Performance Potential—☆☆☆☆ 3/4
- ✓RCN "Bob" Rating—☆☆☆☆

RANS HOT ON BIKEE'S TAIL?

So what about Rans hot BikeE killer—the Wave? The Wave has a non-3x7 drivetrain with a front derailleur, lower gearing, but a killer Rans seat—which *MAKES* the bike. The Wave is TIG (pulse) welded and is painted a beautiful blue color—WOW, what a cool bike for \$695!

BikeE NX 5.0

TYPE.....	Medium Wheelbase sboveat steer (ASS)
WHEELBASE.....	50" std./54" XL
SEAT HEIGHT.....	28-29"
BOTTOM BRACKET HEIGHT.....	21"
WEIGHT.....	32 pounds (BikeE target weight is 30 pounds)
FRAME.....	US Built Custom extruded aluminum
FORK.....	CroMo w/disk brake mount
STEM/BARS.....	TIG CroMo
SEAT.....	Sweet Seat™ CroMo, sling mesh, foam base

COMPONENTS

CRANKSET.....	Schlumpf Mtn Drive 2-spd. 36-T
BOTTOM BRACKET.....	Schlumpf
HEADSET.....	Aheadset OS 1-1/4"
DERAILLEUR-REAR.....	SRAM ESP 9.0
DERAILLEUR-FRONT.....	None
SHIFTERS.....	SRAM ESP 9.0
CASSETTE.....	8-spd. 11-30
GEAR INCHES.....	25-125
WHEEL-REAR.....	451mm 20" X 1-3/8" Sun M14rim
WHEEL-FRONT.....	349mm 16" X 1-3/8" Sun M14 rim
TIRES.....	Matching Primo Comet
HUB-REAR.....	Hayes compatible QR
HUB-FRONT.....	Hayes compatible QR
BRAKES.....	Hayes Hydraulic disk
WARRANTY.....	5 Years to original owner
COLORS.....	Dark green/silver powdercoat
PRICE.....	\$1995

THUMBS UP

- ▲ Advanced new BikeE geometry
- ▲ The most high-tech drivetrain available
- ▲ Easy to ride/Best of SWB & LWB in a MWB
- ▲ Idler-less drivetrain runs smooth
- ▲ Disk Brakes are high tech, cool and stop fast!
- ▲ Built/assembled in Corvallis

THUMBS DOWN

- ▼ Sweet Seat base is still a bit small
- ▼ Possible control reach problems (new bars should help)
- ▼ May be too high tech (I didn't want to ride this bike in the rain)
- ▼ High performance requires skinny Primo Comet 451/349 tires.
- ▼ Not as fast as a Gold Rush or speeding Colnago (wedgie)

The BikeE CT 2.0

The Best Deal on the Recumbent Planet

by Robert J. Bryant



BikeE is the first and foremost entry level recumbent manufacturer. They have specialized in compact (CWB) recumbents and have refined them into a near art form. Nobody in the industry nor in the world is as committed to entry level, easy-to-ride recumbents for the masses—especially at such low prices.

The BikeE CT is an exceptional buy. It even has some improvements over previous versions. The main difference between the new \$650 CT and previous BikeE hard-tails is that the CT's are now fully manufactured in the Giant bicycle factory in Taiwan.

■ FRAME

The new BikeE mainframe extrusion is nearly identical to its US built counterpart ('98 model). Odd as it may sound, it feels different to the touch. The Taiwan CT's are polished in Coke-can hues of red and blue. It is not bad, just different. The polish tends to show the imperfections in the finish more than the built-in-Corvallis BikeE's with their brushed finish. Personally, I miss the brushed aluminum. Also gone is the love-it or hate-it purple finish.

The seat frame, handlebars and other bits once built state side of stainless steel are now imported CroMo and HiTen steel with an electro-alloy finish. The new fork is nice as well. It has a cast crown and there is plenty of clearance for the tiny 305mm Primo V-Monster (or optional Primo Comet tires) and a fender if you like.

The CT comes in an XL frame size, recommended for those +/- 6' tall. Our CT XL weighed 32 pounds.

■ DRIVETRAIN

The Sachs (SRAM) 3x7 is a time proven friend that is tops in user-friendliness. We didn't know how much until we found ourselves shifting more with the new BikeE NX's Mountain Drive (with fewer gears). Almost overnight the 3x7 hub has become more difficult to find (though not according to Angletech, Bike Friday or BikeE) and could even be considered outdated in this new era of 9/27 speed recumbents.

The 3x7 is for the most part an easy-to-use trouble free system—and is an outright bargain on this \$650 BikeE. One case of a 3x7 problem that I know of is Kent Peterson's son Peter's BikeE. At 5,000 miles it dropped its bearings all over the ground. When I asked Greengear about 3x7 problems, they said that they were almost nonexistent. Our 3x7 was completely problem free. The Sachs twist grips shifted the 3x7 21-speed perfectly. It shifts easily and there is nothing better for the entry-level enthusiasts.

The Dotek crank has become par for the course for recumbents under \$1000. Even the Rans Tailwind and Rocket have the same crankset. The Dotek seems to wear just fine, as long as the crank spins true (stand over the crank and spin pedals to make sure the chainrings are straight). Little has changed in the inner workings of the BikeE drivetrain—it is even better at \$650.

■ STOPPERS

New for this year are the Alhonga linear pull brakes. The front is especially weird and wonderful. I guess we can call it a semi-linear pull (semi-V). Combined with the inexpensive Tektro levers, the brakes feel a bit mushy, though the stopping power is incredibly good. It is also a no-brainer to stop a BikeE. You can apply both brakes full force. Our test Alhongs were flawless during the test and I like them a lot. These new brakes also come outfitted on the suspension AT as well.

■ CT SEAT

The CT 2.0 gets BikeE's "Original" seat which most users consider *not* to be the most comfy recumbent seat for miles on end, though adequate

for shorter rides and—most would agree—better than a wedgie.

■ CT UPGRADE PATHS

Once you buy a CT, there are some interesting upgrade paths for seat pads, seats, and frames.

✓ **The Sweet Seat Base** is available for \$50 retail and will bolt on to your existing CT seat frame in minutes.

✓ **The Sweet Seat** is not an option on the CT, though it can be purchased separately for \$249. There are some incentives which have some dealers offering them as low as \$199 and some dealers may take your CT seat in trade (the best trade-in was offered by People Movers—\$100, for a perfect CT seat). The downside is that a BikeE AT with rear suspension and a Sweet Seat sells for \$1099. Think about this before you buy the CT. The AT is a superior bike from a comfort perspective.

✓ **An AT Suspension Frame Upgrade** is available for \$499.

✓ **EZ Rider Cycles** offers a CT seat extension kit for \$35. This combined with the Sweet Seat base will make for a low cost seat upgrade.

✓ **3x7 Woes:** BikeE has replacement wheels in stock. Some owners have added a double crankset up front for two gear ranges. Still others shift the crank by grabbing the chain tube. Fools Crow offers a front derailleur tube mounting kit and then there is the Schlumpf.

■ CT 2.0 WOES?

All considered, the transformation to Taiwan production has gone fairly smoothly. From a road test perspective, the biggest glitch that we have seen is the BikeE kickstand. Gone is the neat integral inverted kickstand pedestal mount. We've had trouble keeping the new one tight, though BikeE's Lee Eckroth has told us that there has already been an update for this problem.

From a dealer/customer perspective, the main issue is that CT's are assembled in Taiwan and shipped to the USA. They don't come out of the box until they get to the dealer. If you have a lame dealer who doesn't go beyond the call of duty during set-up you end up with a broken spoke or some other little problem that turns into big problems to the retail paying customer. BikeE is a very proactive company—call them if you are having a problem. Lastly, this is not a bike that I would recommend buying mail-order. Find a local dealer.

■ VERDICT

BikeE still owns the "compact" genre of recumbent bikes—and the CT is the best deal on the recumbent planet. For an entry level rider—it will be a barco-lounger on wheels and put smiles on many users faces. BikeE has become the industry's beloved manufacturer. They are bringing recumbent fun to the masses and have done a lot to promote recumbents taking many along for the ride. There have been some real improvements in BikeE's technology over the past two years, though I will miss the old built in Corvallis, Oregon BikeE. I guess that this is progress. The imported version is less expensive—and built in Oregon is still available at a price (NX).

Our CT's drivetrain performance and all systems performed flawlessly (except for the kickstand). With the introduction of the new Sweet Seat, I don't much care for the old style CT seat—though many still do—and now there some other new seat possibilities (Sweet Seat Base/seat back kit). The only downside is that the hard tail CT rides—well, um, "hard" in comparison to the silky smoothness of the AT.

The *EASY-TO-USE* BikeE ride and feel is alive and well in the CT 2.0. Aside from the like it or don't Taiwan cosmetics, the CT is enough improved and with a lower price that should make it a best selling favorite. The CT is recumbent simplicity at its finest. We hope BikeE sells boatloads of these \$650 'bents. □

Ersatz Sweet Seat

by Tim Koffley, tim@benefittechnology.com

I had recently upgraded my BikeE seat to an imitation Sweet Seat. By that I mean that I had replaced the seat base with the new Sweet Seat base and added the seat back extension kit available from EZ Riders.

The \$35 EZ Rider seat extension is a relative no-brainer to install. Simply insert the extension tubes into the existing seat tubes, drill two holes for each, then secure with machine screws. A nice touch was that a drill bit was included. The kit also comes with a piece of mesh that goes across the bottom of the seat back and looks as if it was made to be part of the original seat. The old seat mesh gets put on top of the new tubes.

The instructions imply that you wrap the old mesh over the crossbar and then slice a whole in it so your reflector can stick through. I found that I then couldn't secure my BikeE bag on the crossbar, but wrapping the mesh behind the crossbar so it's exposed didn't seem to present any problem.

The only real problem with the setup is that the extension tubes aren't stiffened by another crossbar. As a result, you are limited to a certain amount of mesh tension before the tubes start to flex towards each other (push through). So if you're looking for a real tight upper back mesh then buy the Sweet Seat. The extended CT seat back will always be a bit mushy. This wasn't a big deal for me since my natural tendency on the BikeE is to dig in with my lower back for added power, with my upper back coming off of the seat. And the new lower mesh can be as tight as you like. During more relaxed cruising, the new upper seat back felt great and is comparable to the comfort of the new Sweet Seat, though you get less "push through" with the Sweet Seat.

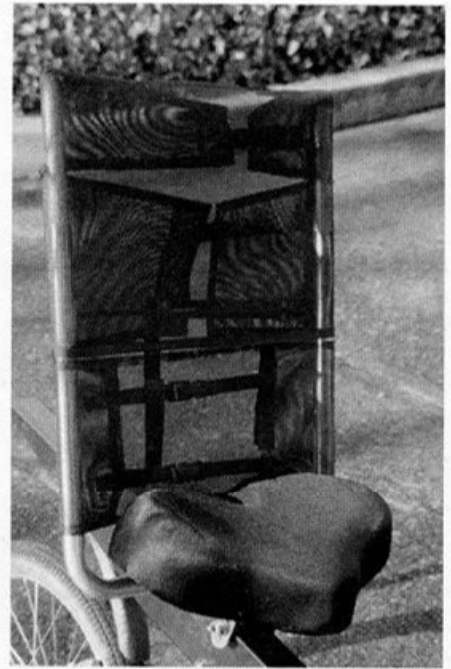
As for the new seat base from BikeE, well, all I can say is that with all the complaints I had read (and experienced) with the old seat base, I expected to sit on it and experience some kind of epiphany. I was disappointed. Even though the new seat *IS* thicker, it seems to be just as stiff as the old seat and I think many of the complaints stemmed from how stiff the old seat was. It's a decent bit wider and there is a notch in the back, presumably to alleviate tailbone pain complaints. The whole seat seems as if the design team sat there with the list of complaints, made what they thought were the necessary adjustments on paper, then put it into production without ever sitting on it.

So how did my \$85 upgrade compare to the \$250 sweet seat? I've ridden with the BikeE Sweet Seat and as far as simulating the modicum of improvement afforded by the new seat, I'd say my upgrade came pretty close. The Sweet Seat has the advantage due to the comfy contoured seat back with increased support and far less "push through" (and better performance?) than my modified seat. But until I sit on a new BikeE seat base and get visions of angels sitting on pillows, I don't think it's \$150 worth of advantage. □

Editor's Note: See Page 6 for Easy Rider Seat Back kit info.

Tim Koffley rides with the NW rider group and when not participating in pickup games of full-contact origami, enjoys watching Amish rake fights on ESPN42. Tim rides a BikeE AT 3.0 and has Bob Bryant and Kent Peterson's old Rans Rocket that he recently rebuilt.

*Ersatz Seat
Tim Koffley's
BikeE AT with EZ
Rider seat
extension kit and
Sweet Seat
base. This
conversion cost
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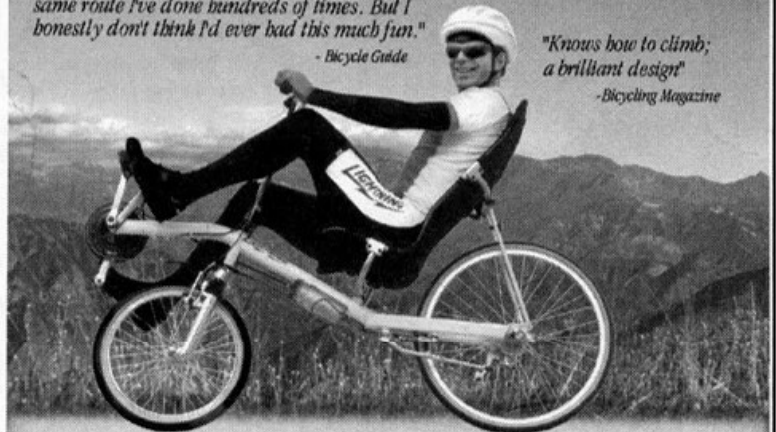
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■ **RATING—BikeE CT 2.0**

- ✓ **Chain Management** (idlers, chain noise, chain line)—☆☆☆☆ 1/2
- ✓ **Drivetrain Performance**—☆☆☆☆
- ✓ **Drivetrain Rating**—☆☆☆☆
- ✓ **Brakes/Braking**—☆☆☆☆
- ✓ **Finish Quality**—☆☆☆ 3/4
- ✓ **Comfort Rating**—☆☆ 3/4 (easily upgradeable, see NX pg.11)
- ✓ **Rider Ergonomics**—Upright seat, low bottom bracket=open and very user friendly riding position.
- ✓ **Best Use**—New rider, recreational, commuter, bike trail, fun bike.
- ✓ **Best Rider Type/Size**—Fits most riders well if sized properly.
- ✓ **Recommended Weak Points/Upgrades**—These are not the world's greatest components, though exceptional for a \$650 recumbent. Our test bike's kickstand did not work very well.
- ✓ **Market Comparisons**—The new Rans Wave has a better seat at \$695.
- ✓ **Performance Potential**—☆☆☆
- ✓ **RCN "Bob" Rating**—☆☆☆☆

THUMBS UP

- ▲ Fantastic Price
- ▲ Easy to ride
- ▲ Easy to own
- ▲ Idler-less drivetrain and cool chain tube
- ▲ Cheap Alonga V-brakes, mushy (anti-lock?), but strong
- ▲ EZ to use 3x7 21-speed

THUMBS DOWN

- ▼ Kickstand mount on our CT needs work
- ▼ Old low back, small base seat
- ▼ Made in Taiwan finish and detail work as not as the Corvallis, Oregon build
- ▼ Taiwan preassembly is not as good (find a good dealer)
- ▼ Is it just me, or are 3x7 21-speeds losing their luster?
- ▼ This BikeE's is not fast....sorry, it's true
- ▼ Our CT 2.0 "XL" is kinda heavy

BikeE CT 2.0

TYPE.....	Compact above seat steer (ASS)
WHEELBASE.....	52" std./56" XL
SEAT HEIGHT.....	26-27"
BOTTOM BRACKET HEIGHT.....	17"
WEIGHT.....	(our CT XL) 32 pounds
FRAME.....	Imported extruded anodized aluminum
FORK.....	Aluminum electroplated CroMo
STEM/BARS.....	TIG Hiten steel
SEAT.....	CroMo, sling mesh, foam base

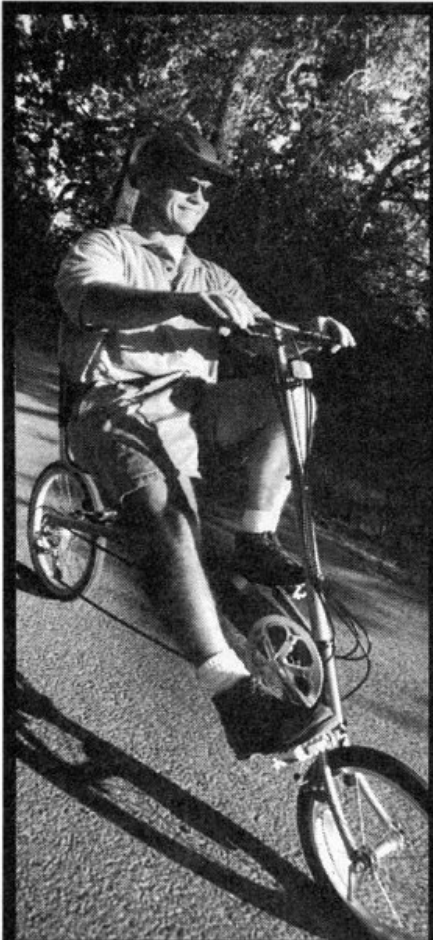
COMPONENTS

CRANKSET.....	Dotek Pro6-210 46-T
BOTTOM BRACKET.....	NA
HEADSET.....	Aheadset OS 1-1/4"
DERAILLEUR-REAR.....	Sachs Centera
DERAILLEUR-FRONT.....	None
SHIFTERS.....	Sachs twist shifter 21-speed
CASSETTE.....	7-spd. 11-28
GEAR INCHES.....	23-108
WHEEL-REAR.....	406mm 20" X 1.75" Rigida rim
WHEEL-FRONT.....	305mm 16" X 1.5" Rigida rim
TIRES.....	Matching Primo V-Monster
HUB-REAR.....	Sachs 3x7
HUB-FRONT.....	Quick Release
BRAKES.....	Alonga Linear Pull
WARRANTY.....	5 Years to original owner
COLORS.....	Polished Red & Blue
PRICE.....	\$650

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Chills & Thrills

The Grizzly Challenge on a Screamer

by Shirley Schoberg
SCHOBLIS@PSNW.COM

A NEW SCREAMER

Is our newly acquired recumbent tandem compatible with our local club rides and favorite statewide centuries? This summer we set out to find the answer.

Our Rans Screamer was purchased basically on a whim. Previously we were neither tandem riders nor recumbent riders. But thanks to the urging of the local recumbent guru, Bill Bruce of the Fresno Cycling Club, the idea was brewing in our heads to make this purchase sooner or later. When an email came to us from Zach Kaplan Cycles in Muir Beach, California that he had a Screamer in stock, we knew that we had to take a look. Within two weeks the machine was ours and we were heading north along the coast of California for a learning-to-ride-the-tandem recumbent vacation.

▲ LEARNING TO RIDE IT

The Screamer was fairly easy to learn to ride. It is a very stable bicycle, especially at higher speeds. We are finding that with increasing experience we are now able to maintain balance at nearly creeping speed, such as when trying to avoid a total stop while waiting for traffic at an intersection. The two falls we have taken were when we were at a standstill and attempting to start moving! These low-speed tip-overs were due to inexperience at handling the gears and coordinating our effort and occurred early in the learning curve. Our bike is equipped with a daVinci independent pedaling system which we feel has aided our ability to learn to handle the bike. Having no other tandem experience to compare with, we were at first bothered by the amount of side-to-side wobble which apparently is inherent in tandems. Even with the IPS, our pedaling strokes are usually coordinated so the side-to-side movement is minimal. The last time I took note, the wobble is still there, but the movements of the bike have become second nature to us now. The only movement that bothers this stoker is when the captain's attention wanders and he makes a sudden overcorrection, for which he is rewarded with a "hey" and a forward lunge to the above seat handlebars to maintain balance.

My one disappointment with the bike is that I am not able to be the captain. With my 38.25" x-seam measurement, I am barely able to reach the ground with my toes while sitting in the captain's seat. This prevents me from easily controlling the bike in a sudden stop situation. As we are not willing to experiment with our safety, to the rear position I am resigned, and what a comfortable seat it is! No one tops Rans for the quality of their seats.

▲ 'BENT TRAINING

My husband and I are average recreational bike riders, having been members of the Fresno Cycling Club since 1992. We usually ride 1500-2000 miles per year which includes most local rides in the San Joaquin Valley and the foothills and mountains of the Sierra Nevada. We also have our favorite centuries and search for a new and different ride to do each year. Our sights are set on touring and we bought the Screamer with that in mind. With determination that we were going to get good at riding this bike, we abandoned our "wedgies" and started riding the Screamer at least five days a week. We have averaged about 550 miles per month since June. As the daylight has become shorter, we have added lights front and rear and continue to ride at night after work. The lights in combination with the reflective tape on the seats, bike bag and our shoes make us an outstanding sight in the dark. Approaching cars will often switch to high beams to get a better look at whatever that

"thing" is travelling down the road!

▲ GETTING STRONGER

There is a certain amount of disbelief bordering on disdain in our local cycling club that recumbents can perform as well on club rides (or any ride) as conventional uprights. After we felt like we were not going to disgrace ourselves by falling over, we started riding with the club again. We found that we could not climb as fast as we could on our single uprights, nor even as fast as other upright tandems. This might be due to the weight of the bike, listed at 45 pounds without the weight of the seat bag and all of the gear it holds, plus the weight of the riders. The geometric configuration in which the bike positions our legs and our pedaling strength are other major factors. However, as time passes and we are getting stronger and more experienced at handling the bike, we find that we are able to climb any mountain pass around.

On the other hand, give us just the tiniest bit of descent and watch us go! Although we are not speed freaks, if we feel confident of the road we can pass up just about any rider, single or tandem, on a downhill. Our top speed has been 46.5mph. This was with the drum brake on because, quite frankly, the speed and momentum of the bike are unnerving to us at this point in our experience.

The burning question in our minds has been, how would we feel physically after a century ride on the Screamer? Would the laid back position, which eliminates pressure on the wrists, feet and critical areas of the crotch, result in a pain free ride? What, if anything, would hurt after six to seven hours in the saddle, err seat?

As a warm up to the real test we rode in the Cool Breeze Century in Ventura and the Lighthouse Century in San Luis Obispo, California. Suffering no more than a need for lots of food, sleep and ibuprofen for the quads after each ride, we determined that we were indeed ready to test our capabilities in the "Grizzly Challenge."

▲ THE GRIZZLY

The community of North Fork, California sponsors the Grizzly Century each year on the first Saturday in October in conjunction with their Fall Festival. North Fork, a small mountain town located about 20 miles south of Yosemite National Park, is positioned at the exact center of California. Looking for ways to promote economic growth in the area after a major lumber mill ceased operation, the community established the Sierra Vista Scenic Byway in 1989. This route is a designated member of the National Scenic Byway System. It winds its way through the Sierras on mostly paved, curving two lane roads through a variety of terrain and vegetation, past points of historical interest, and offers many breathtaking vistas of the Sierra Nevada Mountains. It is truly a chance to "backpack" through the Sierras on wheels. It is on the Scenic Byway that the challenge of the Griz takes place.

The Grizzly Century is one of those secret gems in the bicycling world. The ride can accommodate any level of rider. It hangs in the balance between a homey, set apart from the fast pace, small town aura and the potential for fast track bigness. Three routes are offered. Loop the Lake is a 24 mile route with 1000 feet of climbing which winds around beautiful Bass Lake. The Metric Century with a 5000 foot elevation gain climbs to Mile High Vista and back. The "Griz" Century route has over 10,000 feet of elevation gain in its 100 miles.

The challenge began for us even before starting the ride. While fee camping for riders is offered at one of the Bass Lake campgrounds,



Author Shirley and her husband on the new Rans Screamer tandem

we instead chose to arise at 3:45 am to drive the two hour ride to North Fork from our home. Arriving at the North Fork School staging area at about 6:30am, we were more than ready for the omelette breakfast. This breakfast is open to the community as part of their Fall Festival and is provided to all the cyclists as part of the entry fee. It was delicious as usual and an indicator of the great food to come during and after the ride as well.

As more cyclists arrived in the semi darkness we reconnected with our friends from the Fresno Cycling Club. We took some good natured ribbing about pedaling our chairs down the road and could we please carry their gear in our bag? We have a large BikeE bag on the rear. Finally, we had our arm warmers and jackets on and the time was right. The first bit of light was emerging over the mountains and we were off.

The ride begins with a whammy. After a short sharp descent from the school to the main road and a dip down into a small valley, the road immediately starts to climb. There is no warm up time unless one considers climbing to be a warm up. From an elevation of about 2500 feet at North Fork to the lunch stop 30 miles down the road at Mile High Vista (5300 feet) there is almost constant climbing. The slope of the climb is not excessive and we were easily able to handle it. Our Screamer, customized by Zach's mechanic Conrad Oho, is equipped with a 12-34 quad chainring set up and an 11-34 8 speed cassette. We had plenty of gears left on this part of the ride.

▲ PASSED BY EVERYONE

Being unconcerned that we were being passed by just about everyone, we sat back, pedaled, and enjoyed the ride. One of the best features of any ride is making the acquaintance of fellow cyclists. From time to time a rider would slow down and ride along with us, admiring our set up and asking lots of questions. A fellow from Danville, California, declared wistfully that he might even get his wife to ride something like that, since it is lower to the ground than a conventional tandem. Little did he know that his thinking figured quite large in my willingness to ride on a tandem!

This ride is known for unpredictable weather. While October in this

part of the Sierras sports generally beautiful fall weather, one needs to be prepared for cold or rain. Of the past 7-years only one year were the ride organizers forced to so do some creative rerouting due to snow blocking the Cold Springs Summit area. That actually afforded veteran Grizzly riders a new route and made for some spectacular snowcapped mountain scenery.

This year was cloudy and threatening rain. Riders at the lunch stop were debating about how wise it would be to go on. Many of the Fresno Cycling Club contingent decided to turn around and make it a metric century instead. I had my heart set on testing our machine and our muscles on the Grizzly road and declared to my husband that we should not be caught up in the group think. However, as captain he had the final word...and the word was that we were going on.

▲ THE ASCENT

Donning our jackets for the descent to the Grizzly junction that we knew was coming after lunch, we set out again. We had predetermined that we were going to cut off the extension for the ride that goes to the Minarets work Center. We would instead proceed directly up the Grizzly road, which was the challenge we were most looking forward to. The full 100 mile route is indeed beautiful, but we had done that before in previous years. Now we wanted to know, would our granny provide us with the gearing that we needed? We were facing a 13 mile, narrow, winding back country road, with almost 3000 feet of climbing, and inhabited by local 4x4's and campers.

As we approached Cold Spring Summit at 7308 feet several hours later we were taking inventory. Tired? Yes. Full of aches and pains? No. Used all the gears? No. We dropped into the granny most, but not all of the way to the bottom of the cassette. We were triumphant. And cold. No rain had fallen to make things more difficult, but it was cold, around 40 degrees. The people at the rest stop had a camp fire going and were offering hot coffee and tea, along with the usual marvelous cookies and fruit.

We took full advantage of the campfire, putting on our leg warmers as well as all of the other clothes that we had along. Reports were that



Screaming by Bass Lake

wind chill was quite a factor going down the road. We were now facing a 13 mile descent with a drop of about 4000 feet. If we would be dropping at 30 mph the wind chill at least near the top would make the air feel like it was about 14 degrees. For half the way down the mountain my teeth were chattering uncontrollably and my body was shaking from the cold. Finally, Bass Lake came into view and the sun peeped out from behind a cloud. We started thawing out, soon warmed up, and dropped down comfortably the rest of the way into a beautiful autumn day again.

Circling Bass Lake on our way to the finish in North Fork we felt like we were out for a Sunday afternoon ride. With energy to spare and a sense of accomplishment, we knew we faced one final task—that pesky little climb back up to the school! Using the granny once more we pushed

to the finish. And that was it. The welcoming committee at the check in desk gave us enthusiastic congratulations and offered more food. We declined in anticipation of the post ride barbeque dinner.

▲ SMALL TOWNS & SCREAMERS

The dinner is held in the town hall, in conjunction with the local art show, and is another Fall Festival community event. Locals mingle with the riders and listen to tall tales of the daring. Riders enjoy the small town friendliness of the locals, who seem genuinely glad to have us in their community for the day. We had our own story to tell. With looks of awe and a few slaps from club friends we recounted the day's experience. We knew we now had an association with a bike that would serve us well in any adventure that we would dare to undertake. We plan to ride forward into old age with this bike, pain free, fit, and strong. This bike has seen us through the challenge and we are forever recumbent converts. For information on this ride, contact Mike Nolen at grizzlycentury@yahoo.com □

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The Brompton Folding Recumbent

by David Henshaw
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from A2B Magazine

Anyone present at the UK Folder Forum shows will be familiar with the Juliane Neuß Brompton recumbent conversion kit. For those who don't know, the kit is the result of several years hard work by Juliane and partner Ingo Kollibay.

The folding bike problem is one of the toughest transport nuts to crack. A folder needs to be tough, yet light, and fold rapidly to the smallest possible package. Many promising designers have met their match with this apparently straightforward engineering problem — the select group who won through includes Harry Bickerton, Mark Sanders (of Strida fame), and Andrew Ritchie, inventor of the Brompton.

A folding bicycle is a tricky design exercise, but a folding recumbent is even harder. Recumbents tend to be longer and heavier than uprights, with large unwieldy seats. Folding versions have come and gone over the years, but they're usually pretty basic — either the rear wheel folds under the frame, or various parts are demountable, the object being to fit the machine into a typical automobile trunk.

But Juliane and Ingo were looking a great deal further - to a recumbent that was fully transit and bus friendly. After building a few machines from scratch, they decided to produce a kit based on Andrew Ritchie's ultra-compact Brompton, with the first machine seeing the light of day in the summer of 1996. The Brompton seat pillar and saddle had been replaced by a laid-back seat just above the frame tube, while the pedals were mounted on a folding boom extending beyond the headset. Drive was transmitted from this new bottom bracket to the original bottom bracket (still there, to allow for easy reconversion) by a toothed rubber belt.

Looking much like any other short-wheelbase recumbent (small wheels are de rigeur in the laid-back world too), the machine worked pretty well. Folding took about a minute, with the front boom folding down and back, and the seat being carried separately. The Neuß recumbent was probably the most compact in the world at the time, but after a bit more work, Juliane and Ingo managed to incorporate the seat into the folded package, too.

The result was unveiled at the 1997 Folder Forum in Weymouth. The compact folded package was - like the standard Brompton - a neat cube. It was a little larger, at six cubic feet against three, but that was hardly surprising, with a recumbent measuring no less than 62 inches from nose to tail ready for the road.

The prototype machines caused a sensation at the Show, stowing neatly with 60 other bikes for the train-cycle-train trip across the county of Dorset to Swanage, and the pair spent much of the weekend dealing with enquiries. In a perfect world that would have been the end of the development phase - you invent something unique, find a strong market, someone builds it, and you retire in luxury. But life isn't like that.

As so often happens, production proved a lot harder than developing a prototype. Several engineering companies found the project too daunting, and an initially promising response from Herr Voss, the German Brompton importer, came to nothing when Voss backed out of the project. A full year after the prototype made an appearance, Juliane took the brave step of going it alone. The pair decided to build and market the kits themselves.

▲ ASSEMBLY

The recumbent kit comes with everything you need to convert a standard Brompton, right down to cable end caps, but nontechnical types will need assistance from someone-who-knows-what-they're-doing, because the process is quite involved. Fitting is claimed to take a couple of hours, although we took a lot longer, thanks to inevitable teething

problems. For example, we used a 3-speed donor bike and our prototype kit was designed for the 5-speed.

So what? Well, you have to extend the cables and we couldn't find a three speed inner cable long enough. There isn't quite enough room for an Alhonga brake caliper on the front either, so we had to track down the old Saccon (don't despair — the problem doesn't appear to be insurmountable). And on our early prototype, the headlight bracket gave a light beam suitable only for spotting owls, and the seat support was a tight fit in the saddle stem bush, but these minor quibbles should be sorted out once production begins.

The kit is beautifully manufactured, with all components either zinc plated or black powdercoated, just like the rear triangle and front forks on the standard bike. The finished machine is as seamless as a production bike, and a very attractive one at that. The only slightly odd feature is a standard right-hand crank arm that whizzes round where you might expect a pedal to be, but there's a very pragmatic reason for this. The recumbent kit might take a few hours to fit, but it's designed to be converted back in as little as twenty minutes, so the crank's there waiting for the pedal to be refitted.

The kit consists of a front boom and Bottom bracket, alloy mounting block, seat assembly, handlebar stem extension piece, cable extensions and a combined chainwheel and pulley to fit in place of the chainwheel. You remove the saddle stem, saddle, handlebar clip and front luggage block (if fitted). For reconversion, its only necessary to remove the boom, the handlebar extension piece and the seat — everything else remains in place.

Observant weightwatchers will have noticed a great deal more weight going on than coming off. The complete kit of parts weighs 15-1/4 lb (7kg), but that's slightly offset by the 2-3/4lb (1.2kg) you can leave stacked up at the back of the garage. So the gross weight - assuming a basic Brompton weighing 26 lbs - is just under 39lbs or 17.5kg. That's on the heavy side, but by no means exceptional for a recumbent.

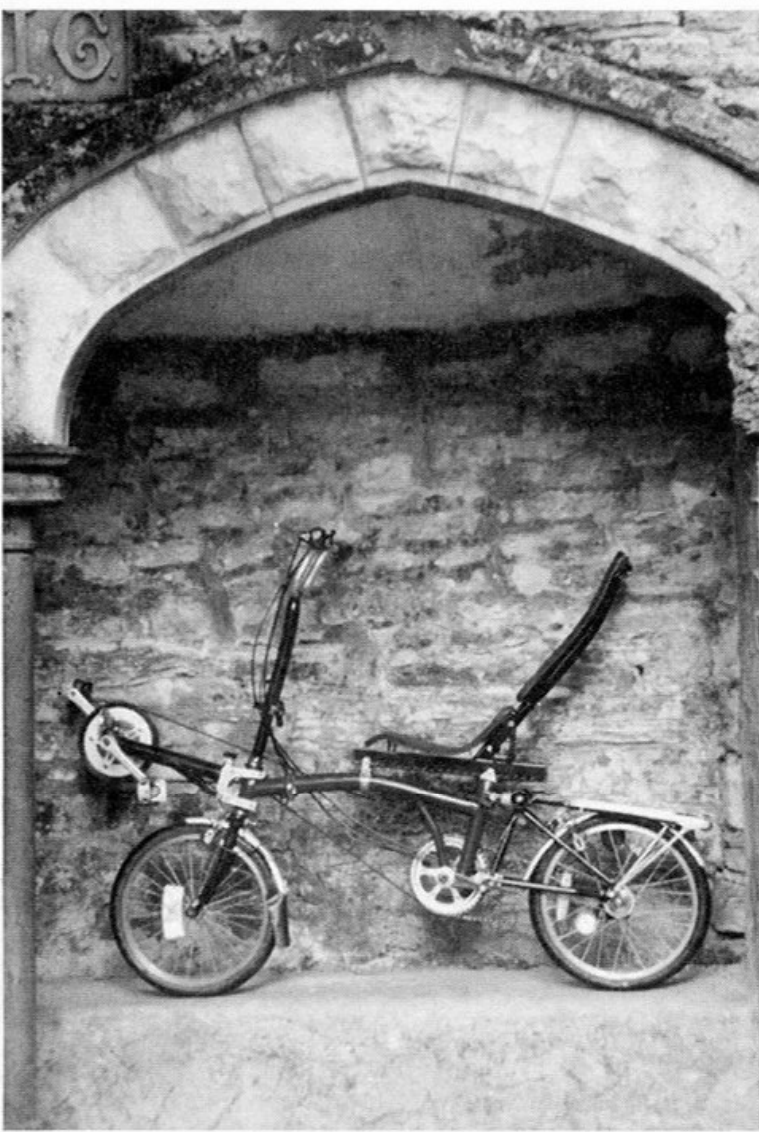
▲ RIDING

Recumbents require different balancing skills, and slightly different muscles than conventional bikes. The Brompton recumbent is no exception, with the added and rather surreal complication that a few hours before it actually was a conventional bike.

The kit offers a bewildering array of adjustments. The seat rail is fixed to the frame tube at the front and mounted in place of the saddle stem at the back, so the stem quick release now adjusts the seat angle. Reach - from the seat to the pedals — is adjusted by removing a fixing bolt, loosening two clamps, and sliding the seat rail back and forth in 20mm increments. There's plenty of adjustment, and even our 6' 3" (187cm) rider found room for his legs without any trouble. The kit is claimed to suit anyone from 5' 3" to 6' 7".

The final variable is the handlebar angle — this can be left in the standard position for those with long arms or tilted back to varying degrees. As a general rule it's not advisable to fit a quick release to Brompton handlebars, but There's a lot less strain on the recumbent bars and easier adjustment would be quite welcome.

If you've ever ridden a short-wheelbase recumbent, you'll know what to expect; the Brompton is not exceptional. The problem was neatly summed up by a helpful passerby in an invalid carriage: Issac Newton - I can see him turning in his grave! You're not using gravity to balance, you're using your muscles. Eh? Well, he might have been closer to the truth than he realized. Try balancing a broomstick on your hand, then repeat the experiment with a pencil. Paradoxically, it's easier



The Brompton recumbent—David Henshaw



Jane Henshaw and the Brompton recumbent—David Henshaw

to balance a bicycle when you're some way off the ground, so the more pencil-like recumbent tends to have quick and unforgiving steering.

Setting off (except uphill) is extremely easy on the Neuß/Brompton, but the steering is horribly quick. The uninitiated tend to make initial progress in a shallow arc towards the nearest brick wall, but everyone survived and come to grips with the machine, including one or two nameless individuals who had refused to ride recumbents in the past. Once underway, it's clear that the bike is in serious need of softer suspension. Replacing the Brompton block with the softest (yellow) polymer from the Birdy made life easier, but if you expect to ride any distance with decent tire pressures, you'll want something softer. We would guess that an air suspension unit — too soft and under-damped on an upright Brompton — would be ideal here.

Handling is different... very different. For a start, weight distribution (formerly 67% rear, 33% front) is almost evenly spread between the two wheels, with a very slight bias towards the rear. Add a lower centre of gravity to the equation, and you have a Brompton on which the handling is barely recognizable. Unlike many recumbents though, it's stable enough at low speed to turn on the proverbial sixpence, and with a bit of practice you can wind your way through stationary traffic quite well. Downhill, the bike is very fast and directionally stable, even through tight turns. Uphill, thanks to what appears to be torque-steer as you push the pedals, it's a lot less reassuring. This all shows in the riders face — enormous smiles, even peals of laughter, going downhill and a nervous twitch riding back up.

That observation, like those that follow, could apply to any recumbent. Looking over your shoulder is difficult, so a mirror would be useful, and we would rule out riding the bike in heavy city traffic. Downhill, the bike outpaces a conventional Brompton with ease, particularly into a

headwind. Uphill, of course, it's a different story, although we might have found it easier if we'd become accustomed to the new geometry. We had to jump off on slopes that would have been hard, but by no means insurmountable, on an upright.

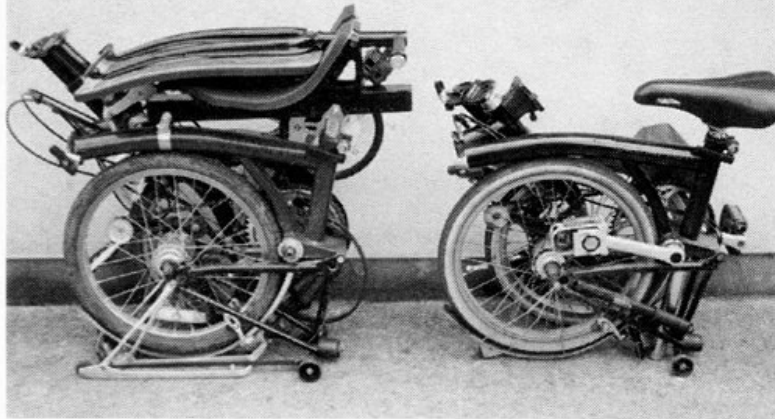
To counter this tendency, the recumbent kit lowers the Brompton gearing with a 46-tooth chainwheel. On our 3-speed bike this gave three rather pedestrian ratios 42", 57" and 75" that were neither low enough for hills or high enough for cruising on the flat. But the kit is clearly designed around the 5-speed, which would give ratios of 38" to 85". That's not bad, but even with the lower gearing, acceleration is a bit flat, and if you try really hard, the belt occasionally jumps a tooth on the pulleys.

Wet weather brought some interesting results. Despite being nearer the road, you're well clear of spray on the recumbent Brompton, unlike the conventional machine. Sitting further forward, your back avoids spray from the rear wheel, and with your legs in the air, your feet stay well clear of the front. Off-road, the bike performed surprisingly well, clambering up and down muddy gullies and forging through the sticky bits. If you are unlucky enough to get stuck, you don't have far to fall, which has to be a bonus.

▲ EQUIPMENT

This, of course, depends on what you start with. As above, you would be very well advised to choose a 5-speed Brompton, and—as a front carrier is out of the question—a rear rack would be a strong recommendation too. The rack can be used pretty much as normal (you can still carry a friend on the back too), and there are a couple of hooks on the back of the seat for a pannier or rucksack.

The kit includes a lamp bracket on the front boom, to which you



Brompton recumbent (left) and upright (right)—Henshaw

can either fit a battery light or transfer a dynamo light. With everything included, this is quite straightforward, but it's probably the fiddliest part of the reconversion. The seat is extremely clever, with a folding frame based around some cumbersome front forks and an alloy seat back faced with a thin layer of plastic foam. As the instructions coyly put it: ...you can add extra padding to suit your anatomy.

▲ FOLDING

This is a miraculous procedure, let down only by the fact that the standard Brompton is much better. Passersby gawp in amazement as this apparently substantial machine disappears before their eyes, leaving a little block sitting on the pavement. The process takes a lot longer than the 12-15 seconds of the conventional Brompton, at 30 seconds or more, but it's still quite exceptional, requiring no tools and no assistance.

As the handlebar catch and lower stop that normally lock the bike together are unusable, the kit includes a strap to hold it all together. The handlebars may or may not lock helpfully in place against various parts of the bike's anatomy, but this depends on the saddle and bar adjustment. Make any change to the settings and all folding certainties disappear. Under some circumstances, the belt tensioner hits the main frame, too — it's a case of adjusting for comfort, then finding whether you've caused any problems with the fold. A useful tip for those converting a 3-speed Brompton is to fit the longer 5-speed front mudguard stay which gives more clearance for the wider recumbent to latch together.

Another minor inconvenience is the belt, which might or might not stay in position, but it isn't oily, so you can coil it up either in the folded package or elsewhere. Unfolding takes a little longer—say 50 seconds—largely because you have to rethread the belt.

On the train, or even—dare we suggest it—a bus, the recumbent sits on its little wheels just like any other Brompton, although it's a little bigger in all directions. It's much heavier too, but you can wheel the package around on the trolley wheels using the seat release handle.

▲ VERDICT

The Brompton recumbent kit is expected to sell for about \$1150 in the US. That might sound expensive, but in terms of engineering quality, you can take our word that it's worth every penny. All the same, it sounds a lot for a box of bits and pieces, but recumbents aren't cheap. Even including the cost of the Brompton, you can build a usable folding recumbent for around \$2100.

And you've got a conventional folding bike as well. Just imagine, you weary commuters — you could arrive home on a Friday evening, convert the bike, head west, ride feet first all weekend, reconvert, and park the Brompton back under your desk Monday morning.

The way we see it — and you may or may not agree — recumbents are fun, but they're purely leisure vehicles. So unless you're very keen on the genre, a recumbent will absorb a lot of garage space and a lot of precious income for very little benefit. And that's where a conversion kit really wins. It's not expensive, it folds into a tiny package, and when the



sun comes out, it's ready and waiting. The Neuß recumbent kit is a superb machine.

▲ SPECIFICATION:

Brompton T5 (US from CM Wasson)	US \$978
Brompton recumbent kit (est. price.).....	US \$1150
Weight (kit only).....	12-1/2lbs (5.7kg)
Folded Dimensions	L29 1/2" H26 1/4" W13 1/4"
Folded volume.....	5.9 cubic feet
Gears (as tested).....	42" - 75"
Distributors.....	Channell Wasson 800-783-3447

▲ ABOUT BROMPTON FOLDING BIKES

The Brompton is considered by most to be the world's finest folding bike due to its quick fold and uniquely small package when folded. Bromptons have a very loyal following. There is a Brompton specific mailing list on the internet and as well as a great website packed full of information to get up to speed. Check it out at www.bromptonbike.com. In the links section, you can click onto other folder sources as well as the recumbent kits manufacturer web site. C.M. Wasson Co., 423 Chaucer St., Palo Alto, CA 94301-2202. Models start from \$745. A full host of options, factory accessories and custom accessories are available.

▲ ABOUT A2B MAGAZINE

If you like folding bikes, eclectic magazines, spirited articles, neat bike art, stories and the Brit sense of humor, you should love A2B. Formerly the Folder Society, A2B has most everything to do with folding bikes, road tests, product reviews and the like. You can see them on the web at www.a2bmagazine.demon.co.uk/. An airmail USA subscription to this bimonthly publication is \$26 US. A2B Magazine, 19 West Park, Castle Cary, Somerset BA7 7DB. □

The Cambie Recambini

by Robert J. Bryant

Cambie Cycles has quietly been building and selling recumbent bicycles north of the USA border in Vancouver, BC for several years. The small fabrication shop within Cambie has built Tour Easy LWB ASS style recumbents. Over the last few years, Cambie has developed a SWB ASS rear suspension bike that is distinctly different from the other SWB bikes. Okay, I won't be shy, it's a hefty comfortable SWB touring bike with the longest wheelbase in its class—48"!

The frame is TIG welded of 4130 CroMo tubing. The main tube is 2" while the rear stays are 1.5" x .75" rectangular section steel. The stays are cut and welded square as they flair out to accept the 26" rear wheel. The front wheel is a 406mm 20". The front fork is a unicrown CroMo with the V-brake on the back side. The frame is powdercoated black (or optional custom). The fabrication quality is excellent and everything about the Recambini spells TOUGH! The bike ready to ride with a rear rack weighed over 38 pounds.

The above seat steering (ASS) uses a fixed aluminum riser with an aheadset style stem at the top using city bike Northroad style bars. The ergonomics are pretty nice, though your hands tend to feel like they are falling off these nearly vertical handgrips. The aluminum riser is the second most flexible part on the bike, though it seemed tough enough.

The ergonomics are also in a league of their own. The seat recline is fully adjustable from the seat braces, though the bottom bracket is very high—27", or 4" higher than the seat. That is high, though the riding position is adjustable. The Recambini and Recamboni (LWB) both utilize a Cambie built and designed fiberglass shell seat. The seat has a nice tailored cover and a rather large foam pillow base pad that had velcros on. I have never been a big advocate of fiberglass shell seats, but this one is better than its peers. It closely resembles that of the S & B (mostly) and Turner, though the cover and large, cushy seat base pad are squishy comfortable. I had no discomfort problems with this seat, though the fiberglass shell is very flexible. My 6' tall body with long torso liked to flex the upper half of the seat quit a bit (common on S & B, Turner and other fiberglass seats, though not the Easy Racer Cobra). This did effect performance for me, though the Recambini is not necessarily a performance bike. It is an urban assault touring SWB. Being that this is a custom bike, I would guess that Cambie will adapt a Rans seat as an option (upcharge). Lastly, as I have stated many times before, I believe that bikes with a really high bottom bracket (BB) (extreme position) limit the ridership (possibility for foot/toe numbness and not as user friendly due to the high pedals). My advice is that riders should try a high BB bike before they buy one.

Our Recambini was outfitted with a Shimano STX/RX100 group with Rapid Fire shifters and V-brakes. The drivetrain and braking performance is excellent as it should be from this value-added group. Higher end Shimano components are optionally available on the bike.

Chain management was excellent for a SWB with one exception. Cambie has a beefy upper and lower chain idler with roller-blade style wheels with a machined chain track. The idler has an inner and outer stout aluminum plate frame. My thighs occasionally clipped the allen bolt mounts. It seems to me that this could be worked out fairly easily.

The ride is like that of an urban assault vehicle. It is smooth and stable, offering a reassuring ride. I'm sure the bike is capable of riding anywhere you want to take it. The Recambini is the Hummer of recumbent bikes. Between the long swing-arm, flexible seat shell and foam seat base, the ride was ultra-comfy, yet once I had the stiffer elastomer, the suspension did not pogo. I liked the feeling that the bike was TOUGH! So many suspension bikes feel wimpy, too light and flexible.

■ Dealing With Cambie

These laid back Canadian recumbenteurs have been in the biz for a

long time—they even predate RCN. They were a joy to deal with and hand delivered the test bike and made it available to us for more than six months. The bike was almost perfectly set-up. The suspension was set for somebody lighter than me, and they even sourced a now optional HD elastomer that dialed this simple elastomer suspension to perfection. I was continually impressed by the quality of all of the custom made parts as well as the fabrication.

As Cambie is a Canadian company, you will have an excellent exchange rate when buying from the USA. The downside is that shipping can be more expensive, and there is more paperwork as well as import duties. Cambie accepts credit cards and they can actually have you a custom Recambini (or Recamboni) in as little as a month's time.

■ The Verdict

The Recambini is certainly an interesting bike with a longer wheelbase than almost any other SWB, a huge long swingarm, and simple durable systems throughout—though a rather heavy bike. Cambie offers the Rans seat as an option, and if you've agreed with me about recumbent seats in the past, take my advice and get the Rans seat. If you like seats like S & B and Turner, the Cambie seat is better than those and has the cushiest base on the planet. If you like Rans seats, you won't like this one. Luckily, the Rans seat is optional.

The drivetrain is excellent, though the gearing is too high. A low gear of 28 gear inches is not adequate for a touring bike. Plan to rethink your gearing on this bike. The handlebar/hand position is odd—my hands were hanging down—and had gravity working against me. The elastomer suspension seemed trouble free during our test.

Cambie offers a custom quality bike building experience that should surpass even the toughest critics. This seems to be that really tough touring SWB we're always thinking about. With the great Canadian exchange rate, it's not a bad deal either.

■ ACCESS

Cambie Bicycle Shop

Address: 3317 Cambie St.

Vancouver, British Columbia, Canada

Tel. 604-874-3616

Email r-bent@portal.ca

Web:www.cambiecycles.com

■ RATING—Cambie Recambini

- ✓Chain Management (idlers, chain noise, chain line)—☆☆☆ 1/2
- ✓Drivetrain Performance—☆☆☆☆
- ✓Drivetrain Rating—☆☆☆☆
- ✓Brakes/Braking—☆☆☆☆
- ✓Finish Quality—☆☆☆☆ 1/4
- ✓Comfort Rating—Back ☆☆☆ 3/4; Base ☆☆☆ 3/4; Rans ☆☆☆☆
- ✓Rider Ergonomics—Adjustable seat, high bottom bracket=closed riding position
- ✓Best Use—Heavy duty tourist, urban assault vehicle
- ✓Best Rider Type/Size—Med.-tall riders who don't mind high-BB.
- ✓Recommended Weak Points/Upgrades—Try the seat before you buy—otherwise opt for the Rans seat upgrade
- ✓Comparison to Market Competition—The market comparison will be the Vivo, Trek R200 and Vision suspension models. This bike should appeal to a rider wanting a VERY TOUGH, customizable, and available suspended touring bike. Cambie can custom build in less than four weeks. They are really nice folks and accomodating
- ✓Performance Potential—☆☆☆ 1/2
- ✓RCN "Bob" Rating—☆☆☆ 3/4 (more if you like high BB)

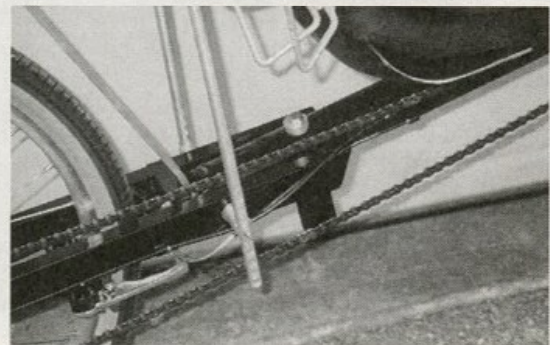


Cambie Recambini

TYPE.....SWB above seat steer (ASS)
 WHEELBASE.....48"
 SEAT HEIGHT.....23"
 BOTTOM BRACKET HEIGHT.....27.5"
 WEIGHT.....33 pounds, ours was 37 pounds with rack
 FRAME.....4130 TIG welded CroMo, rect. CroMo swingarm, elastomer rear
 susp.
 FORK.....Powdercoated CroMo
 STEM/BARS.....Alum bars & riser
 SEAT.....Fiberglass shell, Cordura cover, thick foam pad (velcroed)

COMPONENTS

CRANKSET.....Shimano RX100 30/42/52
 BOTTOM BRACKET.....Shimano UN72 Sealed
 HEADSET.....Shimano
 DERAILLEUR-REAR.....Shimano Alivio, STX or XT
 DERAILLEUR-FRONT.....Sachs
 SHIFTERS.....Shimano Rapid Fire
 CASSETTE.....24 or 27 speed
 GEAR INCHES.....28-123
 WHEELS.....559mm 26"/20" x 1.75"
 TIRES.....City Slicker/ACS
 HUB-REAR.....Shimano Alivio or STX
 HUB-FRONT.....Shimano Alivio or STX
 BRAKES.....Shimano Alivio or STX V-brake
 WARRANTY.....Five years
 COLORS.....Powdercoat
 PRICE.....\$1895 Can. (Alivio)/\$2200 (STX)



ABOVE LEFT & RIGHT: Cambie Recambini SWB ASS rear suspension

RIGHT CENTER: Recambini rear suspension

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My Electric BikeE

by Wesley Lapp

Years ago I saw my first magazine photo of an electric vehicle. I knew that eventually I would have one. I never realized I would have one so soon, so cheaply, or that it would be so much fun. I never dreamed it would be so cool.

In fact, whenever I travel without my electric BikeE, I am always surprised when people of all ages and description don't run up to me and get all excited and say very enthusiastic things like "Wow, cool bike, is that an electric motor?" Last Winter bike touring through downtown Tuscon on a warm sunny January day I passed three Generation X'ers (those are the young kids with the baggy pants who are supposed to be ultra cynical about everything). I hardly looked up at them when they all three spontaneously in broken unison shouted to me with arms raised "RIGHT ON !!!" as I flew by. For me (a thirty something engineer searching for the meaning of life) that is excellent.

I am getting ahead of myself. In 1994, I was eagerly reading about an electric vehicle kit that converted a pickup truck (that I didn't have) where I would take out all the engine parts (which I didn't know how to do) and then install all the electric vehicle parts (which looked like a lot of work) and I read at the bottom in small print that this kit came complete with "everything" and cost \$9,000. THAT'S NINE THOUSAND DOLLARS!!! I definitely didn't have that. About the same time I noticed an ad in a Real Goods catalog (that's an ultra eco-company that sells solar panels and the like) for an electric motor that fit on a bike that cost about \$500 and thought; Well that's better, but it's still an awful lot of money to spend on a bike. Then my car broke. It didn't really break (it's a Honda); it still ran fine, it just sort of got sick and I knew I should take it to the dealer where they would do a lot of little things to it that I would hardly notice and that would make it run perfectly again for another 50,000 miles. The Honda Dealer did exactly that, and bracing myself for the bill, I remember being relieved that it was only \$400. THEN IT HIT ME, LIKE A TON OF BRICKS—WHY WAS \$400 A CHEAP CAR REPAIR BILL WHILE \$500 WAS WAY TOO MUCH TO SPEND ON AN ELECTRIC BIKE! Sight unseen, I immediately ordered that electric motor kit out of a Real Goods Catalog.

■ ELECTRIFICATION

It was a beautiful sunny day when the kit arrived, I took the day off of work (I am self employed) and frantically mounted the electric kit on my MTB (My BikeE comes later). Then I unmounted it and mounted it and unmounted it and mounted it, Ugh!!! For being really simple it was amazingly complicated. Then I realized, they hadn't sent the charger!!!! I called and yes they had sent me the charger (late) and it just wasn't here yet, Ugh!!! 'Relax', I said to myself, the battery was charged, and I could still try out my new electric bike. I rode my new electric bike halfway down the hill from my house (it's a big hill, a 2,000 ft drop) and began riding up with the motor. It was great! Without pedaling, my new electric bike barely crawled up the steep hill, but as I added pedal power the whole bike came alive and I was virtually sprinting up the hill. I was on the second chain ring in a middle gear on a hill that I am usually in granny gear (next to lowest) or when tired, super granny gear (lowest). It was smooth, quiet, powerful; I was in love. Then it began to die, and halfway up the hill it stopped. Now it was heavy — 35 lbs heavier (battery 25 lbs, motor 10 lbs). I was definitely in super granny lowest gear and the extra weight was killing me. I had ordered the larger battery as I ride in hills a lot and am a big guy, 6'4" tall and about 190 lbs. The battery hung from a series of straps in the middle of the frame and the motor was mounted just below the seat stays. The C.G. (center of gravity) was very high and as I would stand up on my bike and pedal, the battery would annoyingly sway back and

forth, making standing up and pedaling useless. All I could do was sit, spin, and sweat. Even walking the bike was much more difficult than usual as the high C.G. tended to topple the bike over if I even slightly let it fall from vertical

Then I called Zap Power Systems (the bike kit electric motor company). To be fair since then Zap has developed a much better lower c.g. hard mounting system for regular bikes. The guys at Zap were totally cool. Actually I was so impressed with Zap that last Thanksgiving I bought stock in their initial direct public offering — yet again I am getting ahead of myself. The Zap people were really supportive and excited at what I wanted to do. I told them about my experience and my hill. They had all kinds of tips and hints that helped me out. They said get a hill climbing roller, it's more efficient (that's a smaller size driving wheel that lets the motor put out more power at a lower speed and actually climbs hills faster), and get high pressure inverted tread tires and max inflate them; you'll save your battery and go faster. At the time I was using knobbies. They said on the really steep sections switch to low speed which will keep the motors (there are actually two motors but it looks like one) cooler and save power, and that my battery was probably not fully charged after being in storage so long. There was hope, and all that summer I worked at becoming more fit and learning to use my electric bike most efficiently climbing back up the (2,000 foot vertical) hill from work. It was nice, but I knew there had to be something better, different, and easier . . .

■ RECUMBENT ROMANCE

Then one day, Nina, my (then) partner and housemate brought home a new BikeE. I had never seen a Bike E before in my life. I had barely seen a recumbent and I know I didn't know what recumbent meant (come to think of it I still don't know what it means). Well, I took one look at that Bike E and that massive rectangular cross section aluminum tube frame (this was before they started using their own custom thinner walled aluminum extrusion frame) and thought, "Wow!! I could hang a whole bunch of batteries right under that there frame. They would be right above the ground and right in the middle of the bike Perfect!!" Nina would have no part in having batteries and motor put on her bike so I bought my own BikeE CT (the guys at BikeE were totally cool, too). I got the improved 1995 model with the new lightweight frame (still totally strong, in fact I toured with a maximum gross bicycle weight -including me — of about 375 lbs.), got the new more comfortable seat and the new XL (that's eXtra Long) frame.

The pictures tell the rest of the story. My BikeE has a stock BikeE Zzipper Fairing (which I roll up inside my foam sleeping pad for transport) and an extra heavy duty rear wheel (an available option from BikeE). I also added a rear Shimano LX V-brake with brake bridge which works great and is a critical component since the extra weight takes more brake power to stop. I have since heard the Shimano LX V-brakes work better and are stronger than the more expensive (yet lighter) Shimano XT V-brakes.

This is my third version of the battery and motor mount. To switch from regular to electric mode the battery and motor can be quickly attached or disconnected in about 5 minutes, while the controller (weight 6 ozs), wires and lights stay on the bike. The batteries consist of three individual 26 amp hour 12 volt lead acid gel cells. These are made by Hawker/Gates, total weight for three is 70 lbs. They can be charged with a special 30 amp quick charger (made by Todd engineering) in about 5 hours. The standard charger from Zap will charge the batteries overnight. The top speed, and I am fudging here as I don't have a bike computer (too complicated for me), on electric power without pedaling is about 20 mph, (it would be close to 25 mph with the



Note dual Night Rider lights mounted above fairing, dual WB cages and cut off frame tail

standard roller instead of the hill climbing roller). I like the extra speed on hills, though, as on the flats I can cruise without the motor engaged at about 20 to 25 mph anyway and going downhill (with the extra battery weight and the Zipper fairing) is definitely no problem. My batteries will drive my bike at high hill climbing speed for about an hour (I average 13 mph on an 11 mile 3.5% grade hill with me pedaling pretty good), or cruising on flat ground at 20 mph with me just barely pedaling to keep up for 1.5 hours or about 30 miles. There is also a low speed used for very steep hills (where in high speed the motor would overheat and automatically shutoff) or for very long hills to conserve battery power. The batteries in low speed with me pedaling climbing a moderate to steep hill would last about 5-6 hours. The lights are Night Riders that I custom mounted. I replaced the factory 6V halogen bulbs with 12V halogen bulbs (same as in standard halogen light fixtures). I use a front 20 watt flood aimed at oncoming traffic and 12 watt spot aimed down at the ground in front of my bike and a rear 8 watt flood covered with red tail light repair tape. The lights are very bright and most people think I am on some sort of a tractor when they see me at night, not a bike. On a two hour ride with all the lights on they use less than 9% of the battery charge so I usually ride with all the lights on even in the daytime for added safety.

■ REALITY SETS IN

The main problems I encounter with my electric bike are that the batteries (70 lbs.), motor (10 lbs) and BikeE (30 lbs. with fairing) are quite (total 110 lbs.) heavy! They do not feel heavy at all while riding as their weight is barely noticeable on flat ground, and much appreciated on long up-hills where the more batteries the merrier. The batteries do feel much too heavy when moving the bike up and down stairs (curbs are O.K.) or when trying to load the bike into a car. I almost always take the batteries off for this, which works, but is a hassle. The other problem is reliability; the electric motor friction drive and greater weight add to tire wear and chance of tire puncture. I now use thick treaded Primo V-Monster 1.5" x 20" tires with Mr. Tuffy tire saver strips and Thorn Proof tubes with Slime inside. Now I don't get flats which adds to the reliability a lot. Other problems seem to be having a lot more parts to malfunction, although lately everything seems to be working pretty well. It is still very frustrating when something gives out though, usually at dusk as I am riding home from work. I often share the analogy that my 1987 4WD Honda Civic which easily 100 times more complicated than my Electric Zap/BikeE has proven to be also about 50 times more reliable. This leads me to the conclusion that the overall quality of my 1987 Honda is 5,000 times better than my Zap/BikeE. People who want bikes to replace cars take note!

■ SO YOU (STILL) WANT AN ELECTRIC RECUMBENT?

There are some people (trying?) to sell fully set up electric recumbent



RIGHT: Bike Cockpit from L to R, Night Rider Light, Wes in Mirror, Left hand thumb motor engagement control, Right hand thumb hi/low light switch, Right hand finger electric throttle (hold down) hi/low switch. Night Rider Light mount is removable and can be used as a spotlight.

BELOW: motor is mounted at rear to aluminum welded frame holding batteries. Aluminum Plate covers battery wiring. Size 20 bolts mount unit to frame and hold batteries in place when dismantled



bikes. I have seen stuff on the Internet but haven't had any dealings or heard any good reviews. I heard a rumor that Zap offered (at an additional cost) to make a kit to mount a potential customer's Zap motor on their recumbent. This makes sense, but is not definite.

■ BUILDING YOUR ELECTRIC RECUMBENT

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problem is huge. I use lead acid gel cells which are really easy to use, work great (one of the things that has worked flawlessly for me) and really heavy. The other newer battery technologies are almost ready, but not really available now. Here is how I use my electric bike and how it works for me. I don't need or use my electric motor when going downhill or on the flats. It is nice when accelerating from a traffic light in city traffic as I can accelerate while I clip in and keep up with the cars. I mainly use my electric bike for climbing hills, specifically the 2,000 foot vertical climb from my work to home. It takes just under an hour with the electric motor, and about 1.5 hours with a stripped down bike—not too much difference. However, if I add 25 lbs of groceries, I hardly notice on my electric bike and I am dying on my pedal only bike. Also, my electric bike has super bright lights that I use in the day as well as night time which adds a lot (I believe) to my safety. Bikes are about 10 times more deadly per mile than cars (U.K statistics quoted by The Economist Magazine). My electric BikeE is designed to have the battery capacity to get me up my hill, 12 miles and 2,000 vertical feet, with reserve to spare and run my lights. I definitely need the three 26 amp hour batteries as I have tried and failed with only two.

■ HOW TO MOUNT THE BATTERIES

The batteries should be securely mounted because they are heavy. Mounting them low and in the center of the BikeE is ideal. My mount is definite overkill (welded 1/8" x 1" aluminum angle stock with mounting hardware) and I like it this way. The mount weighs under 2 lbs, and the batteries and motor weigh 80 lbs., so who's counting anyway. Mounting batteries on the BikeE is really easy due to its box frame and I am not sure how a tubular frame mount would work. The batteries also come in different sizes. Hawker/Gates (who I highly recommend) makes a 38 amp hour battery, a 26 amp hour battery (my bike uses three of these), and an 18 (?) amp hour battery. You might get away with one or two 38 amp hour batteries, or you might be able to mount more 18 amp hour batteries easier. Bigger batteries have more power per pound as the cases weigh proportionately less. Smaller batteries are easier to fit onto a bike,

but also add complexity.

■ HOW TO MOUNT THE MOTOR

My motor mount is my third generation try and the motor attaches directly to the battery mounting box. When the batteries and motor are attached to the BikeE the whole unit can be slid forward or back and side to side to easily align the motor with the tire. The motor has an engagement/disengagement control wire which can be connected and disconnected easily with an allen wrench without adjustment. The motor leads plug into the controller which stays on the bike and the battery lead also plugs into the controller. There is another battery lead for charging as well. You will have to pick out a motor/controller system. I firmly recommend the Zap system. I have heard nothing that's led me to try anything else. I also own stock in Zap so am definitely biased.

I recently got a BikeE AT, and it rocks! My motor mount system won't work on it though as the rear stays are suspended. An option here and on other recumbent bikes is to use the standard Zap mounting system, or a modification, that (essentially) permanently mounts the motor to the rear stays and thus your bike. It is possible to unscrew the motor mount and remove the motor, but its too time consuming, and complicated to do on a regular basis.

■ HOOK UP THE CONTROLLERS

I use a stock Zap controller and throttle switch. This works great. The lights are a bit more complicated. The Zap controller has a power out lead but this is switched off when the circuit breakers trip if the motor is overloaded. This happened to me riding up a hill at night and I was enveloped in darkness, which was not good. I run my lights directly off the battery with a separate automatic reset circuit breaker for them. I also have a three way switch that controls the lights — one position is off, one is high beams, two headlights and one taillight and one is low beam (one headlight and one taillight). If you understand how to do this wiring, great, if not I will never be able to explain it here (I barely understand it myself). So ask someone to help—it's not that technical.

■ SET UP CHARGING STATION(S)

I use the standard Zap charger at my house. It's a lower output that can charge my (big) batteries overnight. I use a special Todd 30 amp hour charger at my work place which can charge up my batteries in about 5 hours. Both of these charges work great and can be left hooked up charging the batteries indefinitely because they automatically slow down when the batteries are full. Developing electric bike savvy is a bit trickier. Remember to plug the bike in. I have set off too many nights to ride home realizing I never plugged my bike in to recharge — Ouch!!

Don't freak out when your electric BikeE breaks down. Something inevitably will break and you will be stuck. One of the nice things about having a bike that weighs 110 lbs is that I don't worry about someone running off with it, or grabbing it off the sidewalk and throwing it in their van. I have left my electric bike on the side of the road always to find it there for me on my return. I never have felt the need to lock up my electric bike.

■ TALES TO INSPIRE

Remember it's fun! It won't always be easy, it won't always seem graceful. There were dark scary times for me when I wondered what form of insanity had possessed me to believe that my life would be better or simpler with an electric bike. There will also be the occasional negative energy to put up with. I remember enthusiastically describing my new electric bike to an environmental activist friend of mine, who upon hearing about my bike, scowled and asked "Well, how's that different than a motorcycle?" I sighed and said "Never mind". I hope this article will help and inspire other riders to try electric recumbent bikes. There are very few answers, lots of questions and a whole lot of fun. I will leave you all with the following: It's always been very gratifying and fun for me to ride up to a restaurant or park and say "Hi, I'm Wes and I was wondering if it would be alright if I charged up my electric bike while I had lunch?"

■ ACCESS:

BikeE Recumbents

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Web site: www.realgoods.com

Hawker Energy Products

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Address: 617 North Ridgeview Dr.
Warrenburgh, Missouri 64093, USA
US tel: 1-800-730-7733
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Zap Power Systems (available direct and thru dealers)

Address: 117 Morris St.
Sebastopol, CA 95472
Phone: 707-824-4150
Web Site: www.zapbikes.com

■ ABOUT THE AUTHOR

Wes Lapp lives in Oregon's Hood River Valley where he enjoys organic gardening, windsurfing and ultimate frisbee. Wes is an Aerospace Engineer who learned about carbon fiber at McDonnell Douglas. He and a friend left to start Carbon Creations, which makes parts for windsurfing and kayaking. Wes can be e-mailed at: wes@gorge.net

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Shown is the new 1999 Nitro, available in under-seat or above-seat steering.

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


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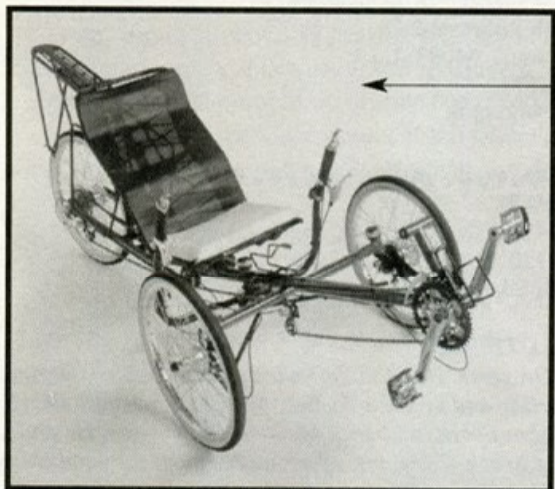
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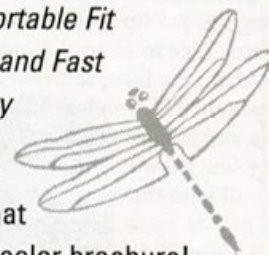
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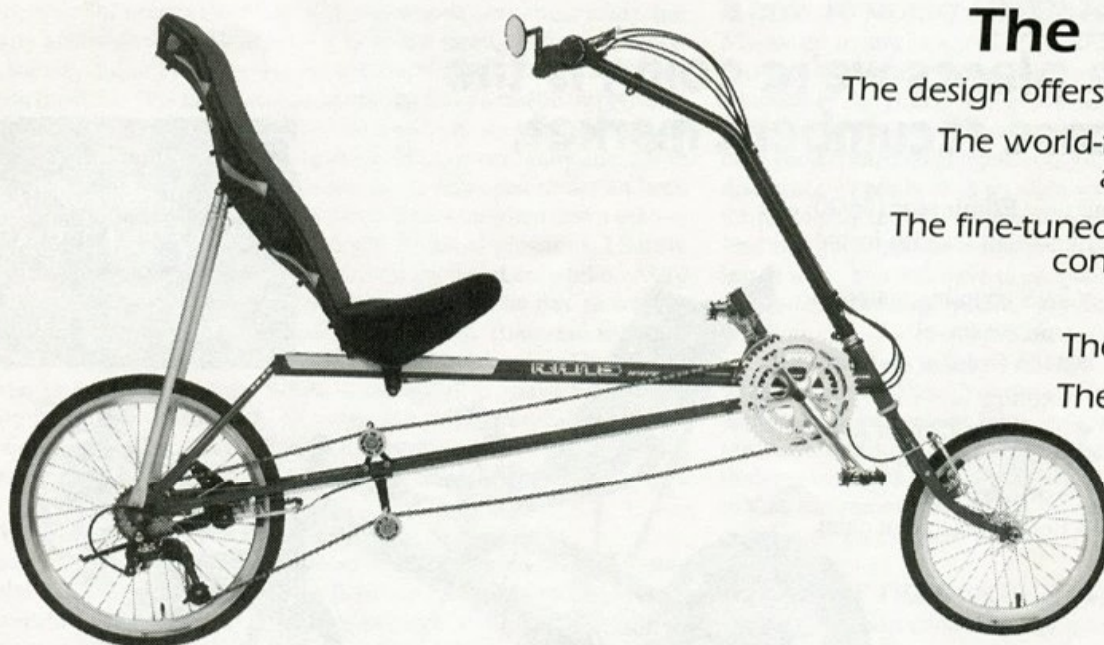
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Recumbos Are A Pain In The Butt

by Alan Zeppa
AZEP@aol.com

Recumbos can sure be a pain in the butt. Now don't get me wrong. I love recumbos. More precisely, I love to ride bike, but I had to give up wedgies over 15 years ago, after finding that long tours often meant that I'd lose feeling in some of my fingers for months at a time, in my crotch for weeks. Whoopee. Progressively things got so bad that even short rides on uprights became exercises in overcoming pain. Physically—psychologically—simply the thought of “one more mile” became almost too much to bear. So, over time, I quit. My city bike sat unused on the porch, collecting cobwebs and dust. My old road bike slowly rusted away in a corner of my garage.

Ten years went by before I discovered a wonderful thing called -recumbos. I wolfed down every word about every model in RCN, ten/a dozen times or more and I pestered Bob Bryant by phone for his expert advice in the early days of RCN.

Eventually I decided to spring for a used Tour Easy. Finally, it arrived. Quickly relearning old mechanical skills, I set it up, went riding. Short rides at first, reusing old muscles, feeling the joy of being out and about again. I learned about new problems called “chain slap” and “heel strike” and what to do about them. Slowly I progressed to longer rides, and I learned something else.

▲ Recumbos sure can be a pain in the butt.

Now don't get me wrong. I really liked my Easy Racer Tour Easy (TE). It's a wonderful bike. Sleek, fast, steady, comfortable. It's just that after about 30 minutes of riding it I'd start getting this terrible pain in the butt. It got so bad I found myself cringing before every bump. Worse, the effect was cumulative, and progressive. Nothing I tried—special exercises, extra rest stops, extra recline, extra padding, working through the pain as if I were just being some sort of a wimp—made the least bit of difference. I later learned this was called “recumbent butt.” Whoopee. Maybe riding recumbos was just not the answer for me.

But I wasn't quite ready to give it all up. Even though I had no reason to suppose that any recumbent would be any better for me, on a whim I sold the TE at a big loss and sprang for a new Vision R-40 SWB with USS. Finally, it arrived. I set it up, went riding. Slowly I progressed to longer rides, and I learned something else. Maybe not all recumbos were a pain in the butt. True to its name, the Vision proved to be a revelation for me. I could ride again, without pain. Muscles willing, I could ride all day long if I wanted to. Often I was so relaxed riding my bike that once or twice I caught myself actually nodding off while pedaling. Maybe it wasn't as fast as the TE, especially on a downhill run, but in every other way I found it to be a much better bike for me. Sometimes in RCN I'd read about how others found it to be a twitchy bike, and wondered if it was some other bike they were talking about, or some other reality, or maybe I didn't know what twitchy really meant, anyway. I loved my Vision so much that when UPS mistakenly lost it after I boxed it up to take it with me to California one winter, never to be seen again, once the settlement came through I immediately bought another without considering anything else. I loved my Visions.

But, like most of us who can't leave well enough alone, after a couple years I got curious to experience what other recumbos were like, and after a while, to go along with my Vision, I bought, sight unseen, an old Presto that had lived in a garage under a plastic blanket for nearly a decade, for a bargain price. Unfortunately, the guy who sold it to me misrepresented it as an 18-speed when it was really only a 12, and it had really ugly looking drop style bars instead of T-bars, among other gross abnormalities. I spent a long, aggravating first half of a summer first deciding to keep and then upgrading the bike, swap-

ping out cranks and brackets and binders and green spacers and white spacers and dremelling here and there and swearing loud and often at the damn thing, finding out in the process (again) that even the experts can't always tell their butts from a hole in the ground, relearning the old maxim that before you ask a question it's always better to know the answer (but that's an article for another day).

Well, I liked the Presto, once I pieced it together, but I didn't love it like I loved the Vision. After fixing it up that first year I rode it a lot. Next year, hardly at all. But I was hooked. Somehow this had all turned into a quest to find a bike I loved as much as I loved the R-40.

Something else I did learn from riding the Presto, however. Maybe only the TE was a pain in the butt for me.

So this spring I sold my upgraded classic Presto to a friend at a bargain price, and struck up an email conversation with Luke Breen at Calhoun Cyclery in Minneapolis (good man - good shop). Originally I'd wanted to look into the new Visions with the rear suspension, but in the end decided I wanted something that was not too similar to my existing bike. I'm relatively short, and from limited trials had always thought Rans SWBs to be too 'tall' for me. Luke had, however, a closeout special on a '97 V-Rex 24, and when I went down to check things out I took it out for a longish ride to see how accurate my previous impressions had been.

Maybe it wasn't love, exactly, but it was pretty damn close. Sleek, fast, steady, comfortable. That alone should have told me something, but it didn't. When I left the Twin Cities I had a new V-Rex 24 on my rear rack.

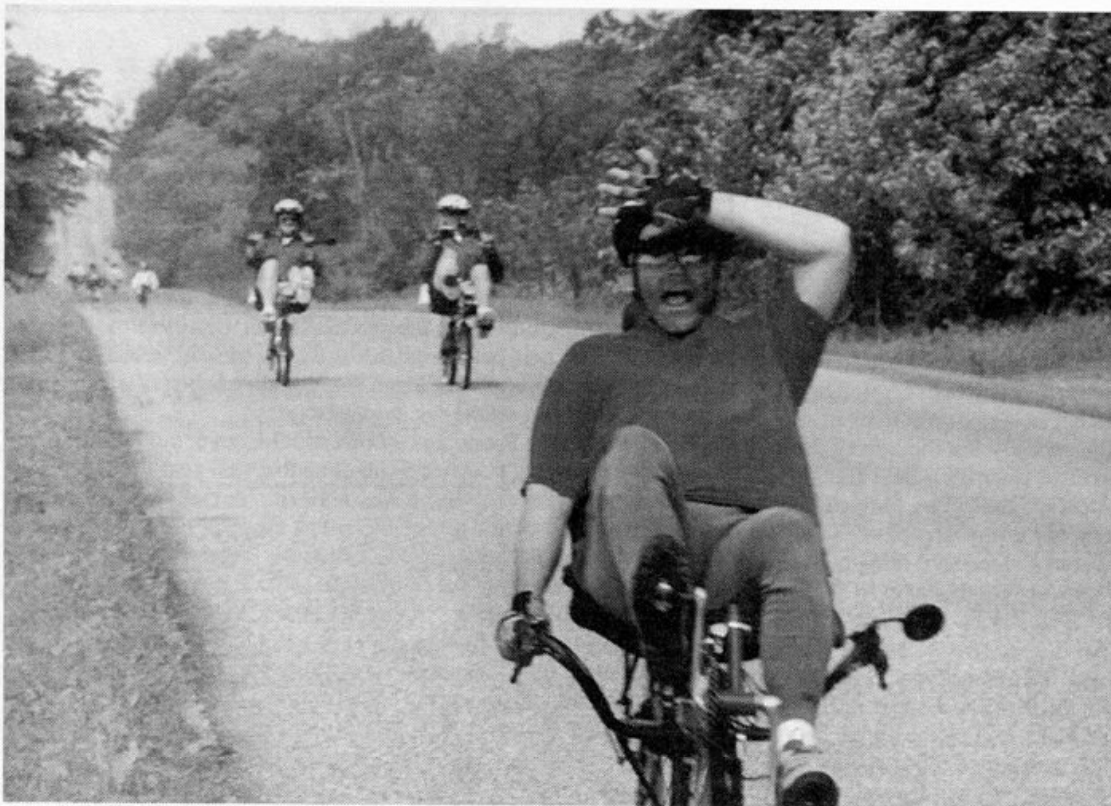
I took it home, set it up, waited for the weather to warm up into the upper 30s and low 40s, and went riding. Slowly I progressed to longer rides, and learned something both new and old.

▲ Recumbos can sure be a pain in the butt.

Things weren't as bad on the V-Rex as they were on the TE - at least not to begin with. It was generally only after about 20-25 miles (at first), or when I'd ride a couple/three days in a row that I began noticing the unmistakable symptoms of recumbent butt. At first I couldn't believe it. Hey, I didn't get recumbent butt anymore. And everybody absolutely raves about the Rans seat. It must be me. I must be wrong, or just plain wrong-headed. But the pain kept coming, getting cumulatively, progressively, worse. I tried everything I could think of, and some stuff I found after appealing to people on the HPV list. Seat angle, seat to pedal length, extra foam, special exercises, bonding my thermarest pad to the Rans seat foam so that I always rode on a 'cushion of air,' etc. I put 300 miles on my V-Rex in April, feeling around for the cure. Then, finally, after riding the V-Rex for 3 straight days near the end of the month, cringing at every little bump, the very next day I quickly got my Vision road ready and took it out for the first time this year on my cruddiest, bumpiest 20 mile ride, sore butt and all. Well, I felt every bump, all right, but I wasn't cringing on any of them, and my butt felt inarguably better when I got back than when I started. Go figure. But at least that ride helped me realize that it might not be me at all, but the padded hard-shell V-Rex seat, like the padded hard-shell Tour Easy seat, that'd been causing all of my 'pressing' problems. From which I deduced (finally) Zeppa's First Law of Purely Personal Recumbo Preferences, which states:

Padded or unpadded Mesh seats - like my Visions and my Presto — GOOOOOD! Padded Hard Shell seats- like my TE and Rans, no matter how cushy the padding — BAAAAAD!

Whoopee. Unfortunately, it cost me a lotta time and a lotta moola to figure that rule out. No sour grapes, mind you, just a basic fact of recumbo life. Which might be, in fact, the biggest pain of all about



Alan Zeppa rides his Vision one handed scaring people at the '97 Midwest Rally
photo courtesy of Alan Zeppa

recumbos, and potentially a big problem in their acceptance by the general public. Fact is that they're not like wedgies, where you've got a pretty good idea from the get-go how your butt and hands are gonna react (or not react) to the saddle and the bars. With recumbos, you never really know what's gonna work for you and what won't, until it's too late and you're stuck with what you got unless you can (somehow) sell what you've bought sight unseen at a big loss. Unless, of course, you can convince the guys at the local recumbo shoppe to "give you a week or so to see how it suits you" before you plunk down your cash.

Oh, I'm not done trying, before I finally give up on hard-shell seats. Some guy up on the HPV mailing list (www.ihpva.org) wants me to try something called temperfoam, and Luke at Calhoun has graciously offered to let me use the V-Rex as trade as well as exploring the possibility of seeing if a Vision seat can be fitted to a Rans, and I can always try to shop the bike on the HPV list or elsewhere, but the whole process has pointed out to me - again - the very worst thing about recumbos. RCN columnist Bill Volk may have had the best idea I came across regarding my problem, one that I think deserves to be passed on and thought about

by the recumbo powers that be. "What would be cool," he wrote, "is some attempt at standardizing seat mounts, so you could CHOOSE what seat you would want on your recumbent."

Very cool indeed. But, we commiserated, too simple, too elegant, too good of an idea for it to ever have much chance of happening. Besides which, that's an article for another day. Recumbos can sure be a pain in the butt.

▲ RECOMBO UPDATE 1/1/99

Well, I've finally got an update. My tentative 'solution' involved converting my V-Rex 24/20 into a V-Rex 20/16, as per your homebuilder's issue. What with getting a new 406 rear wheel built around my existing Sachs 3x7 hub on my 24 inch wheel and finding an adequate roller cam brake, I only completed the conversion in early October. Since then—well, what can I say? In spite of the spell or record setting warm weather we're having around here currently (in the 40s!), winter starts in early October by Lake Superior, and you ride when you can, not when you want, and it's typically too cold to ride for very long. I have,

however, put about 350 miles total on my "new" bike, and although I won't consider my tests to be "complete" until I can string three 50-mile days together without significant pain (my longest 1 day ride was 40 miles), I can say that the combination of (1) lowering the seat height through the 24/20 to 20/16 inch conversion (allowing me to recline the seat more), (2) replacing the stock foam pad with a 2" temperfoam pad (from a suggestion by Bill Volk), and (3) exaggerating the lumbar curve of the Rans seat with a thermarest pad, has produced a ride that has so far exceeded my best expectations. Simply put, I haven't experienced much in the way of recumbent butt on my new, lower V-Rex. A bonus has been that I've got a bike that I consider an improvement on the 24/20 V-Rex that I purchased in almost every regard. The ride is still 2-4 mph faster than on my Vision, the handling is still smooth and sure, but I've also got a bike with virtually no heel strike, and one that I can use a kick stand on without it falling over. Also, since the bike is lower, it is, in my opinion, much safer. I can stand with both feet flat on the ground at stops in traffic, and with a lower center of gravity when rolling I feel more lateral stability as well. □

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A Project of the Center for Appropriate Transport

Recumbent Anthology

Paul Atwood of the BikeE Corporation

by Kelvin Clark

Editor's Note: Kelvin Clark is the proprietor of Angletech in Woodland Park, Colorado. Kelvin is one of our industry's most respected recumbent dealers specializing in custom spec bikes as well as manufacturing his own machines. Kelvin has been in the business for years—pre-dating even RCN, Angle Lake Cycle even sold Avatars in the early 1980's. In his new column, "Recumbent Anthology," Kelvin has offered to interview recumbent industry personalities for RCN. He has several in the cue for upcoming 1999 issues and hopefully beyond.

Kevin has done all of the interviews live and had them transcribed from tape, and supplies them to RCN pretty much as you read below. We all owe Kelvin a great deal of gratitude for this very time consuming process.

Paul Atwood is one of the original founders of the BikeE Corporation. He is well known in HPV racing circles as well as around the NW from the early days of recumbent cycling (1980's). Both Paul (and Kelvin Clark) were instrumental in my deciding to start RCN. Paul was the co-designer of the original BikeE and suspension AT, and as the head of BikeE R & D, the new "NX" or Next Generation model. The NX is Paul's baby. Whereas many designers are resting on their laurels and revamping somewhat dated designs, Paul Atwood is a recumbent designer for our time—dare I say the "new breed" of recumbent designer. The BikeE is a very successful and popular design with almost a cult-like following. The BikeE may very well may be the most popular enthusiast recumbent made in the world today,—and Paul Atwood is an unsung hero of this design Well, unsung until today that is—Bob Bryant, RCN Publisher.

KC—Interviewer: Kelvin Clark

Paul—Paul Atwood

KC: What's going on with BikeE for '99?

Paul: The big news is we're finally steering the company as far as product development. There are core groups at BikeE committed to marketing and to product development, and do it with a passion. We've reached a point now where finally we have the resources. We can actually build things instead of just talking about them.

We looked at last year, losing sales to some of the competition because we didn't have a model for customers to step up to. We said, "We need a bike in the \$1800-\$2000 range." Boy, did we hear the flak! So we went and built it, and pretty soon everyone in the company said "We've got to sell this." Dealers are telling us, "You know, we can sell this." Now we've come to the show, we're selling these bikes, it's great! Another affirmation we do actually have a clue about what we're doing!

This year we've gone both directions. By going to Giant, we've cut the cost of our base model (CT-2) by 1/3, from \$995 to \$650, and we've added a bike to really lust after (NX). It's got the hydraulic discs, and all the good stuff, and at a price people are willing to pay. It's good for us because in the past we've been so price conscious. This is our first year of profitability. Five years of losing money is a scary thing, and there are a few of us who always looked at that and said "If we could get a better and more expensive model out there, and we could actually make some money on a smaller volume product"—and now

we're going to prove it. I hope that we're actually getting to the point where we can explore the possibilities more, rather than having such a rigid doctrine of how it's going to be. Letting broader markets for dealers decide how it's going to be.



Kevin on his Angletech Altitude in Creede, Colorado

KC: What is your position at BikeE?

Paul: Director of product development. Basically it means that I'm the guy that often will come with an idea and say, "What if we did this?" And if we get some positive response, I'm the guy that has to make it happen.

In the case of the Giant project, I'm the guy who was the front man for the company. I had to go to Taiwan and make sure they knew how to do it, visit all the vendors, establish a relationship. I've actually had 3.5 weeks in Taiwan this year, and it's been fabulous. A learning experience, really incredible. The culture is so different and of course shattered all the stereotypes (laughs). There a few of them that are true, it's pretty darn dirty. The people, and the way they relate to each other and the way they do business is just incredible, we have a lot to learn.

KC: So, they have a respectful way of doing things?

Paul: Very much so, over there it's a big family. The Giant family. When I go over there, I'm not just dealing with Giant, but Giant has a network within maybe a 25 miles radius—300 bicycle manufacturers, parts vendors, frame manufacturers, whatever, and they all work together. Giant will say, there's a specialist that can do this better than we can do it. Call him up, he's there in an hour, the president of the company is there. The Taiwan government, when they established the ROC, they started from scratch, and said how do we bring prosperity to our people? They decided that the best way to do that was to empower them. Programs like family factories, which encouraged families to establish their own manufacturing businesses. This was in the 1950's, and those have grown up now, and become full fledged and very capable manufacturing concerns that have grown their own families. I guess the big thing is business over there is not about this deal or that deal, it's about the relationship, the lifetime relationship. The way the companies are guided philosophically, especially Giant, Tony Lo (president) is incredible, and it filters down. I have yet to meet anyone in the Giant company who is not happy with their position in life, even though they work very hard, 6 days a week, 65 hours a week is average. Saturday is a full day, 3 out of 4. They have long weekends, 2 days off in a row! It's been a real eye opener, being over there.

KC: There used to be a time when Taiwan was thought of in a low quality sense. Have you been disappointed about the capability factor?

Paul: Not at all, because we're working with Giant. If that weren't the case, my job would be much more difficult, I'd have to be fluent in Mandarin and I would be living over there part of the time. As it is I have staff at Giant that act as liaisons for us. They have good English, and a great understanding of who can do what. They take care of things



Paul Atwood and the new BikeE NX at Interbike Las Veags—John Riley

the time, and he dragged me into it. I didn't know anything about organizing people, I was, and still am in a lot of ways, a loner, but he sure taught me a lot. His enthusiasm and commitment really spurred me on. I'm really proud to have been involved with him, the projects that he did.....Expo '86 was amazing!

KC: That was neat, I remember that.

Paul: (laughs) The race from Seattle to Portland, that was a real high point, Steve Delaire out there ready to do a 200 mile race in his flip flops, Pete Penseyres.....

KC: What about the Roots in the Sky thing. Number one, where did Roots In The Sky come from as a concept, the name?

Paul: It's the title of a record album from the group Oregon. I've always been a wood worker, so I suppose the tree image, the root image has something to do with that. I can't really put into words what it means except creative freedom.....

KC: What did you do with Roots In The Sky for people who don't know?

Paul: (laughs) It began as, I guess, part of reason for the name was that it wasn't limiting. The state requires you to have some business name, and I didn't really want to use my own name, so I looked at that and said well, I don't know what I'm going to do yet, but I'm damn well not going to work for other people.....I actually started out building furniture, and discovered that was a pretty difficult way to make a living, I had no capital resources.

for us. So it means I don't have to live there. I could spend more time there, we would be better off if I did. But it will come, somebody will be over there more. It's really an inevitable part of this industry. Once you've experienced over there, you understand that. There's no way we can do business here, I don't have the 300 vendors an hour from my office. The entire island has that lifetime commitment

KC: Well let's step back in the past a little bit.....see where we go here. Where was the beginning of your recumbent seed planted?

Paul: Probably '78 or '79. Cyclist Magazine (now defunct) did some great pictures of HPV racing, and then Bicycling did some coverage of the HPV championships. I was living in Seattle, and eventually got connected with Jim Weaver (Counterpoint), that would've been '83. I can't remember the first year Jim came out with the Opus.....

KC: That was '83 actually.

Paul: It would have been about that time, as I think Jim was taking bikes out to HPVish things himself around that time. Yeah, '84 was the first time I went to an HPV event when Jim invited me to join his team. We went back to Indianapolis, and of course, being part of the Championship totally hooked me because I had been living without a car for some time by then, and was committed to bicycles. Obviously this was more functional, more fun, faster, and they were free thinkers. The key issue was not to have the limitations, being free to pursue an idea, and see if it works.....

Jim Weaver gets all the credit for turning me on to all this, and as a life model, creating his own business, and pursuing his dream, he really did a lot for me. It wasn't long after I met him that I quit working for other people. It was within a year of getting involved with him, I would guess.

KC: Does the NW HPV Association fit into this.....

Paul: Oh sure! Tom McDonald was a key part of what Jim was doing at

KC: What kind of furniture was that?

Paul: The one product that actually earned me some money was a kneeling chair, an evolution of a Balens chair.

KC: Oh yeah, I used to have a Balens chair.....

Paul: Funny thing is all these years later, I walk into the seat vendor in Taiwan and there's a Balens chair they make the cushions for! That was part of it, and then doing craft fairs with boxes & knick knacks, that sort of stuff. Then it eventually evolved into Quick Disc, which was the lycra wheel covers, and that was a real experience, because it taught me so much about the patenting process, taking your product to market, licensing and all of that. Ultimately, lost a lot of money, had to suffer through the years of being really, really poor. I managed to survive that and turn things around. I'm a long way from wealth, but certainly feel I'm living an abundant life now. I have to say it's because I followed my heart. So Roots In The Sky was really about freedom. Growing up in American society, they don't teach you can stand up for yourself, do what you want and make a living at it.

Now, the funny thing in Taiwan is, and in China in general I think is, although there is this group consciousness, group mind, vs the individual mind like we have in the US, they are encouraged to create their own abundant/trust way of making a living, it's difficult for me to put it into words, but so radically different from what we have here.

KC: So they're cultivating independence as a good thing vs. a threat

Paul: And yet, the United States is the land of independence, but we're not encouraged to create our own place in the world. College encourages you to lock into a corporation.

KC: Let's talk about seeking your fortune.....there was a time when you kinda put your knapsack on your shoulder and you moved to Oregon.

Paul: I was never happy living in Seattle! I loved the geography, the mountains, Puget Sound, the proximity to Canada, all that, I certainly

miss that, but living without a car in a city like that is not much fun (laughs). The weather left something to be desired. I was born and raised in Bakersfield, California, and I was pretty happy with that dry, hot climate. Even though that's not where I live now, at least there's a little more sun! Things had just played their course, I was listening to my heart, and it was obvious it was time to go. There's no rational reason why I moved to Corvallis. I spent one day there. I checked out the library, the food co-op, some of the community, and concluded I could be happy there. So, I went back home and mulled it over, packed myself up with no visible means of support, not much money in my pocket. I landed, found a house to rent in October, on the phone, when the students were all moving back, and students are half the population in Corvallis. Finding a house to live in 300 miles away was a miracle in itself. Everything unfolded from there. I just started introducing myself to the community, finding people interested in HPV's, I walked into Dave Uhlmann's office one day (a BikeE founder with Paul and Richard Rau), a professor at OSU who I had happened to know had an interest. After a half an hour of talking about bikes and HPV's, he asked me why I was there. I said "because I was meant to be there," and he gave me this look like I was from outer space! Now he looks at me and says "now I know what you mean (laughs)!" It all fell into place.

KC: So, with Dave Uhlman, and you and Richard Rau.....

Paul: Richard Rau was the first guy I knew when I came to Corvallis.

KC: You knew Richard before you came to Corvallis.....

Paul: From organizing the Portland Event, 1990 HPV Championship, I traveled down to Portland a number of times as part of the HPV organizing committee, especially the practical vehicle competition, where my interest was. I knew Richard, I visited him on the way home from a trip. He was just setting out on his own, manufacturing handcycle attachments for wheelchairs, the Cyclone, which turned the wheelchair into a trike with gears, he had a contract with the inventor, the inventor sold it to a wheelchair company, and all of a sudden he had some volume to deal with, he needed some help, so I jumped right in and worked with him on that. I think I did a lot to improve the manufacturing processes, efficiency, and that sort of thing.

KC: What would this year be, timeline wise?

Paul: This would be 1991. Eventually the inventor sold it, the contract ran out, we were looking around for things to do, and this was after we moved to a bigger facility to accommodate the volume. That was about the time Dave returned from a years sabbatical....

KC: Where'd he go?

Paul: Holland. He's on a years sabbatical now too!

KC: Really!

Paul: Yeah, every 7, I've known him for awhile now, he's thinking he may not be going back. This was also about the time of ReBike. We were thinking, this recumbent market has got to happen sooner or later, maybe the ReBike is the thing to crack it open! We called Kathy (Skewis) up and ordered 10 ReBikes, lost our shirts because it cost us much to make them functional and she didn't want to hear about it. Dave comes back from sabbatical and we look at this bunch of bikes setting around, start scheming about how we can make them better. Pretty soon we start thinking we should throw them out and start over, and that birthed the first BikeE. It would be September '92

KC: The gestation of your 3 pieces of influence here.....

Paul: The first Bike, September '92, we did the napkin sketch.....

KC: I mean who found the vibe that worked there?

Paul: Well Dave and I really found that we had the same thinking when it came to mechanical engineering and some specialties and design philosophies. He's always been interested in bicycles, recumbents, but never had a deep understanding of the bicycle industry, components, frame building, the hands on aspect, but was really great at brainstorming design solutions. You find the problem, you lay out the solutions, and

start filtering it. I was able to take those ideas and make them real and Richard was able to support us with a facility, equipment and purchasing. So the three of us together had the ability to take it from one idea to the next with business experience, marketing, sales and all that, but we didn't have a company, we were still just playing. It was Jan. 1. 1993 that we actually incorporated and we were sitting in the lawyer's office and she said, "Okay, who's the president?" We all looked around at each other and said "We have to have a president." Dave's the oldest, so we nominated him. He quickly realized he didn't want the job. So we started scouting for a real business person, but it took 2 years to find him. We struggled a lot those first 2 years, because we didn't have any real capital. We started with \$4500, which is insane, no one should start a business on \$4500, much less one that requires the kind of up front expenses that manufacturing bicycles does. But somehow we went without meals and put our families through the wringers, and eventually we got to the point where there was obviously enough potential that people were interested in our business, so we attracted John Moreland. He had enough connections that he was able to bring in other investors. We had a number of small investors, who we called "the true believers."

KC: So Moreland brought in the business side that you needed.

Paul: Yep! John had led several companies in the computer industry, was semi-retired at the time, and was scoping around for something to relieve the boredom, found us and decided that the bike was so much fun that the business ought to be that much fun too. But I think maybe it hasn't been that much fun for him. It's been a lot of grief.

KC: He came on in what year?

Paul: That would be spring '94. We went about a year and a half without any real business leadership. Just kind of struggling through. Our product was not that great the first years, I'm not real proud of it. We did the best we could and we managed to survive. By doing that we were able to make little improvements here and there, and to dream about making the big ones.

KC: You chose a particular format design for a reason, right?

Paul: We didn't chose the design, Dave's thing is the design philosophy. His approach is strongly influenced by a man named Figucci, and essentially it involves trying to identify all of the needs of the end user. It's tough to find out what they want. The most obvious was that it be easy to ride, its worthless if you can't get on it and ride away. You can't have a product and expect it to sell to a lot of people that takes a training course to be able to ride. We were coming from the Presto and the Quadraped, some of the college projects which Dave's done. We had this high level of enthusiasm for the companies but, these weren't bikes that we could share with most people. That was the key driving force for us, being able to have a bike and say, "Here, try it."

Today the BikeE is arguably is the easiest recumbent to ride for the first time rider. Someday there will be enough of them out there that we will move on to bikes that aren't quite so easy to ride that have other aspects that are conducive to higher performance or whatever. When Dave starts a new project he'll come up with this whole matrix of needs and solutions and when you're done you have a picture of which solution will fulfill the most needs most effectively. That's been really invaluable for me, to have that kind of structure and at the same time I balance that. Sometimes it can be too academic and you can study it to death. Then I say, you know, we've really got to get some feedback!

KC: Focus groups can be valuable, but after that it's inspiration and....

Paul: You have to keep moving.

KC:You have to value your inspiration as a worthy thing.

Paul: That's where we're very different, its very logical and analytical and time weary. Sometimes I'm pretty out there, but one of my core philosophies is that you can have 100 people going in the same place and they're all going to take a different path. His path and my path are different but we both wind up in the same place. We've come to respect each other more by recognizing that.

KC: What did the extrusion idea come from?

Paul: One of the things that we determined early on, that we recognized in each other, was the desire that anything that was to be produced was to appear simple. Elegance is one of our goals. What that says to me is that every part has to fulfill many functions. It has to all work together and has to be easily produced and has to be designed for manufacture, DFM, has to be designed for assembly, DFA, to use Dave's terms, all these different needs from a design. We wound up with essentially a big fat tube. Then somehow the seat has to attach to it. In the early days we took off the shelf materials, because we couldn't afford to do anything else. It evolved! It was obvious that the custom extrusion was the right thing to do. We had already defined the parameters of what this member needed to accomplish and we were doing it with multiple pieces that obviously could be integrated into one piece. Initially, we actually did look at alternatives, formed sheet material, that kind of thing, then it came down to the extrusion that in the final analysis was the right choice.

KC: One of its byproducts is the fact that you can put anybody from an 8 year old on the bike, all the way up to any size of adult.

Paul: Including 7 foot Doug! (laughs)

KC: It turned out to be a very clever thing.

Paul: It's worked out extremely well, it's been one of our most successful design projects. We're continuing to build on that and continuing to develop different seats for example that are modular and fit the same extrusion. The accessory bracket for which you can put all sort of things on the frame and in different locations on the frame. That kind of thing. Modularity was a key issue, expandability and being able to grow the product line down the road and be able to let it all work together.

KC: Bikes, Not Bombs, tell us about that. I have a sticker on a fairing that you made anciently and I remember you talking to me about Nicaragua and all that kind of stuff way back when. Were you involved in any of that?

Paul: Personally I actually was not all that involved, but that is the inklings of Matteo Martignoni who is a bicycle activist who sometimes lives in Petaluma, CA. He also works with his uncle who is a world renowned sculptor and right now Matteo is in India doing a project for ITDP (Institute for Transportation Development Policy). Some of his other careers, he was a frame welder for Lightning Cycle Dynamics. One of the projects that really inspired me was in Haiti, where he was doing the Bikes Not Bombs program, collecting bikes here, taking them there, with sponsorship from bicycle companies that take their old surplus inventory that's been sitting in the corner of the warehouse and giving to people who can actually do something with it. He was involved in starting Wheelchair Repair workshop in Nicaragua where there wasn't any before, people didn't even have inner tubes, that kind of thing. Russell Gasser was also involved. He was a big influence. He lived in Seattle for a few years. He's Scottish or Irish. It touched my heart. I wasn't in a position to really do anything about it, but that's someplace I'm going to go in the future as BikeE allows me a little more freedom.

KC: Tell me about the Corvallis culture, and obviously the fit is good, what is it about Corvallis?

Paul: Its good, I don't think that I could live there for the rest of my life, I'm not even sure how much longer, because it is one white town! Having spent some time in Asia now, its really apparent that there is some diversity missing. After living in Seattle, there is an awful lot of diversity there, but Corvallis a wonderful blend of abundance both monetarily and intellectually because of the University. Somehow it's attracted what I suppose people call a counter culture, not a radical counter culture—it's kind of subdued, but you know we look at the food coop there and see a really beautiful community that gets along really well. Some coops are just hopeless, they turn into corporations or they fold because nobody can get along. In Corvallis, the co-op has been going for 25 years, although it hasn't grown to become a natural sort of supermarket kind of thing, the community that has grown with it is really wonderful. That's important, and the way that they support local farm use. There are so many organic local farms, for example, that have grown out of the coop.

A network of other kinds of activities have grown up around that, and the aspect of community is really very important to me. I don't believe that the traditional way of doing business is the best way or the only way. I believe that what you do for a living is part of how you live your life, and you can't separate them.

KC: So how do you achieve a balance? Obviously there's a business side, how do you keep that balance and having a personal side?

Paul: I'd have to say that I'm not really living my philosophy real well lately because I am part of a corporation, that I helped create what it is, and it is not in all aspects what I would like it to be. That's what it means to have so many people involved. It can't be just what I want it to be.

KC: Well, how do you keep the rejuvenation factored in?

Paul: Sometimes we don't! (laughs) It's been very difficult because we have been through some pretty hard times and all of us have been ready to throw in the towel at least three or four times. Not recently, but in the first few years, and there has been plenty of pain associated with the birthing of this business. And I would say that the rejuvenation part of it has been deferred.

KC: So the recent prosperity that you talk about is finally getting clear of the red ink here that's going to allow you to bring that part in ...

Paul: Oh, yes.

KC: ... and restoration occur.

Paul: Even just reaching the point where we can establish a relationship with the biggest bicycle company in the world and I can go to Taiwan and meet all these new people and learn so much about their culture and how they do business and all the rest of it and encourage this project through and see it successful. That's abundance, that's rejuvenating, that's prosperity. That is a reward in itself.

KC: What's the transportation situation in Corvallis? How do people get around?

Paul: Well, Corvallis has the highest bicycle commuter rate in all of Oregon. I can't quote you the number off hand, but it's amazing. Over 10%. That's reflected on how they spend money on the infrastructure. For example, they are now putting in covered bicycle parking structures on the street. So bicycles are part of the transportation system there. A little bit of bus, a high percentage of walkers, and then there are cars, but the balance is better and it certainly is a lot healthier.

KC: So you bike to work with them.

Paul: Of course, I still don't own a car! It'll probably change in the next year or so. The kids are at an age and all of that, but I'm not going to forget my commitment to bicycles. Its what keeps me sane, that has gotten me through all of this. Up in the morning and getting on my bike.

KC: DaVinci Days, that's part of Paul.....

Paul: Boy, I wish I still had the energy to do all that. That was part of the rightness of being in Corvallis. Not long after I moved there I read an article in the newspaper about this festival which was dedicated to Arts, Science and Technology named after Leonardo DiVinci and it was obviously the number one event in this town. It seemed to me that HPV's and recumbents embodied all three of those, art, science and technology, so I walked into their office and I said "You know, I think we need to do something," and I kind of laid out where I'd been and what I'd done and she said "We've been waiting for you." So they gave me a budget and I started putting the word out and we got a bunch of people to show up and we shared what we knew. It was a different kind of an HPV event in that we had 16,000 members of the public to come and see what we were doing and ride our bikes and get turned onto it all and the peak year we had 21,000 and we were the main attraction out of all the stuff that was going on. It was pretty amazing, so there is really an important part of my life and I know that it is part of the reason why there are now 200 recumbents in a town of about 45,000. That's maybe the highest density in all of the US and that's among the residents. I think there are about one or two students that own recumbents, but when the students go away

there are only like about 24,000 people in town. Its not a very big town. You can go out on your bike and see somebody else on a recumbent within half an hour any day and I've been many days where I'll see 6 or 7. That's pretty amazing.

KC: Okay, the recumbent industry. I've noticed an attitude change between companies.

Paul: I hate to say it, but I don't think I have. (laughs)

KC: Last year at the invitation of Bob Bryant from RCN, we sat amongst more companies at dinner in a restaurant in Anaheim, CA. It was the first time that BikeE, Easy Racers, Ryan and Rans, everybody was there (except Vision) sitting around seemingly enjoying each other's company.

Paul: We can do that, no problem.

KC: Even that seemed to be strained in the early days. It seemed, anyway.

Paul: I don't ever know that I felt that relationships were strained as long as it was a social situation. I definitely think that we could all sit down and have fun with each other. Certainly, I hope we all respect each other. We all have obviously common dreams and I would hate to ever cut off somebody who shared my vision. The business side, we have a lot of investors, a lot of money in things and we need to be careful.

KC: Do you have anything else you want to cover that hasn't come up so far?

Paul: Yeah, one thing I'll say, I sure wish Trek had done a little more homework. I think they're shooting themselves in the foot. I was hoping they would come up with a bike that they could put into all the Trek dealers and have some success with. What I think is going to happen is that they are going to drop that bike, then Trek isn't going to have any other recumbents on the floor, and they are going to walk away. Its going to be a few more years before we get the legitimacy of having one of the big names in the business.

KC: So let's talk about this, the big players coming into the business. So Trek is going to enter the market this year, '99. They've brought out a short wheel base bicycle and it's not on target for bringing volume into the market or it's just not designed for ...???

Paul: No, I think it is. It's a neat bike. Suppose you walk into a Trek dealer and you've never been on a recumbent, which most people never have, the dealers never sold a recumbent before, so how are you going to sell that bike?

KC: It's part of that easy to ride, hard to ride thing you were telling me about?

Paul: Yeah, how do you sell that bike?

KC: Trek will tell you that the mission of the bike isn't supposed to be for the beginner. It's the enthusiast Trek customer that is walking away from the Trek enthusiast bike.

Paul: Most Trek dealers are not recumbent dealers. They don't have any recumbents and they don't have any recumbent experience. You can't take an experienced bicyclist off a road bike and put him on that bike. Just as you can't take somebody off the street and put him on that bike. I think they made a big mistake. □



Paul Atwood on his Roots-in-the-Sky Presto several years ago

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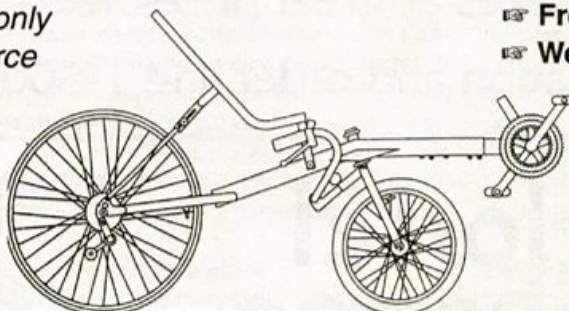
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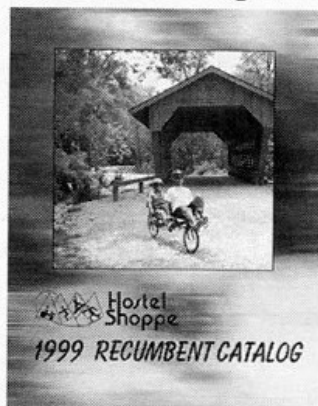
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Why I Prefer Above Seat Steering

by Richard Drdul
drdul@portal.ca

ASS — Above Seat Steering, where handlebars are located in front and above a rider's lap. Also known as Over Seat Steering. Some object to the acronym ASS as for some reason it offends some people.

USS — Under Seat Steering, where handlebars are located below a rider's seat. Also known as Below Seat Steering, which does not result in a potentially offensive acronym.

Yeah, I know — this column is guaranteed to get me in trouble. But I just had to write it. Every few months, the old "ASS versus USS" debate comes up on the HPV Internet mailing list. Accusations fly, the trenches are dug deeper, and no one gets any closer to understanding the advantages and disadvantages of ASS and USS steering. So it looks like it's up to me to clear the air and set the record straight.

When I first went looking for a recumbent, I figured USS would be the way to go. It looked so natural — just let your arms hang at your sides. However, many recumbent cyclists cautioned me against USS, pointing out some significant drawbacks that I had not considered. So I test-rode both USS and ASS bikes, and went with ASS. I have since ridden many more USS bikes (SWB and LWB, tandems and singles), and have no regrets about my choice of ASS.

I know that many recumbent cyclists prefer USS, which clearly illustrates the first rule of recumbency — different strokes for different folks. If you're considering purchasing your first recumbent, my advice is to test ride as many different bikes as possible, and spend as much time as possible on the ones you're seriously considering, before making your decision.

It's interesting to note that a survey conducted by RCN a few years ago found that approximately 75% of recumbent cyclists use ASS steering. I suspect that percentage is even higher nowadays, particularly with strong sales of compact bikes such as the BikeE and Tailwind, all of which use ASS. To my untrained eye, it appears that USS is becoming harder to find on a 'bent.

■ Advantages

There are several reasons why I prefer ASS steering. Probably the biggest reason for a lot of people is that it's a familiar position — it's similar to the steering position on an old Stingray bicycle, a motorcycle and even a car. For me, the reasons are:

More aerodynamic—There's no question that placing your arms in front of you is more aerodynamic than dangling them at your sides where they can catch a lot of wind. I ride my V-Rex with my hands about a foot or so apart, and my elbows tucked at my sides. This is a fairly aerodynamic position, not much different from the position on aerobars on an upright bicycle. I know of some recumbent riders who have mounted MTB bar ends close to the centre of their handlebars, in a variation of Spinachi bars, so that they can get even more aero.

■ Better steering control

This is the comment that's going to provoke a rash of letters from USS-supporters. Sure, the geometry of the bike can have a lot more to do with steering control than the location of the handlebars. But given the same geometry, in my experience I have found that USS bikes are not as easy to steer and manoeuvre, especially at low speeds and in tight turns. However, as they say in the car ads, your mileage may vary, so be sure to check this one out for yourself.

■ Easy mounting for accessories

With OSS, you can mount a computer, a heart rate monitor, a mirror, waterbottles, a horn, a bag and whatever else you want to put on your handlebars, right there in front of you, within easy reach. On a USS bike, all that stuff gets mounted to the sides or way out in front where it's more difficult to see and reach. On my ASS bike, I can unzip my handlebar bag, take out an energy bar, eat it and stuff the wrapper back in the bag, all while cruising along at 30+ km/h.

■ No distractions

Because your computer, heart rate monitor, water bottle and whatever else are right there in front of you, there's no need to turn your head and look around for them. I almost crashed one USS 'bent that I rode, because I looked down for too long to see the damn computer mounted on the handlebars.

■ Dry armpits

I don't know about you, but I *hate* clammy armpits, especially my own. I've found that USS steering tends to pin my arms at my sides, with the result that no air circulates through my armpits. On the other hand, my armpits stay dry on my ASS 'bent — if there's any need for a cooling breeze, I just lift my elbows for a while.

■ Hands are in a safe place

When I wipe out, the last place I want my hands to be is at my sides, where they could be caught

between the handlebars and the pavement, or between the seat frame and the pavement. Just the thought of that gives me the heebie-jeebies. I want my hands up high, out of the way of trouble. If any part of me is going to contact the road, I would rather it be something big and fleshy like my rear end.

■ Disadvantages

One of the most common complaints I have heard against OSS is that it interferes with the view. Several USS riders have commented that they don't like "all that stuff in the way." Yet when you ride an ASS bike, you quickly realize this is a non-argument.

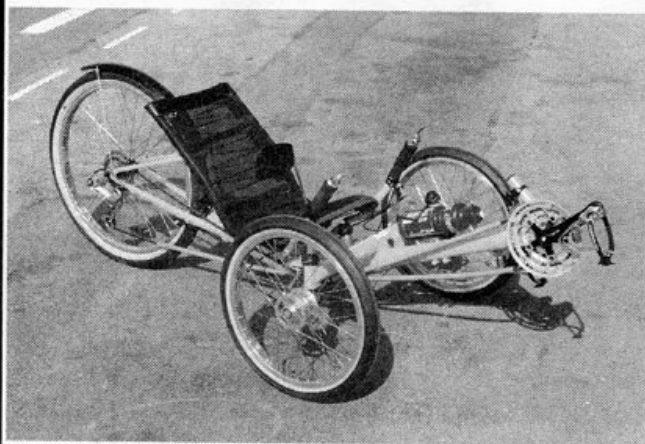
On my V-Rex, I have the handlebars set fairly low and close to my chest, so that my arms are bent at about ninety degrees, and my elbows are tucked at my sides. I find that this is extremely comfortable, and provides excellent steering control. The best part is that in this position, the handlebars aren't in my field of vision at all. In fact, I see more of my knees than my handlebars, as they come up slightly higher and a few inches forward of the bars. Even on a LWB where the handlebars are further forward, the bars only appear at the bottom of the field of view, sort of like the dashboard of a car appears at the bottom of the field of view of the road ahead.

Another complaint against ASS is the concern that in a crash where the rider is ejected forward, the bars would get in the way. I agree — there is definitely more in the way on a ASS bike in the event of a forward ejection. However, as anyone who has ridden a recumbent for any length of time knows, the most common way for a recumbent rider to meet the pavement is in a sideways fall — recumbents go down quickly, and usually go down sideways. In this case, ASS bars aren't in the way. And just in case they might be a concern, most manufacturers now use pivoting ASS handlebars on SWB's, that can be pushed out of the way.

■ What's Right For You?

Remember, my opinion is only worth the cost of the magazine it's printed in. Although most recumbent cyclists ride ASS bikes, that doesn't mean ASS is best for you. Ride both ASS and USS to be sure. After all, who wants to be plagued by nagging doubts after dropping big bucks on a new recumbent? □

Editor's Note: We are looking for somebody to write a similar piece on under-seat steering (USS). Please email DrRecumbnt@aol.com.



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The Children of a Lesser Bobka

Words of Wisdom By Kent Peterson

Bob Bryant sends email notices to the local group reminding us of upcoming recumbent rides. He always includes a line about how we ride "rain or shine." Of course, he's kidding about this. From November through May in the Puget Sound area, you stand as much chance of seeing Bill Clinton and Ken Starr enjoying a ride on a Double Vision as you do of seeing the sun. It's not a question of rain or shine, it's only a question of how much rain.

On an early December Saturday when the sky was only a light shade of gray, my son Weasel and I set out to meet up with Bob and the rest of the recumbent gang. Well, actually, it's a subset of the gang. For some reason I can't quite fathom, we seem to get a greater turn-out for the summer rides. Those who choose to ride only when the weather is "nice" we refer to by our own little term of endearment. We call them "weather weenies." They, in turn, affectionately label the rest of us as "crazies." We're a wonderfully close-knit group.

Weasel seems to have inherited the "crazy" gene from his old man—that and a love of baked goods. Weasel's latest obsession is babka, a sweet egg bread flavored with either cinnamon or chocolate. Inspired by an episode of "Seinfeld," Weasel has embarked on a semi-scientific survey of the pastry, intent on proving once and for all which of the babkas, cinnamon or chocolate, is the "lesser babka."

In this modern, multi-tasking age, we've managed to combine our interests in bicycles and babka into a single ride. The ride officially starts at Coulon Park in Renton and then follows one of two routes to the bagel shop on Mercer Island where we gorge ourselves on bagels and babka. We then waddle out to the bikes and ride back.

It's 16 miles from our back door to Coulon Park and Weasel and I ride off on our bikes. Weasel is on his BikeE and I'm on the Reynolds Weld Lab Wishbone. As we're riding along, Weasel comments about the wind. It's not a complimentary comment. On the Wishbone, I'm both more laid back and lower than he is on the BikeE. I say something like "What wind?" which inspires Weasel to make another disparaging comment. I'm impressed with his economy of phrasing, but suggest that we are gaining nothing by complaining about the conditions. "Look on the bright side," I say. "At least it isn't raining."

It begins to rain moments later. We stop and pull our raingear out of the tailboxes and put it on over our Polarfleece. In light rain, fleece alone will keep you somewhat comfortable, but we have a feeling this rain is going to be particularly wet and persistent. Still, it takes more than a little wind and rain to keep us from babka. We get back on the bikes and ride to Coulon Park.

As part of the weather's treachery, it decides to stop raining by the time we get to Coulon Park. This later proves to be part of an insidious scheme to get as many riders as possible out onto their bikes for the eventual drenching. But I'm getting ahead of my story.

Bob is at the park with his Gold Rush, and a few minutes later Mike and Matt drive up with their bikes in the back of their pickup. Mike and Matt are another father and son team of recumbent riders. Mike rides a Vision R-40 and his son Matt rides a Rans Rocket. They both cast somewhat apprehensive gazes at the cloudy skies, but Bob, Weasel and I convince them it is a fine day for a ride.

The surprise guest of the day is Tim. Tim shows up with his BikeE Airtech and all his fancy new foul weather gear. Tim has a new Polarfleece jacket, warm Speedo tights and a bring-on-the-winter attitude. Since Tim had previously been a charter member of the weather weenies, his defection to the wet side is quite a coup for us.

We discuss which of the two routes to the bagel shop we should

take. The shorter route goes up the east side of Lake Washington, doesn't have any major traffic or hills, and crosses over to Mercer Island via a relatively short bridge from Bellevue. The longer route goes down through Renton, up the west side of the lake, climbs a big hill and crosses over to the island on the mile-long I-90 floating bridge. Weasel and Tim convince the group that the western route is the obvious choice: the harder ride will give us more of an appetite for the babka.

As we set out, we are joined by Neal and Pam on their Rans Screamer tandem. They've ridden down from Bothell and mumble something about being slowed by the wind. They are dressed for the weather with multiple layers of Polarfleece. Pam has discovered a fabric store with a big supply of fleece in very bright colors and she's sewn this into jerseys, jackets, pants and gloves.

We ride through Renton and then up towards Seattle along Rainier Avenue. Our standard pattern is that we each ride along at our own pace, but we pause frequently to regroup. Right before one of our standard regroup points, I manage to hammer the rear wheel of the Wishbone into a steel plate on the road and I flat. Of course it is raining by now, so while the rest of the group chats in the drizzle, I patch the snakebite flat. By the time we get rolling again, the rain is really starting to pick up.

By the time we turn onto Lake Washington Boulevard at Seward Park, it is raining pretty heavily. A rider on a titanium Merlin swings around the pack of us and takes off. Now some of us are cursed with a little circuit in our brains which just snaps when another bike goes by us. I happen to be one of those afflicted fellows, and the next thing I know, I'm hurling along Lake Washington Boulevard, hot on the Merlin's trail. He is doing about 25 MPH, so I kick the Wishbone up to 27. I catch and pass the Merlin rider just as the road is curving to the left. Right about this time, I realize that a) this is stupid, b) it's really raining, c) this road is really slick, d) I don't know if I'll be able to hold my line in this turn, and e) even if I do, I'm squeezing the Merlin into the curb. I hear the Merlin rider swear as he goes for his brakes. I hang on and do the only thing I can do, which is to try to torque a bit more power into the pedals and blast through the turn. Remarkably, we both survive and keep our bikes upright. I back off a few notches and say "Sorry!" and "You take the lead!" As the Merlin cautiously passes me. The rider is shaking his head and is obviously convinced I am a moron. Given the circumstances, I think he is right. At our next stop Pam comments to me that we've passed from friendly competition with the wedgie riders to open warfare.

We continue to ride along the lakeshore and then wind our way up the switchbacked road that takes us up the hill. It's a steady, character-building climb and we regroup at the top. Then it's down to connect up with the trail that hugs the north edge of the I-90 floating bridge.

The I-90 bridge is a wonder of modern engineering. Now anyone with half a brain will tell you that if take a chunk of concrete and place it on some water the concrete will sink like — well, concrete. But if you're the kind of person who stayed awake in math class and likes thinking big, you'll figure out that if you have enough concrete and enough displacement, you can make a bridge out of concrete that will actually float on the water. Since Seattle has more than its fair share of engineers, we naturally have several of these floating bridges around here and most of the time they work pretty well. Sure, there was that time back in 1990 when one of them sank during a big storm, but that was just a freak occurrence.

So it's with confidence that we roll down the ramp and onto the



Kent riding William Burroughs towing a recent "donor" bike (note dry pavement)



Bob Bryant tests the Rans Vivo in the rain

bridge. Logic tells us that a bridge floating on the water should be level. But "should be" does not always equal "is" and today seems to be a day in which the laws of physics are not on the job. The ride across the lake sure seems to be uphill. And into the wind. And really cold. And the rain is coming at us horizontally.

In keeping with the vacation from physical laws, the temperature must be below freezing even though the raindrops are persistently liquid. But they aren't really individual drops, they are more like a current we are fighting against. We barely have the energy to pedal and swear at the same time. But, like salmon being drawn by the scent of their birth stream, we fight our way toward Mercer Island. The babka is calling.

Remarkably the bridge doesn't sink. We drag ourselves up the true climb to Mercer Island and gasp like freshly evolved amphibians in the shelter of an underpass. Matt, Mike and I were up at the front and we wait for the rest of the crew. It's a cold wait.

I comfort myself with the knowledge that I've actually been colder in the past and somehow managed to live through the experience. It was quite a few years ago. I was on a solo bike tour heading from Minnesota to Northern California. It was late May and the weather in the South Dakota Black Hills turned nasty. The day started with a relentless rain in Spearfish. As I climbed into the mountains, I said to myself "Well, it can't get any worse." When I crashed my loaded bike crossing wet railroad tracks, I said, "Well, it can't get any worse." When the climb got steeper and the rain got heavier and I could barely see through my rain-streaked glasses, I said, "Well, it can't get any worse." When I crested the pass and the rain turned to snow — well, then I knew for certain that it couldn't get any worse. And when my brakes froze open and my cheap rain gear actually froze solid and shattered and fell away from me in large, useless shards of plastic — well, then I was a bit too busy to be thinking about whether or not things could get any worse.

A fully-loaded, soaking wet, brakeless bicycle drops like a Cadillac going over a cliff. Like many trauma victims, I don't clearly recall the descent. A combination of sheer terror and reflexes chilled to the point of super-conductivity allowed me to somehow keep the bike upright. The road leveled slightly as I crossed into Wyoming and at the town of Buckhorn I was able to ease the bike to a stop by wedging my heel into the edge of the rear tire.

Buckhorn, Wyoming consists of one bar & grill. That's it, but that's enough. I pried myself off the bike, shaking uncontrollably from cold and adrenaline. I limped into the bar — wet, cold and closer to death than I care to consider. I couldn't talk, but I pointed to what I wanted — a shot of whiskey, a ham sandwich, and hot chocolate. This combination poured into some small part of me that was still burning with life and gradually warmed into the rest of my body.

Eventually, I noticed a cowboy at the bar. He'd been staring at me

since I'd staggered in. I guess they don't get too many guys wearing cleated shoes, soaking wet tights, tattered plastic scraps, and a racer's jersey in Buckhorn. He saw me looking at him looking at me and said, "What the hell are you doing here?" "I'm bicycling to California," I replied. He thought about this for a minute, took a swig of his drink and squinted at me. "And how much do they pay you to do this?"

I thought of that old cowboy now, nearly two decades later. How much do they pay me to do this? Not nearly enough. I may be getting older, but I don't seem to be getting any wiser. At least now I've got companions in this lunacy. Weasel's the last one in, explaining that at the height of the storm his visibility dropped to zero and he wound up walking his BikeE through the worst of it. Tim turns to me and asks "Why are we doing this?" "Because we're stupid," I explain. "No," Weasel counters, "it's for the babka!"

Of course! The babka! We press on and in a few minutes we are someplace that is warm and dry and it has babka. But something is lacking. We load up our loaves of babka and head next door.

Next door is coffee. Warm, wonderful, life giving coffee. We spend a long time with the coffee and the babka. The verdict is in — cinnamon takes a backseat to no babka. Truly, cinnamon is superior, and chocolate is the lesser babka.

Our experiment done, our hungers satisfied, our faith in science restored, we look out at the sky. Maybe the sky is a slightly lighter shade of gray, maybe the raindrops are a little smaller. We ride for home and live to ride another day.

It's raining as I write this, one week later. Bob has just sent me an email asking why I didn't show up for today's ride and calling me a weenie. But we're on deadline and he really needs this article. We can't all spend all our time riding. Someone has to make sure the magazine gets out the door. And did I mention that it's really, really raining?

But I'll be on the next ride. Guaranteed. And so will Weasel. We'll be there, we have to be. Because, you see, I've just eaten the last of the babka.

Editor's Note: Babka 101—Babka is a kosher leavened cake swirled with cinnamon or chocolate. Our Babka comes from Noah's Deli in Mercer Island, Washington. It is Green's Homestyle Babka flown in from Brooklyn, New York. They also serve a mean lox bagel to hungry and wet recumbent riders. □

Kent's Mission: A 'bent beat from the back alleys, garages and dumpsters where new bikes don't come powdercoated and old bikes live on with the help of duct tape, hose clamps and determination. You can find Kent on the internet at: peter@halcyon.com or www.halcyon.com/peter/bentkent.html

Single Tracking on the BikeE Air Tech

by Bill Conklin, willieco@aol.com



Peter Forss single tracking at Keystone ski area in Colorado

In the 1970s I was the first person to ride a unicycle up Mount Evans in Colorado. In the 1980s, I led a team that made the first descent of a Colorado High Peak on snowboards. And now in the 1990s, I think that my friend Peter Forss and I are the first to single track a Colorado ski area on a recumbent.

Ever since I got interested in recumbents back in the early 1980s, I have wanted to take a recumbent off-road. This last year BikeE came out with the Air Tech, the first recumbent that I have seen that had the potential for single track riding in the Colorado mountains.

In August of last year, Peter and I loaded the two BikeE Air Tech XL's on the back of my Subaru and headed for the mountains. We arrived at Keystone Ski Area in Summit County about 9:30 am and headed for the lift ticket booth. Of course we got a lot of strange looks and snide comments from the macho bikers along the way. After downing a hot cup of coffee and attaching our tickets, we rode to the ski lift. The ticket checker was quite interested in our bikes and asked a lot of questions. I was afraid that our bikes would not fit

on the lift, but the operator draped the bikes on the chair and put the safety bar down.

The view from the ski lift at Keystone Mountain is beautiful and it is really unique to see the mountains in the summer from a ski lift. After a fifteen minute ride, we arrived at the top and enjoyed the astounded look our bikes got from the other lift operator.

We checked out the trails and picked a green/blue combination (color coded for difficulty) for the descent. Peter took off like a bullet and we passed several sets of mountain bikers. The Air Tech behaved very well. Riding the single track was extremely comfortable and the bikes handled the green and blue terrain with ease. We used the standard tires because we didn't feel like changing over to the knobbies as Bob Bryant and the RCN crew did (see RCN#43). Before the ride, we changed the front chainwheel to a 38-tooth unit. I think that the added low gear is very necessary for the steep back country trails.

When I was near the bottom of the first run of the day, several mountain bikers came charging past me and dropped off to the side of the trail and my front tire slipped on the gravel

at the edge of the trail. I fell off and scrapped my knee. I think that it is important to be very careful single tracking a compact recumbent as there is little weight over the front wheel. There is some chance that the bike can slide out from under the rider on sloping gravel. We used the standard road tires, but the knobbies would have given us the additional traction gripping more in these situations.

I enjoyed single tracking on the BikeE. I think it is probably the only commercially-built recumbent that one could effectively use in an experience like this. We did not try any extremely technical runs as we stayed on the green and blue coded trails. The BikeE is a fun and versatile machine. I did hit a rock hard with the front tire at one point and rim-cut the tube. Fortunately, I carry spare tubes so I was able to quickly repair the problem. I think the knobby tire would provide more protection and flats would be less likely.

BikeE has actually created a new sport. Put some knobby tires on your Air Tech and take it out on some ski area trails at your local mountain resort. You may be the first in your area to single track on a recumbent. □



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Mike Sheehan's V-Rex 20/20 (former 700c/20)—M. Sheehan

HONEY I SHRUNK THE BIKE II

Greetings from Vancouver Island! If you had't printed Mark Ariens story in RCN#47 (Honey, I Shrunk the Bike; page 43) and without Harry Wozniak's imaginative input I might never have attempted the transformation that has occurred on my V-Rex. It started out life as a 700c/451mm 20", 40" frame SWB. Due to the unstable nature of this wheel combo, I dropped the rear down to a 24" which improved handling dramatically, although these changes were a constant thorn in my seat due to the availability of good long lasting tires in this weird tire combo. So along comes RCN#47 and with the changes to a 20/20 combo the road finally has a smile. I am extremely happy with this V-Rex now and would highly recommend to anyone with a 700/20 or 24/20 to make the change.

So what I have now is a rejuvenated dual 20" 63-speed V-Rex with a 3x7, Magura brakes, and a great fairsing and mount made by Vision. I want to thank you, Mark Ariens, Harry Wozniak (Wheel & Sprocket) and Max and Richard at Fairfield Bicycle shop for the ideas and help in this transformation.

Mike Sheehan, Victoria, BC, Canada

Mike, as a dual 20" fan, this seems like an awesome swap. Rumor has it that Mark Ariens has a tricked out dual 20" Stratus!

RCN BIG TIME

Contemplating major changes can really get to a person. I'm guessing that you usually hear the negative voices, since they're the ones who tend to write. As a high school teacher, I rarely have people just e-mail me to tell me I'm doing a good job! So, being a nice guy and everything, I just wanted to let you know that I appreciate the job you're doing.

You actually got me started in the world of recumbents in '91 by providing me with some advice over the phone as to where I could get a used Stratus. You put me in touch with BikeE regarding a reduced-price demo 2 years ago. I still have both bikes, plus now I'm getting into building additional bikes for my family!

I could care less if the mag was in color—in fact, if it were, I'd probably drool over bikes I can't afford right now even more than I do in black and white! I don't care about your web site, since I can get specific bike info directly from dealers' sites. I don't even care about the credit card thing. What's the big deal about writing a check every year or two?!

What I DO like is the newsletter "flavor," where the views of various voices can be heard. I don't expect to agree with all of them, but I do enjoy hearing them. Sometimes there's a lot of humor in the unintended, too. For example, when I saw the word "Tamden" on the cover this summer, I had to laugh when I imagined the look of horror on your face when you picked up the first copy. Even as an English teacher, I do the same sorts of things on occasion. It certainly wasn't something I contemplated cancelling my subscription over! Ian Sims' rebuttal was hilarious to me, too. Did he have a complete fit, or what?! It's not like you don't CLEARLY state that what you write is OPINION, or that

people should go out and actually TRY these things out for themselves! Some people just have no sense of humor!

I'm GLAD you don't have a "quest for wealth" — because life's too short just to chase after money. Think about the super job you've got. You get to ride cool bikes - and share your love of those bikes with others — for a living! From where I sit, you're already IN the "Big Time!"

John Kleinsteinber, getbent@rths.k12.il.us

RCN#49—STRONG ISSUE

I just read your latest edition and it was so wonderfully meaty. Thank you RCN and Bentan Pist for being the voice of retailers. This was a very strong issue. Good for you and us.

Hester, Absolutely Recumbents
bentinabq@juno.com

CLOWN SUITS

AMEN to you and Grant Peterson! I have always felt that cyclists were doing themselves an injustice by garbing up in lycra, tap shoes, and team jerseys. I usually make it a point to remove my helmet and glasses (rather traditional helmet and cheap safety glasses) when stopping at a convenience store on a ride. It seems to put people at ease after seeing that very strange bicycle roll up to know there's a person under there.

I, too, did the snobby Italian bike thing in my twenties, and never enjoyed myself less. Where do you go after you have the ultimate bike and the full costume? You must learn to make it fun. As with any exercise/lifestyle, if it ain't fun, you won't keep it up. Like you, most of my spare time is spent at my bike shop (my second "job"), selling recumbents. When I do ride, it's usually short commutes in plain clothes on anything from my home built 'bents, to my 36" Coker Monster Cruiser, to my unicycle. I don't feel pressured to "dress up," or ride a "chest beating" 100 miles. As a bonus, most all of my customers are not "posers," but solid lifetime cyclists with a desire to have fun, stay fit, and do the planet and others a favor while they're at it.

I'm really through with lycra, and when I buy new clothing and equipment, I consider function, not fashion. I'm still searching for the right pair of shorts, and welcome any suggestions. Lycra is too binding and tight, and the really baggy shorts that seem to be the only thing on the racks now blow up like a parachute on a 'bent. (I call them parashorts). I really appreciate what you do with the magazine—can it be any more fun than this?

Tom Beuligmann
TOM'S BIKE ANNEX
bikeman@midwest.net

LWB KING OF THE HILL

I recently read your article (RCN#45), "LWB The King of the Hill." I am at this time standing on my two feet giving you a standing ovation. I am a 29 year old young man who rides a Rans Stratus "LWB." I sold my Linear in search of a faster, better riding, better handling bike, only to realize that a long wheel-base bike could be the only one to satisfy all of my (recumbent riding) needs and more. I thought that I could listen to all the hype of the SWB owners, but realized that they were only fooling themselves. You are VERY correct in stating that LWB do set the standards and are the true classics that all other 'bents evolved from.

Comfort, view, and speed are the reason we all ride 'bents and after all as a young man do you think I would ride anything else? I have been told that a LWB is an "old mans" bike. I find this very funny because I always seem to be doing serious speed on my Rans Stratus. For all you LWB 'bent riders who often considered switching to a SWB, DON'T BE FOOLED by all of the hype, fancy features and the latest SWB 'bents of the month. LWB will always be the king of the 'bent hill because they were built to the KISS method (Keep It Simple Stupid).

Mike (Mike Rider) Nunez, Norco, CA
Mike, I don't get it either. I am amazed at the market competition, latest greatest marketing, constant updates and changes—while Rans and Easy Racers quietly share the majority of the LWB ASS market all by themselves (with a big grin on their faces I'm sure), consistently sell out, and have customers waiting lines to buy a bike. Many riders will question our LWB ASS reviews and think to themselves, "Could a bike really be that good," only to tell me, "You were right all along," after they have had the chance to ride one. The secrets are in

the user-friendly riding position, simple drivetrain, easily workable design, and most of all that very cool Zipper fairing that mounts on in seconds with simple wing-nuts and mounts (no mounting hardware that costs hundreds of bucks). On the used market, LWB ASS bikes hold their value well and are snapped out of the classifieds as fast as they are put in.

GRR WORK OF ART

I received my new Gold Rush Replica in September. At first I didn't think the Cobra seat was going to work for me. I had a pain at the points where my hips and tailbone contacted the backrest. I decided to make some alterations which I did over the course of several test rides, being careful not to remove too much material. I carved out impressions on the backrest with a cone shaped drill grinding bit. I also trimmed off the front of the seat and seat horn, where my legs were hitting, with an electric meat carving knife. I removed about a quarter inch of the hard glued layers with a razor blade and pliers. I now have a pain free custom fit.

Randy Phillips, Sioux City, IA

SPEED COMPARISONS

Regarding the article in RCN#48, "Are Recumbents Faster than Uprights" by Richard Drdul. I read this article with great interest, because I did not buy my first recumbent because I thought it would be fast. I bought it because it was a thrill to ride. What I now know (from experience) is #1 they are comfortable and #2 that one of them makes ME fast.

I own three different recumbents: a BikeE, Rans Rocket, and an Easy Racer Tour Easy. I wouldn't sell any of them, they each have their place, and they are all comfortable and fun to ride. I was never a fast rider on wedgies, I was just average. The Tour Easy has MADE me a fast rider in a wedgie group. I know this for a fact. I am 56 years old and just a recreational rider but it is rare that a wedgie can pass me if I decide not to let them. If the ride is rolling, after going down the first hill they'll never see me again (IF I choose). And that's the point. I ride because I enjoy riding; my Tour Easy enables me to easily keep up on any ride, without putting out the effort I used to put out on my wedgies.

My husband and I recently rode the Oregon Coast Bike Route on our Tour Easys, fully loaded for bike camping (my bike weighed 75 pounds). We have done this same route twice before on wedgies. The number one difference was arriving in camp smiling. The number two difference was arriving at least two hours sooner than we did on wedgies. We attribute this not only to the 2 mph average speed increase, but to the fact that we didn't have to stop as often with the pain of long distance touring on a wedgie.

To sum up, my BikeE and Rans Rocket are close to the same speed I rode on my wedgies (actual-while-pedaling-speed). But even so, they still get me there sooner, because I never stop because of pain, only to look at scenery, etc. Give a faired (Zipper) Tour Easy (or even faster, a Gold Rush) three months of riding, so your new muscles will be used to it. You WILL be faster! My advice to people who ask about recumbents is: they ARE comfortable, and if you are a person who wants to ride FAST and have the money to spend, then do research and find the companies who have proven speed records. They WILL get a recumbent that is faster than a wedgie!.

Connie McAyeal, ohyesbent@hotmail.com

9-SPEEDS FOR FLY-WEIGHTS

The new Shimano 9-speeds leave me out in the cold. I was all set to buy a new Ultegra gruppo until I saw the 11-tooth high gear (cog). I use a 14-tooth with a 52-tooth chainring and anything higher will blow out my knees. A 9-speed costs twice as much as an 8-speed (deja vu when the 8 replaced the 7). I really feel that that high end stuff is best left for the fly-weights. Now a super-super narrow chain is required along with closer cog spacing. At \$1000 for the group, there should be a parts availability program for at least ten years. What is needed is a sensible wide range touring <recumbent> gruppo.

Walt Wroblewski

TRIKE RANT #649

I noticed that the TRIKE discussion hasn't ended yet. Personally, I think that Ian Sims was right in what he wrote you about your trike reviews. There's a great difference between riding (eg. testing) a trike for a couple of miles (like you do) and owning/constructing them for several years (like Ian Sims does - I think he even breathes trikes!) I'm not saying that a trike is THE ultimate 'bent, but from my current fleet of 'bents, it's the most comfortable and safe one! Yes, I do own a GREENSPEED GTR 20/20, but had a trike before that one (not as good though). Well, at least that's what I think of it.

Keep up the excellent work and many mega-miles for you in 1999!

Tihamér Tasnády, Ravels, Belgium
cornetter@village.uunet.be

Tihamer, I ride more than "a couple of miles" when I test a trike. I have ridden hundreds of trike testing miles over the past few years. I don't think there is a

right or a wrong in this trike scenario, I think it is how comfortable you are riding so low to the ground. More miles will not make me feel safer on a low trike riding on King County streets. (See RCN#30 Greenspeed & RCN#46 Dragonflyer).-Bob, RCN

BENTAN PIST

Mr. Pist has a good point concerning the lack of availability for recumbents. We were on the list for 2 to 6 months before we got some of our bikes. This lack hurts each person in the chain, and causes resentment all the way. Is this really all bad though? I have been in the bike industry for 21 years, never have I seen such an opportunity for true growth for the future. Clone-o bikes abound to the point of being another commodity that we lose respect and value for. My request is that the better bent companies not advertise the retail price and allow the dealer to set the price his/her shop needs to survive. Make your orders early and get the bike in stock, your competitor won't. NBDA records show the average shop loses 5% on each bike sold, made up a bit in the other categories, to bring in a huge 5% profit at the end of the year. That is less than sales tax in most states. I believe the so called "arrogant" manufacturers are doing their best to grow and change as fast as they can. Are we willing to loan some risk capital to any of them? No strings attached. Frustration works two ways! A brief history of over stocked MTB and Road bikes may give a clue to caution. Our industry needs change at all levels. Let's begin to get on the right track, selling and riding the most valuable bicycle ever! ORDER EARLY! TAKE THE RISK!

Jeff Long

bikeeasy@digisys.net

RCN NOT IN DRDUL'S TOP 10

I was disappointed that a subscription to RCN was not mentioned as one of the top 10 bike things. The article was thus seriously flawed. (Otherwise it and the rest of the issue were fantastic.) I also would have included a few other items: 1. A cell phone. I would never go on a ride without one. 2. A bell and an Air Zound—you can yell "to your left" to your heart's content it will not work with pedestrians. A bell will. As a last resort, the Air Zound will clear the path. The Air Zound is also good as a warning to cars/trucks in situations not meriting a scream.

Andy Milstein, ACMilstein@compuserve.com

FORGOTTEN TAILWIND

I read your latest issue today, and I must take exception with one thing you failed to mention. You did not list the RANS Tailwind as one of the best commuter bikes. I bought a Tailwind last year and spent the spring, summer, and fall commuting to work on it. I have found it an excellent commuter because it is nimble enough to ride in moderate Chicago traffic and fast enough to keep up with the fastest of road bike training on the Chicago Lakefront bicycle path.

Brian Harrison, BHarri6973@aol.com

Brian, we love the Tailwind. It was an oversight—Bob, RCN

GULF WAR CORRECTION

Thanks for your editorial in the RCN#48. I think you did a good job in a small space hitting on some of the many issues around cars. I agree that it is important to have bicyclists, hopefully a receptive group, think about these issues.

I did want to point out one error in your 3rd footnote, though. Actually, in the Persian Gulf War, somewhere between 200,000 and 300,000 people were killed, not 146 as the footnote stated, which was just the number of Americans. <http://leb.net/IAC/> has lots of information about the Iraq situation.

Scott Bohning, sbohning@igc.org

Scott, the foot note info was from Asphalt Nation. Thanks for the correction.

A BIKEE TRIP ACROSS THE US BENEFITING BREAST CANCER

My name is Adele Ullman, I am 52 years old and I ride a BikeE! I am riding across America on my BikeE in the Pedal for the Cure (P4C) 1999, a fund raising event benefitting the Susan G. Komen Breast Cancer Foundation. I think I will be the only one riding a recumbent. I am looking for support from all you BikeE-oids out there. (See: www.p4c.org/index.html for more info).

My journey begins on May 14 in San Diego, CA and 42 days later ends in Jacksonville, FL. Each rider must raise \$6,000 in contributions by April 1. I have reached half of my goal and need your help. If you wish to make a donation (tax deductible), please make checks payable to PCEF and mail to: Adele Ullman, 2397 NW Kings Blvd #183, Corvallis, OR 97330

In honor of my grandmother and friend who died from cancer and my mother-in-law who has survived two mastectomies, I will paint their names on the frame of my BikeE. You can have the name of your loved one painted on my BikeE for a donation of \$100 or more. I will send you an honorary certificate with a picture of my BikeE at the end of our journey. Happy Trails to all.

Adele Ullman, adeleu@proaxis.com

KMC CHAIN NEWS

It has been brought to my attention, on repeated occasions, that KMC chains are not on the 'A-List' of the RCN editorial staff or many of its loyal readers. I thought it would be a good idea to respond to with a few comments.

First, I think it's safe to say that there is no product that all people will universally embrace. There will always be a percentage of people who will have bad experiences and therefore not like the product, in this case, KMC chains.

Secondly, KMC chains are a constantly improving product line. Changes are made to meet the evolving requirements of new gear systems and more speeds. The current KMC 'Z' product is a completely different chain than the KMC chains from a few years ago. Bull's-eye Pin Riveting was introduced a year or two ago and the new StretchProof treatment is debuting on our upper end 8-speed models and on all the new 9-speed models. Bull's-eye Riveting is an exclusive KMC process. It produces over 200kgf of Pin Power, as high or higher than any other chain in the industry. The StretchProof treatment is a combination of higher grade inner plate material coupled to an improved Pin hardening process. Our tests show that no other popular chain will provide better wear.

KMC does make a variety of derailleur chains that provide great value. Our economy model has a retail price of about \$9 and is engineered for non-indexed derailleur systems. Our upper end 'Z' models for 8-spd systems and the new 9-spd chain range up to \$25-\$30 range. As a comparison with the Sachs line up, KMC Z82 model offers the equivalent of PC91 Pin Power at about the same price as PC41.

I hope this letter will help open a better channel of communication between your readership, the publication and KMC chain. There are people out there that are users and believers in the product and feel that it represents a great value for the cycling consumer. It seems a reasonable expectation that any KMC opponents base their opinions on current chain models designed for compatibility with their gear systems and that KMC be given the opportunity to know about and address the situation.

Russ Okawa

Continental Chain Co. (KMC)

Editor's Note: During the last few weeks of December, there was an ongoing string about KMC chains on the internet HPV list (www.ihpva.org). Well, to make a long story short, word got back to KMC's US rep., Russ Okawa. Russ sent me a very nice letter addressing KMC chain updates as well as sending two new KMC

"Z" "Stretch proof" chains (actually 2 x 3 = 6 chains).

Many HPV'ers and recumbent folks will recall Russ from his days running Sachs in California prior to the SRAM merger. Russ and I spoke about KMC, RCN and recumbent chains for some time. Russ has offered to supply up to 10 recumbent riders with new KMC "Z" chains for review. Those who would like to be involved must agree to ride with the KMC chain in '99 and write a review of a few paragraphs for a future RCN issue. I have in mind a few people who should do this (anyone who was making KMC jokes). The other stipulation is that your bike should be currently outfitted with an 8 or 9-speed and Sachs chain. If we can't find Sachs/SRAM 9-speed chain users, Shimano should suffice. I would prefer that testers be year-round cyclists and probably RCN readers.

The Rans company is using KMC Z chain on the 27-speed '99 Stratus, which is my current RCN test bike. I plan to test the chain as well--for as long as Rans will allow.

We selected 10 testers and sent the following email to them:

You have been selected to participate in our KMC chain test. I have forwarded your info to KMC who should be sending out the chains. I would like to have reviews completed and back to me via email by June 1, 1999. We are looking for the following information:

- Where you live/ride.
- What kind of bike (8/9 speed)
- Past chain experience (if any/biases, etc.)
- How far you rode the KMC chain
- Shifting quality
- Durability
- Problems
- User friendliness (installation, cleaning, removal, etc.)
- Changes experienced from your old chain.
- Your overall opinion.

This does not have to be very long (a few paragraphs to < 500 works). Please be honest in your review. If you've had previous experience with KMC chain or other popular brands, please include that as well.

If you have any questions along the way, feel free to email me .
Thanks in advance, Bob, RCN ☐

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FOR SALE: 1997 RANS STRATUS 3X7. Small frame, Very low miles. Mostly LX components. XT rear der. Phil front hub. Sachs 3x7 rear. Sharkskin color. Very nice bike. \$1400 OBO (408)249-3169 (CA/50)

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Ad Deadline for RCN#51 is April . 1, 1999

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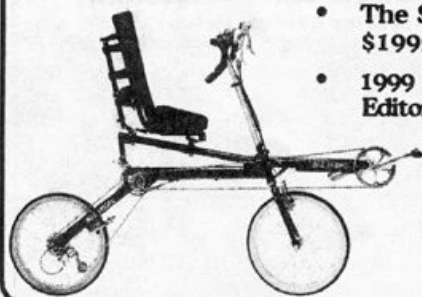
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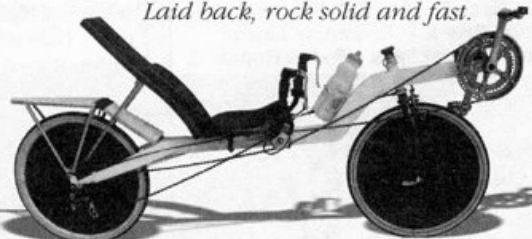
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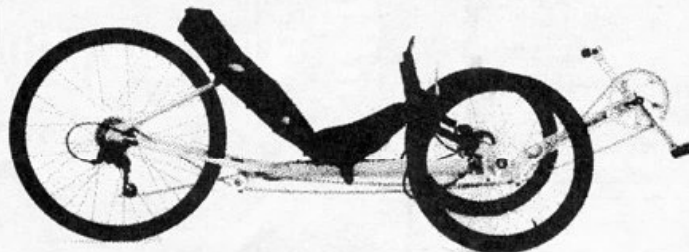


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Recumbent Cyclist News is solely committed to the purpose of promoting the sport of recumbent bicycle riding. RCN's goal is to provide an effective communication between recumbent bicycle riders, manufacturers and dealers. RCN offers editorial coverage, news and features on recumbent bicycles, recumbent bicycle touring, racing, commuting and personalities, and tech info as well as 'bent events and how-to articles. We pride ourselves on fair and honest evaluations and comparisons of commercially available recumbent models, while also covering homebuilder technology. It is our goal to be the world's foremost printed communication on the subject of recumbent bicycles.

■ READERSHIP

RCN is distributed to subscribers worldwide by mail and recumbent bicycle specialty shops. We anticipate that 1999 will bring the largest RCN readership ever. We print approximately 6,000 copies of each issue. About half are mailed first class, and half 1/3rd class. By RCN#54—all issues will be mailed first class (we no longer accept 3rd class/bulk mail subscription orders).

■ AD COPY

It shall be the advertisers responsibility to provide RCN with usable Macintosh-friendly ad copy. Call for complete information.

■ ABOUT RCN

RCN is published by just Bob and Marilyn Bryant—RCN has no employees or paid staff. We use subcontractors for copy editing/proof reading, scanning, and graphics. RCN's editorial is 100% enthusiast produced. Many of our systems are limited due to our small staff and limited equipment. Your support of this publication can only make it better. RCN is here to support the recumbent world.

■ RCN AD RATE INFORMATION

RCN is a recumbent enthusiast newsletter that accepts advertising. RCN is not driven by ad sales. We don't have any ad salespeople, and we don't make ad calls (unless requested). Advertisers must *want* to advertise in RCN. We like to think RCN advertisers are supporting *THE* cause of promoting recumbent bicycles, though we understand that manufacturers and dealers need to sell products, too. Our ad revenue also provides for larger RCN issues, and offsets the time-intensive task of road testing new recumbent models.

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Recumbent Cyclist News

Robert J. Bryant

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■ ARTICLE SUBMISSIONS

Road tests, reviews, comparisons, tours, event reports or home-builder stories. We recommend 1000-2000 words with 2-3 photos or drawings. If you are writing a bike road test, email us for our Reader Road Test Template (please *DO NOT* use this for any other purpose besides RCN).

■ FILE TRANSFER

RCN is produced on a Apple Macintosh PowerPC G3. We use Mac Pagemaker 6.5. We *DO NOT* use any Microsoft Software or Word. Please send article on a 3.5" discs or via email (or multiple emails). Please *SAVE* word processor files as "text." *DO NOT* email us attached files, scans, jpegs, or compressed files. Be sure to label *EVERYTHING* you send us. Articles should be typed single-spaced at 10 point justified Times, text with paragraph indents. Please *DO NOT* use styles or columns. We only need *RAW TEXT*.

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Every article will need a few (1-3) photos to be complete. A good side-view with a neutral background (not grass, bushes, etc. Remember, green comes out very dark when printed B/W 35mm prints are best (B/W or color). Even disposable cameras work fine, but *NO* Polaroid prints, please. Scans must be made into TIFF files for the Mac and placed on a 3.5" disk. We do not accept photos via email.

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Articles submitted are *NOT* guaranteed to get published in RCN. We *CANNOT* guarantee how long it will take to get your article into print (some take days, others 2 years...balance). We will *NOT* consider an article for print if it has been submitted to another publication. We prefer *NOT* to run articles that have been on the Internet first, though reserve the right to put the article on the RCN web site. If timing is a concern, we request that writers offer us a six month right of refusal on all articles and enclose a return SASE for the article.

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Do not send us originals. Make copies of what you send. We cannot return articles, letters or photos unless you: 1. Send an SASE; 2. Label *EVERYTHING* you send 3. Ask us to return it.

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■ GETTING IN TOUCH WITH RCN

Your best bet to get ahold of us is by email to DrRecumbnt@aol.com. RCN is still a two person business and we cannot get to all of our phone calls (or nothing would get done). By letter send an SASE for reply. Mail to: RCN, Bob Bryant, PO Box 58755, Renton, WA 98058. □

RECUMBENT CYCLIST NEWS

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WELCOME TO THE WORLD OF RECUMBENT CYCLIST NEWS

RCN was started by Bob Bryant back in 1990. He is the accidental publisher, a self professed 'information junkie' who wanted to have something to read about recumbent bicycles. Bob has been a cyclist since 1969 when his dad bought him his first Schwinn Stingray. He purchased his first recumbent, an Easy Racer Tour Easy in 1987. Bob Bryant has been riding, writing, and just plain fooling around with 'bents ever since. He is an active member of the NW recumbent rider group and rides daily.

WHAT YOUR RCN SUB INCLUDES

Recumbent Cyclist News has been North America's Premier Recumbent Bicycle Publication for going on 9 years! RCN is published six times per year, every other month. Issue sizes vary from 44-60 pages and we squeeze a lot into those pages. You will find a mix of features, road tests, reader articles, tour narratives, news, rumors and events.

RCN's mission is to provide accurate reviews, editorial opinion and his view of whatever event, product or bicycle he is writing about. Unlike other glossy mags, RCN does print reviews of problematic bikes. It is his hope that manufacturers may learn from the reported problems and that the products will improved. Over the past eight years, this has been proven effective.

RCN offers an effective and lively communication between recumbent riders, enthusiasts, those looking to purchase their first 'bent, dealers, builders, manufacturers and the bicycle industry.

RCN has no business ties to commercial builders or manufacturers. RCN is sold by subscription and back issue packages or through select recumbent bicycle dealers and agents around the world.

RCN is paid for by you the recumbent enthusiast (for the most part). This is your publication. Tell us what you want. We accept paid advertising though it is *not* our primary source of revenue. RCN is bankrolled by us, you (readers) and dealers/manufacturers (who advertise). We *do not* accept automobile, cigarette or alcohol advertising. We are not supported by \$20,000+ car ads.

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- RCN#48 Easy Racer GRR test
- RCN#47 Homebuilder Special
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- RCN#45 '98 Buyers' Guide: Long wheelbase (LWB); Tour Easy
- RCN#44 '98 Buyers' Guide: Short Wheelbase (SWB); Rans SWB
- RCN#43 '98 Buyers' Guide: Compacts; '98 Awards; How to buy a 'bent; BikeE AT
- RCN#42 Slumgullian Tour article
- RCN#41 Angletech Altitude; Haluzak Hybrid Race; HPM Tritan
- RCN#40 Linear Compact Mk III; S & B SWB; Turner T-Lite

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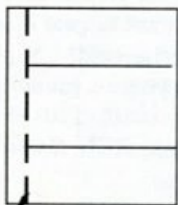


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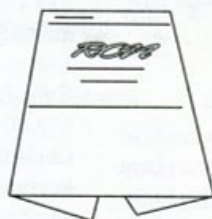
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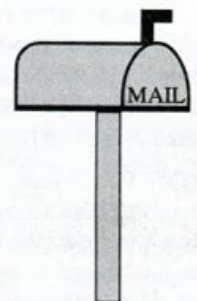


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