

RCN

REGUMBENT CYCLIST NEWS



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The 1997 Wheel EvoGlide

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What's Coming Up!

RCM#39 May/June 1997: In this issue we are experimenting with a lighter weight paper inside, and a glossy stock on the cover and have added four pages in the process. If you *DO NOT* like the new paper and look of RCM#39, drop us a line or give us a call at 253/ 939-7200/ fax: 253/931-9728 (note our new area code).

RCM#40 July/August 1997: The new Linear CLUB/Wheel EvoGlide gets tested (RCM#40 or #41), a Hatzek Hybrid Race should be in here and we have completed Turner T-Lite, S & B Beach Cruiser articles ready to go. See page 36 for details or call 256/939-7200 to get a copy of our new glossy brochure.

RCH PUBLICATION INFORMATION

Recumbent Cycle Magazine is a subscription only publication. Recumbent Cycle Magazine is 100% advertisement and subscription based and providing an exciting and informative resource for the casual, hobbyist, dealer and commercial recumbent rider. There are only recumbent-specific publications in the world today.

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RCH FAX: 253/931-9728

EDITOR & PUBLISHER

Robert J. Bryant - rcm@rcm.com

CIRCULATION MANAGER

Barbara Joyce Brent

ASSOCIATE COPY EDITOR

Paul Kravitz - rcm@rcm.com

ADVERTISING, CONTRIBUTORS

Gene Miller

Gene Fairing

Rick Brodgrass

BJ Steas

Linda Smith-Henberg

Tom Taylor

RECYCLED ADDRESS

RCH, P.O. BOX 99765, Portland, OR 97208-9765

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RCM, Box 24

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Editorial License

By Robert J. Bryant

Contact: Editor@bicycles.com Web: www.bicycles.com Fax: 800-627-6708



Riding in the NW Rain, Chilly Hilly and the "Bent Zone"

I've been a "bent riding" fanatic all winter. After being a weather-seeker for our NW ride last December due to convective rain storms and a cold, I decided that I needed a new winter hobby, or to get prepared—so I'm getting prepared.

The three-thing tools I set up whenever rain hits. The Gold Rush is just too nice to ride in the rain. It gets too slippy. The Blase Rocket seemed to fit the bill, and the Kase company gave me the OK to ride this bike in the rain. For those of you who don't live in rainy areas, you should know that one ride in this bike can get your wear so bad like there is a season of dry rides. It can literally make a new bike look five years old in a few hours. Ever since our ill-fated Seattle run, I request permission before riding a wet bike in the rain or snow.

Our wet Ruckelshaus is a decent Flapjack, though they don't stain quite enough for the winter. A W-Motion or something with a heavy sweat-wick to wick away moisture would be more desirable. The bike has 20" Rigo fenders supplied by Kase. The new and latest seat cover is new on the market. Early on, I rode one day in the rain with no fenders. During the course of this ride, I proceeded to walk the seat foam and cover, and then stretch the cover while drying it. The newest seat cover stretches on much easier and adds comfort and improved "feel" to the seat.

I should adopt a Zipper fitting in the Rocket, but that fitting model is expensive and the price of the blanket is to be an affordable bike. I've considered adopting the less expensive Vision Zephyr and rain ponchos, though I think Vision may want me to sit in the bike like this.

As for my body, keeping warm has become a real adventure. My old Shimano SPD shoes leak from the front. If I tried Neoprene shoe covers (about 100 miles) and then polar covers (about 50 miles), to no avail. Next thing I plan to do is purchase SPDliners in plastic and use some sort wool-flock "shoe" rain boots (I'm not sure), and with a flapping poncho. This should solve the cold foot blues.

The rain coat I use is one I've had for years that dates back to my sailing days. It's a Gore-Tex™-like material and keeps me pretty dry for a half day of rain riding. It has a hood that I put up midway before. The forward edge of the hood acts as a rain pipe over the forehead but not face a vision. My nice pants are cheapies from \$44 that cost \$35. During a sale, I picked up a Gore-Tex™ rain coat from \$44 for \$19.

My hands are another matter. I've got some Pearl brand winter gloves that are great, though they do eventually get wet. I went back on my local RBE and purchased some Gore-Tex™ mittens that I wear over my gloves. They keep my hands fairly warm. These are not from the bike department, and the bike people don't have any idea these existed.

My best advice is to buy Gore-Tex™ where you can afford it. Try to wear a bright yellow or other reflective-type color for your jacket, but buy black pants, otherwise the chain grease will stain the tracks of your right pant leg gray/black.

GETTING INTO SHAPE

OK, now we've set to ride in the rain so we can't be called "weather wannies." How do we get in shape? For me, it was much easier than I thought it would be. I used to not get enough aerobic miles per month in the off-season to 150 miles per week in three short sessions. The following Backland mountain exercise made the indoor miles just less (pg.30). The two levels of mountain, interval, hills and mountain climbing simulations and two 12 minute sessions a day did the trick. After 12 weeks, I now ride on the Backland for two 30-minute mountain-climb five days a week. I ride over 15-20 mile rides outside in wet, rain or slush. The interval training has made such a difference. I am actively seek steep hills to climb. Recently, I rode up the steepest hill around Kent, a hill that I've never climbed before on a mountain. I took straight up on a Race Strain (hey even IWB machines supposed to be poor climbers?!

Along with all of this riding, I've been doing sit-stands and leg

lifts. I supplement my indoor rides by lifting with hand weights. I recently doubled my sit-stands (200 per day) and started getting some mid-back pain. I then tried out a friend's info-cassette on machines and now plan to order one. The Nordictrack version looks the best, though it's pricey. I'm hoping it will take the stress off of my mid-back.

Along with the riding, it was time to get on a decent diet and lose some weight. I went down to the 1-lbsey and got Cover Body's "Fit or Fat," and the composition "Fit or Fat" and the composition "Fit or Fat" (Fit or Fat). This diet is a relatively simple low-fat diet that is based on calorie counting, but it's really balanced in a week or so and doesn't require strict, and the diet works. Another neat book that may be a bit "out there" for some, though it's helped me is Dr. Andrew Weil's "4 Weeks to Optimum Health." It's a best-seller right now and easy to find. Both doctors are on PBS and well respected. (It's a good idea to consult your physician before you start a diet or high mileage program.)

An additional issue my program has been what it's done to my motivation. My body has become fitter and noticeably more efficient. It's become like a finely tuned machine. It lets me know when it needs more fuel, as well as when the fuel is contaminated (too much sugar, coffee, fat or grease). I finally have given up that fuel, with the exception of an occasional two-aids.

The best benefit of the whole program is what it has done for my riding. I've always loved the freedom of the road and a nice ride makes you feel, but it's been since I was an 18-year-old roadie again that I have reached such euphoric experiences from my cycling. If I don't get outside (rain or slush) every five days, I start to get a little crazy. The adrenaline has become addictive. If I always read about this, but never experienced it and was. Once out on the road, I'll ride for hours, and just when I start to get tired, a second wind comes along and sends me into another "sweet spot" that only cycling can bring.

One weekend on my local ride was canceled. I was on looking forward

to it, that I'd demand my rain gear and went out to leave a new 30-mile ride in Maple Valley (near Kent). I ended up getting soaked around, but, not knowing which direction I was going and literally rode around in circles. In the pouring rain on county roads for nearly three hours. I finally got back on track, though I did have a flat tire one block from my house. I coasted into the driveway on a muddy rain flat. And this was flat! Could it be that I had arrived in the "Bent Zone"?

The best experience of the new year so far has been a popular NW winter ride, Chilly Hilly, where riders are so hot they've enjoyed one of the most beautiful days of the year so far for the 30+ miles and some of the steepest hills in the area. I was shocked and amazed at the roadies, accomplished cyclists and tandem team, pushing their bikes up the hills—had not me. I rode up every hill. At the halfway point and during the second half of the ride, I could not see the best upright seats and the comfort associated with upright cycling were taking their toll on my young riders, and the best ideas took advantage, which eventually led to some new positive perceptions of members in the Northwest. It took me three days to come down from this ride and rather than wear moose, to congratulate to ride even more. Again, an example of the "Bent Zone."

The most important message to readers has to do with perceived differences in bicycle performance. If I ride different bikes, some will feel fast, some slow and this can change in different conditions. We must not forget that the bicycles are the tool of the cyclist, but the cyclist is the human body. A training program, diet, more miles and proper hills will do more for your body than any part-gear-coating, performance slick-tires, or small-differences between models... well, at least that of a Gold Rush or P-40.

For '93 Buyers' Guide updates and corrections, see page 17 in this issue.
See You On The Trail!
Robert J. Bryant

Recumbent Mail



Directions to use: Fold your card, letter, 10x10" post-weights, business response, photos, articles, newsletters, newspaper clippings and whatever to RCM Letters
PO Box 50755
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Send to: RCM@rcmletters.com

RCM reserves the right to edit submissions for clarity, content and space limitations. If you write to RCM and DON'T want your letter published, please make this request in the title.



Have you received your RCM'98 1997 Buyers Guide yet?

All active subscriber issue mailings should have reached their destinations by this time. If yours has not arrived—give us a call today. The illustrious postal service occasionally misplaces a bulk mail issue or two. Call 204-635-7200 if you've had a problem.

PROFESSIONAL: THE RCM

I got a charge out of your Jan/Feb 1997 editorial in which you responded to an advertisement from a reader "professionalize the RCM." As the former editor in chief of Bicycle Guide, I have some idea of what real "professional" magazines cost. And as an industry consultant today, I have a pretty close bead on the ability your advertisers have to spend money to support you.

Oh, how do I say this? The respondent to me isn't big enough to make RCM look like National Geographic! When your advertisers want (and want to pay for) a smaller publication, you'll know it. They'll tell you.

I thought all of this was kind of self-serving, and I wondered how this reader could not notice this. There I saw your answer! He's a military officer! In a world of \$5,000 salaries, a \$10,000 monthly freelance budget may not seem like much. But that, and other expenses like it, is far beyond what a smaller publisher can afford.

I've said it before and I'll say it again. I find RCM a wonderful information resource. It's a lot of fun. (And I think of you who haven't met Dr. Bob in person, rest assured — he's more fun than a barrel of oysters.) As the so-called "professional," consider this: many a glossy magazine with dozens of Kodak-like graphics for content copy editors and photo stylists has rapid content. Every editor has his preferences. Bob tells you his. That's as good as it gets.

John Schabert
The Lineup Marketing Group

1997 RCM BUYERS GUIDE I

The shows and clipping of handouts be loved around the world! To put it mildly, it's great, outstanding, superb, insightful, and, well, just one heck of a job! Thank you, Robert Bryant aka Dr. Recumbent!

Bill Brown, Fresno Co
billbry@ym.com

1997 BUYERS GUIDE II

I just received this buyers guide issue in the mail today. In my opinion this is by far the best issue of RCM yet. Very timely done. Lots of new stuff out there I didn't know existed.

Zach Kaplan

1997 RCM BUYERS GUIDE III

Just got home from work and thanked him for my new RCM. OUTSTANDING — GREAT JOB — LOVE IT. We read it tomorrow. When I went back over a year ago your 1996 Buyers Guide helped me so much. At that time I thought it and my best riders were just a small fringe group and that RCM was just a small-time specialist mag. Well, here you changed that. This is classy, spacious, first class and a new major force. Congratulations! It also appears that the major manufacturers and dealers are now in full advertising support. I AM IMPRESSED.

Ed Logan
EDLOGANMAN@worldnet.att.net

1997 RCM BUYERS GUIDE IV

I just got my RCM 1997 Buyer's Guide in the mail yesterday. It's sooooo beautiful! I am consuming it

page by page. Jeff accused me of drooling on it, but they are tears of joy. Oh, I'm getting so happy... gotta go... Just talk amongst yourselves...

Shari Berkland
shari@groups.msn.com

WHERE & SPRINGRIDE NOTES

We recently participated in a weekend promotion "Family Fun" sponsored by two local TV stations, so you can imagine how well the event was publicized. They brought in many of their show's stars. Actors from Baywatch, Home Improvement, American Gladiators, really brought in the crowd.

We had a "booth" and display/display of our recumbent bikes. It was really great to bring such a mass media attention to them. As a direct result, we can account for several recumbents sold. We are looking forward to participating in the event again next year.

We were just featured on a PBS show called, "Outdoor Wisconsin." I am amazed at the show it pulled. The show reaches all of Wisconsin, as well as northern Illinois. It was a "how-to" show on recumbents. We filmed both at our store, as well as the nearby park.

When it's possible in avoiding the airwaves even more as we kick off our 30 minute TV program. We are covering all the aspects of our bike business, and featuring recumbents throughout the program. Our show will be on the local cable channel about four times a week,

throughout April and May.

We attended the CAMDEN consumer show in Chicago, and the downtown ride area was constant recumbent demo rides. Rans, Ribell and others were there. Rans had the new Olex, a definite "fit" on a scale of 1 to 10, due to the combination of rear suspension, hydraulic ESP, and 20x20 Continental tire combo. We placed our orders right away.

I would like to thank Fady and Randy Schiller and Mark Pade of Rans, Steve Howard of Illinois, and of course, Dick "the Outfitter" Ryan for helping us to sell over 125 recumbents in one weekend!

Lastly, I must say how much I enjoy your publication! I've read every issue! It's the best source for product knowledge that I require to determine what we sell.

In Recumbents We Trust
Harry Moskik & The Wheel & Sprocket Gang

LONG & LOW MUST STABILIZE!

Thanks for the great coverage in RCM'97. I would say that it was fair and positive. If I might be allowed a follow-up:

Remember my vision is that recumbent bikes are the future and so that out we have found long and low bikes to be the safest and most stable. We know through years of tests that recumbents have a lot of water (fluid) effect. What the Interceptor taught us is that when combining aerodynamics with water dynamics, the tilter effect is a great thing. In a cross-wind situation, the

air pollution on the failing in such a way that the bike wants to stay upright, rather than be blown over.

KMC CHAIN FREEDOM/CKC: For many years, we have suffered through numerous broken KMC/CKC chains. At the Wood Championships, Rotax races, Sprint Deltas broke one in the second. Only Delta broke one in the final race. I'd say we've had a 10% chain failure rate. KMC notes this failure rate was due to not applying lubricant too many chains. We now use their "Magic Link" (nylon links, which can be taken apart for cleaning). We use a continuous chain system that is purchased by the rail. KMC makes 95% of the Shimano chain as well. I think the KMC shifts great, and more importantly we haven't broken any—100% success.

Stephen Delano
Rotax Bicycles

Steve, we share your opinion that the long and low bars are the most stable, especially on speed. As far as KMC chain goes, I'm glad to hear of your success, but I've been an experimenter for Santa Fe's (a slightly upscale to recreational) long-chaired adventures. For many of our long-termers (and, I only because an issue with the bikes we several months old) and riding around 1000 miles, or riding during rainy season.

NOTE: Have you also a "Magic Link" to show us and recommend that anyone starting with a KMC chain should keep one of these in their tool kit.

RCN DEFENSE

I read your editorial in the recent RCN with a deep sigh. I thought I'd let you know that some of your readership (i.e., our eyes) reading the publication, thinks you're doing a great job, and thinks that it is a high-quality magazine.

Let us say that (as a consumer) I especially appreciate your printing out when a bike isn't well constructed—by instance, a gear wheel or a snappy part job. This kind of article encourages the manufacturers to improve their processes.

It's also worth pointing out that the bar part of the RCN (to) is the section in which you let your own personal opinions of the bike. I also think you can't have too many bike photos—that gives me more information than a column of specs.

Keep up the good work.
David H. Strydom

RCN'S MISINFORMATION

I am writing to you on behalf of Bicycles By Helmut suggesting

misinformation printed in the 1987 "Buyer's Guide." In the "W" rating section, the Hybrid Race and the Horizon are listed with "9" rider on tips, or those who want a "steer similar to that of their dirt track." While we admit that the Horizon and Hybrid Race are rather than other bicycles in their class, a rider with a 10" or longer inseam should have no difficulty starting, stopping, and holding up on a bicycle. The class riders with inseams less than 36", we offer the Labyrinth with a 10" front wheel instead of a 20". The Hybrid Race also comes with a fat tire option, as well as a high performance tire option for the Horizon. In fact, because we build every bike right, any of our models can be "Hybridized" to suit the rider.

Sincerely,
Bill Helmut, Owner
Bicycles By Helmut

RC: James' "AMP" Inseam AM 21- Steve, I can't say your first pit on the ground well suited as a Midwest location. My first meets the ground on the back of my feet, which is some extra effort parked on the side of a hill as one major intersection of our first best region(s) could be the sign. Different manufacturers, different riders have differing steering methods acceptable choices. This must be a personal decision, though we recommend riders do not buy a bike that requires you to be on your knees until they're used to it.

PLUOTIC V37 ARRIVES

Well, the bike I ordered from "New Bob" finally arrived at the Recumbent Barn. It's a Pluotic V37, made in Ukraine. I got the E-Tour model that's with a 40" rear wheel and the 7" front wheel. The pricing is the Urney-Straker 37—overpriced. This is one of the few PLUOTIC's, with a size that wheelbase it takes a little getting used to, but the side-to-side things in the middle of the frame helps a lot on corners. The plastic fender works were quite annoying by my first ride around their parking lot.

The entertainment console, which fits between the handlebars, has an amber meter, CD player, and air bag. I opted for the 13" TV, because the 19" was a bit cumbersome for a conservative guy like me. With three 10" CD of his music files, the recording plays, featuring the only polkas of Beethoven (I'm not doing these jokes). All-in-all, a pretty nice package. Don't you think?

Respectfully yours,
Michael Philip

Michael, New Bob tells me that you're the only Recumbent Barn cus-

tomers to order a Pluotic V37. He says the 13" front wheel and side height give the bike a limited appeal and is really only suitable for very tall riders, or those who want a "steer similar to that of their dirt track." So if you are reading this and you have absolutely no idea what we are talking about, we think that you—A. Don't live in Ukraine, Washington, or elsewhere (I copied). This is a review of the latest model.
B. See us at our new Low Down and Cold Hard by Gene Fierberg RCN's #33, #5, #7 and #9.

SEND CHAINS TO THE 3RD WORLD—RCN RACISM??

It's a great "90 Buyers' Guide" except for one VERY inappropriate remark—to send the KMC chain to a 3rd world country (page 24).

Do we want our friends in other countries to receive bad chains? Check out your racism, Bob, and please don't let it happen again.

Keep up the good work.

Steve Zucko

Steve, this comment seems to me one of a kind you in any way shape or form. In fact, I believe there are many "bonds in 3rd world countries." My first 2nd world countries are filled with better offers out-of-hand spread before where the KMC may be the best chain they've ever seen. My first 2nd world countries can't afford expensive bike parts (or anything else for that matter), again, the KMC chain may be welcomed—especially for Joe. As a result, this was never to be a tongue-in-cheek comment. I believe a sense of humor and I honestly don't expect ANY RCN readers to send their chains to the 3rd world.

SEARCH FOR BENT FORK

In RCN#107 on page 23 there is a picture of a bent-but still an AMP suspension fork. Where can I get a lightweight suspension fork?

Lyne Miller,
Pearl City, HI

Lyne, the fork is an older model AMP fork that was shortened by the builder of the bike. AMP has been known to build suspension forks. They are very pretty. Are the bike also last fall we were given many additional quantity orders for these forks. Just calling them out of the stack of recumbent customers. Currently available forks include the Lightning and Double-T (Angleton). Oh, and the German manufacturer, now covered by Angleton, was a custom AMP fork, though we don't know whether it is shortened by Daniel or custom by AMP. G.

GLOSSARY

(Third Edition)

BIOMECHANICAL ANALYSIS: involves the study of the human body from a mechanical perspective. It is used to determine the forces and moments acting on the body during movement. It is used to design equipment and to improve performance.

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RCN Feature Road Test

The Rans Stratus

by Robert J. Bryant



Rans—the inventor

Whether it be airplanes or bicycles, the folks at the Rans company are innovators. In the recreational world, they have become a power-house. The Stratus is the classic of the line. Originally designed by Rans Company owner and chief designer, Randy Schlimm, in 1974, and modified from 1976, the Stratus is the bike that helped to build this company—in both airplanes and bicycles, and it's a remarkably better bike today than ever before in its history.

Stratus—the bike

The LWB Stratus has benefited from nearly twenty years of refinement and has seen many updates and changes. Through the years many RCN readers have fallen in love with the long and low Stratus due to its prominence in the Rans color brochures. The lines are seductive and it rides every bit as good as it looks.

The Stratus has never really been paid it's due. Always playing second fiddle to the Tour Easy and there is really no reason for it. Well, probably it's the Rans company that

has held it back, only due to the sheer size of their line, or maybe it's the current popularity of the SWB models (the V-Rans is Rans' best seller).

With the introduction of the new suspended Glee, and talk of a 26x20 Glee-type hard tail version, it appears as though Rans may consider the useful lifespan of this venerable friend. We hope they don't, as this is a fine machine.

Stratus—the design

Stratus technology set the pace for the full line of Rans bicycles. When Rans designs a bicycle, they pay close attention to the modular aspects of the bicycle. This is why handlebars, frame-tube sets, wheels, and/or seat mounting geometries are tear-reared within the models. When one model improves, others eventually benefit as well. On the down-side, we have seen the Radcon, V-Rans and Serenore reach their peak evolution at age three (model years). The up-side is that we're sure other manufacturers (that haven't) needed the peak evolution at five or even ten years, which proves another benefit of an in-house CAD-design!

R & D center. Having an airplane fabrication department next door also helps.

The unique Rans frame design is no accident. The large diameter seat tube stiffens the frame, while the smaller diameter rear stays offer just enough passive suspension. This theory works well. It's continuously softer than a stiff Tour Easy, though stiffer than a Romeo Percut. And it's softer to ride than those bikes as well. Interestingly enough, this theory in Rans design is cross-bred into most of their designs—except stiffness or you don't lose power in a flexing frame, and just enough "give" to keep you comfy.

Stratus—the frame set

The Rans frames are beautifully built—probably the nicest in the industry. The welded aluminum configuration allows. The Stratus frame is TIG welded 4130-chromoly tubing. Another nice touch on the Rans line-out drops with the Rans "W" cut out. The fork is a painted to match Chromoly related to Rans spec, though they are no longer built in house as our '82 Stratus test bike.

There are two aluminum handlebars available for the Stratus:

C-Bar: These are the classic loop-bars and they are the most popular. They are similar to the bars found on the original Rans Stratus-A (remember, the seat without joystick for controls). The C-bars are fairly narrow and aerodynamic, yet offer multiple hand positions. They are stiffer than the B-Bar, though still flex up and down a bit (by 3-3.5") of you try.

This is our favorite bar for this bike, though we haven't tried the new T-Bar on the Stratus yet. C-Bars come from the factory with the split, double Rans fitting that does double duty as a dash board, junk storage or hydration system holder and it is standard on the bike.

B-Bar: This is an aluminum up-larger-extended. It's tall, it's wide and it flexes. The B-Bar has a wide natural ergonomic position, though it's overkill to say the least. Cruisers will love it, performance riders should consider the C-Bar. During Stratus testing last summer, our test bike had B-bars and we could never reach dial-in-perfection.



We used different stems and placed them forward and backward to suit. When finally replacing them with the C-Ras, that is not road-fair perfection was accomplished. The B-Ras came standard with a Rans lying or welly.

After spending time on each of the two types, most riders prefer the C, however, they are different and take some getting accustomed too.

Stratus—the paint

The Rans paint is knock-out gorgeous and it's done in house. The very lovely Tailwind and Rocket have powdercoat, though everything else is wet-spray DuPont Chromabond with three-clearcoats. There are no other recumbent manufacturers providing such a nice finish on a stock bike. Our Sherbrooke Stratus is a bright gray that has a pearl shadow depending on how the light hits the paint. It's one of the nicest paint jobs I've ever seen (most recumbents we've seen). Rans also has custom logo graphics for each model and the Stratus logo (one of the nicest combinations on the large main tube of the bike).

Stratus—the seat and adjustment

The ultimate upgrade of the Stratus came in 1985 with the new seat. Rans uses a slightly different version of their seat designed to sit more upright, which can be a blessing or a curse depending on your personal preference. After six months of Rocket testing, I prefer a more laid back seat, though not far enough back to where my neck gets twisted. The most upright seat angle of the Stratus works well and nearly everyone who climbs aboard will be at ease on this bike. If you need more seat incline adjustment, specify this to Rans when you order. Another in-

teresting aspect of the Stratus is the ability to order it with 24" (7.5-lm24), 26" or 780c rear wheel and your choice of 40mm or 45.1mm 30" front wheel. Available either motor or across the spectrum of recumbent trikes, from a trike to a trike, is a slinky rear suspension. Rans offers Hart, Avon, Specialized, Continental and others.

The Rans quick release (Q.R.) sliding seat adjustment is the easiest to use in the industry. The seat assembly rests on an aluminum channel that is bolted to the frame. The adjustment system includes one Ritchey Quick Release (two manual) and two ball-bearing pins on the rear stays (spaced inward), a year ago we had some trouble with Q.R. seat slippage which has now been taken care of. We haven't spoken our seat loose in a climb in a long while. Winding up your seat Q.R. so it is positioned right is important. If you do not have an understanding on how to do this, be sure to ask your dealer for a demonstration.

We did experience a bad batch of Q.R. seat plates (the Q.R.'s rest on cast built by Rans). Rans quickly replaced them, though this little job could have you stranded, so proceed with care to be sure. Even with the possibilities that come with the Rans Q.R. seat, I still prefer it to having to carry a wrench or more with adjustable levers, foam balls and fine-adjusting chain length adjustments.

Stratus—the fit

With the three frame sizes (187, 27"40"), the bike will fit virtually any adult. Rans has been known to build custom order stands/frame for very tall customers. The Stratus may be the optimum bike for shorter, stock

petite riders. The small 25" Stratus can be built using a 24" or 26" rear wheel, which lowers the seat 1-2 inches and fits riders from a 38" X-man. The total X-man range of the Stratus is 38"-35."

Stratus—the components

Aside from the token Stratus part, the Stratus components are for 1987 is excellent, but even better it works great. The package includes a Sanyo SC Camp 24/26 Mountain (available and out of production), Deere LX front and rear derailleurs, HG50 11-28 cassette, and Grip-Shit SRT 800's with a smooth running Sachs Sode chain (Rans doesn't use KMC anymore). The Deere derailleurs and HG cassette shifted smoothly and crisply and better than our Rans-FWB set bikes. The only rans are easy and refined. Every aspect of the drive system was working in perfection. The Stratus Grip Shift SRT 800's offer superior free-shifting resistance. They are quiet, smooth and long-life (better than the 400's on the Rocket that had to be replaced in the Grip-Shit 850 upgrade with Sanyo V and Shim). The other difference is a Deere LX front derailleur matched with the 24/26/28 chainrings (smaller chainrings shift better than the larger ones on the Rocket). Since I don't like to use my belly NW and lap, this extremely direct drivetrain had me in gear-changing nirvana. When I found my front sprocket on the Rocket (SRT 400) had a Sanyo front derailleur, the Stratus practically shifts itself with a single turn of my wrist.

One of the greatest benefits from the FWB drive wheel and the otherwise nonoptimal NHTS drivetrain is an easy gearing selection. The Stratus easily achieves a 23-111

gear-inch range. The low gear is right where you want it for getting up all the steep ones, and the 111 will keep you spinning over 30 mph. I found myself spinning out in high gear. A taller high gear could deliver by itself in the Stratus or it's a flat bike. A 324/253 is available as an option (33-130 gear inches).

The wheels on our bikes are a 700c/26" 45mm with stainless steel spokes (and to fit into Avon handles tube, the front rim is a JCC Roadline 26" x 1-18" which is a rim that could have been designed for use on either of 1988 recumbents. The rear rim is a Specialized Transition 700c x 26. This set up is optimum for a LWB, though I am down to the 26/28-dual Continental Grand Prix's because I like small wheels and the 26" size can be more durable. The Conti GP rim tubes are the best recumbent ones we've tested and they are available in 700c, 26 x 1" as well as 26" x 1-23" -30mm. Continental tires are a Rans option.

Our two bikes had standard front and rear Deere LX cantilevers. A Magura hydraulic brake option is also available, though not necessary on this bike. Whatever are an option that we'd like to see. The dual LX cant's matched with the long and low look of the way Stratus had it sitting on a stem with minimalist fork. Even the front brake was a notable exception to either mediocre LWB fork braking.

The Stratus chain-ride is a high quality dual high-tens steel wheel type. The roller wheels have cartridge sealed bearings that easily maneuver the chain away from the frame. We did experience some light-gear chain noise due to the chain angle as it passes over the roller to contain gears, and the drivetrain

was wider than our Rocket, though it's a smoother and more free-running system.

Something prospective Riese owners may want to know is that Riese will upgrade components from other Riese model years. Considerations could be that gorgeous Campy triple crank and bottom bracket from the V-Rex 24, as well as the Campy BB52 disc-drive or even Magura brakes, if you are so inclined.

After our test, the Stratus was sold locally through Angle Lake Cycles and upgraded with a 3x7 hub, possibly the best upgrade for this bike—due to the expanded gear range and RS-3x7 shifting.

Stratus—options

Riese has an optional fenderset, which is nice for this long bike. Riese sells 100% trailers and you can even get one painted to match your bike. Sachs 317, low-rise rock and pump-up fenders are an available option. All Riese seats have two pairs of water bottle mounting holes (for two bottle cages on the back side within any reach, even in motion).

The Riese fairsings work great. They are tough, durable and the price is right (modified frames with "B" and "C" bars). They make for a nice shield for your junk. They cover and clean up the cables housing and really add to the looks and really do give you a performance boost, though not so much as a Super Zipper.

Our favorite Riese option is the new and updated seat bag. It doesn't quite have the capacity of the Angletech bag, but the looks make it a truly quick release bag that is so attractive it could pull double duty as a briefcase. The red stitching and Riese logo are an added touch. We have been able to get a 6" wide lock, collar phone, a few tools, spare water, keys, and more stuffed inside. Once in a while I need to reach behind to see if it's still there. If you have an early version, contact Riese for the seat-bag upgrade.

Component upgrades, like chains and cassette and component options will make your Stratus customization enjoyable. If there aren't enough options, check out Angletech's "58" and "31.63" (Sachs 3x7) equipment models.

Stratus—versus Glas

The Glas is an exquisite machine with suspension to boot, though it's not quite production. The seat will recline more than the Stratus, though when riding the Glas, my center of gravity was further rearward

than on the Stratus. The Glas bottom bracket position is higher, which can be a benefit, though the bike may not be as efficient as the venerable Stratus (not yet, anyway). The considerations will come down to bottom bracket placement, suspension and price. The Stratus seems to have the fat lead and downhill performance edge (though it's close). The Stratus is like a Tour Easy or Gold Rush Replica riding position—with a low seat and lower bottom bracket.

Suspension is an interesting topic. Personally, unless I can get both ends sprung, one wheel will shake me when I hit the crooked See's-Creek Bridge at 30 mph. Keep in mind that suspension adds complexity, more moving parts and added maintenance. It can affect precision tracking ability and sometimes cause short the limits of your performance, or at least change the predictability while tracking through a fast corner. You also need a special pump for the shock (we had one before the time leading one in Seattle).

Stratus—versus Tour Easy

Many Easy Racer customers are buying bikes with Riese seats as an option. I can't help but wonder if they're considered a Stratus. The Stratus has the Riese seat as standard equipment. The Riese seat works much better on a Stratus than on an Easy Racer. The mounts place the seat higher on an Easy Racer, which can slightly throw off the ergonomics by raising the rider and possibly placing the rider farther away from the handlebars which could make the stratus "dial-in" more of a chore.

The Tour Easy/Gold Rush Replica handling is legendary and it's LWB perfection. It has a bit more oversteer and a more dished steering geometry. The Stratus handles nearly as well, though the handling flexure is not quite at the level of Easy Racers. Less advanced or experienced riders may actually prefer the Riese as the seat is more upright, there is no knee/leg/handlebar interference and the Riese seat offers 3 pressure points, better comfort and full breathable foam support.

If there's a handling deficiency, Riese has made up for it in other ways. The components are slightly upgraded. Deore LX Shimano and SR5000 shifters versus SR1600's on the Tour Easy; the Stratus has dual LX cantilever versus the KC Pro/PSR or Williams 400 combo; the Riese seat is more comfortable than the Tour Easy seat; the Stratus fairsings, the frame and bars are lighter (more flex, shock absorption, and



This is the Riese Stratus circa 1990—Photo courtesy of Riese

stability). The Stratus comes with a fairsing; the Riese point is nice. The Riese factory frame warranty is an impressive lifetime to the original owner with just a one-year on the seat. Not to be confused, Easy Racers has just introduced their "Double Lifetime Warranty" (see page 32).

The Easy Racer alloy straps, steel chain and shifter for a wider stock gearing, though gearing is not usually a problem on LWB racers—with full size rear wheels. Both bikes are world class and the choice will be a difficult one. We like the Easy Racer toughness and straightforward systems, though the slightly suspended side of the Stratus and availability of the 3x7 (and the Tour Easy) and (arg) it to prove which is the truly the best LWB machine.

Stratus—versus Rocket

The Stratus is actually more comparable to the V-Rex in spec, though because of my more familiarity with the Rocket, I will use it for comparison. After months of riding the Rocket, I had the chance to keep the Seattle White Easy Racers around for other needs. After several many rides on the Rocket, the weather broke our Saturday afternoon. I put the Stratus in the stand, dialed it in and took off down the road. My first thought was, "This thing is fast!" Immediately after I left my driveway, heading out to the downhill sections of my test loop, the Stratus was noticeably faster than the Rocket. I was cruising 2+ mph faster with ease and spinning out the Stratus 111-inch high gear (versus the Rocket's 103-inch high gear).

I had't been on my Gold Rush seat (the stock December-of-last-year) and have been logging mostly 2000 miles through the winter. I've been

managing 150 miles a week since January. The miles have been equally split between the Riese Rocket and the Schwinn Backdraft AirDync road-racer machine. So, I've had equal testing in both LWB and LWB models.

The LWB Stratus definitely has less rolling resistance with the 780 rear and 20" x 1-1/4" high-poll front, no question about it. The Riese fairsing makes the effort that much better. I had Exponent lower that a long and low LWB car. The Stratus is noticeably faster on descents, roller-coaster hills (has down and side coast up the other side) and flat terrain, though the high bottom bracket of the Rocket seems to get more power to the rear wheel, faster and I

MODEL: Stratus
CLASSIFICATION: Group 1, custom LWB
TYPE: ROAD
WHEELBASE: 67" (53" wheelbase, 14" offset)
SEAT: 18.5" (14" seat)
CRANK: 170mm, 28° spindle
HANDLEBAR: 400
GROUPSET: Shimano
FRAME: 4130 (60 Series)
COLOR: white/24 Gold
RIDE: 2000 miles, custom paint
DETAILS: 1000 Series LX 21 speed
SPECS: 1000 Series 1000 Series
CONTACT: Guyton 800-899-2000
CONTACT: Stratus—800-714-20
CONTACT: Riese USA
EMAIL: RieseUSA@21011
RIDE: 1000 Series LX custom
RIDE: 1000 Series
PHONE: (206) 795-1234/1-800-899-2000
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CONTACT: Stratus—800-714-20
CONTACT: Riese USA
EMAIL: RieseUSA@21011

FGGZ, more efficient in steep-climbs on the SWB. High flat-land speeds and super-high speed descents have made me on the Rocket, as it is a fairly high bike.

Just when I thought I had it all figured out, I rode the Stratus up "Sawyer Hill," the steepest hill I know of here in East, Washington. Before today, I have been unable to climb this hill on ANY recumbent. The Stratus cruised straight up with no problem whatsoever. It has a lower low gear than the Rocket, which made low-speed climbing easier. On these kinds of really steep climbs (I note the Chilly Hills on the Rocket (in past February), the Rocket has a tendency to bunny-hop the front wheel wheel, at least the one isn't heavily loaded. After careful analysis and observations with knowledgeable riders, I believe that it's because my 6' body is at the upper extreme of the Rocket's one-size-fits-all frame, especially with the seat laid back the way I have it. This is a

problem the less pitch the V-Cam which comes in two sizes, 30° and 40° when riders should not experience this problem (unless they are really tall, in which case they should order a custom length frame).

High bottom bracket SWB bikes sometimes give me a dip vs flipping over backwards forcing on steep climbs, so the lower bottom bracket on the Stratus was a plus. To climb steep grades on a LWB, I have developed a side-to-side handlebar-pull/way technique that helps to maintain the weight/balance you can do on uprights (or SWB models). You slightly move your arms back and forth, pull one bar, while pushing the other, thus simulating switchbacks. The maneuver should not make you wobble, as your back should only sway slightly if you doing this move correctly. This especially helps to maintain balance at under 4 mph. The Stratus is a very capable climber and the LWB will be my choice the next time I climb Sawyer Hill.

Stratus—the Stride

The Stratus is a flat, stylish and dependable machine with extraordinary performance that you won't find in SWB or USB bikes. I feel more comfortable on long-low LWB ASB bikes consistent at twice the speeds of SWB bikes, especially down with USB. The systems on the Stratus are proven and tested. At a time when SWB recumbents are getting lots of press and traction, we should not overlook the LWB ASB recumbent which works better than

any other design, at least until you have to find a road bike that works and fit the long bike onto the road of your car.

If you are a Stratus fan, you may want to let the Rans company know this before it's too late. Drop them a line and tell them you read about the "Strat" in *Kovach's Cyclist News*.

For more, contact Rans Recumbents, 4001 Hwy 183 Altamira, Hays, KS 67601. Phone: 620-6346 Fax: 620-6345-2765. ☐

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Recumbent Touring

Miles for Clean Air

A Tour of the Canadian Rockies by Double Vision

Story & photos by Alice Snodgrass



It really all started some years ago, when I talked my brother, Sheryl, into going on bike rides with me. At that time we both had single standard, or "roadie" bikes, as we now call them. This lasted for only a few rides. We had trouble talking and felt like we weren't riding together as would get separated altogether because of traffic or different riding abilities. Soon we weren't enjoying our outings as much as we had hoped. We then bought our first "roadie" tandem. We really enjoyed always being together, being able to talk. We also found that a tandem really is great for riders with different riding abilities. You both put what you can into it and your net performance is the result. Our riding improved as we began to give more and more repeated rides.

We began having some trouble with back pain on longer rides. I had big problems with my hands and arm going numb. This took a lot of our new found fun away. We worked hard to change our riding style and different things on the bike to correct this. With very little success we got pretty frustrated.

Then it happened! I rode a recumbent bike. At that point I had to have one! After Sheryl rode one it

was on easy sell. So after much research we bought a "Double Vision" recumbent from Advanced Transportation Products in Seattle, Washington. From that time on we really began to truly enjoy our riding. What an awesome move for our riding pleasure and comfort. We began doing more rides and made longer rides. No more back aches, no more sore shoulders and hands. What a pleasure!

Our favorite local riders are the ones put on by the American Lung Association of Washington (ALAW). When we heard about a ride they were putting on, Sheryl thought this would be a great long distance test for our new tandem. Only a few years before, Sheryl thought a ride of 5 miles to Starbucks was a big ride!

It's called the Kalispell to Calgary, Five Peaks Ride, it was a 10 day trip with 5 days of riding with 2 layover days. We met at a campground in Kalispell, Montana. About 55 riders rolled in throughout the day. As we pulled our bike out folks gathered around to ask if that was what we were going to ride on the whole trip? Tents started popping up and new friendships began.

DAY 1—MONTROUSE

After breakfast, the day's course briefing, and last minute packing—we were off. The warmth of the sun was wonderful as we pedaled back roads, taking in the beautiful farms with snow capped mountains in the background and enjoying the flat roads. This was a great warm up day, taking our time, getting to know fellow riders. Passing through several small Montana towns like Whitefish, the day's temperature climbed to the mid 80's.

After about thirty miles we came to a water park which we just could not resist. We dived our suits and hit the water! We stayed for several hours, enjoying the sun and the water slides. A sign should be posted at the biggest slide - hold on to your shorts! Everyone got a nuclear wedge going down this 80 foot drop! We found several other bikers cramped by the cool water. After lunch we were back on the road completing about 40 miles total for the day as we rolled into West Glacier, Montana.

DAY 2—GLACIER

At the Glacier National Park boundary, day 2 was an early start. We had to be over the top of "Cody

in the Sun Highway" by 11:00 am. We started the day about 40 miles from the summit with 20 miles being a constant 5% grade. This is such a powerful area it was hard to keep pushing ahead. So many things to see, big lodges and cold clear lakes. We nearly made the top when we had a flat tire. This was by far the most beautiful place I have ever changed a flat! I really didn't seem to mind the work. With more steep cliffs and awesome waterfalls, we made the summit, Logan Pass.

This is our first crossing of the continental divide. At 6,804 feet, we are on top of the world. Our bike was running great. We found the recumbent to climb at the same pace as our conventional tandem, but with a lot more comfort. After going on a little walk through the snow to see mountain goats at the visitors center we returned to our bike ready to try this baby on the downhill! With 20 miles of downhill we didn't let our speed climb too much, because we were enjoying the scenery of what seemed to be an endless U-shaped glacier can valley. Our drum brake was just the ticket for maintaining our speed. Near the bottom we did our 10 loops and the speedometer showed our maximum speed at 22 miles per hour.

We rode the full mile day near St. Marys, Montana at the tribal owned Cheung Blackhorse Campground. A beautiful spot with camping on a lake. We were fortunate to be there during a Power Show and the camping area across the lake was full of people. Our camp was set up, we enjoyed a great dinner and enjoyed the growing friendships of fellow riders. The evening I gave someone some cartoon rides. Many asked, "Is there a shock on the back?" The ride is so smooth." Just before sunset the sky blackened and we found ourselves having to huck away in our tents to keep dry. Other campers were not so lucky trying to use anything available to keep the rain out.

DAY 3—CANADA

The rain had ended and soon the sun was out again. We traveled north reaching the Canadian Border to Alberta. Passing through Customs the agents there were more interested in our bikes than where we were from. At this point we also entered Watsons National Park. The park was great to ride in with wide roads and shoulders. This day was just the perfect temperature for cycling, shorts and no shirts all day. We had many stops for photo opportunities. The last downhill before lunch our speed was up to 55 mph. Sheryl was thrilled to know how stable the bike felt at that speed. It wasn't because challenge for her to go faster and faster. Lunch took us to the Prince of Wales Lodge with many other riders. It was a beautiful spot along Watsons Lake looking back towards the Rocky Mountains. We stayed in long and late in the evening, but we finally dragged ourselves away. Just a few miles from our lunch stop, we saw a bear and his cub. We rode out onto the plains of southwestern Alberta. Long straight stretches of rolling country leads took us to Pincher Creek ending a 70-mile day. The city park we camped in was next to the municipal pond with a hot tub and showers. This was our night to help with the cooking deal. We were impressed with the type and amount of food that was made available to us. The American Lung Association bike leader was shopping each day for fresh food and special requests like local micro brews. That night around midnight we awoke to a very impressive thunder and lightning storm followed by strong winds that all but blew us all out of the park.

DAY 4—ALBERTA

This was our longest day and

not because of the mileage. We started the morning with warm sunny skies over the rolling hills, enjoying the lack of traffic on the wide back roads. Turning out at Pincher Creek, we saw an entire hillside covered with wind mills used to generate electricity. BIRD-FLAG. As we rode on we soon found why those giant propellers were located where they were. A strong headwind of at least 20mph with gusts reaching higher was coming in at us on one

side in the distance. Picking close we found ourselves at the base of this one. We stopped and took in the awesome power of Mother Nature in Pincher, Alberta.

In 1806, Frank was a small mining town at the base of a large ridge of mountains. Around 4000 a.m. one morning, the ridge gave way and the entire hillside slid, covering Frank in thousands of tons of dirt and stone. The slide continued to push its way to the other side of the valley. Years



later the road was built over the debris. The size of the hillside and the remaining debris some 14 years later was humbling.

Continuing on we wound our way back across the Continental Divide for the second time to cross British Columbia. The wind was calmer on the west side and we had lunch in Sparwood, BC. The afternoon ride followed the country highway west to the winter ski town of Fernie, BC where we ended the day with 83+ miles. We stayed in the local youth hostel/motel. We helped prepare another satisfying meal of homemade

pizza, salad and tons of ice cream. After hot showers, we wandered around Old Town Fernie with vintage buildings and a train station, looking for the next morning bakery and coffee stop fix.

With fresh pastries and lattes, we were on our way. Sheryl loves the ability to sit back and pedal, with her cold hands wrapped around her lattes, warming her hands a deliciously Northwest pastime. We passed some very paleo "Widgie bikers," their coats up around their ears wishing for some warmth. Other riders commented on how clean she looked as we slipped down the road. We rode with a group of 11 but so no riders near the rolling country roads which soon were starting to head north again. Passing rivers and through valleys, by mid morning we were enjoying warm sunny skies. Mid day we stopped to swim and take in more food. It had been 80 miles since breakfast. There has been and with a very crumbly blood sugar depleted motor we made it to Fort Steele, British Columbia. Fort Steele was a booming silver town in the late 1800's. Nearby Carleton Place obtained the railroad contract which took most of the businesses out of Fort Steele. Locals have turned the original town buildings and homes into a "Heritage Town."

DAY 5—BEST LATTE

The main history of the town is played out from mine to flint during the day through mine productions. These productions are acted out in the streets by employees of Fort Steele in period costumes. Lunch at one of the operating hotels was a ray back in time as well. We were happy to have gotten in early enough to have this experience. Two miles up the road we camped and enjoyed a swim in the campground pool.

Two miles up the road we camped and enjoyed a swim in the campground pool.

DAY 6—BLUE DIRT

This was one of the longest mileage days coming in around 85 miles. The route was fairly narrow and relaxing. We took the back way around Lake Wabensetee, on Highway 1 was full of traffic. We were thrilled to have miles of a quiet trailless road along the glacier-fed river to the lake. We stopped in for lunch in Windermere at the Blue Dog. People come out of towns and the excitement to look at our bikes. It was sixty to spot where we had parked the bike with the crowd around it. Making our way over the last pass of the day, we were drinking about Red Bull Hot Springs. Once in the town of Kamloops, we decided

in shape and spend the night in a real bed.

DAY 7—KOOTENAY

The first order of business was the hot springs. Within the bounds of Kootenay National Park and steep canyon walls, a wonderful facility with snack bars, locker rooms, and of course the huge pools where the hot water is brought here was calling our names. We soaked, had massages at the treatment center 30 steps from the water. We stayed most of the day visiting with people from all over the world. Dregging members out from our beds on Friday the day, we headed back to the motel to do laundry. We met up with several other hikers, at a local pub and dined the evening away.

DAY 8—THE LONGEST DAY

The trip through Kootenay National Park was a continuation of long climbs over 90s ridges. Starting with an 8% grade, Sinclair Canyon made us glad we had a good breakfast. It was hard to pass the hot springs on this damp, cool morning. One out of the canyon, we made our way up the next 18 mile hill. The day grew darker and at the top we all stopped for more clothing. We had a great downhill run even with the rain beginning to fall. We enjoyed the ride, but by the bottom we were wet and cold. Again, the Mopars/My-dia-like trucks have been a dream come true for stopping power on the tandem.

We rode past more crystal blue glacier-fed rivers, over rolling hills, most of the more lucky riders saw a moose and her calf. By this time we were wet and very cold. The temperatures was in the upper 40's. Quite a change from our 90 and 100 degree days. We happened upon the Kootenay Park Lodge. Most of the hikers were stopping to dry out and regroup. The lodge was in the middle of nowhere and powered by generators and propane. The log structure was the picture of peace and quiet. We were very disappointed when we found that they were closed because of snow drifts! After making all our coats pressed against the windows, they opened again for us. The owners put together a feast of potatoes, eggs with cheese, bread and peas of hot coffee. We all made ourselves at home. The old rock fireplace was covered with falling logs. Sheryl was curled up in a blanket across of their

couches, and everyone was raving around in stocking feet. It looked like an old home Christmas party. Once warm, we had a hard time returning to the cold tent that waited for us. Once on the road, the mist stopped and we enjoyed the quiet ride north.

with reservations at the Banff Springs Hotel and Spa. Built at the turn of the century by the railroad to attract Victorian tourists, the hotel stands on one of the most scenic views in Canada. What an outrageous place! (Riding up to the hotel in check-in, the visitors came

DAY 10—CALGARY

Packing up we left and arrived 80 miles in Calgary. This morning was the coldest yet. By mid morning we were stripping down to shorts and tee shirts. With fluorescent roads and a wonderful tail wind pushing us, our speed was up as we moved out from the Rockies into the rolling open areas of Alberta. Climbing past herds of buffalo and through Indian reservations I was thinking of how well the recentest tandem had done for us and how well we had done on the bike as a team. No problems other than a few flats and a small adjustment to the seatpost. No hands falling asleep, no back and shoulder pain and best of the best no butt pain. Riding upright and looking around is the only way to ride as far as we're concerned. We stopped for pie in Cochrans. Climbed a steep hill with too much food in our bellies that we're on top of the plateau that we would follow into Calgary.

The ride ended at the Canadian Olympic Park, site of the Winter Olympics in the last 80's. Now it is used for training Canadian Olympic hopefuls and tourists. The lower end of the Long course offered ideas to those who thought in my. Sheryl was the first to talk. When a rider! To think this was only the lower course of the course. We were sad, happy, wishing it could go on, glad it was over, wanting a long, very long hot shower. The evening came with group photos, dinner, poems, thoughts, friends and thank yous. We drifted off to sleep all under one roof of the huge garden we set up for us by the park.

DAY 11—KALISPELL, BY BUS

This was final park stop. The American Lung volunteers and organizers treated us wonderfully the entire trip and were even more generous as we loaded bikes and trailers into trucks and buses. The 4.5 hours it took us to return to Kalispell was a mad part of our trip. From the French side, back in Percé, and one last look and the "Largest Water Park in Montana" we pulled into the campground where we all first met 12 days before.

The trip was great. ALWAYS ride on the best sides. But it was having a bike that allowed speed, control and my desire to enjoy riding as much again, that made the experience one I had to share.

1997 Update: Sheryl is talking about riding coast to coast with next summer! To her she's back! ☺



We saw elk, and had a close encounter with a Big Horn Sheep. For the third and final time we crossed the Continental Divide and back into Alberta. This boundary was also the entrance into Banff National Park. The roads into the park are split so there is only one direction of traffic to contend with. This was wonderful. The only mishap was heading out to the highway. The livestock gates in the road to keep the animals from straying into danger almost cut us our best week. The steel bars are 3 inches around, had 7 to 8 inches apart and sit atop a 2 foot deep ditch. We had crossed many of these gates and had no problems. But the distance between the bars had never been so far. We barely were able to keep our speed up to maintain forward, when we saw ahead an into the supercolossal sign. Later that night a friend was making his rounds after catching his front wheel in the gap and having to set one side under the hand. No broken bones, but when the sign says walk, walk.

One of the hills was Banff. Surrounded by snow capped mountains it was as beautiful as I remembered. Not ever having been to Banff herself, Sheryl decided to surprise me

with three separate stations, gathered in the center of the parking area and looked at us for a long moment trying to decide which one of them was going to have to park this crazy thing. Another gear night, indeed, was a mad ride. The mechanics that were still cramping did not have those luxuries.

DAY 9—LARK LOUISE

We awoke to fresh snow on the mountain tops and temperatures in the upper 80's. The day was not too hot of weather. We liked the trails, watched at a herd of elk grazed on the driving range of the hotel golf course and explored the town. Some reminiscing to the hot springs or took a bus trip to Lake Louise. Funny no one wanted this the 40 mile round trip? We met at a great restaurant with others from the ride. Still cold from the night before, we felt guilty when asked "Where did you guys stay last night?"

After dinner we checked into a small bed and breakfast with other hikers who wanted a good bed. The evening was a combination of celebratory and somber emotions. This was our last night on the road before Calgary, but the last end of an incredible trip.



Lynn Miller's custom Hybrid Hybrid Race Trike
Photo courtesy Lynn Miller

leg... this is no road bike. Not a loaded pack-out of Lewis's trail bike from Hill. Climbing through pineapples and aggressive fields white, as you round each bend, sure that it is the top, you find that it just keeps on going and going and going.... And I'm not the average heavy rider.

The old speeds are coming by the time I finally roll into Whitawa. It's just typical town on the edge of a military base, but it still looks beautiful to me. After a much-needed rest and long cold drink on the shore of

Lake Wilson, I reluctantly push on. It is mostly downhill for the next several miles. After coasting through Milton's Tires and screaming down Kappa gulch at over forty miles per hour, I know I'll be in no condition to visit the Arizona Memorial. Best plan on that for another day I did ride by it, however. There's a cool bike path that follows the harbor edge all the way from the (west) end of Pearl. It does it in the best way of

the way. This last section goes past the airport, along the waterfront with its colorful fishing boats, past downtown Honolulu and finally through Ala Moana beach park to Waikiki.

Man am I glad to see that boat! The deck clerk wonders how I can ride clear around the island and still have this goofy grin on my face. I explain that my mind is "best. ReverseBEST" that is. He thinks, "best? Right... More likely warped. Even after a long hot shower, I don't think I'll go dancing tonight, however I believe I will have one of those Pina Colodas. A big one, there's to you Paul! Maybe next time we can do Maui.

There are several excellent riders in Hawaii. On any given day there is likely one or more that would love to show you around. If you've never been it, or your own, there are plenty of maps available. If it sounds like fun, come join us. Drop a letter or card, I love getting mail and try to reply to everyone. Lynn Miller '98-1983 Honolulu St, Pearl City, HI 96762 See also RCN #56. Q

RETIRES NOTE: We are thinking that a better organized newsletter Hawaii hour would be just the ticket if you do as well. Help us (RCN) on 24HR if you get enough interest, we'll name it. Thank for a Hawaii Hybrid Race team on upcoming RCN.

RCN BACK ISSUES FOR SALE

We still have limited quantities of the following RCN back issues. Now is the perfect time to complete your set. The prices are \$5 each post-paid or six for \$25 postpaid (USA).
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LOW DOWN and LAID BACK *by Gern Faring*



Spring is hitting hard here in Skowhegan, and it's bringing all the recurrent riders who have been in Winter suspended animation out on to the byways of our little town. We've had ice storms, floods, and occasional rains, but, as the county picks up the downed branches and sweeps the shoulders, the riding is going almost normally. I committed all winter to no school, and Felicity rode with the crowd. Now we're out and about almost every day. We've discovered another interesting hobby about our adopted town and it's love of recurrent riders. This town and its environs has some of the greatest dogs we've ever encountered.

Sure, we've had plenty of canine contact in our recurrent rides in the suburbs before we moved to Skowhegan. These dogs did typical doggie stuff as we rode by their lairs on our "toes. We felt that peculiar kind of vulnerability that recurrent riders are prone to. None of our dogs is available in determined dogs on our bikes. Radically low-riding "toes can even find themselves at eye level with a German Shepherd or Border Collie. In the suburbs we encountered the highly territorial, pippy, yappy dogs. These little Bull Terriers would start yipping as you crossed that imaginary line that they maintained this territory, and they maintained this noise until you crossed over the boundary that marked the end of their domain. They were usually all show and no bang. Occasionally, you passed yards that had dogs that could do you real damage. These dogs would often bark, bark, but usually wouldn't forward pounce. Even with the fences, our hearts would beat faster as we unconsciously wondering whether the dog had detected the fence somehow or if the owner had left a gate open. Once in a while, a dog with speed and who

attacked openly "recurrent riders" would show up on one of our riding routes. These opportunistic canine assailants of our leisure and joy considered all of Western Washington their territory. Felicity and I would most often change our route and avoid the danger area on future rides. Although we sometimes considered packing an aerosol can of "Doggie Doom," we usually could create labyrinthine detours to avoid the bad doggies and eliminate the need to go on the offensive. Nothing prepared us, however, for the dogs of Greater Skowhegan.

We began to realize that something was a little strange in Skowhegan when we were down at Vera Bob's Recurrent Run one Saturday morning drooling over a faint notice that Felicity and I had been covering for some time. Our conversation turned eventually to the best rides in the immediate Skowhegan area.

"Don't you have a copy of 'The Guide'?" Vera Bob asked tentatively.

"What guide is that?" I replied.
"Let me see if I can dig one up for you."

Vera Bob began rummaging around some boxes in the corner of his basement. Vera Bob's organization system is flawless in some. What appears as chaos to some mortals is a well-thought information retrieval system to V.B. Sure enough, Vera Bob lifted a stack of "Whisper (Former Suspension Device)" and, under it, found what he was looking for. He brushed a little dust off a small booklet and handed it to me.

"That'll tell you all you need to know," Vera Bob announced.
"It'll tell you about all the rides within a thirty mile radius. Each one is described and given a rating."

The booklet was titled, "The Low Down Guide to 'Best Rides In and Around Greater Skowhegan.'" I

handed it to Felicity. She looked at the table of contents and looked confused.

"What's with the title name?" she asked.

"Which one do you want?" Vera Bob responded.

"Well, this first one for instance...it's named 'Alice, Oh Mickey, and Rex' (The Border Collie Rumble)."

"Oh, yeah. Each one is identified by the Skowhegan dogs you'll encounter on the route. All as 'owners have come to know each of these breeds intimately. Best covered, none of us have lost a body part to any of them. All I can tell you is to follow the routes as described; the dogs will introduce themselves to you somewhere along the way."

Felicity and I thanked Vera Bob for the book. We went outside and got some recurrents. The sun was peeking through the morning clouds, and we were itching to ride.

"Do you want to try one of these from Vera's book?" Felicity asked.

"Sure. You choose and I'll ride."

Felicity paged through the color photographs to herself occasionally. Finally, she laughed out loud.

"Here it is. We're doing 'Tiny Tim's Salt Lick Loop.' If we're going to encounter a dog, we'll choose the smallest."

"Yes with us."

We pedaled out of town and headed out on Winger Road just the public library. A quick right on Bowery Avenue got us finally to "Tiny Tim's Salt Lick Loop" as described in the book. The miles rolled by, and we wondered when Tim was going to show himself. Maybe Tiny Tim had met his demise since the book was published. We soon forgot about the dog and lost ourselves in the early Spring ride. A line of white, stretching for a hundred yards to our

right caught our eye and parked us from our events. Darkling identified the object as a dog. This one was unusual. He had gauged our speed accurately and was moving at the correct angle in front of us at about an eighth of a mile ahead. As times like these Felicity and I usually began our creative tactics. We both accelerated. We've always thought that the line occurred in a group is the one that the dog might bother. We were trying to leave each other behind. Neither of us wanted to be the trailing bike, so we prey to Tiny Tim's devices. Felicity was a woman possessed and left me several yards behind as the dog loped in along beside me. This dog was no dog by any means. It looked like it had Newfoundlands in it along with some Golden Retrievers and not a small amount of Whippet. The dog came up on my right. Heed his eyes on my right, and moved its muscle over toward the flank of my leg before my shorts. I began to swear, but the dog deftly appeared remaining fixed on my leg.

"This dog is serious," I shouted to Felicity. "Don't slow down."

At that moment, Tiny Tim struck. With muscle eyes and tongue lolling out, the dog began lapping my thigh. As he ran, he moved in for a series of doggy licks. When I became sure that the licks were't precursors to a bite, I relaxed into a comfortable cadence and reached up my foot. From behind me I heard a shout.

"Tiny, you cut that out! Get back here!" someone yelled from the distance behind me.

Tiny Tim took one lick and broke off his pursuit. He became just a dot in my mirror as I caught up with Felicity.

"Thanks for letting me ride Tiny Tim's money. I've just been nearly lapped to death."

We finished the loop and Felicity laughed all the way. They were al-

to call and recognized the recumbent sides so easily across. When we got home, I showed off the dog spit. Felicity said the basket from cover is cover while I was in the shower. When I came in to the living room, Felicity was bantering with new knowledge.

"Tomorrow we'll do the next side in the book. It's called *Thyris and Maffie: The Penetration*

Recumbent Jumper Jacks," she announced.

"That with us, I said. "Only this time, when the diggers appear, you ride straight."

Well, that's it from *Sheddom* where the dogs are straight, the people are low down and laid back, and recumbents are the transportation of choice. ☺

RCN#38 1997 Buyers Guide Updates

The RCN '97 buyer guide has been completely revised to include the latest information on new bikes, though there's more to it.

The *Price of Tech* chapter has been expanded to include the 1996-1997 RCN's new standard new "price" for the single

or the day is a 20 grand, for example, is 20, depending on the size and other options.

In the update, the new RCN reader's book for the future shows price trends across your RCN. RCN's buyers guide will be a great reference for you to buy in the future.

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Road Test Clipboard

by Robert J. Bryant

Thanks for the RCN Road Test Notebook! Our long readers informed us our progress-obtaining test bikes, dealing with manufacturers and the actual delivery, set-up, and testing procedure. This will include glitches, problems as well as the high points during the test.

Manufacturers are invited and encouraged to submit long-term test bikes to RCN. These test bikes may qualify for a feature test, and/or will be reported on here as long as they are in the test fleet.

This is a "no strings" test format. Manufacturers need to supply a current model-year test bike in as many conditions, with as many factory options as you wish to supply the bike with. We prefer factory assembly for a direct mail customer with all documentation, instructions, etc.

We prefer to keep the bike for a period of two to six to three months. We like longer 4-6 month test bikes for a period of 12+ months. A longer test bike will be added for its use, wear, well-used, well-used and dirty. The bike will also be written about on a regular basis. Manufacturers will need to pay round trip shipping and in some cases, customs duty, delivery and possibly assembly (rare).

A perfect example of what we like to see is the Kona company. Kona has supplied us with a Scrambler, Tuffbird, Stratus, Roadcat and V. Rascal. Our Prototype Ultra 41 was shipped back to Kona, but we are on the list to get an early production test model and there are other surprises on the way. At any given time, RCN always has a Kona test bike.

Previous to the RCN95, this is a real BOMBS to Kona—and RCN. Our Mexican bikes is very late, our S & B arrived with a broken derailleur and our Tamao has a long list of problems that we are working on with the manufacturer. The Linear CLUB/Wheel ENDLESS has not arrived yet, the WindWalker is a super bike and the Trion and Black Gold are the way. RCN96 is the prime issue of the road-test year, and we're short of bikes to test. This shouldn't last very long, because our thought they'll all show up at once and we'll be tested in bikes.

Let us extend these words to RCN readers. Manufacturers: Send us long-term test bikes. We ride them, we get accustomed to them and they

get compared to other bikes and written about. For 1997, we plan a long-term road test column that updates readers on our test bike fleet as we ride and learn more about them.

Downsides Seattle ride. Tony's Merax has a Super Zipper tubing on the front of it as well as other thick upgrades which we will report on later.



Our test fleet with three rear bag, upgraded Arlen/Kocher brake pads, Philmore, new rear cable housing, Arved Peugeot tires and 20" handle bar at 1000 miles on it and we still love it.

Readers/Dealers: If you want to see a bike tested, write the manufacturer and tell them to get a long-term test bike over here ASAP. If you don't like what's being tested, get some pressure on these guys who are tight with the test bikes.

ATP VISION

I have reported an E-4042 experiment kit (LWB-3793-405-1553-357-20") for a long-term test bike. Also a Merax is due here soon. RCN contributor, Tony Licuanan (RCN94/95/96/ HomeBilder's Corner and RCN97/98/99/ Commos) is now officially commencing on a sticker out 21-speed (x7) equipped Merax on his duty Wile. Sorry to

CRYSTAL BALLS

Last summer we received our long-awaited test "Hare Tico" bike. This new model has a three piece frame (near triangular cross front/rear beam) that comes apart for easy shipping and a mesh seat which replaced the removable fiberglass shell. This Tico was a prototype and had a few flaws as noted.

Peter Rice has offered to send me some '97 production Ticos for an RCN test. It was a dark history, then postponed several months, though we do expect to see it sometime this year. You can be guaranteed the delivery will be slow if you order one right now. Another point worthy of note is the hefty price increase that Tico

got into effect for 1997. The Tico is now \$3000 (developed) territory.

Please write me here sometime, if this could be the 1997 Tico one, if they can only get these long delivery delays behind them.

EASY RACERS

Our favorite test bike of all time was returned to Easy Racers this past month. It was a 1992 Gold Rush Replica (GR). This bike was a tried and true friend. Aside from any other RCN test bike in our history and the most dependable test bike as well. Upon final inspection there was not a single problem with any component or the frame. Throughout the five years of this bike, it had two sets, the original, and then last year a new custom seat with aluminum for my three broken tailbones.

I should mention the wheels. Peter finally built the 700c/49 frame 20" wheels when the bike was new and they only needed to be used once over the years. The wheels have been passed on to new homes as they finally reached over 50% of their useful life.

During the summer of 1993, I ran Annapolis front and rear. They were acidic, low-line, rough-riding and heavier than the Peter-built wheels, though they look very cool. The Annapolis were better in flats, but slower up hills. Other seat systems confirmed on the test GRB was a custom Zip Design Super Zipper fitting with "T-Block" "gullwing" mounts, an AirZed foam from People Moves and dual water bottle cages on the handlebars. The bike also had a handlebar bag borrowed from a test EC-1. During the five years, the bike was shipped to the bare frame twice for maintenance and therapy...I and it was polished (and I've better therapy).

The replacement Gold Rush Replica/Black Gold will be delivered to RCN in early May. It will be run with Super Zipper wheels to meet delivery of the Black Gold carbon fiber tubing and body work.

Gardner Martin mentioned that Steve DeLore stopped by on his way back home from the San Diego triathlon race. Steve Gardner and Ron Polk took a Gold Rush Replica with Super Zipper and body stacking, a Gold Rush Replica with Super Zipper and Steve's Solar Car

to Parrot with Interceptor front fairsing and Solar Cat rear fairsing). Steve says that this set-up is (arguably) the fastest fairsing combo he offers.

Center said that between him on the GRR/body stacking and Delaine on the Solar Cat, they run dead-even on a cross wind. The most interesting experience of the Interceptor test was that Ron Babb was noticeably faster on a GRR/Super Zappan than the other two. Why? Ron Babb is slightly shorter than Delaine and possibly more aerodynamic than Gardner. Summation: Rider body shape and size matter in bike performance testing.

So, I asked Gardner what difference the GRR body stacking makes. He said they figured Zappan over the Super Zappan equipped Gold Rush Rapids.

Anyway you look at it, there are all claims for bikes. A local rider just bought a Four Five and another found a 20% increase in speed between a mid-1980s SWISS model. The Long and Low folks again!

HFM TRIFLIN

This is the trike that was originally designed by Dick Ryan and sold as the Ryan trike in the early 1980's. When Dick ceased production, Ian VanderPuis took up where Dick left off and has continued the design evolution and fine-tuned the design. Our test trike will have a cross disk brake. The HFM trike should arrive any day and we'll be excited!

LIGHTNING

We had requested an updated Stealth trike last year, though that was canceled by Lightning. The new bikes look a lot better than our previous two bikes, though Lightning does not seem to have any interest in an RCN road test of any model at this time.

MAXIM

Our promised Rayville trike has been delayed again and is overdue. Chris Gay said to let us know if it is now promised for late April.

RANS GLISS

Prototype Gliss (41) was packed and returned to Rans in mid-March. This dual Coast Grand Prix equipped speedster is one of the smoothest riding speedsters I've ever ridden. The higher BB seems to make a difference in hill climbing efficiency, though nothing conclusive yet. We hope to do some timed tests when the production Gliss comes in later this year.

RANS ROCKET

This is our January 1987 test bike. Rans turned it over to us for long term testing, which means four status checks. The Rocket survived the winter exceedingly well, and it's still my personal favorite SWB. The primary reason why is that I like to have two components, one as an all-arounder/ain bike, and one as a high performance bike. The Rocket is the ultimate all-arounder.

After six months of Rocket testing, mostly in the rain, our bike was

dent-free and not more rusted-out than it easily slid into the small 11-tooth cog. Rather than add a spacer between the derailleur and dropout, Phil added a spacer to the front-hub and polished the wheel. He then replaced the rear cable housing section, rear derailleur cable and changed slightly the cable routing (still within factory set-up). We had considered adding an SRAM Race Worn, but it wasn't needed.

I had noticed that the rear cable-stay brake pads were wearing very

slowly. Madsen and I have yet to get away on a test ride. Finally, local 14 year old Rans Rocket road-racer rider, Matt Herwig, has agreed to share the bike on our April/Low Down and Land Back Rans ride. Matt and his dad, Mike (Vinton R-60 SWB/SWB), ride with the Low Down group often and we did Chilly Hilly together as well.

RANS TAILWIND

In surprise news by Rans, the Tailwind got the last minute round-tube treatment for 1987 (a few square tube models are still available). I've always been a Tailwind fan. The High BB, dual 20" and no-tilt drivetrain make it a sure-firely fast machine. This latest Tailwind had the new vertically and horizontally adjustable "T" forward a drivetrain nearly identical to the Rocket.

The drivetrain works great due to the easy LWB cable runs, no chain idler (not needed) and short chain. The braking is better than on the Rocket with the front and rear cantilevers. It's interesting to note that one can spin the Tailwind out with the 113 tooth high gear faster than on the Rocket. Could it be a frame bike? It's quite possible, though the weight distribution and handling are not as balanced as the Rocket.

The Tailwind is not as versatile as the Vinton bikes and even less so with the '87 updates. With the new 1.3" main tube, the frame flexes more with horizontal/tilt riders. Certainly a custom longer frame size could be delivered, but then that is almost a Gliss. The dual 20" wheels and fully adjustable Rans seat on the Tailwind apart from other "longpacks," though the bike is most suitable for riders under 5'10". Given these observations, the Tailwind did quite well up the RCN test hill. Slight front wheel boggy legs were apparent on the steep part of the hill (we've had this experience on standard Road's as well), though they were controlled and the bike climbed right to the top. The Tailwind is a neat bike and is still under-appreciated, though I cannot recommend it for taller riders (at least not in the standard frame size).

REBIEE

We did informally request a Rebike 2600 test bike last Winter, but nothing is scheduled.

RYAN

A '77 trike with updated BB position is on the way.

S & B BEACH CRUISER

This test bike arrived in early



We have a completed S & B Beach Cruiser test ready for paint.

badly in need of some maintenance. Out of the clear blue sky, the shifting really went south on the bike. I was finally blaming the Crisp Shells, BMC chain and winter grease, but the problem was more complicated in the winter, getting the bike to shift into the small cog became difficult. I replaced the chain (with a Shell's), added a Rohloff and adjusted the index to no avail. I then realized that a professional help was required.

I took the bike up to our local road-racer specialist, Angle Lake Cycle, that is affiliated with Kevin Clark's Angle/Tech in Colorado. I explained the problem to Angle later called me back, Phil, and left the bike for a few days.

As it turns out, the Rocket's drop-outs (in this vintage) were not as thick as the current 1987's, thus the

fast and irregular. So, while the Rocket was in the shop, Angle Lake installed a set of Koolstop Acme brake pads to the rear Shimano XC-LT/convertibles as well as to the front Bull Dog side-pull. This has been the most significant upgrade to the Rocket thus far. The braking feel, modulation and power were all improved. This is especially noticeable in the rain. The brakes are now perfectly adequate, though I may eventually outfit the bike with improved brake levers somewhere down the road, and maybe a front drum brake for next rainy season.

RANS SCREAMER

The Screamer Bike Edge Speedster is sitting in our shop. Discover Anyday's How to crank the pedals and Don't top 41 dip the ride, but really can't reach the pedals



Our Turner T-Lite has been a problematic bike. We are waiting for feedback from Turner and will have a full report in an upcoming PCN.

March. Here is what we have:

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4-Wheelset 195 Sizing.....	\$400.00
*Best Deal.....	\$670.00

The Cruiser was shipped assembled and ready to ride. Only after proper adjustments did we realize a leather cable adjuster on the Sachs Commuter derailleur. We've had bad luck with this range of Sachs derailleurs. This one had one we've tested. 5-6-8 was scuffed and has been slow in sending a replacement. It finally arrived after six weeks.

This will be a difficult bike to test because performance comparisons are out of the question. Most of these "brake" type options add weight and do nothing but slow you down, though some may think they look cool. Our bike is a 10-speed. There is an inboard 5-speed one de-

signed and a front double crank. We don't know how that happened. We were expecting a 12, 14, or even 20 speed bike. The 5-speed freewheel with a double crank is not even an officially offered option according to the 5-6-8 spec for BUN B02. The standard Beach Cruiser is 10-speed.

TRIKUMBER (Review)

A company reorganization has production on hold for the time being. Apparently our partner called it quits and he was the bikeowner.

TURNER T-LITE

Our test T-Lite arrived in early March as well. It's a black Mach large size T-Lite with the following equipment:

T-Lite 1995.....	\$1099.00
4-Step option.....	\$100.00
4-Step gear.....	\$50*
Shipping 1995 great.....	\$40.00

The bar-end upgrade usually includes bar-end, bar-end shifters, though ours had bar-end only with Twist Grip shifters mounted on the handlebars, while the handle levers were mounted on the bar-ends. This

This is the Schwinn BackDraft!



- On-Board Computer
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- Multi-Stage Resistance System
- Anytime Evolution™ Fan
- Padded Handlebars
- Second Stage Belt Drive
- Built-In Wheels
- Serial Number

The incredible Schwinn BackDraft Recumbent Trainer. Our test unit was supplied by Bob Corinne at the True Wheel in Hialeah, Fla. Give Bob a call at 305/788-2493 or see your local Schwinn dealer (though they may not be up on this incredible model). Read more about it in *Ballistics* (this issue) and PCN248.

is an odd and potentially unsafe setup. Luckily, this option is not generally available to customers. We have removed the bar ends.

In the two months we've had the T-Lite, it's become labeled a problematic bike. There is a rear wheel spacing problem, missing wheel spacers and loose caps and cones. The hub problem was taken over of thanks to Winter Wood in Kent, WA, though we're not convinced that this is a one-time deal as the problem returns to the homologous frame drag-out thickness and incorrect hub spacing to match the frame's dropout spacing. This is a design issue that needs to be worked out.

The Turner chain filter is among the scariest that we've ever experienced. Some owners are spinning the stock filter in an ATP Vision B-40 model (see T-Lite in B02416).

There has been one bad problem and we are giving him some time to respond, and replacement parts or an updated bike.

WHEELLINEAR CLUBE

We expect one of these any day. This bike is built by Linear and sold as the Wheel NoSide (derived from Wheel only) or as the Linear CLUBE (available as Linear dealers everywhere except Wisconsin).

The only real difference is that the Wheel version has slightly lower price/above \$500 and they are working on custom options such as a Zuppre fender and bar-end mounts. Wheel will also do custom opt. We even have a picture of one that has a drilled-out frame. Bikes are in stock and available now. We hear that they are selling quite well. Look for our test in B02488.

W4WHEELS

Not one is scheduled, though we are confident that it will happen. It seems under response to the "brakes" patch coverage in keeping them happy. We've only one picture of this bike, so don't ask us about it, ask W4Wheels to send a test bike. ☐

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The Vision Zipper & Poncho

In an area like the Pacific Northwest, rain is a way of life....

Story & photos by Terry Parker

In an area like the Pacific Northwest, rain is a way of life—especially on the wet, western side of the Cascade Mountains. I was used to the moist conditions at least I thought I was until last year. During the 1999 Seattle-to-Portland Ride, all of the riders received a torrential baptism on the second day of the event. That day was one of the “sit-up-your-a**es” kind of downpours. Recumbent riders, because of their generally lower profile, suffer more in wet

spots than still wanted to plug me. I made the trip out of an old mountain bike inner tube attached with judicious and tasteful use of some black duct tape.

Next, I purchased a chair from Vision. On my bike with its configurations, the chair provided me with warm legs and dry feet even in the most vicious deluges. All the claims about aerodynamic advantages of the chair appear to be true, but the com-



fort is the cold and rain turned out to be the chair's strongest selling point for me.

My continued search led me to try the Vision Rain Poncho. This bright yellow, coated nylon poncho is made to work with the Vision chair. It attaches to the chair with black nylon webbing straps at two points. One strap extends over the leading edge of the chair and snaps on to its supporting framework. A snap and buckle system also holds the poncho over the rear third of the chair. Both of these attachments are

good rain jacket or pants, something else might be required.

flowing through the zipper. The zipper, incidentally, is accessible before to allow for adjustment while riding and for easy entry and exit while stopped.

No, how does it work? I've had lots of opportunities to use the poncho during the monsoons of the last several months, and I find it convenient and practical. It makes the sun in the bag problem, it keeps my hands dry and warm, and it's easy to take on and off. My poncho is subjected to provide enough freedom on



group rides. We get the rain from above, but we also sit in the spray zone from other bikes. I ride my Vision R-41 LAW ASS on that STP I had all the requisite rain gear, but I needed more as well in search of better protection—except for a drive role.

The first addition to my bike was fenders front and back. This kept me from being pelted by my own spray. My front wheel is a 16", and I found I needed a little rain and mud flap extending from the back of that front fender to block the pesky

When I ride in the rain, I almost always have my sunglasses on except when I'm caught by surprise or when my ride is short enough to not care about the moisture. Down with the fanning and the fenders, I did notice that water pooled in my lap and that my gloves would get soaked quickly. If you've got good sunglasses, the inconvenience of having a lake in your laps is no big deal, but if you lack any—where or if you are caught without a

secure and easy to connect. Positioning buckles on the straps allow you to customize the fit for you and your bike. The poncho fits over your head and drapes over your shoulders. The rear of the poncho is held in place by being between your back and the main seat. Vision has attached a yellow lycra extension to the back of the poncho so that you can easily reach behind your back and pull the lycra flap down to position the poncho on your shoulders. There is an ample, zippered opening for your helmeted head. A flap with a velcro closure keeps rain from



it to flow water to run off. I don't flip inside when I'm in a flat descent. The yellow color increases my visibility as well.

I see hard-pressed to find disadvantages, but here are a few thoughts. In really splashy conditions, the poncho won't protect from spray entering from the sides because it does not fully enclose you, and is not intended to do that. With the chair, fenders and rain poncho, however, I've ridden for close to an hour in light rain in street clothes and stayed virtually dry.

The poncho doesn't allow you



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to use your feet, and other people who need to look at the pedals to get their feet connected might find that disconcerting at first. I had no problems with that myself. People with mirrors set up low on US bikes will have their rear view obscured. A better mirror might be necessary. With my AIS arrangement, I have the mirror mounted on the end of the handlebars. It extends beyond the edge of the handlebars, so visibility is no problem. Vision wisely suggests to try this recumbent in controlled situations before using it on a regular basis.

The price for the recumbent is \$100 from Vision the Vision Zipper fairsing is not included, though necessary. I think it is worth the price if you have to regularly deal with the capricious weather like ours here in the Pacific Northwest. My commute in the morning is at times dry, and I don't always bring my rain gear. On my way home in the afternoon, the

weather often takes a turn toward the soggy. I can quickly attach the post-ride and get home in my regular clothes without being soaked. I always carry it with me.

I'm not sure if the recumbent adds up to my aerodynamic efficiency, but it's as close to a streamliner as I'll ever get. The riding on my LWB is aerodynamically pleasing, and the posture seems like a natural extension. Vision has created a practical piece of equipment here in this dandy little recumbent, and it's worthy of your consideration. The only suggestion that I would make is that the sides of the recumbent are an excellent place for some reflective material. I would increase your side visibility in dim conditions. In the final analysis, my ultimate test for equipment is whether I use it a lot. I do. It's always on my bike in use or in my rack bag. I don't leave home without it. ☺

Going Hybrid

by BJ Stress

It seems that no matter how scientific, rational, futuristic, forward thinking and open-minded someone considers themselves they can still be offended by something too unusual....too far from their comfort zone. We Roadheads have been long observers of this for years. We ride unusual, futuristic, forward thinking bikes. Are we embraced in projects and reviews by the cycling community....Hardly! It never fails that we offend other cyclists, thinking of themselves as open minded, but turning out to be "punks." We are accused of cheating through use of such technical as "aerodynamic" and "comfort." Our futuristic bikes, by mere presence, can offend these people. It doesn't matter how much carbon fiber or titanium is in the composition of their bike, or how fast, fast or comfortably we can ride. It doesn't matter that it is all about fun, exercise, environmentalism, and most importantly a better, more appropriate, mode of transportation. We are still way too far out there for these people to comprehend.

Over the years I have dealt with the occasional questioning of these individuals in many ways: anger, sarcasm, rhetoric, and finally just by ignoring. The fact that the public is beginning to accept recumbents says the way but the critics are still out there. I like to find that these individuals have brought Roadheads closer together as a group, bringing in a brother/sisterhood of sorts. Well kids, over the summer I found a totally new way to bring out the cycling pros, and this time some of them are recumbent riders. How is this possible brother BJ? Easy, take your bike and add a motor on it!

WHY?

Why is the world would someone want to take a perfectly good bike, especially a recumbent, and stick a motor on it? Well there are many reasons. Generally the idea of "Going Hybrid" is to allow the rider a greater top speed, make hill-climbing and/or longerways with the same effort. The concept is that you will pedal, but get a power boost. It's not an effort to turn a bike into a motor-cycle though some of those units can almost turn your bike into a moped. There are some reasons for going hybrid:



Dimension Edge All on a Mission—BJ Stress

1. Commuting: If you live a long distance from work or need to arrive punctually preparation free.

2. Hills: Hills can be fun to climb but can also reach limit your distance.

3. Special needs: Many riders go to recumbents due to a physical problem. An auxiliary motor can allow a rider to keep up with a faster group.

4. Touring: Crossing the Rockies, Great Plains or Appalachians could be in reach of more people if they had an assist for the more difficult sections.

5. Environmental impact: The proper way our put contaminants on bikes that they would not otherwise ride. Also a small motor, electric or gas, would have much less negative impact on the environment, than an auto or truck.

Here's a good example. A few years ago John Titz rode his recumbent on a line of the east coast. He had built an motor using a tiny two-cycle gas motor geared so that it was only good for speeds under about 10 mph. It was used primarily for hill climbing and consumed only about \$1.1 worth of gas for the entire trip. Obviously this application worked

out very well as he had the auxiliary power when needed and was able to cover a great distance while using a very small amount of fossil fuel.

TYPES OF HYBRID ASSISTS

As more and more power-based motor assists come onto the market the selection can get confusing. It is important to first consider what will be the unit's main use. Long commutes? Touring? Short jaunts to the market? The unit can be tailored to the usage. Do you want just a boost on hills or do you want to greatly increase speed over long distances? Do you want the flexibility and high power of gas or the clean quietness of electric? Over the summer I took the opportunity to study and use as many of these hybrid units as I could. So is border BJ now a confirmed "Hybrid Headliner"? Not just yet...but I am considering it very strongly.

DIMENSION EDGE

The Dimension Edge motor kit is designed to mount to most traditional bikes. It is light, at around 10.5 pounds and powerful at two horse power. As with most kits, the motor unit drives the bike through a friction drive but this unit has a system

to engage and disengage the drive wheel. When the lever is engaged the motor unit forces it's urethane rollers onto the bike's rear tire. Friction drives keep the unit simple, light and fairly reliable. The Dimension Edge drive wheel is a 1-1/4" urethane roller mounted onto an extension of the motor's drive shaft. Urethane seems to be a good choice as it has high adhesion and wears well. The motor unit mounts similar to a rear rack. There are two, two piece struts which screw on to the dropout rack eyes and then a front mount which mounts to the seat post (on a traditional bike).

We chose to test the motor unit on a '90 Motus Revolve as the rear triangle is similar to a conventional bike, and the Revolve is a very strong, though heavy, bike. Mounting the motor unit was not overly difficult, but did require some fabrication and modification of new front brackets due to the lack of a dropout. A bit of bending and drilling of a new aluminum bracket and the motor unit was on the bike. Next we had to mount the throttle control and engagement lever.

I first mounted the engagement lever to the stem as it would be on a conventional bike. In testing the action of the lever I found it was tricky to reach so it was moved to the frame tube forward of the seat. The cable and housing went too short for a long wheelbase, and so a tandem brake cable and longer housing were substituted. With the engagement lever now mounted the throttle control was next. As with the engagement lever the throttle control cable/housing were also too short and a tandem derailleur cable and matching length of housing were used. The throttle control unit is actually a generic, non-indexing mountain bike thumb-shifter. We mounted it upside down under the handle lever and were able to control the throttle using the thumb and forefinger.

After mixing of a half gallon or so of gasoline/petrol with a good quality synthetic two-cycle oil I filled the tank. This was an immediate problem as the angle of the motor unit and fuel tank would only allow the tank to be 50% full. Undesired, I engaged the choke, flipped the top power switch on, and began pulling the starter rope. After five or six

pulls the motor started and killed along happily like an anxious leaf blown off a full wind storm. I allowed the motor to run for fifteen or so minutes at a fast idle, as a preliminary break-in period, and about off the kill switch. Now it was time for a test run.

I whizzed the Revvelli out onto the street and pedaled up to about 30 mph, revved down, and pulled back, the engagement lever. The drive wheel ran the tire but was not tight enough so the tire slipped and the motor didn't start. Back to the shop for adjustments and out on the road again. I repeated the same scenario, and this time the motor fired easily. I slowly increased the throttle to about half-open and the bike sped easily to over 20 mph. At this point pedaling was almost useless. The motor had much more power to speed along than my leg muscles could supply. A few laps around the block and I decided to open it up to see what top speed would be. I shifted the bike into high gear while pedaling and increasing the speed until the gears ripped out, but the bike kept accelerating. By top speed we clocked the bike at around 38 mph, but trust me, it felt like I had just taken an G's on the space shuttle. This was my last. The fact?

Also I had discovered that in trying to make runs at speeds lower than 7-8 mph the motor would stut out unless disengaged. With the first test over it was time to go back into the shop and work out a few of the bugs.

First I loosened the drive wheel and checked it on my lathe. The surface is cylindrical and the diameter was 1-1/4" by about 2" wide. I cut the wheel down to a 1" center and rounded it into a concave shape. The outer edges remained 1-1/4" but the center was now 1." This, I felt should gear down the motor and allow closer mesh and top speed, while the concave shape would improve the contact. While I was doing this my riding pal, Gianni, fabricated a new front fender allowing the front of the motor unit to disengage and the tank to hold more fuel. I then installed a small spring on the throttle cable forcing the throttle to return to idle when released. Installing the drive wheel and readjusting the drive contact and the bike was ready for the main test, the seven mile commute from my shop to town.

With a small backpack sling across the back of the seat and a newly full tank of fuel I started out. My shop is situated in a main industrial area on the outskirts of town.

This made for a good run area with few stop lights and light traffic. Riding along toward home here was fairly effortless. I burned about 40 minutes at between 15 and 20 mph which allowed the bike to feel quite safe and the motor to stay within a good operating range. The typical scenario would be: I would see a stop sign or light ahead and disengage the motor unit at about 30 yards and brake to a

The constant engaging and disengaging became a dominant and I was happy to shut off the motor while at one of the law stoplights and finish the ride safely under my own power.

Over the next two months we rode the lighted Revvelli quite a lot during errands and in a couple of more commutes with no real reliability problems. The adjustment status needed occasional minor adjustment

built, U.S. made, light and very powerful. If using a good synthetic two cycle oil the mix can be cut as small 50:50 to 1 ratio and smoking is minimal. I would expect this motor to run well for a long time. We didn't check the fuel economy but after idling in the garage, found it to be good. Dimension Edge claims you can get over 200 miles per gallon and I feel this may be possible.

Overall I was reasonably pleased with the kit. I did have to be modified to mount but we Roadheads are already adept at adapting wedge bike parts and accessories for our own benefit. The finish and overall look of the aluminum frame and housing were very industrial and unapologetic, though powder coated units are available. While mounting the motor unit I found the inner edges of the housing were very sharp so I placed a 2" gash along the pain of my left hand. This since has been covered as all the units are now laser cut as opposed to shear-cut. The rear struts are also of a thicker gauge which should reduce bouncing on rough roads.

Can I recommend this product? Sure if the user understands and accepts the quirks as well as the benefits of adding the Dimension Edge motor kit to a bike. If you live in a rural or semi rural area with minimal stoplights and lots of open road the unit is great. It allows someone to cover long distances without the worry of the battery going flat. Also someone with a physical or stamina problem can benefit by the hill climbing capability. Being that the power is gas derived it is possible to cover long distances using the unit as fill ups are only a service station away, just carry a small bottle of two cycle oil. Also at \$289 the unit's cost is reasonable as compared to some of the electric bikes on the market and it is much more powerful. The Dimension Edge people are very enthusiastic and willing to work with Roadheads to meet their needs. They will custom mount kit on your bike if you are willing to ship it to them.

THE ZAP

ZAP (standing for Zero Air Pollution) is one of the children and most successful in the hybrid conversion market. They have been building units for a few years and are one of the better known. The ZAP consists of: the power unit, which mounts over the rear wheel, a battery pack, made to fit into the triangle area of a conventional bike, and the two speed/pedal unit. The power unit is basically two identical elec-



It's still a peddle-powered govt car—no stress

stop, then sit with the motor killing until the light changed and pedal away, under leg power, to about 30 mph, engage the motor unit, and accelerate to my cruising speed of about 35-30 mph. At this speed the motor was at just over half throttle and at its best efficiency.

The one small hill in the area presented little problems as I simply started pedaling to assist the motor unit and easily glided over. The problem came when the stoplight density and traffic increased. The new riding procedure became laborious and detracted from the main awareness needed for riding in heavy traffic.

and some belts needed looser due to vibration, but otherwise the unit generally worked well. The long length of the struts mounting the motor unit proved to feel wobbly on rough roads, and allowed the motor unit to bounce when not engaged. At first, the motor's sound is quite irritating. Not that the motor is loud, it is actually fairly quiet when you move along at a reasonable speed but still it is a gas motor and it stoplights the sound is very noticeable (if you think you get noticed on a road bike as stoplights, try a road bike with a motor).

The beauty of this unit is the motor. The bike two-speed is well



DriveShaft Edge kit on a Brevini

via motor connected by the drive wheel. In this way one can avoid the side of the bike's rear wheel. The battery pack is fairly large but mounts well on a traditional bike. The switch setup is a simple toggle.

I had the opportunity to take a few laps on a ZAP equipped mountain bike this last spring. The setup was fairly easy to use with little practice. The first thing I noticed was the unit's bulk. I don't have an accurate weight but would estimate it between 20-25 lbs. It does make a noticeable difference in the handling of the bike and nearly doubles its weight. Not that the bike handles badly, just very heavily. The second thing I noticed was the quiet. The bike had street slicks and the motor made very little noise. I was slipping along admiring the quiet and before I knew it was cruising at nearly 20 mph without pedaling. It seems to be a fairly low setup. ZAP states that the unit can give up to a 20-mile range on one charge. There are no mounted rubbers that have mounted ZAP units on their bikes and given them considerable use. In my view, with a little work, it could easily be made to adapt to most situations.

One drawback I felt was the instability of the rider to disengage the unit through the. If you are going along without the "power on" the unit is still engaged and you pedal pushing the drag of the motor. The drag is not horrendous, and you are recouping the batteries, relatively, but still effective disengaging would be a nice option. ZAP has had quite a bit of success in hybrid racing electrically and in Japan with two world records. Also they have successfully confined many police mountain bikes with specially modified units. If you want a fairly long distance electric unit offering good speed, and don't mind the added weight, the ZAP could meet your needs. Like the weight the list price for a ZAP is also fairly, with a basic unit starting at \$499.

HAMMER BY CHROMOS

Unfortunately I have not had the opportunity to use a Chromos Hammer. It is electric like the ZAP but otherwise there are few similarities. The Hammer is light, at about 7 pounds for the entire unit including battery. The battery is an oversized water bottle type, similar to some lighting systems, and takes little room on the bike. The Hammer is meant as a hill rider with a range of 5-12 mph.

I have had no luck in getting Chromos to return my calls. I can't say for sure whether they are still in business or not.

EROSMINI INSTRUMENTS

The EROS is perhaps the best

deal on the market, at least for electric. It is simple, versatile, offers lots of options and has the best cost. I have used two of the kits to convert bikes I have built. One was a custom Mountain mountain and the other was a cross of mountain bike golf cart. Both worked well and were very reliable.

The motor unit of the EROS appears to be the same as used on the ZAP except EROS uses one motor instead of two, and thus the EROS is not as powerful or heavy. The EROS is a booster system, that when mounted allows the user a boost on hills as well as cruising speed up to about 15 mph. Weight of the kit is also pretty good at about 12 lbs including the battery pack. Also there is an option where one can control that allows the unit to be disengaged when no-riding or power assist is desired. The kit comes with a simple mount to attach the unit to the seat tube of a conventional bike placing the drive wheel on the rear tire. This will not work on most mountain bikes but an adapted mount can be made to place the unit similarly on a recumbent or you can order the optional front mount allowing the unit to be placed on the front wheel. The battery pack is likewise designed to be placed on a conventional bike but I had no problems making minor modifications to mount it elsewhere. The power switch is a simple trigger which velcros on the handlebar grip. There is one speed only.

Installing the unit I found that an average scenario would be: riding along with the unit disengaged while on the flat, engaging the unit with the power on when coming to, and climbing a hill, leaving the unit engaged with the power off on the downhill, and disengaging the unit when back on the flat. If the engaging and disengaging became a problem in heavy traffic, I felt the unit engaged and just pedaled along adding power as desired. EROS rates

the unit as an 8-10 mile range of constant use while pedaling but this should easily be more in practice. I commented about seven miles each way in this manner and found I need only charge once a day. I also enjoyed the quietness the unit offered and found more people had no idea the bike had a motor in use.

When building up the above mentioned bikes I found Joe Stravinos, owner of Omni Instruments and designer of the EROS, to be very helpful and open to recommendations on the use of his kits. The EROS can be ordered as a complete kit or in different stages of completion. For this I also will individual components. This is great for the selflessly tinkering home head. The basic kit for the EROS starts at a very reasonable \$199. An has also been built working on two new systems due out in the spring. The first will be similar to the present unit but offers better efficiency at lower weight, and the second will be a super compact system similar to use in the Chromos Hammer. □

CONTACTS:

DRIVE SHAFT EDGE
2600 Virginia
Billings, MT 59102
Phone#406245-5380
http://www.stp.net/edgkit

ZAP POWER SYSTEMS
117 Morris St.
Sellersport, CA, 95472
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The Dimension Edge Power Kit

Story & photos by Linda Smith-Weinberg

Since becoming a fan of recumbent travel and living around the hills of San Francisco, I have been looking for auxiliary power means for a recumbent to regulate the up of the hills.

Electric vs. Fuel

I began by reading an electric auxiliary power review of a Zap-equipped Time Easy in the RCN last year. I then went to the 1996 Anaheim Interbike trade show and studied the two electric and one gas-powered alternatives represented there. Since I was in a research mode, I thought I would contact electric representatives at one of the electric power booths that had made a deal with Sharpers Image for his folding bike and electric motor and was not interested in orders less than 200 pieces; actually he did not even know what a recumbent bike was, nor did he seem interested, unless I wanted 200 or more, so I stopped that pursuit. At the other electric-power booth, a company was also only interested in large quantity sales or selling me a manual about the history of electric power for a few hundred dollars.

At the Dimension Edge booth, I met Robert and Kristin, who had already sold a gas-powered engine to a Vision customer, would sell in any quantity, and were willing to work with the customer. After reading their material, I became even more interested in this system as it offered the ability to start from a standstill manually as well as by a power-grip handle from a relatively slow speed pedaling, compared to the electric versions. I was told that an electric would require a speed of about 10-15 MPH to initiate the motor and continuous pedaling.

For a little while, I was thinking that I shouldn't be using fuel for the environment's sake, but the fuel economy is such that Dimension Edge claims that you can achieve more than 200 miles per gallon (which is about 100:1 gas tool), or less than one cent per mile (including oil). The fuel tank has a capacity of 3.5 cups of fuel.

One of my concerns with the electric motor had been that there would not be sufficient juice if I needed it until the next charge or would have to carry around supplemental, heavy, large-batteries. I could always get gas and oil at a gas sta-

Installation

There is a detailed 10-page step-by-step installation manual with photos and drawings included in the original package if you've mechanically inclined and patient. Last recently, a rider has been prepared for

steel handle. We were then in touch with Dimension Edge, who stressed the importance of having the handle pull toward the rider. Since we originally received our cables, the handle has been improved to have other parts that we found problem prone; all have been made tougher.

A Vision dealer reported to Dimension Edge that he mounted his handle on the captain's seat and had success with it. We'll have to see how he did it and maybe we'll revise our setup.

Start Your Engines

To start the engine, push the switch on, then you can manually pull it in or you can be idling and engage the start-up handle when you are traveling at slow or 5 MPH (maybe at higher speed if the engine is not warmed up). Dimension Edge says that when engaging the engine on a tandem, for safety's sake, there should be a pause in pedaling. Once the engine has engaged and your hands are back in directional control (once important if the captain is engaging), then you can pedal as desired.

Our first test ride began in a large parking lot and moved immediately to a trip around a lake (Lake Merced, for you locals). At just about 7 miles per hour, I turned on the motor by pulling the handle which simply forces a drive shaft into the rear tire; the motor began to run almost magically. This sound the motor makes is comparable to a leaf blower and of course fluctuates, depending on how much gas is administered and what level of surface you are traveling (uphill, downhill, level). The sound that the motor made and the fact that it was moving my husband me so quickly around, without pedal power, made us laugh and giggle, or maybe for me it was the slightly tickling sensation I felt from the motor behind me. Once the motor is warmed up, you can then it down by closing the throttle and disengaging the drive shaft (moving the handle forward) and you are able to coast at a slower speed. I found if



View from right side. Dimension Edge system is placed on tandem stoker's seat. Alternator handle is on captain's right side. Note that cable is looped, but would be cut down to be in an straighter line as possible.

tion. Eventually you have to replace the electric batteries (like any battery); while on the fuel system, the gas motor just needs oiling, carburetor adjustments, and the occasional spark plug.

I ordered the power upgrade with the higher RPM (4 to 3.9 RPM; an additional \$29) as I wanted to see this cost on the extreme end of a Vision V8-82 tandem for my husband and myself. The standard motor is 3.65 and costs for \$189 plus \$18-\$20 shipping. The entire system weighs 10.5 pounds (without gas).

The aluminum engine mount fits on like a toy rack; there are six easy-pull jobs in bright colors (red, pink, blue, purple) and black, but they are additional in price and went out of stock when I placed my order. We have the plastic alternator, which comes with protective white plastic covering. We plan to spray paint treatment with either black paint used on barbecue, heat resistant,

installation procedure (A/B/C/D) was used as a model for the recumbent version; you can pay \$15 in one or pay for it, return the video, and get a refund if I haven't seen the video).

Although we spoke to Dimension Edge prior to receiving our unit and they knew what application we were going to have, we still had to make some parts for ourselves as the system did not work well with the Vision stoker seat handle. They tried to provide us with custom fittings including the longest cable they had, but it did not reach as far as the captain's seat on our setup. The design of the handle was such that it was difficult for me, as the stoker, to engage with power using the handle under my seat while riding in a recumbent position. My husband explained the aluminum handle since I bent it by pulling my entire body weight against it. When we tried relocating it to another position, we replaced the part with a



View from the rear. Darker drive shaft is visible at top of rear tire. Fuel tank is plastic container to left of rear tire that levels to stable through counter.

we came to a very slow speed or stopped suddenly, the motor would stop but would start as soon as we accelerated or started up again.

Another concern I had with this engine was that the sound of the motor would be offensive, but seemed just in front of the motor or standing on the street listening, the sound is not that noticeable and not as loud as those dirtbikes with motor cut, or chains, motorcycles. However, communication between the captain and motor is affected; the captain can hear the strikes, but not vice versa, but that is also directionally affected. We have developed some hand signals, but have also used voice-activated walkie talkies (but that's another story).

Adjustments

After our second outing, we became aware of how important it was to make sure all parts are checked to see if they need tightening or other adjustments before each trip; the vibration of cycling and running the motor affected some parts loose. On our next, as we rode along, we dropped the drive shaft and assembly into the street, but not before making the plastic drive shaft. Fortunately the package had included another engine drive shaft. We could see that the drive shaft we replaced had not been covered on the rear tire since only one side of the



View from left side. Dark portion is the motor; lighter shape below it fuel container, and rectangular shape at top left is the aluminum mount.

drive shaft had melted and deformed; we found nothing had happened to the rear tire itself. There are specifics in the printed instructions about the wear and when to use the dry-weather drive shaft versus weather drive shaft. There is also a warning about sea-gravel, check valves, and oil leaks. Once we had correctly fit a couple of bumps and the support legs located the drive shaft into the bearings. We had to adjust the legs with tools before we could continue as the drive shaft had locked down.

There is a Remote Kill Switch included in the kit, which we have not yet installed as we are planning to test this motor on the LWB and SWS Visions. On the toolbar, we eventually plan to mount the Kill Switch with the captain, although the cable is not long enough, so we will replace or splice it. Once the switch is installed, the On-Off button on the engine no longer functions, which means the engine is always ready to go on with the engaging of the handle, unless you buy and install a Terminator as an electrical stop.

When you order your engine either through a dealer or directly from the company, you can specify which one vehicle you want to come with your engine. There is also a kit pack available (\$40), which includes all the types of wheels including the new aluminum wheels (a rough and hill terrain), the all-weather aggressive street for wet and dry situations, and the off-road wheel (dry, basic conditions).

To eliminate the unknown intricacies of installation, you may want Dimension Edge to give you custom-made parts for your particular mountain, for about \$50. They are also very amenable to helping make changes necessary to fit any bike and open to feedback. There is a full year warranty on all components against breakdown; the engine has a warranty of 90 days all through Dimension Edge.

Speed and Hill Test

Finally, with some improved parts, a new drive shaft in its proper place, and all adjustments and inspections made, we ran a test with a speedometer at the lowest throttle speed, we were between 17 and 25 MPH, depending on the motor, with no pedaling involved, two heavily-clothed adults, everything included at a total weight of about 350 pounds. Since we were traveling through Golden Gate park, this motor did not feel comfortable going faster than 25 MPH, but it seems that speed is no problem. As with all gas-powered vehicles, at higher speeds, fuel consumption will increase. On short distances, we found with pedaling we were nearly doubling our speed.

The main reason I wanted this engine was to be able to climb the hills in our home approach at the end of a pleasant ride. It's been a strain when you've been out riding (with-out your motor) and you've faced with those major hills to climb to get home; well, this little engine could - it passed my test. With the engine running and slight pedaling, we went up the hills in no time. I think my husband was more interested in this engine with his need for speed; in

both of our minds were met and we haven't yet edited the fuel tank.

If you contact Dimension Edge, please let them know you read about them in the *Mountain Cyclist News* and have your bike specs on hand. You can reach Dimension Edge at 2400 Virginia, Billings, MT 59122. Email: edge@edge.com, Fax: 406/258-8155, Tel: 800-625-6485, 406/240-5180 ☐

SENTENCE HOME: Though possible may adapt to bicycles, their use may vary somewhat or cause greater component failures. You should always practice and use with your specific manufacturer.

From what we can tell, custom power-kit mounting is not for everyone. If you are a motor or mechanical by nature this project could be for you. Dimension Edge is working on written details for recommended model-specific installations at this time. (The only conclusion that we've heard of that doesn't work is the diary *Harley Daily*.)

Our best recommendation is to seek out a model or dealer that has had power-kit mounted successfully. Dimension Edge and People Motors have adapted the Edge, though we are not aware of Edge's policy on this. Dimension Edge also sells fitting bills with kits installed.

This report is not an endorsement of the Dimension Edge product, as we don't have our ride it. However, on other auxiliary power-kit motor has tried harder to work with our bike industry and we have companies that are committed to the mountain world.

There reviews are featured submissions to RCN.

A Composite FWD

Story & photo by Tom Traylor

I have never been overly concerned about comfort when designing a bike. It's not that comfort is unimportant, but for me it has always taken a back seat to performance. As far as I am concerned any recumbent is so much more comfortable than an upright that there is no need to worry about it.

This is the first bike that I have designed purely for comfort. It has both front and rear suspension. I was determined to build this bike without compromising the performance. To do that, I knew I would need to lighten the frame to compensate for the extra weight of the suspension.

I have had previous experience with composites when building my tandem and streamliner. I decided to go with a combination of carbon and Kevlar. The front section of the bike was made from the molds I made for my tandem, so that part was quick and easy. The rear section of the frame was another story. I figured that I would have to make some changes, so I decided not to make a plug and mold. This takes a long time and it's very hard to make changes. Instead, I decided to do a one-off frame. That means I curved the frame out of foam, and then covered it with carbon and kevlar. This allows the builder to make changes quickly and easily if need be, but it's harder to get a good finish, and of course, if you want to make more than one bike, you're out of luck.

All of my bikes are FWD (front-wheel-drive), and this presents a real challenge when it comes to front suspension. There are several ways of doing it, and what I finally settled on is what I will describe as a sliding-link suspension. The white fork is connected to the steering tube by two arms of unequal length. Because of this, the front section does

not simply move parallel to the steering tube, but through an arc. The center of the arc is located at the bottom bracket. As a result when the wheel hits a bump and rebounds upward, the bottom bracket and pedals do not. This was necessary because I didn't want the whole weight of the front

as slung back into the fork and around the stem which allows the seat to move up and down, but not side to side.

The rear suspension is pretty simple. The rear wheel is mounted on a horizontal composite fork and is hinged by a bolt under the seat.

able, but can be changed depending on the size of the chainring.

I wish I could make off a long list of impressive components, but as in the case with all of my bikes, the components are either used or custom-made outside of the line. I am still using friction hub-and-nut hubs. I bought a bag of three-eighty years ago for three dollars a set. I used the last

set on this bike. I have no idea what I will do for the next bike, as I love these shifter. The brake levers are from the ProBike catalog. The only other component I bought was the rear derailleur which is a Shimano Deore XT with a long cage. The front derailleur is made from an old rear derailleur. The gearing ranges from 29-132 inches. I used a cassette hub for the first time thinking it would be easier to change the gears, but not so. They need to self-adjusted gears, but now they only self the whole cluster that is moved together. Although the



section, and the weight of the chainring to become part of the suspending weight.

This suspension is activated by a single spring, which is connected to the bottom bracket. All of this is inside the fairing, just in front of the stem. In fact, so much of the suspension's insides, I have a hard time convincing people that it really does have suspension.

This suspension has worked well, though I did not use a number of unforeseen problems. The primary problem was excessive movement of flex between the handlebar and the front end. This is caused because the outer front section is hinged to two swing arms and four bearings. No matter how close I machined the bearings or how strong the arms were, there was still too much flex. This was finally solved by mounting a boss on the stem, then bonding

An aluminum block is mounted between the fork and main frame. The front suspension does a good job of absorbing pot holes and rough spots in the road, but here is what really smooths out the ride. I use 24" x 1" shock-bush front and back. I wanted the same sized wheels so that I didn't have to carry two sets of tubes on long rides and it also allows me to shorten the wheelbase and overall length of the bike. This bike is well within the parameters of USCP regulations for racing. The wheelbase is 41 inches, the bottom bracket height is 17 inches and the overall length with the pedal cranks is 73 inches. The chain-stay block in the rear suspension can be changed in a matter of minutes, and doing so will lower or raise the seat level and inversely the bottom bracket. The given measurements are those that I find the most comfort-

able, but they are acceptable, and the bike shifts pretty well.

Overall, I am really pleased with this bike. It took a long time to work out all of the bugs, but it's been worth it. It is so fast in any of my confined bikes on level ground, and slower on the hills. It's also quieter through the chain, and is definitely the smoothest riding bike I have. It's become my bike of choice for all types of riding, whether it is long, short, flat or hilly, fast or just cruising. ☺

EDITORIAL NOTE: Tom Traylor has a worldwide reputation for his FWD recumbents and he is very busy on his bikes. Tom sells building plans for his homebuilt recumbents. Please see 314. Tom Traylor, 23400 Riverside Ave., Trowers, CA 95003.

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RECURRENT NEWS & RUMORS

BIKES "Roadie" OFFERS PERFECT BALANCE OF SPEED & COMFORT

Cervello, OR—Imagine yourself speeding down the road on your bicycle, wind rushing through your hair—all the time—staying comfortably and enjoying the view. With Bikel's Corporation's new Roadie high-performance semi-recumbent bicycle, riders enjoy this ideal balance of comfort and speed.

"The Roadie is a perfect alternative for those who are interested in the Bikel's comfortable cruising position, but desire speed and power for climbing and sprinting," said Andrew Linton, Bikel's race and endurance. "I was pleasantly surprised how well the Roadie performed compared to other vehicles at last year's World HPV Championships. Consider high placings in all the events, including a win in the 200-meter Sprint, earned me the overall win in my class."

With the enhancements of high-pressure Primo tires, Sun M14A Aero rims, and front and rear dual pivot-clipper brakes to the trademark Bikel's aluminum frame, the Roadie offers a faster, more efficient ride—without sacrificing the comfort of the Bikel's. The Roadie is priced from \$800.

"First and foremost, Bikel's emphasis is on comfort—we have never considered ours as a manufacturer of racing bicycles," said John Moorhead, president and CEO, Bikel's Corporation. "After the success of races like Andrew's, however, we've come to realize that with high-performance enhancements, the Bikel's does hold its own and is extremely quick off the line. We look forward to offering the Roadie to the group of riders who desire high performance as well as comfort."

Bikel's Corporation is based in Cervello, Oregon, where it manufactures both 7- and 21-speed bicycles (semi-recumbent) and a complete line of accessories. For more information on the dollar amount you, contact Bikel's at 1-800-231-6346, 3440 SW Philomath Blvd., Cervello, OR 97333.

OPUS RETURNS AS BIWENKY RETURNS AS

Philadelphiya, PA—8 sleekly Cycle Works of Philadelphiya has just acquired the exclusive rights to produce the Biwinky Viewpoint (formerly Compygrip Opus IV). The Viewpoint is a semi-recumbent tri-



Andrew Linton's race prepared Bikel's Roadie at Las Vegas—Bikel's

den, in which the rider rides recumbent in the front with a full view of the road, and the captain rides upright in the rear with a full view of the road and the rider. With its independent control (padding and hand crank) operation available, the Viewpoint is ideal for tandem teams of disparate class, ages, and/or abilities. Production begins Spring '90. Contact Steve Biwinky at 1-800-233-6348 or <http://biwinky.com>.

FULLY PAIRED GREENSPED TRIKES

Morriston, Australia—Greensped's aim is to produce a Green-

sped Vehicle in which an ordinary person can maintain 50kph, or the urban speed limit, thus providing an attractive compelling alternative to the motor car. It is anticipated that this vehicle will be a practical streamlined bicycle, with or without power assistance.

In 1982 a 104 fitting was fitted to an early Greensped touring trike. This consisted of a lightweight fiberglass nose cone which completely covered the legs of the rider, and was flush with the disc-covered front wheels. A fabric tail was attached to the inside of the nose cone with Velcro, and extended over the rider's

shoulders a pole or rather a tailfin formed by a frame attached to the rear wheel, forming a tow-up shape.

This trike was used successfully in the 1990 Energy Challenge, winning first class, with Gerry Tizard pedaling it, covering 23.6km at an average speed of 28.8kph, through Sydney traffic. A rolling resistance test showed a 1kg drag at 60kph, against 4kg for a similar recumbent trike. And a hill coast test showed a 60kph maximum against 45kph for the recumbent trike. My suburban average commuting speed increased from 20kph to 30 kph.

This body was refined to get in and out of, didn't provide full weather protection efficiency, and weighed a total of 25kg. This work was concentrated on further developing and reducing the weight.

The resulting Sports Tourer and GTR 2020 Touring Trikes proved to be quite successful machines. The growing demand for them has prevented us from building more fittings. Thus we have been working with Don Elliot of Berlin Paints to develop and produce fully fitted ultralight our figure Trike designs. These will have stronger frame, and the Trike Champ Trike class, plus a wider track of 900mm, for use as our tandem trike. Starting in an 80-tooth chainring, Schlumpf 16-tooth-Drive, and Sachs 3x7 into with an 11-28 cassette. The body is similar to that shown at our web site.

In January of this year one was run in the Adelaide to Melbourne Solar Cycle Race via Broken Hill. It came in 2nd, covering 1,500kms in 6-days. The winning trike was also a Greensped trike, using a larger pedaling team, better assist motor, and a much larger solar array, with a Reflex nose cone.

The problems I have found for practical use with the full fitting are the noise inside, stability in cross winds, getting in and out, vision at night in the wet, and condensation. We are working on all of these problems.

A modular system has been developed so that the hard canopy shown on the web site can be replaced with a front screen, removable roof, roll up side screens, and removable tail fin, with a detachable solar panel. This will provide motor noise and wind, less noise, and good weather protection, at the expense of some loss of efficiency.

The next step is to alter the seating geometry to suit the fitted trike, and also to modify the fitting

to improve stability over 60 mph. Also under development is a new 3' 4" tubing, similar to the 1992 tubing, and a full tandem tubing. We now have a Hutchinson solar/electric hub-motor for testing. It will be fitted to a trailer soon for road testing. GREEN SPEED, P.O.#41 3-9758 3541 FoxPole 3-9752 4103. E-mail: greenspd@comcast.com.au

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NEW BIKE SET-UP VIDEO

Wassonville, CA—in our continuing efforts to improve service to customers, we are introducing two

new videos that will be available to customers at no charge. These videos take the user and EE-1 customers step-by-step through the assembly process. It begins speedy and correct assembly with video begins with opening/unpacking and concludes with seating/adjustments. EE-1 owners will receive the approximately 15 minute video covering their new bike; the Tour Day video runs about 30 minutes. Feedback on further improvements are welcomed and will be incorporated in future releases. Our thanks to the many customers who provided input for these first two assembly videos.

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EDITORS NOTE: *Every bicycle's parts and components will not last forever. A word of caution to buyers of any bicycle is that any frame built on fatigue over time and mileage and has the potential for failure. Bicycling Magazine recommends that most owner types who ride ten thousand miles or more a year, should replace their bikes every two years. Factors influencing fatigue are road surface roughness, pot holes, rider weight and load carried, maintenance, air pressure, corrosion from slight humidity or salt air and other variables. Thus it would be hard to predict a definite time or mileage limit. Certainly after ten years or thirty thousand miles any bicycle fork could be suspect and should be replaced. □*

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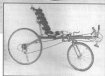
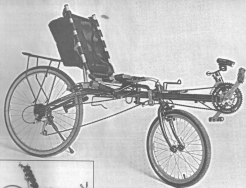
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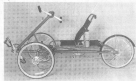
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FREE CLASSIFIED ADS for subscribers. For one insertion: Party wanted, Party for sale, (class) for sale/wanted \$600. Personal ads and Year Parties: \$25/20 \$50 \$100/\$200/\$400. Ads \$250 by mail/email.

AD DEADLINE FOR RCN#46 June 15, 1997.

USED RECURRENTS

FOR SALE: 1994 CONTINENTAL PRISTO 71 Loaded! Shimano front and hub, XTR front wheelset, 27" x 10T gearing, RockShox for commuting, brake mirrors, compact, lockjaw, barstange, 28" x 1 1/2 wheels, Zippier front fairs with body stacking, Speedplay pedals and shoes. \$1800 or B.O. Call Steve at 767(252-2765 (CA/IN)

FOR SALE: TURNER LAMAR BIKE, 1995 USR 7.0 spl., 8in 800 x 71" x 277. Lite Nov, 1500 + shipping. 7.0 minimal phase and 702-594-7900 ext. 231, ask for Steve (IN)

FOR SALE: RYAN HANDEMAK, 21 spl-up for touring, 21 speed Deore XT, Rapidfire shifters, Phil Road car hub, better than new. Call Steve @ 205(400-3434, CA/IN)

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30 words x photo for two weeks = \$50 advertiser \$75 non-advertiser. Call 800(800-4276) for commercial rates. Ads must be prepared in advance. We need 3 photo images of your bike or items to sell. **RCN photo from Pigeon Forge** RCN-Ad, 120-3776, Pigeon, TN 37863.

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FOR SALE: 1996 Black, only 100 miles, 1600. **FOR SALE:** 1994 Race Machine, 21 spl., CityShox, Leaning, small size like others to 27". Low miles, nice condition. \$1150. Fax (760)333-3627 (CA/IN)

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FOR SALE: BERKEE, approx. 2 year-old, 14 speed, lowered seat, 18" tires, alloy rear wheel, \$60, \$300 + shipping. **BOOKERBEE**, 17" 20" 50W, \$200 + shipping. Don't forget! 1982 Morning Star, Loveland, CO, \$2000. Fax (760)566-4913 (IL phone manager) (CA/IN)

FOR SALE: CUSTOM 1995 LIGHTNING P.B. Small size, suspension fork, Zippier tubing, Shimano XT/Campagnolo 24 spl. 17" cog, new tires, mt, pink, under 1000 miles, \$2400 Pick up Sunnyvale, CA. Carol (408) 730-3324, carol@world.com, www.carol.com/ (CA/IN)

FOR SALE: RANS VANS, 21/29 CRG, 12 year, upgraded fork and bar, 3-way fork post, custom fenders, immediate sale. Located in the Seattle area, professional status. Fax Criggle, (408)970-7429 (WA/IN)

FOR SALE: 1995 YERON 6-8, Tel. 202(624-910, 132, x 100cc, new 8 pedals, mt, the new! \$800, James, (904) 583-0417 (IN/IN)

FOR SALE: 207 YERON 6-8 (1995), 1.8 ton, lightweight mt, Tel. 573, Cary, (807)923-5005 (AZ)

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FOR SALE: LINER 1995 with 67 miles, 21 spl., new mt, two 1000 cc cogs, compact-1700. Don't lose! 1995 with 42" frame, 21 speed, like new - \$800. Call 800(800-6786) (California, IL, CA/IN)

FOR SALE: LIGHTNING P.B., 1992, Large size, Blue, Shimano Deore equipped, 18" x 17" front wheel. \$1450-1500. (949)838-6311-4527 (CA/IN)

FOR SALE: 1995 YERON 6-8, Red, 50/14, 132, 3 spl. City-Shox 54T-100, w/160cc, compact-1700. Don't lose! Shimano Deore XT 21 mt, 120 mm, Shimano XC seat/lights, dual bottle cages, 100W tires, 1625 mt, maintenance miles. Excellent condition. Best offer takes it. Seattle, email@pigeon.com, 800(870-3796) (TN) (IN)

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1997 RCN Printing Schedule

RCN is printed bi-monthly on a six issue per year schedule. We have added one issue to our line-up this year by making the '97 Buyer's Guide a single issue instead of a double.

- BC9471—Jan/Feb '97
- BC9488—Mar/Apr '97
- BC9489—May/June '97
- BC9490—July/Aug '97
- BC9441—Sept/Oct '97
- BC9462—Nov/Dec '97

Cyclists not received BC9427 or BC9458 and should have, please call us today at 206/693-7038 or e-mail us at info@rcn.com if addressed we'll provide info as to why.

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A blue Lightning P-38 #733, a blue BikeE #196272, a red BikeE #19080, a purple BikeE (19046), a Black BikeE (19931) and a red EZ-1 (9189) were in the six bikes stolen from People Movers.

LET'S HAVE SOME FUN AND MAYBE WIN A PRIZE

How many words can you make out of:

"PEOPLE MOVERS RECUMBENT BIKES"

Rules: Words must be at least 3 letters or longer. Plurals count. No proper names allowed. Person with most correct words will win a \$100 set of painters (seal and black). Tax broken by random drawing. Decision of judges is final. Contest ends July 1st.

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