

# RCN

## RECUMBENT CYCLIST NEWS

RCN #28

The Planet's #1 Recumbent Source

Summer 1995

### MARK COLLITON TALKS V-REX

Interview by Robert J. Bryant

RCN: Mark, when and how did you get interested in recumbent bikes?

MC: *The first time I saw a recumbent was in the late 70's when I was living in Cambridge, Mass. and I guess that's when I first became interested in recumbents. It wasn't until years later, when the Recumbent Bicycle Club of America (RBCA/RCN) got started, that I decided to pursue that interest and I pretty much dove in head first.*

RCN: How many bikes have you owned? Do you mind telling us which brands?

MC: *I hate to think about how many recumbents I've owned but, if you have the space I'll be happy to list them for you. My #1 bike was a MAVERICK from Ed Roeters with a custom 24/20 wheel set. #2. RANS Stratus-XT which I later added a 24" front wheel to. #3 Home built SWB 20/16 wheel set. #4 Home built SWB 20/24 wheel set. I sold the first two bikes and bought #5 a Counterpoint PRESTO. #6 Lightning MICRO from Gene Lemle. This bike had custom cable stops added so I could use upright steering and a Super Zipper*

....Continued on page 12



### The Easy Racer EZ-1

by Robert J. Bryant

#### EZ-1 EVOLUTION

The evolution of the EZ-1 began nearly twenty years ago in 1975. Over the years, chief designer Gardner Martin, has perfected the LWB above-seat-steering (ASS) recumbent design. He has sold more than 2000 bicycles and over 8500 sets of plans! The EZ-1 is the latest design from the Easy Racers stable. The bike marks a unique departure from the Tour Easy and Gold Rush Replica models as it sells for less than \$800, about half of what a Tour Easy costs and a third of what a Gold Rush Replica sells for.

The EZ-1 is an extremely user-friendly design. It is very easy to ride, easy to transport and easy to learn on. Old dogs who have been riding 'bents for years will appreciate the exquisite handling and respect the proper geometry and the overall thought that went into the bike. You see, Gardner didn't just scribble a design on a napkin over drinks. This bike was an evolution of the CLWB design and of

the Easy Racer tradition. Research was done, prototypes were built and thoroughly tested by Gardner Martin and recumbent racing legend Fast Freddie Markham.

#### EZ-1 DESIGN

In one word, the design is brilliant! The EZ-1 is the classic design CLWB. Why classic? A bridged/ triangulated frame design that leaves no question as to frame strength. Gardner went the distance to build a bike that would be near bullet-proof and trouble-free. Best of all is the fact that Easy Racers is a time-proven manufacturer with the best reputation in the industry.

*"The EZ-1 has a well braced conventionally based frame, it is a long lived product. The frame is stiff, strong and responsive. There is no flex, if anything were to ever go wrong with the frame, it could be repaired easily,"* says Easy Racer owner, Gardner Martin.

....Continued on page 5

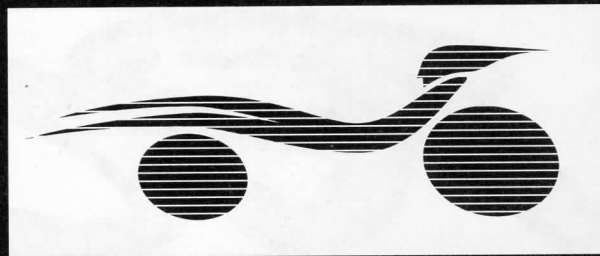
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# Editorial License

By Robert J. Bryant

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## WELCOME RECUMBENT CYCLISTS!

Here it is hot and heavy into the recumbent summer of 1995. As is usual with this time of year, recumbents are in hot demand, and some have long waiting lists—hate to say it, but...told you so....

Our best advice is to call some of the smaller manufacturers in search of bikes or ask about dealers who may have models in stock and available.

There are more big changes on the horizon. Component prices are going up, trade tariffs may come along and increase recumbent prices for 1996. Also, we have heard from more than one manufacturer who is raising prices in reaction to already increasing component and material costs.

## RCN BUYERS GUIDE RECAP

The most expensive RCN issue ever published, in fact, it was more expensive than any three past issues. Did you like it? Some readers did and some did not. Back in the Winter of 1994, when the '94 RCN buyers' guide came out, we were criticized for too much opinion, ratings etc. With the '95 guide, we are criticized for having too little of what many RCN readers have come to know and love, as subscriber Mats Nilsson put it, the "soul" of RCN.

OK, I'll admit it, the 1994 RCN buyers guide was filled to the brim with RJB rants, raves, ratings and opinion—just the way I like it.

Long time RCN readers seem to be split. Some love my editorial, opinions and rants. They love the ratings, critique etc. The other group sees the fanzine approach as hurting our growth, and wanted to see a more professional, cleaner, graphic publication to present 'bents to the world.

For the '95 guide, we had a professional designers help us with a new easy to read design that focused on a very graphic 1/2 page listing for manufacturers who responded to our info requests.

We also did some research on what it would take to get us on newsstands and in bike shops. We figured that RCN #26/27 would be the ultimate buyers guide and way to get recumbents to the fore-front of society. The shops we targeted almost unanimously said they *DID NOT* miss the

RJB opinions.

Despite it's shortcomings we are very proud of RCN #26/27. In the history of recumbent bicycles, nobody has ever published this level of a guide that is 100% devoted to recumbent bicycles. RCN #26/27 offers a great presentation of our favorite bicycles.

RCN #26/27 was an experiment. The idea was to raise the publication up to a new level and see what would happen. Newsstands, books, a tripling of circulation? "Bob, wake up!"

RCN #26/27 will be our last foray into being a *Bicycling* wannabe. And sorry to say, it will be the last buyers' guide as a regular issue of RCN. It is just too big of a job and there are so many models and variations that it is impossible to get enough info in the space and time available. The worst part about it is that it takes up two issues and four months out of the RCN publishing year. In the future we will most certainly cover all new changes and updates but we are exploring other ways to present the information.

For those readers who did not get enough opinions in the 1995 buyers' guide, we will offer a discounted rate on the 1994 guide, RCN#19/20, for \$5 first class mail postpaid (add \$2 CAN and \$4 Foreign). Valid through September 1, 1995.

## LIBRARY DONATIONS

If you would like to donate a new 1995 RCN Buyers Guide and a few sample issues of RCN to your local library, please consider sending a check for \$8 along with the address of your local library to RCN, c/o Library, PO Box 58755, Renton, WA 98058.

## COLOR! MORE ISSUES LIKE RCN#26/27?

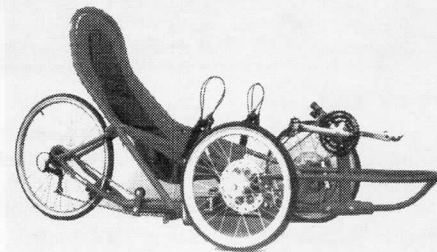
Special thanks to our great advertisers, especially those that made the color cover possible (Rans, People Movers and Open Road USA). As for making regular issues of RCN like RCN#26, sorry, I don't think so! The cost was four times that of a regular issue and the color work was incredibly expensive. We will consider it again when our circulation increases a

bit...well...significantly.

## RCN MONTHLY? WHAT DO YOU THINK?

Well, we need to make RCN profitable enough to get a real office and a paid staff member or two. Realistically, what you will see in the next few issues is a more tabloid/newsletter look, more diverse writing—and writers, more focus on riding your recumbent and upgrading your recumbent, while maintaining even stronger RCN bike reviews. We are also looking into bringing RCN to readers more frequently with 8-10 smaller monthly issues. What do you think? This is an idea that we have been considering for the last year. Let us know if you would like it. If you have comments on this, please feel free to write, email us or call our voice mail box at Ph#206-630-7200 or you can email us at <DrRecumbnt@aol.com>. What RCN also needs is to see support from <non-subscriber> 'bent riders. We reach many, but there are thousands that read friends issues or are aware of us but do not subscribe. What this publication becomes is only limited by the readers.

RCN's growth is not in how many new manufacturers come along or advertise (even though this helps), it is in how many riders decide to read RCN. The readers have the power. RCN is by and for recumbent riders. RCN will focus on recumbent riders as never before. If you have liked RCN in the past or maybe you haven't.... there was a time when there was no RCN to rave about or complain about....stay tuned and I guarantee you will like RCN even more.



.....Continued on page 26

## RCN PUBLICATION INFORMATION

Recumbent Cyclist International is a sole-proprietorship in the state of Washington. Recumbent Cyclist News is 100% dedicated to promoting recumbent bicycles and providing and encouraging communications between HPV enthusiasts, home-builders, dealers and commercial manufacturers of recumbent bicycles. We are the only recumbent-specific news publication in the world today.

**SUBSCRIPTION INFO:** See back cover of this issue for current rates and back copies. Phone RCN at

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Email [DrRecumbnt@aol.com](mailto:DrRecumbnt@aol.com)

## THE BUYERS GUIDE IS WONDERFFUL!

Dear Robert,  
The recent Buyer's Guide is wonderful—what a great job done!  
Sally Walker  
Victoria, BC Canada

## BUYERS GUIDE, BRAVO!

Dear Robert,  
The buyers' guide was the nicest issue ever! BRAVO! Congratulations. I look forward to your next issue.  
Ed Katz, CA

## BUYERS GUIDE, FANTASTIC!

Dear Robert,  
You knocked yourself out! the buyers' guide is absolutely fantastic! We've got it all over our store.  
Eric Ebner, Ranch Hand  
Recumbent Ranch, Austin, TX

## RCN WONDER-BOY!

Hi Robert!  
The buyers' guide is the BEST yet! Keep up the good work. The cover in color...maybe you are going to be the new publishing wonder-boy? I read RCN cover to cover, lend it out, and I keep preaching and touting your great mag!  
Recumbently yours,  
Pete Lardo  
Flagler Beach, FL.

## RCN LIFESTYLE CRUSADE

Dear RCN,  
I've been a subscriber almost from the start. You're all doing an excellent job of communication and education without going overboard on technicalities or a lifestyle crusade. Please continue your vision and the constant improvement of RCN.

Very truly yours,  
Marc Greenwald, M.D.

## CALLING FLORIDA RIDERS

To: [DrRecumbnt@aol.com](mailto:DrRecumbnt@aol.com)  
Thanks greatly, Loose Assemblage of SouthEast Recumbent Riders, LASERR is looking for riders and members. Also will sponsor local chapter, FL, GA, AL. LASERR, 1964 Forest Ave, Daytona Beach, Fl 32119-1591 or email to [fredu@america.com](mailto:fredu@america.com)

Sincerely  
Fred Ungewitter  
Daytona Beach, FL

Dear Robert,  
I am a subscriber of RCN. I want to make a suggestion that might help increase the usage of recumbents. I purchased a recumbent after I had significant back and neck problems. It had become very uncomfortable for me to ride a standard bike. Since using a recumbent I am sold on their advantages.

Recently I had a doctors appointment about continueing neck pain. I asked him if I could ride a recumbent. He did not know that recumbents even existed outside that of stationary models used in athletic clubs.

Based on his lack of knowledge, I assume that there are a lot of other physicians who are also lacking in this area. I would like to suggest that the recumbent industry make a concerted effort at educating the medical field of the existence of recumbents and their advantages.

Sincerely,  
Jeffrey A. Friedhoffer  
Columbia, MD

## Subj: Rans V-Rex commuter bike?

Date: Tue, Jun 6, 1995 8:30 AM EDT  
From: [mckay@gimli.bio.purdue.edu](mailto:mckay@gimli.bio.purdue.edu)

I'm considering buying a V-Rex to be used as a commuter bike for my 4 mile (one-way) commute. I'm considering having a suspension fork installed. Questions:

- 1) Can a rear rack be installed on a V-Rex? How about panniers? I assume so, but all the pictures I see in RCN show the V-Rex without a rack...
- 2) Where are the water bottle cage mounts? Same problem, no water bottles in the pictures...
- 3) I understand that a suspension fork will improve the comfort of the ride, will it also reduce the wear and tear on the 'bent'? It seems like it would due to the absorption of impact shocks that would otherwise be soaked up by the wheel, frame, etc.
- 4) How does the V-Rex handle? I may not be able to test ride and compare it to other offerings due to limited time and lack of local dealers.
- 5) How is the "new" foam bottom, mesh back seat? It looks like a good combination and should be much cooler then the fiberglass bucket seat of my Trice.

Dwight D. McKay

Dear Dwight,  
*Racks with panniers will fit. Sometimes you can install the panniers alone on the seat stays of the bike. I have done this on my Easy Racer.*

*Waterbottle.cage(s) go on the seat frame. It would be possible to mount more on the steering*

.....Continued on the next page

# RCN Crew

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Sheldon Herman  
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Dave Krovetz  
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Charlie Schink  
BJ Strass  
Michael Wolfson

## RCN#28 Cover Models

Katherine D'Amato  
Daniel Bryant (in trailer)

## RCN#28 Cover Graphics

Cover photo by Robert Bryant  
RCN logo graphics provided by Mark Colliton of Kensington Heights Design.

## EZ-1 Models

Marilyn Bryant  
Daniel Bryant  
Katherine D'Amato  
Lyndell Jones  
Fast Freddie Markham  
Gardner Martin

riser and/or lower seat frame if you need more water carrying capacity.

The V-Rex in its present stock variation has a very steep head tube angle (74-75 degrees?). The bike has very neutral/ direct steering. The bike feels high, quick and fast-an odd combination to say the least. The triangulated frame is very stiff, much like a Lightning. The V-Rex is probably more like a Lightning than any other recumbent. The primary difference is wheel sizes and bottom bracket placement. The V-Rex is has a slightly lower BB for user friendliness. I am told that the 37" frame with the 24/20 combo relaxes the head tube angle which improves handling, but raises the BB height and improves power output.

The V-Rex is a bike of many personalities. There have been many wheel and tire size combos and with each one the bikes manners vary slightly. Mark Colliton's original design was a 24/17 performance bike to match his Lightning. Rans introduced the bike as a 700/20, and then with an optimal 24/16. A 17 will fit in place of the 16 and you can get double braze ons and an extra fork to try them all.

Mark Colliton and Kelvin Clark agree that the 24/20 is the best handling version. I have not ridden this set up to know. Rans now offers a 26/20 that would be the best commuter package.

Suspension forks are now available from AngleTech for both the Rocket and V-Rex.

Which ever variation you choose, be very careful about wheel and tire size selection to suit your needs.

The Rans seat is significantly better than the Trice. The mesh upper fits the curve of my back perfectly. The foam base is very nice as well—Robert.

## WHERE'S COUNTERPOINT?

Date: Mon, May 1, 1995

From: waynej@eskimo.com

As the proud owner of a Counterpoint Presto, I was very surprised to find the listings for all of the Counterpoint bikes (Presto, Triad, and Opus) in the recent RCN Buyer's Guide didn't mention the name 'Counterpoint' anywhere.

Just to reassure all of you out there in recumbentland, I talked to Jim Weaver the other day. He is still around, Counterpoint is still manufacturing the Prestos, and they are available through more dealers than just Angletech. I am sure all Presto fans are relieved to hear this.

Wayne Johnson  
Seattle, WA

Dear Counterpoint fans,

Fear not! Counterpoint has not disappeared. The bikes were listed on pages: 11 (Presto) and 39 (Opus). Counterpoint Conveyance (the manufacturer) was listed on page 44.

AngleTech has more than two pages in the buyers guide. Counterpoint did not send us any pictures to use in the guide, nor did they fill out our questionnaire. AngleTech, which has been the primary source for Counterpoint for several years, responded in full

fit in to the issue. Counterpoint has told us that it is the responsibility of Counterpoint dealers to advertise/publicize the bikes. The three dealers for Counterpoint (that I am aware of) are Feet First (in CA), Mt. Airy (in MD) and AngleTech (in CO).

We have the utmost respect for Jim Weaver, Counterpoint and AngleTech. These bikes are shining examples of recumbents and have been highly rated in our publication—Robert.

## SEEKING EASY RIDER?

Dear Robert,

Thanks for the introduction to RCN. I am interested in a comfortable, light-weight tricycle, perhaps like the Windcheetah in your editorial? I'd prefer a trike with seat and chain stays so that I could attach a baby seat for my three year old grand-daughter.

If there are other models besides the E Z Rider 3 (RCM#13) and Trice (RCN#16), please let me know.

Thanks You  
Duke Weeks

Dear Duke,

The Easy Rider trike was a low-end trike that is seems to have disappeared. It was a great trike for the money. We tested it and liked it a lot.

Before spending your money, become an educated recumbent trike consumer.

Currently, the Trice seems to be in transition. At the moment, there are several variations:

- US Trice (different from UK Trice)
- Euro Trice (available from Peter Ross in the UK)—probably the best choice for a Trice at the moment.
- Eco Trike a new Trice like trike from Eco Cycles, the US Trice distributor.
- Trice '96: The newest Trice due out early next year from the UK.

The Windcheetah is a legendary racing/high performance trike. It has a bonded (glued) aluminum frame, and a narrow track. It is probably too high end for your application, as well as being very expensive.....\$5700!

One trike that you may want to look at is the Greenspeed. We will have at test unit in July and it will go up for sale late summer. It is a gorgeous machine and built very tough.

As for carrying a child, I do not recommend it on any of the low trikes. The child carrier will be higher than you are (concerns about the center of gravity). I think this would be unsafe. I have two kids, ages 3 and 6 and we've had trailers for years—this is the way to go. I like our Burley Deluxe and the Winchester (for bigger kids) the best, but the new Schwinn looks good too—Robert.

## BENT HAULING

Dear Robert,

Thanks for all your great efforts for recumbents! I own a Haluzak Horizon. What can you say about transporting? I've got a Toyota Tercel, normal trunk, two doors. My friend and I rode conventional bikes together before the Haluzak using an Allen bike carrier that fits over

The Horizon's wide seat does not allow space for a second bike and it is awkward to place and secure onto the Allen. What is a good way to transport one conventional and one Horizon with this car?

With encouragement,  
Niel Solomon

Dear Niel,

This is a lot easier than you may think. I am not familiar with your Allen rack, but you could continue to use it if you removed the Haluzak seat each time you put it on the rack. This may seem like a big job, but I'd bet you could do it in a minute or two.

If that sounds like too much trouble, you will need to get a new rack. Most roof racks with a rear wheel gutter/ tray mount and a front wheel/ fork quick release mount will work. We have a Yakima rack that works fine, I know most brands offer the rear tray/ fork clamp mount.

When considering the second (conventional) bike, I'd recommend buying a second Haluzak so they fit perfect on the roof. You will need to check the wheelbases of the two bikes to make sure that they will both work with the rear tray/ fork clamp mount. If they don't have compatible wheelbases, you may need to get a different mount system for the conventional bike to fit on the rack at the same time—Robert.

## Subj: Transporting LWB

Date: Wed, Jun 7, 1995 7:59 AM EDT

From: rjs@clark.net

I have just ordered a Ryan Vanguard. The dealer says it will take about a month to be delivered. This will be an extra long frame to fit my 6'9" frame. The big question in my mind now is how to transport this monster. The dealer suggested a roof rack with a tandem carrier. This sounds like a nice but expensive option. Is it possible to transport this bike on a rear rack? Any suggestions?

Ron Steele  
rjs@clark

Dear Ron,

Your dealer was mistaken. I have a Yakima tandem carrier sitting in my garage rafters. It works good for tandems. One of the mount balance points is the bottom bracket. Bottom brackets on LWB recumbents are not balance points for the rack.

The best way to carry a LWB recumbent is to get a standard roof rack and the fork clamp-front wheel, wheel tray-rear wheel mount which most companies offer. If the wheelbase is too long (on a small car) you lay a piece of foam in the rear wheel tray and clamp the lower frame tube into the wheel tray. I have carried three Tour Easy recumbents on the roof of my Toyota PU this way. I'd suggest getting something to cover the seat material so you don't end up sitting on dead bugs.

I have known people who have removed the wheels and carried LWB recumbents on rear racks, but only do this for short hops. I would not drive through downtown Seattle with this set up--especially with an extra long LWB—Robert. □

.....Cover story continued

Another noticeable aspect of the EZ-1 is the weight. The EZ-1 weighs in at 29 pounds. We watched as the bike was weighed on a calibrated scale. This makes the EZ-1 a lightweight among CLWB recumbents.

#### EZ-1 SEAT

The EZ-1 seat is built for Easy Racers in California. The seat is made from sheet 6061 heat treated aluminum (same material as Gold Rush frames). They are riveted together with stainless steel rivets. The seat has a thick foam padding and a Lycra cover just like a Tour Easy. The seat is very light and stiff and the quality is excellent. This is not a world-class recumbent seat, but it is simple and comfortable—perfectly suited for the EZ-1. It mounts on the frame and slides with two simple quick releases, making seat adjustments effortless. Our EZ-1 test bike has a large size frame, but was easy to adjust from a 5'4" rider to riders well over 6.'

#### EZ-1 HANDLEBARS

This is the single best aspect of the EZ-1. After riding many different LWB above seat steering bikes as well as all Easy Racer models, we are convinced that these are the best bars on any above seat steering recumbent. The hand/ wrist position is perfect, the bars are stiff and light <enough>. What is the difference, you may ask? The bars are wider and the reach is longer <exact figures are an Easy Racer trade secret> and the hand position is flared wider for a more relaxed feel. New riders, tall riders and broad shouldered riders will love them. They are the best.

The EZ-1 bars are 1" higher and at least 2" wider than a Tour Easy, with slightly flared wrist positioning. They are nearly 4.5" wider than the bars on our test BikeE.

#### COMPONENTS

The EZ-1 has a slightly retro and very durable component mix. The crankset is a Sakae SX triple. The derailleurs are Shimano Altus, as are the thumbshifters, unless you upgrade to the "Speed Wheel" with Grip Shifts, which we highly recommend. The front brake is a Dia Compe FSE, a dual pivot side-pull and the rear brake is a Suntour roller-cam MTB brake (or cantilever), both are the same as what is spec'd on the more expensive Tour Easy model.

The RCN EZ-1 came with the "Speed Wheel" option which upgrades the gearing, rear hub, cassette and shifters. Besides a higher top end gear, the most noticeable part of this upgrade is the shifters. The Grip Shifts are perfect for this bike and much better than the Shimano thumbshifters that come on the standard version.

#### GEARING

The EZ-1 has near perfect gearing for a CLWB. Our test EZ-1 with the "speed wheel" option has 21 speeds, an 11-28 Shimano cassette and a triple crankset with chainrings of 30/46/52. The gear inch range is 21-95. The gearing on new bikes has been altered slightly and is now 23-81 for a standard bike and 23-96 for a bike equipped with the speed wheel. This may seem low by racer/ gear-head standards, but for a recreational bike, it is perfect.



*Katherine D'Amato, Marilyn Bryant and Daniel Bryant (trailer) in trouble with Seattle's finest, Lyndell Jones—Staff photo*

#### WHEELS & TIRES

The EZ-1 uses matching 20" x 1-3/8" rear wheel/ tire and 16" x 1-3/8" front wheel/ tire. The tires are the Kenda 90 psi recumbent specific variety and work flawlessly on this bike and are the best tire choice of any CLWB currently in production. Introduced last year, the 16" Kenda tire's have had a mixed reception due to quality control problems. We have had no problems with the EZ-1 test bike's tires.

#### CRAFTSMANSHIP

The EZ-1 is welded from USA made steel, in the USA. The frame is expertly TIG welded by none-other than legendary recumbent racer, Fast Freddie Markham and this steel frame looks bomb-proof! The frame material is TIG welded high-tension 1010 square section and CroMo steel. The frames are made in the world famous Watsonville, California Easy Racers shop. The fabrication quality is every bit of what you would expect on a Tour Easy or Gold Rush Replica. The paint is durable powdercoat, the same as a Tour Easy, which has always been exceptional. The colors available are black and red.

#### EASY RACER WARRANTY

Over the past few years we have ridden many recumbent bicycles, and Easy Racer recumbents are among the toughest and most durable recumbents made. The warranty is also among the best in the business. All Easy Racers, including the new EZ-1, come with an original owner's lifetime warranty on the frame and fork. The seat comes with a one year warranty. Under heavy use the seat foam will probably last three years, the lycra cover 1-2 years. Both are easily user-replaceable. The Lycra covers sell for \$18.95.

#### EZ-1 HANDLING

75% of the bike's weight is on the rear wheel, does this make the front too lightly loaded?

*"In the beginning, we didn't think it would be a good combination. I was afraid the bikes front end would skid out prematurely. But in heavy cornering tests on asphalt with Fast Freddie pushing the bike to it's limits the rear wheel would actually skid out first." Gardner likened the CLWB EZ-1's design to that of a rear engine Porsche. As for performance, Fast Freddie was doing 20 second laps. Freddie was only 1.5 seconds faster on his upright racer. In coast down testing, compared to a drop bar bike, (arms straight on drops), the EZ-1 coasts faster than a 10 spd, but not as fast as the Tour Easy which was about 1 mph faster on a 25 mph range," says Gardner.*

The frame is firm and stiff and there is no noticeable frame or bottom bracket flex. We rode the bike in all situations from rain, hail, dry pavement and even off road. We rode on the bike trail, loaned the bike to neighbors, set the bike up for Marilyn (wife test), ran the dog (Jack-the-dog test) and towed the kids in the Burley trailer (kid test) and did many at the same time. The EZ-1 passed all tests with ease and with flying colors.

This bike was at the top of our scale for it's ability to be ridden with one hand, towing kids in the trailer and running the dog all at the same time. The EZ-1 quickly became our favorite bike to jump on for a quick "tour de neighborhood." Not to make light of this bike's serious facets, the EZ-1 can hold it's own on any ride. We climbed steep hills in and around Kent, Washington, and rode fast back down the other side.

The EZ-1 could be considered a CLWB performance bike, as it is lighter and a bit faster than other CLWB recumbents we've tested. But keep in mind that the bike was designed with entry level handling and if fast performance riding is what you are after, we suggest you probably hold out for one of the Easy Racer long bikes, as they feel best at speed.

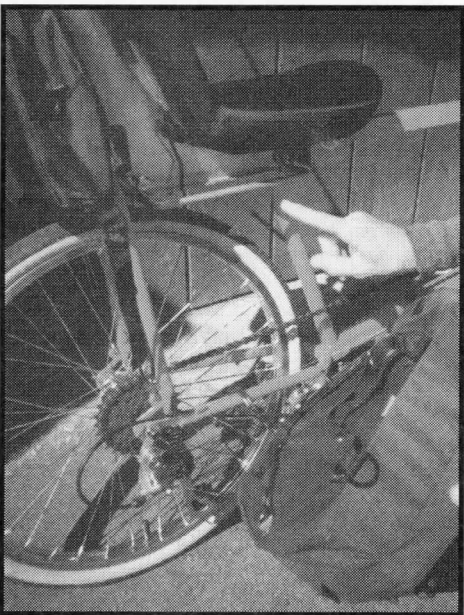
## THE PERFECT CLWB?

Is it the perfect CLWB recumbent? For Easy Racer fans, nothing even comes close. It is the perfect compliment to your Tour Easy or Gold Rush, a second bike or a family bike. The EZ-1 is designed for entry level use and Gardner has set the handling for slow-medium speed riding, rather than the medium-high speed riding on the Tour Easy and Gold Rush. This takes some getting used to, only because I am accustomed to riding a Gold Rush Replica, but once you put a few miles on it, riders will celebrate the diversity between the models.

Things to improve upon? We are fans of the Sachs 3 x 7, but Gardner Martin is not. He doesn't like the added weight, friction and mystery of the internal gears. "There is no reason for it," says Martin. We did not like the look of the seat stay to drop out weld, it could be cleaner looking, however, the frame's triangulation makes it stand out in the CLWB market. Some of the stock EZ-1 drive-train parts could use upgrading, however, with the optional "Speed Wheel" you get all of those parts upgraded. The Grip Shifts work wonderfully on this bike.

### EZ OPTIONS

Since the EZ-1 is such a new bike, the options list is still being put together. The component upgrade, "Speed Wheel," is the most noticeable option. There



*EZ-1 optional pannier mounts  
staff photo*

is also a kickstand, a nice handlebar bag, dual water bottle cages and the newest option is a new side-pannier mount that fits beneath the seat and holds one pannier on each side.

### EZ-1 COMMITMENT

What we have always liked is the Easy Racer commitment to excellence. The customer is king at Easy Racers. Each bike sold is treated like it was for the very first customer. So many companies are trying for a sterile (no fun) corporate image. They lose the connection with the driving

you won't find any of this at Easy Racers. There is so much positive style, attitude and karma at Easy Racers, that I'll be they could bottle and sell the stuff. You can talk to head EZ racer himself, Gardner Martin. The EZ Crew are easy to get on the phone and will help you with all of your recumbent needs, and you will get the facts on some very cool bikes.

The bikes are fully assembled and then bench tested prior to packing and shipping. The care in which the bikes are put together leaves little opportunity for a problem. EZ-1 preassembly is among the best in the industry. We had the EZ-1 out of the box and running in 17 minutes and 32 seconds. There are good, clearly written instructions, and the assembly is intuitive, quick and EZ.

### EASY RACERS, THE COMPANY

Gardner Martin's Easy Racers, Inc. is not just another run-of-the-mill recumbent company. They have a 20 year history. 20 years of building and selling recumbents from Watsonville, California.

With the EZ-1 review completed, we have now tested every model that Easy Racers builds. I would like to say that Easy Racers recumbents, all models, are in a league of their own. These are the finest quality recumbents made. Even if you are a SWB rider or a homebuilder, it is important to note, that Easy Racers is the standard by which all other manufacturers should be judged.

Easy Racer bikes are known to be long lasting and trouble free. They are rock solid and built to ride for years to come. This is something that cannot be said for all recumbent builders. Reputations must be earned.

If you want to see what the best quality control, fabrication, packaging and customer service is like, Easy Racers is the model. Our hat is off to Gardner, and his great staff. We don't think they get enough credit these days for the great job they do and the wonderful bikes they produce.

### RAVE REVIEW?...YES!

Does this review seem overly positive? Yes, it is a rave review, and for good reason. No other recumbent manufacturer has come out with a bike that is this cool, this durable, this dependable, this much quality and this much fun for such a low price—in the recumbent world, anyway. The EZ1 is a clear view of the future of recumbents for the common man. There is no doubt that the CLWB design has a strong future in the world of recumbent cycling. This CLWB bike has been able to bridge the gap between a stylish cruiser and real world enthusiast machine like no other to date.

Whether you ride a Gold Rush Replica, V-Rex, R45 or F-40, the EZ-1 would make a great addition to any 'bent riders' stable. It is the most user-friendly, does-everything, and fun recumbent that we have tested. To get the cool Easy Racers free brochure and video (\$5 if you keep the video), write: Easy Racers, Inc. 2891 Freedom Blvd. Watsonville, CA 95076. Ph/ #408-722-9797, Email: TooEasy1@aol.com ☐



*The EZ-1 quick release seat—staff photo*

### COMPETITORS

Let's see, the true CLWB recumbent that would be market competition for the EZ-1 are the ReBike 818, BikeE and F Tailwind.

The ReBike 707 is low tech and not an enthusiasts recumbent by any stretch. It's speed 707 weighs 45 pounds, and the new 2600 is basic an 818 with a 26" rear wheel, and is as heavy (ugh)!

The BikeE is fine machine that has a futuristic look, but I guess I relate to the Racer design theory a little more. In the EZ-1 design, handling, excellent handlebar and style won me over. The EZ-1 is a bit lighter and faster than our last BikeE test (BikeE was approx. 32 pounds). This is primarily due to the BikeE's Sachs 3 x 7 and the wider, low pressure tires. Also BikeE's tire set does not match, the tread patterns are different. The front tire is a 16" x 1 3/8" wheel to the BikeE. We have found the EZ-1 seat to be more comfortable than the BikeE but this will depend on the individual riders.

The EZ-1's handling was more to my liking than the BikeE. The EZ-1 has medium steering with a hint of trademark Easy Racer oversteer. The bike has a natural groove comparison, the BikeE has a neutral and direct, almost pivotal light steering (almost like a SWB). The EZ-1 was very stable in our kid, wife and dog tests.

Riders who compare the bikes may like them both, but should find it easy to choose one over the other. Both are great bikes.

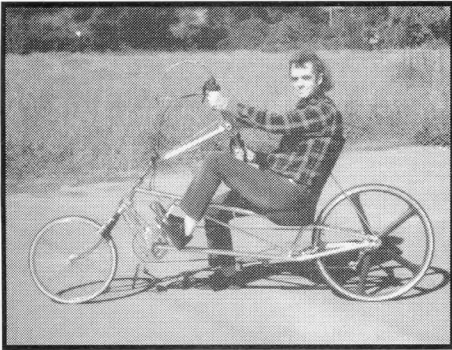
We have not yet tested the F Tailwind/ HP or Response, but look forward to doing so. ☐

# An Interview with Gardner Martin

Gardner Martin has been commercially building recumbent bicycles in Watsonville, California for twenty years. The Easy Racer name has become a mark of excellence and the man, Gardner Martin, is world renowned for his work in recumbent bicycle design and racing. We asked Gardner to talk with us about his new bike, the EZ-1.

**RCN:** Was price a key factor in your decision to build the EZ-1?

**GM:** *The price was targeted for less than \$800. We knew only a small percentage of potential buyers would pay \$1700 for a recumbent like our Tour Easy, whereas an \$800 price-point will quadruple sales.*



*The Gold Rush hand-cranker—staff photo*

**RCN:** How about the EZ-1 componentry?

**GM:** *Componentry was selected for reliability, lightweight, performance and user friendliness. In order to keep the EZ-1 price down, we could not afford to use top-of-the-line Shimano Deore XT, however, the middle of the line Shimano derailleurs we use are very close in performance and reliability.*

**RCN:** Did you do any market research before designing the EZ-1?

**GM:** *By listening to our customers we learned that a price of under \$1000 was necessary. Other desirable features were a more compact bike, more user-friendliness, quickly adjustable seat to fit a wide variety of people. It did not need the speed or long distance capability of our Tour Easy or Gold Rush Replica. But make no mistake, the EZ-1 is still a high-performance recumbent and will out-perform most other brands.*

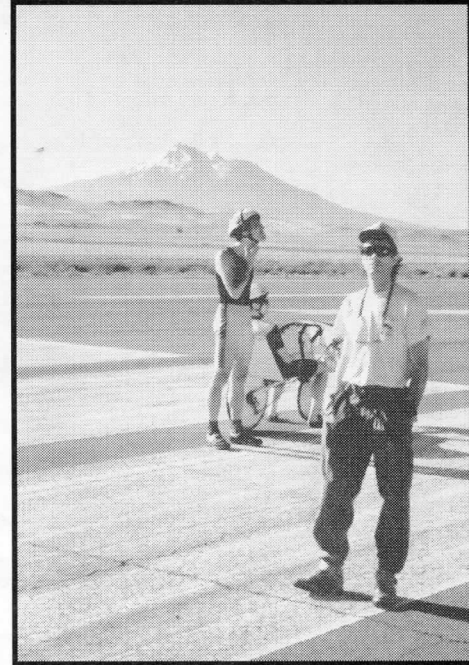
**RCN:** What group or groups were targeted as EZ-1 purchasers?

**GM:** *We were aiming for a bike better suited to less skillful riders....a family bike...good for mom and the kids, grandpa or anybody not needing the ultimate performance of our other bikes.*

**RCN:** Tell us more about the EZ-1 seat.

**GM:** *The EZ-1 seat was an important part of the overall design. It needed to accomplish several different things. First, it needed to be comfortable, but not necessarily as comfortable as a seat designed for a double century, it must provide good back support and not restrict the rider's power output. Most sling-mesh seats do restrict power. Mechanically, the seat needed to be compact enough to fit in one box with the bike. It had to be quickly removable and easily adjustable for different sized folks. Third, it must look good. No dorky lawnchair seats for our bikes. Can you imagine a Harley-Davidson with a lawnchair on it?!*

**RCN:** Let's get specific about the EZ-1. What design criteria did you lay out when you came to build this bike?



*Gardner Martin at Yreka IHPSC*

**GM:** *Well, I wanted to keep the same (Tour Easy "angle of attack" from the seat down to the bottom bracket. That's been a proven ease-of-riding comfort and power-point on our designs. Same for the handlebars: shoulder level, fairly wide, light 6061 tubing with crossbar. I've already talked about our foam seat with Lycra cover. A sturdy, yet comfortable seat is really what recumbents are all about.*

*.....Continued on page 9*

## EZ-1 SPECIFICATIONS

**DESIGNER:** Gardner Martin/ 1994

**WEIGHT:** 29 pounds

**WARRANTY:** Lifetime on frame and fork (seat 1 yr.)

**WEIGHT DISTRIBUTION:** 75% rear wheel depending on where seat is adjusted.

**GEOMETRY:** The steering geometry is a few degrees more upright (toward conventional than on the Tour Easy). Gardner Martin has idealized the handling for lower to mid-range performance, whereas the Tour Easy and Gold Rush Replica are idealized for mid-range to high performance handling.

**HANDLEBARS:** Taller and wider than a Tour Easy — a more comfortable and user friendly grip position.

**HANDLEBAR WIDTH:** 22"

**WHEELBASE:** 55"

**SEAT HEIGHT:** 23"

**SIZES:** 5'-6' (std. size/ large frame available)

**FRAME:** TIG welded steel

**FRAME TUBING:** Hi-Tension 1010 steel

**HEAD TUBE:** 4130 CroMo

**DROP OUTS:** Forged steel

**FORK:** CroMo Hi-Tension steel, manufactured exclusively for the EZ1

**SEAT:** AL/ foam/ Lycra

**WHEEL SIZE:** 20"x 1-3/8" rear, 16" x 1-3/8" front

**DERAILLEURS:** Shimano Altus

**SHIFTERS:** 18 Spd. Shimano Altus thumbshifters

**CRANKSET:** SR SX 32/46/53 (or similar)

**GEARING:** 13-28 freewheel

**BRAKES-FRONT:** Dia Compe FSE

**BRAKES-REAR:** Suntour Roller-cam

**FINISH:** Powdercoat red or black

**SOLD THROUGH:** Dealers & Direct

**ROAD TEST:** RCN #28

**SUGGESTED RETAIL PRICE:** \$795

**OPTIONS:**

Dual Water bottles & cages: \$15

Kick Stand: \$10

Pannier mounts: \$45

Handlebar bag: \$25

Speed Wheel Option: \$99

including: Shimano rear freehub 11-28

7 spd. cassette, Grip Shift shifters with gear display.

Zzipper fairing: Coming soon

To get the Easy Racers free brochure and video (\$5 if you keep the video), write:

Easy Racers, Inc.

2891 Freedom Blvd.

Watsonville, CA 95076.

Ph/ Fax#408-722-9797,

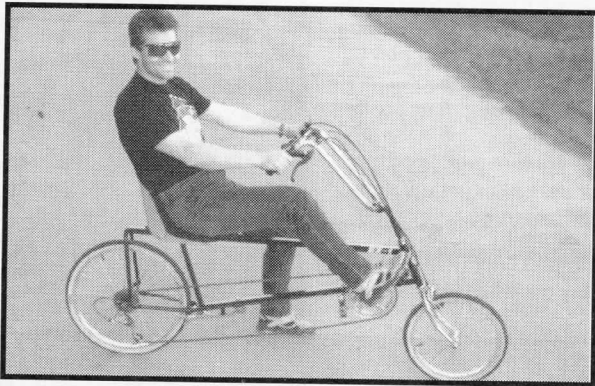
Email: TooEasy1@aol.com

## An EZ cruiser for the Nineties



Comfortable and user-friendly, the EZ-1 continues the heritage as the latest member of the Easy Racers family of laid back bicycles. The EZ-1 is shorter and more compact, and slides into the trunk or back-seat of your car, for a mid-day ride. Put a pair on the back of your van or motorhome and enjoy breeze-in-your-hair cycling on a moments notice. Pack up tight for that New Zealand or Bahama's flight. Even the price has been run through the compactor: \$795.

## Comfort meets Quality and Style.



Hunching over to ride a bike may have made sense once....or did it? A new millennium in cycling is upon us. Gone is the "pain is gain" mentality that earns to many cyclists a trip to the chiropractor, if not the hospital. Leave the hurting behind and enjoy a full aerobic workout suited to your new laid back lifestyle.

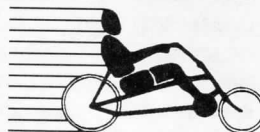
There is no need to sacrifice quality or '90's style as you cruise the beach or scoot down to the drive-in for a burger and shake.

## New seat handles cycling sore point.

How many times have you heard a friend complain about the seat on his/ her latest bike? Probably too often! So many cyclists go from bike to bike in search of a ride that doesn't hurt the neck, arms and wrists. The layered foam on the EZ-1 seat handles the more "shocking" aspects of bicycle riding. A seat-back with a positive lumbar support and a lycra seat-cover feels cool and comfortable even on your bare skin. The reclined natural seating position and high rise handlebars are more like that of your automobile.

Get comfortable today. Ride an Easy Racer EZ-1!

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.....Continued from page 7

## AN INTERVIEW WITH GARDNER MARTIN

**RCN:** The US dollar is currently under pressure. Do you foresee having to raise EZ-1 prices to compensate for increased cost of components?

**GM:** *We hope to keep the price down even with increasing component costs, by making our whole operation more efficient.*

**RCN:** Do you see a major manufacturer building a recumbent aimed at the independent bicycle dealer (IBD) sales network?

**GM:** *An IBD recumbent is certainly possible. It is certain that it will take a very user-friendly design to satisfy this market, certainly not the short wheel-base type (too tricky to learn) and probably not the long wheelbase type (takes up too much*



**ABOVE:**  
*Katherine D'Amato and Daniel Bryant ride the EZ-1—staff photo*

**RIGHT:** *Fast Freddie Markham TIG welding EZ-1 frames in the Easy Racers shop—staff photo*

**LEFT:** *EZ-1—courtesy of Easy Racers.*



*floorspace).*

**RCN:** What single factor will fuel the growth of recumbency most in the next five years?

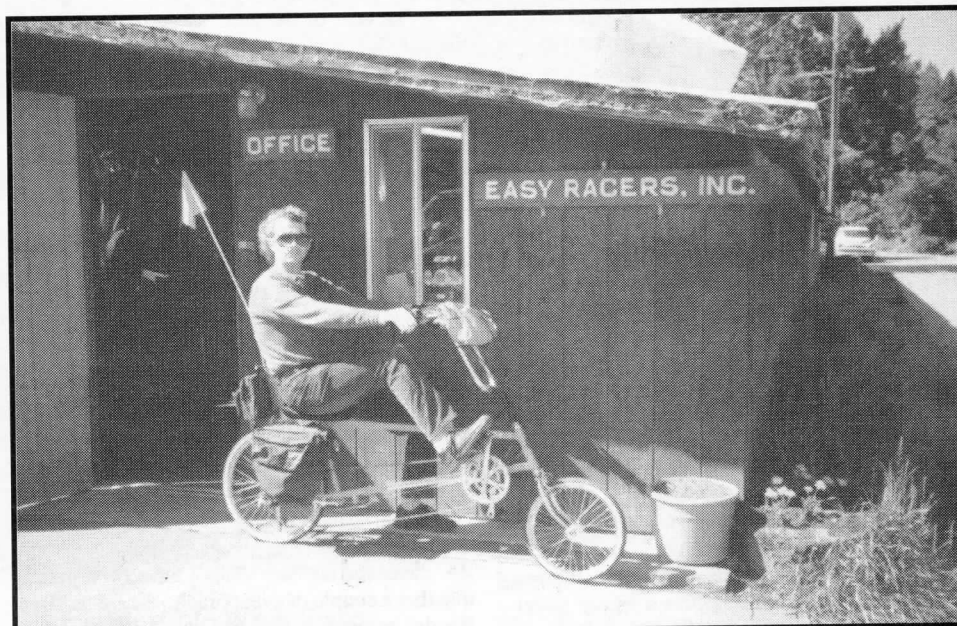
**GM:** *User-friendliness. Recumbents in general are too intimidating for first-timers. Compact (CLWB) recumbents like the EZ-1 will always be the sales leaders.*

**RCN:** What add-ons and accessories do you have planned for the EZ-1?

**GM:** *Lots. We now have an underseat rack for panniers. They are great! No change in balance because they keep the extra weight at the rider's center-of-weight point. We will soon offer a Zipper fairing option which will cost less than a Zipper on any other recumbent. We will be consistently asking our customers what they want and will try to provide what they need.*

**RCN:** Gardner, as usual, you've been up front and open about your bikes and the industry. Thanks for the interview.

**GM:** *Thank you, Bob. Keep up the great job you and Marilyn have been doing with each Recumbent Cyclist News! □*



*Gardner Martin on the EZ-1 in front of the Easy Racers shop—staff photo*

# View from The Big Chair

## WHAT ABOUT BOB—Recumbent Touring With The Beast Of Burden Trailer & THE WINE RECLINE—Tour of the Napa Valley '95

by BJ Strass

Have you ever known a BOB you didn't like??? One of my best friends in college was Bob. He was tough, reliable, easy going and always good for a laugh. This pretty much describes the Yak 16/BOB trailer designed by Phillip Novotny and recently being offered by many mountain bike shops. On the Napa Tour this spring we had the opportunity to put two of the unusual little trailers through their paces.

The BOB was designed for off road use on mountain bikes. It is of a single wheel design with the wheel mounted in the rear. In this configuration about 50-60% of the weight placed in the trailer is on its rear wheel. The rest is placed on the rear axle of the bike. The total weight of the trailer is around 13 pounds. It is made of chromoly and is powder coated black. The 16"x 1.75 rear wheel has a basic alloy rim and hub. Capacity is rated at 70 pounds. I have used it with 50 pounds and have no doubt it will handle more. As it turns out the little trailer will mount to most any bike with a rear quick release and is the best bet for touring on a recumbent.

Most existing trailers are 2 wheeled and designed to haul children or are a cargo variation of the same. They are wide, cumbersome, and can be difficult to mount on many recumbents. The BOB was designed for cargo only and lacks the limitations of a wide 2 wheel model. The profile of the BOB is narrow, about 18". I found that it could go anywhere I could get the width of my shoulders. It tracks well and follows you like a hungry puppy. The mounting of the trailer is the real trick as single wheeled trailers in the past have suffered from load wobbles due to the mounting not being stiff enough. The BOB mounts on the rear axle by a special wheel quick release. Pull off the original quick release and slip on the new one. That is it! When the trailer is off the bike there are no ugly, bulky mounts. Just the simple quick release which stays on the bike.

I ordered my BOB with the optional "Yak Sak". This is a large cordura nylon duffel bag with handles, a shoulder strap, and a full length zipper. Its cavernous size seems to never be full and is easy to pack. The long zipper makes it easy to get at any item tucked away inside. This gives the option to throw the entire contents of the tour over your shoulder. It should be tough as it is made of the thickest material I have seen in bike touring. Most likely it is possible to use a totally waterproof "rafters bag" in lieu of the Yak Sak. But it would be much harder to access the contents.

Without the Yak Sak BOB easily handles a variety of loads like 4 large grocery bags or a lot of laundry.

Pulling the BOB is a breeze! It adds very little aerodynamic disadvantage unlike panniers and wide trailers. I found the BOB to be extremely maneuverable also. At one point we had to negotiate a long wooden ramp with side rails and 180 switch backs. The two of us using BOBs behind our Visions found it easier to get to the bottom of the ramp than the rider with the unloaded Vanguard. Also I found that due to pulling the load, instead of carrying the load, the bikes handling was quicker and remained responsive. This may also show up in the durability of the bike itself. I am a big guy, and with a big touring load, the weight the bike carries can reach near 300 pounds! With the BOB, stress on the bike is lessened considerably.

The cost of the BOB is around \$260 with the Yak Sak included. This is more than the cost of a rack and a set of panniers but then their capacity is much smaller and offers less versatility and poorer handling. Overall the BOB/Yak 16 exceeded my expectations by a lot. Riders can find particular advantage in it's use as my co-tester, David Davis did. The BOB allows him to keep his 22 pounds Vision R-45 light for everyday riding but slip on the BOB and it becomes a heavy duty touring bike. If you need the capacity to get a lot of groceries home, carry good sized loads or tour with more than 35 pounds I would strongly consider making friends with a BOB of your own.



### THE WINE RECLINE Tour of the Napa Valley

April 8 and 9 was the first and hopefully annual recumbent and HPV tour of the Napa Valley. Over the last few years I have been putting together a couple of events each year for us "Bent Heads" to get together and show off our bikes, getting better public acceptance for recumbents



"The Hard Corps" on the Wine Recline—Introspect Cycle

and foremost to have a hell of a good time.

Our tour started in the south end of the Napa Valley wine country. Robert Gepford, a long time bent rider, and the route coordinator for the Eagle Cycle Club had put together our route concentrating on varied terrain, low traffic and lots of fantastic scenery. We met fairly promptly at 8:30 am next to the State Police office in Napa. With California being inundated with rain this winter and spring, and the last minute forecast of rain for the weekend, many riders were scared off. However, there were about 20 for the start. Under cloudy skies we promptly named ourselves "The Hard Corps," snapped some photos and started riding north.

Robert decided to warm everyone up early by putting the longest and steepest hill of the entire ride within the first 5 miles. With "The Wall" conquered we wondered what other surprises Robert had in store for us but our only surprises were some of the most beautiful touring country imaginable. The rain managed to hold out until our morning stop at the infamous Oakville Grocery. Unfortunately 2 of us were caught in the start of the rain due to a flat but our spirits remained high. There we hid under the porch, watched the rain while munching on gourmet cookies, muffins and lattes.

Shortly after we were stuffed the rain stopped and we continued on. The rest of

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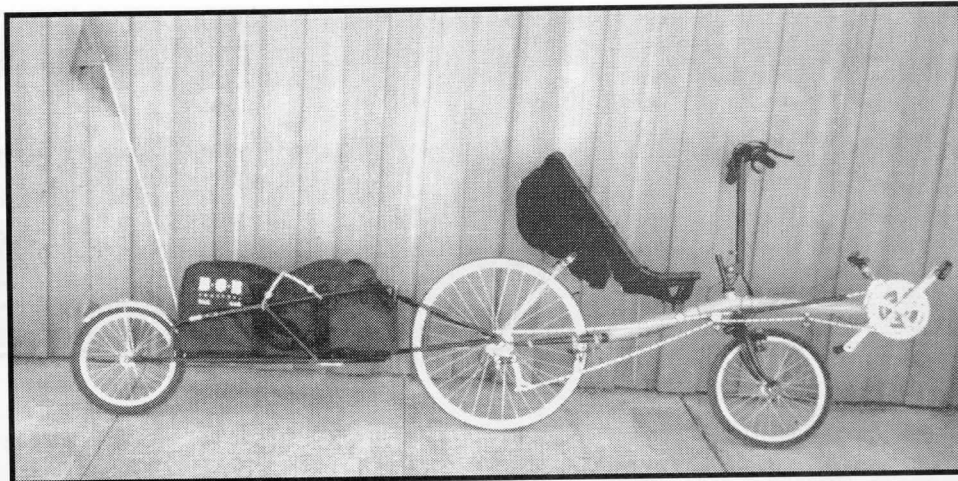
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### THE WINE RELINE by BJ Strass

he trip wound us in and out of small roads through countless picturesque vineyards and wineries. As the day progressed the sun popped out and we broke into small groups to do some wine tasting. My group dropped into to a small vineyard," Casa Nuestra", with a reputation of being popular with the locals. We spent about an hour there admiring the large collection of 1960's rock art posters and sampling some of the best Riesling I have known.

Next we stopped in on one of the large newer wineries. This particular one was built to resemble a scaled down castle. Their sites were nice but their wines were unimpressive. We had already been spoiled for the day. At about 4 pm we rolled into Bothe/Napa campground. About half of the group were camping and the other half were staying in Calistoga. Calistoga has been a hot springs/health spa town since the turn of the century and offers many wonderful restaurants and places to stay. After setting up our camp, Linda our gracious SAG driver picked us up and we met the rest of the group in Calistoga for a wonderful pasta dinner and excellent conversation at "Bosko's Ristorante." Later, back at the campground, we sampled a little more red wine and turned in for the night.

The next day paid off for the "Hard Corps" as we had sunshine, temperatures in the low 70's and a nice tail wind. That morning we rode into Calistoga, meeting for a big breakfast at another fine local restaurant, "Cafe Sarafoina." Stuffed with "pancake carbos" we made a brisk ride to-



BJ Strass' Vision with BOB trailer on the "Wine Recline"—Photo by BJ Strass

ward Napa again weaving in and out along the spectacular vineyards. A few of the faster riders had the opportunity to embarrass a peloton of local roadies out for a fast Sunday ride. I'm sure they felt very discouraged when it took them quite a distance to pull away from the recumbent pulling a loaded trailer!

The return tail wind was so nice we rode nearly straight through and finished a bit early, so we took the opportunity to discuss the ride and pat ourselves on the back for sticking it out. We decided this was an event we would definitely do again.....just maybe a little later in the season to avoid the rain. If you ever have the opportunity to

tour in the Napa Valley and surrounding areas it is well worth the trip.

In attendance were: Bill and Flora Haluzak - Horizon and Leprechaun, Marta Evry - Vanguard, Robert Gepford - Pursuit, David Davis - R-45 w/ BOB trailer, Steve Delaire - Rotator, Trent Levinson - Rocket, Tom Glasheen - Linear, Howard Gilbert - Gold Rush, Dean Christensen - Rotator, BJ and Monica Strass - Vision R-40 w/ BOB Trailer, Bruce and Carroll DeBell - Presto Ti and Gold Rush. Special thanks to Robert Gepford for laying out the excellent route and to Linda Gepford for driving the SAG/gear wagon. □



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# Mark Colliton talks V-Rex

.....an interview

by Robert J. Bryant

.....Continued from Page 1.

pairing. I later traded in the #5 and #6 bikes for #7 a P-38, which I still ride today. #8 was a custom built HORIZON from Bill Haluzak, which had two wheel sets, 20/700c and 24/17. It also had a PRESTO like, ASS, steering column. I really liked this bike a lot but it proved to be too lightly built (at my request) for my size and I sold it to a friend who loves it. Somewhere in the middle of all this I got interested in FWD trikes and bought #9 a FUNCycle, which was later cut up for an experiment that failed badly. #10 VARNA trike, custom built from George Georgiev. #11 Rans V-Rex. This past Christmas I bought #12 a BikeE for my wife.

**RCN:** What are your favorites?

**MC:** To tell you the truth I liked them all but, only the P-38 and the V-Rex remain.

**RCN:** Where do you ride and what type of riding do you usually do?

**MC:** Most of my riding is done in Rock Creek Park, here in Washington, D.C., where WHIRL does a 25 mile ride every Saturday. This is the same route I use for commuting to work, which I try to do twice a week when the weather is good. I also do a couple metric centuries every summer over on the eastern shore of Maryland and one or two Biathlons a year as part of a relay team.

**RCN:** The V-Rex has become one of the hottest bikes of the year, what do you think about that?

**MC:** It is very gratifying to see the bike do this well and I'm very happy to see RANS continue to evolve the bike.

**RCN:** Has the bike accomplished the expectations

that you had when you co-designed the bike?

**MC:** For the most part, yes.

**RCN:** There have been lots of questions come about the Rans V-Rex, options, compo choices, brake set-ups and which is the best figuration. Can you tell us how your V-Rex is se

**MC:** My bike is a large (40") frame with wheel sets and two forks. I have ridden it every wheel combination possible. I've settle the 24" X 1.25"—20" X 1-1/8" wheel set a best handling and best bottom bracket height my style of riding. The head tube angle is a more laid back (about 72°) which slows the si ing down for better control and I've got this t for 24" wheels. They are stronger, lighter accelerate faster than 700c wheels. It's a great up for hill climbing and I really feel that this i best set-up overall. Other than that there is n

## WANTED RECUM- BENT WRITERS

RCN plans to pay writers for the first time ever, starting with articles submitted and printed by us after May 1, 1995. Here are the rules: the article must include computer typed original, 3.5" disc. in a format that is Macintosh (many PC formats work) readable and be complete with pictures.

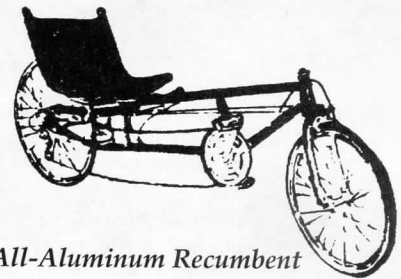
Articles need to be clear, well thought out and include at least one picture. Articles should be typed in Times 10 point text, single spaced, with spaces to separate paragraphs and no indentations. For more info on submissions send us an SASE or see RCN#21.

If we print your article, we will credit you \$30 for each printed article and \$5 for each picture. Credits are good for RCN goods, services, subscriptions, back issues and even test bikes.

We want your stories: "Home-Builder's Corner," "Cool Bike of the Month," trip narratives, road tests (best check with us before you do this) and bike comparison tests. We are especially interested in bikes we have not tested, rare European bikes and suspension recumbents.

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Continued from previous page

too special about my bike. It is painted black, with a matching cro-moly fork (up-grade) and the standard V-Rex package with cantilevers in the rear and a Dia-Compe side pull in front. I have also cut down the steering column to just clear my knees—this is something that all V-Rex riders should consider doing. My bike has the old seat on it right now, but I plan changing to the new seat soon.

RCN: Your original drawings called for a 700c/20" wheel combination. What do you think of the 700c/20" version? How does the bike height affect performance?

MC: I think the 700c/20 wheel set is a good compromise considering the cost and availability of Moulton wheels. It also pushes the bottom bracket to a higher and more performance oriented position in relation to the seat. Recumbent performance is affected mainly by three things. Exposed frontal area, frame stiffness and bottom bracket to seat height relationship. The V-Rex design incorporates these performance qualities but was not optimized to be an all out speed machine.

RCN: About the brakes. Rans offers side-pulls, cantilevers and the special AngleTech V-Rex comes with Maguras (hydraulic brakes). What are your thoughts on V-Rex braking?

MC: The Dia-Compe side pulls are adequate, but I prefer to use a dual pivot side-pull, like the Shimano RX-100/105SC, but unfortunately they do not fit well on many recumbents. I don't really like the look of cantilevers but they offer the best braking for the money. If you're thinking of doing hydraulic upgrades I'd start here. Maguras are very nice if you can afford them.

RCN: I know that you have done some experimenting between the old and new seats on your V-Rex, what do you think of the new seat?

MC: I think the new seat is great! John (Schlitter) did a wonderful job with the design and with getting it done in so short a time. I must admit that I like the easy step-over mounting and the minimal look of the old seat but the new seat is ten times more comfortable. I also think you get a better feel for the bike and more control with the higher back on the new seat.

RCN: You are also prototyping Zipper fairings for the V-Rex. I understand that you have tried the Ryan Zipper bubble and the Vision Zipper bubble both mounted with the P-38/ V-Rex mounting system. Which is the best?

MC: The Vision/ P-38 bubbles are tapered at the top and don't offer as much coverage as the Ryan. For me, the Ryan works best. Karl Abbe has done a nice job with the mounting system which easily comes on/off and seems very solid. I was pleasantly surprised at how quiet this system is. There is very little vibration and almost no road noise.



Mark Colliton's V-Rex 24/20 with 40" frame, old style seat and Zipper fairing  
—Photo by Mark Colliton

RCN: What kind of speed benefit do you get from a Zipper on a V-Rex or P-38?

MC: The biggest speed benefit is the ability to maintain higher speeds (18+mph) for longer periods of time. But for me the real benefit is warm feet and legs on cold and windy days.

RCN: You have an RCN Lightning P-38 test bike on a long term test. How do you compare the bikes and the performance?

MC: I find it hard to compare two bikes that have several hundred dollars difference in their base sticker price but I guess some comparisons are inevitable. The P-38 is a bike designed for speed and overall I find it faster than the V-Rex, although I do feel I climb hills slightly better on the V-Rex with the 24" rear wheel. I also think the seat on the P-38 is the best you can get on any recumbent but the new RANS seat is very nice. At high speeds the P-38's longer wheelbase and lower seat height offer more stability, but at slower speeds I find the V-Rex more maneuverable. The V-Rex's smaller stature also makes it easier to get in and out of the house. I like the look, the lines of the frame on the V-Rex more than the P-38 but I'm a little prejudiced on that one. I like both bikes a lot and never recommend one over the other when people ask. I just let them ride both of the bikes and leave it to them to decide how much money they want to spend.

RCN: What changes are next in store for your V-Rex?

MC: Just the new mesh seat!

RCN: I hear you are testing a customized Rans Rocket. What is different about your Rocket?

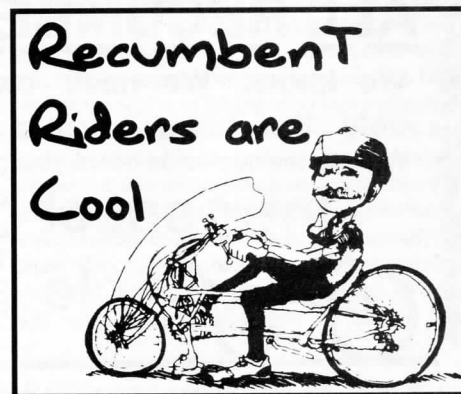
MC: My bike is going to have two wheel sets (big surprise!) 20/20 and 17/17 Moulton wheels and I'm planning to use a cut-down fiberglass seat from my V-Rex. I'm also thinking of doing something a little different with the steering column but I haven't quite worked that out yet. I'll let you know when I do.

RCN: What are your future recumbent design plans? Are you working on your own design?

MC: I have a couple of designs on the drawing board now but these projects are on hold until I can pull together the financial end of things. I'm actually looking forward to taking the summer off from bike building projects and just riding the bikes I already have. So, unless some money happens to fall into my lap, you'll probably be able to catch me down in Rock Creek Park.

RCN: Mark, thank you for your time.

MC: Thank you. □



(From *Buffy the Vampire Slayer*, Twentieth Century Fox, 1992)

## © ALLOY MOUSE

*A column for recreational recumbent riders and friends.*

**You may be what you appear to be:** Mary tells me that a lot of motorists' hostility is provoked by the baboon-in-heat view and vivid print lycra outfits of upright riders. I believe her and try to appear ordinary looking when riding my recumbent. As a result, I rarely meet with the *bubba* style hostility complained of by upright bikers here in Texas. I ride friendly and respect traffic laws, even the stop signs. I no longer have bad confrontations with motorists. I get to be the happy rider I am.

**But what about cycling shorts?** No matter how ordinary-looking you wish to appear; cycling shorts (or tights), a helmet, gloves, and shoes contribute to your comfort and safety while riding. Let's talk about great recumbent-specific shorts and leave the other items for another time.

**Recumbent Riding Shorts are Different:** Cycling shorts for riding your recumbent are easy to get and a great comfort while riding. Knowing that personal taste differs, Alloy Mouse describes the perfect riding shorts:

Select an eight-panel nylon/lycra tight cycling short that is **deep-cut** for touring, not racing. The shorts should have flat stitched seams and not have a synthetic pad or chamois liner. Bottom pads hit you all wrong on a recumbent. **NO PADS!** The waist should be high cut, elastic, and not tight. The thigh section should be firm and about one or two inches longer than a normal workout or cycling short. Get plain black. Prints do not show well and are harder to wash. Always wash cycling shorts after every ride. Rider's rash is partly rub and mostly bacteria, never fun. Well made eight-panel nylon/lycra shorts work well without anything underneath. Many riders wear no briefs or undershorts for better wicking away of moisture and for avoiding friction rubs. This depends entirely on the rider's preference.

**Have Shorts Custom Made, It's Easier than Shopping:** Finding perfect eight-panel

cycling shorts without a bottom pad is almost impossible. Even if you do find them, they will probably not be cut deep enough or have a high waist. I get shorts with a simple phone call to the **boureB Sportswear** company in Durango, Colorado. **boureB Sportswear** has a world-wide reputation as an exceptional maker of cycling and skiing clothing. They are not a fashion name (Buffy would say this makes them the most fashionable). I, like many riders, consider their shorts and tights the best in the world. Considering this, they are not expensive. I normally pay \$55 for a custom made eight-panel short. This includes shipping and handling. I get the shorts in about two weeks. Shorts will normally last three to five years of hard use, including washing. Mary has a pair of tights that are seven years old and still look good enough to wear to work on winter days. If you want a pair, call **Charlie Shepard** at (303) 247-0339, **boureB Sportswear** in Durango, Colorado. Tell him your size and that you are a recumbent rider. Say you want them cut high in the waist, deep in the seat, and longer on the thigh. Make sure you specify no chamois or pad. Mention my name when ordering them if you wish. It may help him understand the difference from normal cycling. (Note: I get nothing from this and have no connection other than as a customer.) I use Master Card for my orders. Buy one pair, make sure they have your size and cut right, then order several. Ned Overand, the famous mountain biker, is a part-owner in **boureB Sportswear**.

### Other Short by the Numbers:

**Six-panel shorts** work almost as well, and are available through **Hal's Recumbent Cycles** in Redondo Beach, California (310)376-5882. These are ready-made, and if you are one of their sizes, (not too big), a good choice.

**Four-panel shorts** work only for short rides or for people who are not bothered by an 'X' seam at the bottom. Four-panel shorts are what you see

in most gyms or aerobics classes. They are available in sporting goods stores.

**Three-panel shorts** are different and may be three-panel in name only. **RUDS** makes "tri-panel" design just for men. It is male specific and great for long rides, especially in h weather. Mary says women cannot wear the because of their "ActivArc" suspension system. **RUDS** come in nylon/lycra and cotton/lycra. They run from \$18 to \$30. You can call **RUDS**: Old Saybrook, Connecticut, at (800) 525-783. **Road Runner Sports** catalog (800) 551-555 also carries **RUDS**.

**"Baggies" and "Sweats":** Baggies are great for winter and windy wet weather. I get custom made fleece pants made with taper down ankles to avoid getting the material caught in the chain wheel on windy days. The pants are made by **Disciplines Motivationwear**, in Coconut Grove, Florida. They make runner and triathlete clothing in every imaginable size. Their fleece is thick, light, durable, and wicks away moisture beautifully. The pants are wonderfully roomy. I recommend basic black. **Disciplines Motivationwear**, can be reached (800) 548-3537, and ask for Mary (not the Alloy Mouse Mary). Definitely use my name with Mary when ordering pants for recumbent riding. Tell her you want a "Chillin" style pant with very long taper-down legs. Make sure she understands you want pants like mine (but in your size) and not long shorts. Again, I have no interest in this company and no benefit from this. They also have many other items including shorts in every imaginable shape, size, and material. Big riders get a "Clydesdale" logo on the back of their shorts or pants.

**At Last.** If you have any questions about the various sources or need some help, send eMail to **AlloyMouse** on America Online, or [alloymouse@aol.com](mailto:alloymouse@aol.com) on the Internet. If you are not wired, reach me through RCN. □

## ALL RECUMBENTS ARE NOT CREATED EQUAL!

We know. We have owned and tested just about all of them and sell only the best! Introspect specializes in getting you a great recumbent that fits your needs and lifestyle.

We take the confusion out of your purchase. Specialist in SWB and MWB. Selling Vision, Rans, Horizon, BikeE,



used and others. Builders of the new MERIDIAN MWB; assemble a great low cost recumbent with components from your existing bike. Custom setups, for Touring, Commuting, Performance. Honest mail order and prices. Demos by apt. Send for big info pack \$2. Now taking VISA / MASTERCARD.

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# Homebuilders Corner

## Tales of a Homebuilder

Story & photo's  
by Michael Wolfson

I've been commuting to work by bicycle for over 20 years. After going through a conventional drop handlebar racing bike, a touring bike, and even a mountain bike (regrettably as a result of several thefts and replacements), I began to wonder if there wasn't a more practical way to design a bicycle for my commuting needs. My first exposure to recumbents was in 1988(?) when the IHPVA (I think) held their races in Ottawa-Hull. I saw all these funny bicycles speeding along, ahead of riders on conventional bicycles. After some inquiries, I found out about the IHPVA, became a member, and started writing to some of the manufacturers for further details. Wow! Recumbents seemed like they might be the answer to my needs for a practical commuting bicycle, but such a wide variety of designs, and most costing well over \$1,000.

Since I've been fiddling around with bicycles for years (hence lots of spare parts), and I have a good set of tools etc., I thought maybe the best approach would be to build my own prototype to see whether the recumbent approach was as great in practice as it looked, and was described by enthusiasts. After studying the various articles and pictures, I decided that a short wheelbase was probably most appropriate, since commuting required good maneuverability.

To begin, I wanted to get a feeling of what it was like to put the major components of a bicycle (wheels, seat, pedals) together in such a radically different way, so I quickly bolted something together using 20" wheels and angle iron. My first lesson in frame design — way too much flex!

My second attempt was only marginally better. I took one of my children's bikes with a 20" rear wheel and banana seat, chopped up another old kid's bike frame, and made a stalk for the pedals in front of the fork tube. This solved the frame flex problem, but then lesson number two — centre of gravity. Since the seat was just about over the rear wheel, leaning back in the recumbent position tipped the bike over backwards. While these may seem obvious points, the "experiential learning" has been invaluable, especially since I was starting as both a complete novice bicycle builder, and with a radical design that has still not settled down — judging by the wide variety of bikes I see continually in IHPVA and RCN. Of course, the relative stability of the diamond frame design reflects more than a century of refinement by tinkering, and trial and error.

At about this point, (1988), I saw an ad in Popular Science for a three-wheeled Brike recum-



Photo courtesy of Michael Wolfson

bent. Since the design seemed rather elegant (with "lean steering"), and tricycles have certain obvious advantages (like not tipping over when stopped, nor falling over after skidding in the snow — I commute in the winter too), I ordered one (my first mail order experience). Two major lessons here. First, it was so low to the ground that it was a real safety hazard in traffic; though this could be fixed by adopting one of the other tricycle designs I'd seen in my (by now) growing collection of IHPVA and other articles. The other "killer" lesson from the Brike experience, another BGO ("blinding glimpse of the obvious"), was that the roads where I live are crowned (i.e. curved so that water runs off to the sides). Riding the Brike at the edge of the road left a crick in my back, since I was continually at an angle to the vertical. This is a problem no tricycle design I've seen can fix.

So back to 2-wheel recumbents. The design of the Lightning looked the most attractive of the various recumbents I'd seen, but at almost \$2,000 was far too big a gamble to try "on spec" via mail order. I persisted in my prototyping, adopting two further "principles": One was to stick with 20" wheels front and back — mainly because they are small enough to allow a good range of geometrical arrangements of wheels, seat and pedals, and

their ubiquity means they are inexpensive and available in wide variety. (i.e. I rejected the Moulton front wheel idea on the Lightning, and the idea of different size wheels front and back, albeit after considerable experimenting with a 16" front wheel and 20" rear.) The other principle as I continued my prototyping was generally to avoid welding, since I don't know how. Instead, I relied on bolting parts together.

The next major experimental lessons came from pedaling various of these crude prototypes around the neighbourhood. (Yes, I got lots of stares, and also interested questions.) First, I learned (another BGO) you can't "stand on the pedals" on a recumbent, so when you hit a bump there is no option of letting your legs cushion the shock as on a diamond frame — your tail bone really gets jolted. Conclusion: a really good seat is essential, and suspension highly desirable. Second, going up hills is hard work when you have to remain seated, so it is important to have really low gears. (On the other hand, as I learned with later prototypes that were better still, you can go down hills very fast, so high gears are lots of fun.)

.....Continued on the next page

.....Continued from page 16

### TALES OF A HOMEBUILDER...

Third, it is really helpful to have a bicycle that is stable at very low speeds (e.g. 4 km/hr). This aids in starting up and in maneuvering. Such stability, in turn, depends critically on the steering geometry. This is pretty complex mathematically. (e.g. I am sure there was an article with the math and diagrams in either Human Power or in Cycling Science, but I can't find it; anyone feel like creating a comprehensive index?). This seems to be one of the areas where over a century of trial and error has led to refinements in diamond frame design that are certainly not obvious to the untutored eye, and that I never appreciated before. In any case, you don't really need to understand the technicalities. What you do need to do is retain the accumulated wisdom by copying patterns embodied in conventional head tube angles and fork trail.

In the meantime, I'd had a chance to visit Robert Perkins, designer and builder of the Thebis tricycle while he still worked near Toronto airport in 1989 (he's now out near Victoria airport in British Columbia). The Thebis is a work of art, but very expensive, and suffers like the Brike from the road crown problem. Nevertheless, Robert Perkins was kind enough to sell me one of his excellent alloy seats with nylon mesh, plus one of his kevlar encased seat cushions with the inflatable rubber canoe/kayak seat pad inside. (He has since changed his seat design, and last time I asked did not want to sell any seats separately.) This seat is comfort heaven, and I've tried many recumbents in my travels over the last several years.

For example, I finally had the chance to visit "Dr. Recumbent" himself, Robert Bryant, a few years ago when he had a crowd of recumbent enthusiasts at his house near Seattle. This was my first chance to meet and talk with a number of folks at the same time, many of whom allowed me to try out their machines. I became an enthusiastic subscriber to RCN, and also reconfirmed my design conclusions.

One of these was the necessity of suspension on both wheels, so I started looking around for an appropriate design. I recalled reading an article about Alex Moulton's philosophy regarding frames — namely make the frame as rigid as possible and put the flex where you actually want it via a carefully designed explicit suspension. This philosophy is the one I adopted. This was in 1991 before the suspension craze hit mountain bikes. The only thing I could find was the Moulton, and its front fork was \$400. So with the help of Michael Plummer of Cyclotech near Ottawa, we built suspended front and rear forks from scratch, using pieces of existing forks, old car valve springs and spare Moulton leading links for the front.

These pieces were put together using a frame made of two lengths of 2" square aluminum tube bolted together at right angles (see photo to get the idea), with the pedal bottom bracket tube and seat fastened using "U" bolts. While this was not the most elegant method, it allowed a wide range of adjustment, and did not require further welding. The resulting bicycle was heavy, but the forks worked beautifully, and persuaded me that

suspension was essential.

I commuted daily through the spring, summer and fall of 1992 on this comfortable but heavy and less-than-beautiful recumbent — through rain and sun, briefcase strapped behind. This experience convinced me I was 99% of the way to my ideal design, so I began work on my "final" version. One suspension lesson from this experience, another BGO, was that valve springs may have bounce, but they have no damping, so while I could ride over a 4" curb with no pain, the bike kept bouncing 3 or 4 more times.

At this point, I was ready to invest a bit more, so I ordered a set of beautiful alloy handlebars from Lightning, and a 20" suspended front fork from ProForx in California (not straight, but with the 4 degree angle). I also managed to get one of the yellow elastomer "springs" from the rear suspension of a ProFlex mountain bike (at over \$30; a cheaper alternative noted somewhere was a Lacrosse ball), and had the opportunity to visit Gaylord Hill's Cyclopedia — a gold mine of neat bicycle stuff, where I picked up some high pressure ACS 20" tires and a needle bearing Delrin chain idler wheel (having previously created my own from a skateboard wheel).

Finally, over the 1993/4 winter, I built a new mostly alloy frame from a mix of 1.75", 2" and 1" square tube, cutting and fitting all the pieces myself, and then having them welded locally. The result is shown in the photo. (Yes, the rear chain is missing; it's winter here and I am in the midst of more tinkering. Also, the rear rack is an extension of the frame so it too is suspended — something I considered essential since I commute with my notebook PC in my briefcase.)

Let me add a few comments perhaps not obvious from the photo. One concerns gearing. A wide range is essential. This is achieved by combining an internal planetary gear hub in the custom built rear wheel with a derailleur on an intermediate shaft under the seat. The shaft doubles as the rear swing arm axle — thereby avoiding problems of changing chain tension as the rear fork swings. The assembly is made from an alloy rear hub. The under-seat location for the derailleur (rather than on the small rear wheel) is somewhat higher off the ground and offers more protection.

A challenge was aligning the various cogs; the solution is a Shimano hyperglide cluster with the pawls removed. This cluster allows room for 5 speeds plus putting the cog driving the rear wheel on the outside. The rear wheel gearing is one of the new 7 speed Sachs units with an integral drum brake. The advantage of this hybrid gearing is that the internal gears allow shifting while stopped, a frequent need when commuting, and the derailleur can be shifted without letting up force on the pedals.

The hybrid braking (mountain bike calipers on the front, integral drum brake in the rear) was motivated by a concern that wet weather would degrade the front brakes, while the rear brakes would be immune. However, I'm not sure there has been any major benefit.

The seat height is a compromise: it is as high as possible while still allowing me to put both feet almost flat on the ground when stopped. It turns out that this puts me eye-to-eye with most car

drivers, so I feel very comfortable in traffic. A rear view mirror is very important, though, because it is harder to look behind on a recumbent than on a conventional bicycle.

The electrical system is also something I'm pleased with. This is yet another area where the mainstream bicycle industry continues to treat the bicycle as a toy rather than a serious vehicle. Battery operated systems require new batteries (expensive and ecologically poor) or fairly frequent recharging. Generator systems, on the other hand, provide no light when stopped. With the addition of a few dollars worth of parts from Radio Shack, I made a hybrid system from a high quality generator and rechargeable battery + halogen lighting package. The generator runs through a bridge rectifier and keeps the battery charged. The battery in turn runs the lights and a 90db electrical horn.

As far as plans for the coming 1995 season, one innovation is teflon tubes for the main part of the chain run. They combine the functions of chain guard and idler wheel. I acquired a set of these from London (UK) Recumbents (affiliated with Neatwork in Scotland, a recumbent distributor), which they in turn imported from the German firm Radius which makes the Hornet SWB and Peer Gynt LWB recumbents. (While visiting London Recumbents, I had a chance to ride the Peer Gynt — exquisite, and a Kingcycle — nice but I missed having a suspension, and the seat is too narrow.)

I'm also considering installing at least one Magura hydraulic brake (I've used them before and they are fantastic). Finally, I'm still weighing the idea of a fairing. From my reading of the literature, this won't give any significant speed advantages at my typical commuting speeds. However, I would appreciate something to keep most of the rain off in poor weather, and possibly reduce the impact of head winds. In a prototyping mode, my plan is to start with fiberglass kite rods, ripstop nylon, and velcro — all easy to find, not too expensive, and easy to work with.

So basically, my foray into recumbent bicycling is complete and very successful. I remain amazed that such a practical vehicle continues to elude the attention of the mainstream bicycle industry; or does the fault lie with the majority of consumers who are seduced so unquestioningly by the latest flashy colour schemes or tube angles? □





# RCN Reader Road Tests

## Rocket Science

by Dave Krovetz

## Easy Racer vs. Vision

by Roger Fuller

## Rocket & Stealth

by Sheldon Herman

### ROCKET SCIENCE

by Dave Krovetz

I just purchased a Rans Rocket to replace the ATP R-40 Vision that I had just sold. This is my reaction to the Rocket and a comparison of it to the Vision.

The Rocket I bought is stock, 14 speed (30-95 gear inches), dual 20" wheels, Shimano Alivio derailleur, Bulldog brakes.

It was shipped to me from Rans, although I purchased the bike through AngleTech in Colorado (a very knowledgeable and helpful contact). I bought a dark green bike, actually has metallic flakes in the paint - really a sharp paint finish. The bike was well packed (2 boxes), the seat was fully assembled (by AngleTech), it took about an hour to set up, another bit of time to adjust.

First impression of the bike is the overall quality is quite high - nice welds, fantastic paint, very well thought out cable routing and cable stops (this is in contrast to the Vision, which has a lot of housing flopping around on the under-seat steering version that I had). The seat is tops, and the bike's #1 selling point. It is the most comfortable recumbent seat I have ever sat on - fiberglass base with cushion, mesh seat back. Adjustable recline angle too. The seat in its most forward position (I'm short) is very upright even though I have the seat stays set as short as possible - they will probably have to be cut off to recline the seat more. As is, I like the angle of it though. Compared to the Vision, not as easy to remove or adjust the seat's angle, easier to slide the seat though for leg length adjustment.

Shifting is fair to good - the SRAM Grip shifters are adequate, not as nice as the SunTour Bar Ends I had on the Vision, but the shifting overall is better (Shimano the reason?). Brakes are comparable to the Vision in stopping power - I will probably put on after-market pads to improve them, but they are good enough for me. Neither bike stops on a dime.

Steering is quite different from the underseat steering Vision - no tiller effect since the bars are directly above the head tube. Its crisp and the

bike tends to try to run in a straight line. The Vision has a floating sort of feel to it - neutral. Also, the Vision has a smaller front wheel. Overall, this bike is better at slow and high speed handling than the Vision. Rough bridges that I had to watch out for at 20 mph on the R-40 are of no concern on the Rocket. The Rocket's front fork has a bend in it (trail I guess its called), the wheelbase is almost 4" longer, the tires are bigger - all of this makes the ride a bit surer to me.

The tires that came with the Rocket are Specialized Stratus, with 35 psi printed on the sidewall. The Specialized folks say to run them at up to 85 psi though, I have them at about 80 psi and they are great.

The chain management system on the Rocket is noiseless (virtually) and use dual idlers. When the seat is far forward, the rear idler is moved to the seat's quick release as per Rans. For me, with the seat about 2" from the front of its travel, this meant that the chain bounced off the rear idler. Rans is extremely responsive to this, as is AngleTech. It put the chain back in the original idler position, removed the long quick release skewer from beneath the seat and replaced it with a bolt - AngleTech is sending me a shorter quick release to replace my bolt. Problem solved - fast and very eager to keep customer pleased.

Complaints are few. One pair of water bottle mounts (on the seat back there are two sets in the lumbar region) is out of alignment - I cannot put a water bottle cage on this set. However, as I only use one bottle, I don't really care. On the Vision, a water bottle is problematic unless one purchases a mount for behind the seat mounting.

With 100 miles on the road so far, I can say that I really like this bike. If one could afford it, I'd recommend AngleTech's 21 speed upgrade. It gives a gear inch range of something like 26-115 (Rans currently offers the Rocket as a 14 speed only).

Look for part II of Dave's story in the next RCN. Dave builds a fairing for the Rocket for \$75. □

### EASY RACER VS. VISION

by Roger Fuller

Dear Fellow Travellers,

I realize that this is an unsolicited test between a performance set-up Tour Easy and an ATP R-40 Vision.

Last week I entered a two day, 120 mile bike ride in order to promote recumbents here in Arkansas. I rode the Tour Easy on the first day and returned the second day on the Vision. 116 riders participated in the ride and I was the only recumbent rider. I placed 7th on the Tour Easy and 60th on the Vision. The Tour Easy is stock except for SPD pedals, sealed bearing pulleys, a fabric wheel disc, and a higher pressure narrow rear tire. The R-40 is stock except for SPD pedals, an XT front wheel and sealed pulleys.

It is interesting that when I shove hard on the pedals, the Tour Easy surges ahead instantly. When I do the same on the R-40, the pedal seems to "push-back." Could this be the seat fabric stretch? With the same effort, the Tour Easy is up to 10 mph faster. and is a better hill climber! The Vision's seat is a bit more comfortable on a very long ride as it has side support.

The above mentioned two day ride was over mountainous terrain and I am 55 years old (but very fit). Had the ride been held on flatter ground, I might have finished 1st or 2nd. Each bike is my favorite while I am riding it. The Tour Easy comes alive at speed, but on a long leisurely ride, I go Vision. □

### RANS ROCKET & LIGHTNING STEALTH

by Sheldon Herman  
Recumbent SEA

As a dealer for new recumbents part of my job is taking each bike out for an hour or so to see if it is set up properly. I am also the lucky

.....Continued from the previous page

### ROCKET & STEALTH....

person who has to repair whatever problems that come along with the bike.

Very few frame kits arrive here perfect. Often we need to retap the bottom bracket threads, retap a braze on or a rack mounting hole. Sometimes we need to do things to the bike you do not want to know about to get it right. This is especially true of lower end Chinese mountain bikes (if they only did bikes as good as they do food!). Rarely do we have to return a frame as a dud. We nearly sent one back this week and it is a bike I was going to review for this issue.

Last week, UPS arrived one day with two frame kits. First I will report on the impressions of the Rans Rocket. The frame is set up for 20" X 1 3/8" rear and 16" X 1 3/8" front. The set up went smoothly, we had everything ready including the right wheels. In one one day the bike was built up and out the door on its first test ride-no problems. The Rans was a pleasure to work with!

The second bike was a Lightning Stealth. The frame kits looked great and as this was our first Lightning product. We were ready to jump on it. A day later the bike is built, I came in looking forward to test riding. The seat was more comfy than my office chair, as well as any seat in the shop. I am stoked and ready to go, however, I did not make out of the parking lot. The Stealth would not steer.

We tightened up the handlebar, I tried again with no luck. Back in the shop again was where I had to go. The bike still would not steer. So we drilled a tiny hole, threaded to accept a 5 mm pan bolt. Now, there was no way the bike would not steer. The next morning again I went out to test ride as my copy deadline was nearing. Impossible, the Stealth still would not steer! This time we got on the phone and called Tim, Mr. Lightning himself. He said that the link bar that goes into the forks steerer tube and then in turn is fastened to the handle bar probably needed to be relock-tightened.....a scary thought, that lock-tight was all that was going to insure that the bike goes where it is supposed to go and not where it wants to go.

Eventually, all of the problems were solved and I got my test ride in. The bike is a pleasure to ride. The stealth is fast and lives up to its Lightning reputation.....this is the bike for those of us

that really want a P-38 but do not have large sums of spare change. Expect to pay \$1200+ for near perfect handling, fast, and fun, and I don't work for them either!

Do not feel cheated to settle for a Rocket. It too lives up to Rans quality and at lower price offers as nice a ride. The Rocket is break thru recumbent. It is a serious performance bike at a price that is a real steal.

I would encourage finding a dealer to test ride before you by anything, and buy it from the dealer you test rode the bike from.

The rocket is probably the best value available in the recumbent world today. I have ridden



The 1995 Rans Rocket—photo courtesy of the Rans Company.

long distances on it AND LIKE IT BETTER EACH TIME.

The Stealth is potentially a great ride. I say potentially because the problems with the steering need to be worked out. □

## Buyers Guide Updates

•**RCN#26/27 Cover:** the Rans Stratus rider is John Schlitter of the Rans company. We would like to offer this special thanks to the Rans company for their support of the buyers' guide issue, without their support, the issue would not have been possible.

•**Page 13:** The bike pictured is an Angle Tech V-Rex SS, the GL63 model is not available with the Spinergy wheel.

•**Page 19:** The correct phone number for Soho Design is 503-575-2003 or 1-800-258-SOHO.

•**Page 22:** The correct phone number for BikeE is Ph#503-753-9747. The BikeE has a lifetime warranty on the frame and fork.

•**Page 22:** The Easy Racer EZ-1 has a lifetime warranty on the frame and fork.

•**Page 35:** The Zephyr by Practical Innovations has a track of 32".

•**Page 39:** The Angle Tech Counterpoint Opus has a 26" rear wheel.

•**Page 60:** The correct phone number for Recumbent SEA is Ph#616-454-3260.

### RCN#25 UPDATE

•**Page 10:** Shown was the 1995 Rans Rocket. The Rans Rocket was designed exclusively by Randy Schlitter of the Rans company. We apologize for the mistake.

## FUTURE CYCLES

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VISA-MASTERCARD-DISCOVER

# RCN's Cool Bikes of The Month!

## VISION RECUMBENT INTRODUCES 20" WHEEL OPTION AND LARGER SEAT

May 17, 1995 Seattle, WA

Advanced Transportation Products, Inc., manufacturer of the Vision line of bicycles, is now shipping all Visions with the new larger seat, and the option of a 20" front wheel.

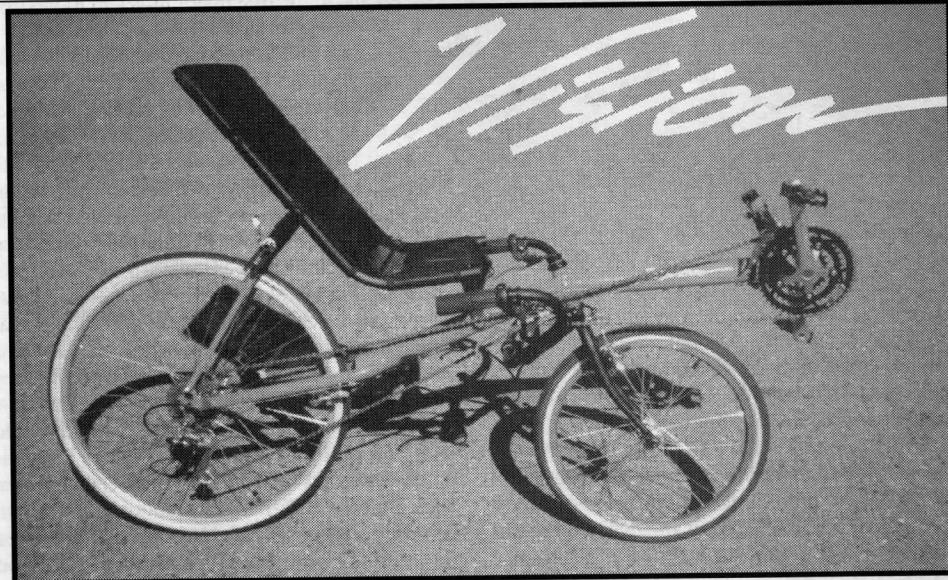
The new seat design is almost identical to the old, except that the new seat base is an additional 1.5 inches in length, and the rear seat cross bar is 3/4" deeper. This makes the bike more comfortable for larger riders. Smaller riders, however, will probably not notice much difference. It is not necessary to change the seat fabric.

The 20" wheel option is available on all Vision models. The VR40 uses a standard Weinman 219, 406mm 20" rim. The VR42 and VR45 uses a Sun Metals CR16, 406mm 20" rim. Both models will be shipped with the Kenda 90 psi 20" x 1.5" tire, although a wide range of tires can be used.

The handling characteristic between the 16" and 20" are really a personal preference as to which wheel a person would prefer. Compared to our standard 16" front wheeled Vision, the seat height of the SWB 20" version is 1.5" higher at 24" and the wheelbase is 2.0" longer at 38". The bottom bracket height increases to 24" with the 20" front wheel from 19.5" on the 16" wheel Vision model.

The new 20" front wheel option is not for everyone, shorter riders may not fit. We strongly recommend that a rider be able to place their feet firmly on the ground while seated on an recumbent.

The retail price difference of the 20" bike will be approximately \$30 more than that of a 16" wheel version. Again, retrofit kits are available to



make this change on any existing Vision. The retrofit kit will consist of a new front fork, wheel, tire and tube. Suggested retail prices for the kits will be \$180. of a VR40 and \$210 for a VR42 or VR45.

ATP Engineer Grant Bower says, "I'm real excited about our new 20" wheel option, it continues ATP's tradition of offering our customers the widest possible range of options."

For more information contact your ATP dealer or: ATP, 952 Republican St., Seattle, WA 98109. Tel. 206/467-0231, Fax 206/467-0175.

### EDITORS NOTE:

We were able to briefly try out the new ATP 20" wheel Vision last month. The handling & feel were much different from that of the 16" wheel

bike, this is primarily due to the higher bottom bracket and it's effect on the riding position.

The 20" wheel makes for slightly heavier steering when compared to the 16" (which is very neutral in feel). The 20" Vision tracks easily, however, the more you steer it, the more it wants to fall right or left into the turn. This makes for a much more pronounced handling feel than with the 16.

Riders wanting a better choice of tires, longer tire life or want a more defined handling (less neutral) should love this upgrade.

ATP has also lengthened the seat, which is great for larger riders and for those who may have felt the seat horn. The seat is mounted farther back on the bike which makes the Vision feel longer.

Both are great Vision upgrades. Ed. □

## NEATWORKS INTRODUCES K3 TRIKE

Scotland- a Scottish-based company, well-known for advanced bikes, are now distributing a new human powered vehicle, the revolutionary Kingcycle K3, designed by Miles Kingsbury, is nothing like any bike you've ever seen before. It is enclosed by a wind tunnel-researched body shell which makes a significant reduction in wind resistance. This means less effort is required to move it along- an average cyclist could cruise at 30 mph in the K3. In order to perfect the aerodynamics, a new compact drive system was developed. Labeled the K-drive, it enables a very efficient out-put from a very shallow pedalling ellipse-to the user it feels like the pedals are not moving horizontally.

Another benefit of the K3 is that you are completely protected from the weather.

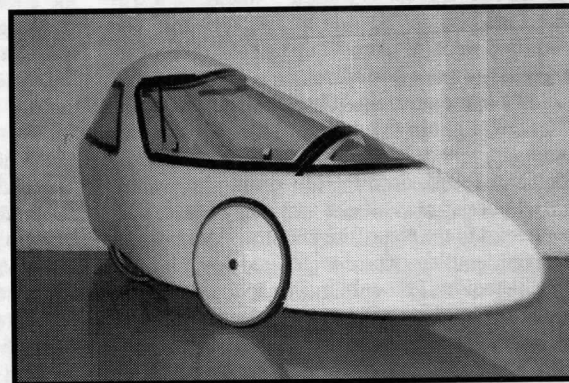
The standard K3 comes complete for road use with lights and indicators. The fact that it is

enclosed from the weather means you can have in-bike entertainment and other installations you might expect in a car.

The K3 represents the best opportunity so far for the car owner who wants a realistic alternative to the car for transport, leisure, health and fitness as well as the expected interest from the cycle sport fraternity.

So, as the planning and traffic authorities get to grips with proposed environment and pollution control measures, reducing motorized transport in urban areas, there is now a human powered vehicle which looks the part and does the business.

For more information and details on how to get a K3 or how to get a test ride contact Andy Watson, NEATWORK, PO Box 2, Coldstream, Berwickshire, Scotland, TD12 4NW, Ph#01890 883456, Fax#01890 882709 □



Please send a picture and short article for "RCN's Cool Bike of the Month" feature to: RCN's Cool Bike, POB 58755, Renton, WA 98058. It can be a homebuilt, commercially built, personalized bike, commercial prototype or you can be a new manufacturer or an old one with something new!

# The Davis Double Century on a Lightning F-86

by Zach Kaplan

I just finished my first organized "double century." Double century is an American term for a 200 mile group ride which means 322km for the rest of the world. I had done longer and shorter group rides, but never that magic "double century." I had been hearing about the Davis Double Century for many years, it seems to be one of the more popular doubles on the West coast with approximately 1500 cyclists riding it. I had already ridden most of the roads it travels on in Yolo, Napa, and Lake counties during the recent Paris Brest Paris Brevet series so I was somewhat bored with the area, however, I figured I should do the ride to promote recumbents. A couple weeks ago Randy Garrett, one of the SAG drivers on the PBP Brevets, gave me his ticket to the Davis Double as he was unable to do the ride as a result of an injury.

At the last minute, a friend and myself were able to borrow a truck to get to Davis. Yes, it feels stupid to fire up an infernal combustion engine just to go ride your bike somewhere, but there was no time to ride to this ride. (I rode to and from 6 of the 8 PBP brevets). We had to leave in the middle of the night and I only got 3.5 hours of sleep Friday night. It is not the way I would have preferred to do it, but I figured doing the ride on that little sleep would be good training for something. I planned on taking the ride easy, as I still hadn't fully recovered from riding 810km two weeks earlier. I was going to treat this as an easy social ride.

I checked in at 05:30 at the school where the ride was starting and finishing from. I was feeling very tired. I knew that five of the *Bicycling* magazine editors would be doing the ride in a paceline but it appeared they had already left.

As soon as I got underway, my fatigue lessened. Nothing wakes you up better than flying by hundreds of cyclists riding in tandem led pacelines. On the flat farm roads leading to the hills, it was like I was doing the ride in fast forward. The pacelines were just coming up fast and disappearing into my rear view mirror.

At approximately 40km, the forward chain idler on the return side fell off. This F-86 is a pre-production model and the chain idler was placed too far forward, occasionally getting hit by my heel. I guess it was hit one two many times. Still connected to the chain, the idler traveled down to the rear derailleur where it jammed up and made horrible noises. I thought maybe I would pull out of the ride and get some decent sleep. Instead I pulled over to deal with it which took ten minutes. I unbolted the chain idler housing and removed it from the chain. I put duct tape on the front fork and brake. I continued riding. However, now instead of a silent ride, the chain made a cyclic tapping noise as it bounced against the tail fairing framework. At least it only made the noise while pedaling. I also could no longer pedal down fast hills as the return chain would hang up under the front brake slave cylinder.

I came to the first major hills and found myself continuing to pass all the upright riders. I briefly pulled into the second rest stop by the lake Berryessa dam. As I grabbed some food, I noticed the *Bicycling* crew was pulling out. I quickly got back on the bike and caught up with them, still going up hill. Then there was a slight down hill and I lost them. Farther down the road on another long grade, I saw the *Bicycling* crew approaching in my rear view mirror. I hadn't been going up that hill especially hard as there weren't any faster upright riders approaching from behind and I was passing all the ones ahead. These *Bicycling* magazine editors do ride there bikes! Ed Pavelka was leading their pack. I let them catch up a bit so they could get a look at the Lightning F-86. Then just as Ed got about one bike length behind, I would shift and pull away, raising my speed approximately 2 km/h. When I got tired from pushing that gear, I would shift back down and drop back to my comfortable hill climbing speed. Then when they started catching up, I'd pull away again. I did this several times during the course of the pass.

There was a *Bicycling* photographer in a car riding with us taking photos. Throughout the course of the ride the photographer would pull up beside me and take photos. Occasionally he would do something dramatic like pull up ahead and then lie down on the double yellow line taking a photo of me approaching. All the photo attention made me play the part and somehow find the extra power to keep up a fast pace—and I was no longer tired. It appears *Bicycling* might be doing an article on this ride. Hopefully, the Lightning photos and its performance in the hills will be featured. This incident on the hill could help change *Bicycling's* attitude towards recumbents.

Near the top of the hill, I did let the *Bicycling* editors catch up with me so they could ask me about the bike. Most of them seemed to be ignoring me and the Lightning. That is the sort of reaction I often get when I make upright riders look bad in the hills. Its like this isn't a bike, it doesn't count. I did talk briefly with Jim Langley, the one recumbent friendly editor there. At the top of the hill, I couldn't resist the long descent and just totally ditched the *Bicycling* crew. It wasn't worth slowing down to their pace for too long. Better to just put some distance between me and them. In this case, that would be a better form of public relations than riding with them and trying to talk 'bents.

I kept going, still doing the ride in fast forward mode. I developed a new technique for dealing with the slow roadies filling up the lane on the downhills. I noticed frequently when passing pacelines the rear rider would yell out "car back!" Then he would say something like oops, nevermind. In any event, it got the paceline to move over towards the right. The faired Lightning sort of looks like a car in a cyclist's rear view mirror. Also when approaching the paceline, the rumble and roar of the fairing could sound like a car.

Anyways, I used this effect to an advantage on the downhills. When a paceline was filling up the whole lane and slowing me down, I would simply yell out "car back" and they would move out of my way.

I hadn't really had anything to eat before the ride and was running low on fuel, so I pulled into one of the rest stops. The rest stop was a dirt-gravel lot with food tables at the far end of the lot from the road. The people on road bikes were getting off their bikes on the road and walking their bikes to the food table. If asked why they'd probably say so they wouldn't get pinch flats but the real reason was probably to give their rear ends a break from the narrow saddles. Taking advantage of the full suspension, my tires were inflated to very high pressures so I wasn't worried about punctures. I simply rode through the dirt and gravel right up to the food tables, came to a dramatic dust flying stop, and would simply reach over and take the food and put it in my seat side bag. I would then take off, eating on the road. This saved a lot of time at the rest stops and also reinforced the comfort of a recumbent. Of course, I wasn't needing to spend any time waiting at those dirty outhouses since the F-86 has an onboard toilet.

At one of the rest stops I was asked if I had a telephone in there. I don't know if that was a serious request or not. Also numerous people asked me if I had a motor in there. Some just couldn't accept the fact that I didn't. I guess the dragging chain sounded a bit like a poorly adjusted engine. At one rest stop the food tables were at the bottom of a steep grass hill. Rather than just parking the bike at the top of the hill, I rode down it with the landing gear (feet) down just in case. I couldn't ride back up that one though so I had to get out.

People seemed impressed by the fact I was wearing tights and a long sleeved shirt on a fairly hot day as one of the other common questions was "isn't it hot in there?" Another common question was "how is that thing in cross winds?" Once you get used to it and develop your handling skill, it is fine in most winds around here so I would say "great, the cross winds actually make the bike go faster." Someone else out of concern for me said, "I sure hope it doesn't get windy." I shot back, "well I hope it does, the windier the better!" The final flat stretch of the ride did end up having a stiff cross wind, and it sure helped me, I was doing about 42 km/h for the final 40 km.

I did see a couple other recumbents doing the ride. One was a slow moving vehicle with underseat steering, a man from Davis riding a Tour Easy with Super Zzipper fairing and Ron Bobb on his Easy Racer Gold Rush Replica.

While the first half of the ride was spent passing hundreds of cyclists, the second half was rather lonely. I'd only pass a paceline maybe once ever 45 minutes during the second half. There were a couple long, winding passes were I smoked out

*Continued on page 26*

# Family Road Test: : My Vision vs. My Wife's Tour Easy

by Charlie Schink

It was sometime in 1990 that I started to notice an upward trend in my life. My weight was up about thirty pounds, my age was up around the high thirtys and my doctor was up in arms about my blood pressure which was up to "high normal". Just about everything was up except my physical activity and my energy levels. So I bought a NordicTrac and exercised. Three months later I felt great. The benefits of exercise had put me back on the road to health, but skiing-to-nowhere in my living room was getting very boring. My motivation was slipping. Something had to be done.

"Why not commute to work on the bicycle?" I reasoned. "Eleven miles each way, I wouldn't have to bother with parking, it's good for the environment...." So I dragged out my old diamond-frame touring bike which had taken me so many thousands of miles around Europe, hopped on and pedaled to work. Bad idea—after an hour I was still shaking and sore in the arms and neck. Nine hours later after standing on my feet all day at work I faced the prospect of cycling home — eleven long, uphill miles. I arrived a basket case. I knew there had to be a better way.

Several months passed when I wondered into Henry's Bicycle shop to get some advice. "I thought about commuting to work, Henry, and I even tried it, but I was shakey and sore and sweaty. Then I think of the problems like riding home in the dark and the 100+ degree summer heat and the 35 degree winter cold. This whole idea is sounding more and more far-fetched."

Henry pointed to the stool at the counter. "Sit down, Charlie and prepare to take some flack. My wife and I have been commuting to work on bicycles for years. Before that, I had all the same excuses — sore butt, bad traffic, too cold, too hot, too sweaty, you name it. In the end it all boils down to one thing: you can either ride and be healthy or sit on your butt and get fat. You must be prepared to take each little problem and just solve it! Now how hard can that be? A hundred degrees out? Strip down and use a sprayer. Thirty degrees out? Put on warm cycling gear. Too sweaty? Wash in the sink at work. Traffic? Go through the residential areas. Sun went down? Buy a lighting system. Sore butt and tingling hands? Ride a recumbent."

A recumbent? I had never even considered one. So I went out and rode a few and it all started make sense. I finally settled on a Vision R-40, (SWB & underseat steering) after a test ride in Seattle and started commuting daily. What a pleasure! No aches. No sore butt. No shakes. My energy improved and my mood improved. My blood pressure dropped back to normal and I actually looked forward to cycling every day. In fact, I became addicted to the daily commute!

My co-workers thought I was an absolute

lunatic at first. But then most of them tried the Vision and saw how comfortable it was. They noticed my improved mood and my weight loss and encouraged me to keep on cycling.

Several months later my wife, Leona and I happened to be visiting friends in Santa Cruz. We passed the "Freedom" exit on Highway 101 when Leona said "Isn't there a recumbent bicycle maker in Freedom?" "Yeah...Easy Racers or Tour Easy or something." I said. "Do you want to test one?"

So off we went to meet Gardner Martin. We found the man in an old barn down a little dirt road behind Hansen's Feed Store. There was an old dusty dog lying in the sun protecting the place. Gardner was inside, hard at work polishing-up one of his famous Gold Rush Replica frames.

We spent about three hours kicking around the workshop and test riding the bikes. Gardner was very generous with his time and his humor. I bought lunch, Leona bought a bike and we left Freedom with a sleek, low, black Tour Easy astride our roof rack. Secretly, I left with a dream of one day owning a Gold Rush Replica.

Well it just so happened that Leona's Tour Easy fit me, too. So I "borrowed" it for my commute one day to see how it compared to my Vision. "I'm a short wheel-base kind of guy," I said to Leona as I rolled down the driveway, "and I don't think I'll like this upright steering, either." "What are you doing home so early?" she said as I walked into the house that evening. "That thing is fast," I said. "Mind if I take it again tomorrow?"

A year has passed and I find myself commuting on both the R-40 and the Tour Easy. Each morning it's kind of like choosing between the Porsche and the Limousine — it just depends on how I feel. I find the Vision very quick to respond and it scoots around in traffic like a jackrabbit. It has a stiff ride and requires my full attention, a bit like any good European sports car.

The Tour Easy is also very responsive but it glides around the traffic more like a low-flying Raptor. It has a very smooth ride and allows for a more relaxed approach to the commute. It is so comfortable and easy to ride that it is almost as if I am being piloted around in some sort of "limo alfresco" by some unseen chauffeur. Now that another six months have passed I can truthfully say that I enjoy both bikes. The SWB Vision makes for a quick, fun ride. I now use it mostly for weekends out on the bike paths.

Leona loves her Tour Easy and looks forward to a good, long ride whenever she can wrestle it away from me! My commute is now almost exclusively done on the Tour Easy. The shorter ride time along with the "autopilot" effect



Charlie Schink and Leona Myburg riding their bikes  
—photo courtesy of Charlie Schink

combine to make it my commute bike of choice.

But now, as I write this article, Leona has foreclosed. She has informed me that she is repossessing her Tour Easy and has scolded me for being such a bike-hog. "Hello Gardner? Please ship me a Gold Rush Replica...!"

Over the past couple of years I have kept a commute log on my home computer. I kept track of the daily cycle-computer readouts, specifically the ride time, distance, maximum speed and average speed. Statistics for the "to work" (mostly downhill) leg are separated from the "homebound" (mostly uphill) leg. The following are the results, averaged over a year with the five slowest and five fastest ride times thrown out (because sometimes I was racing and sometimes I was just "smelling the flowers").

Tour Easy: Homebound (uphill) Statistics:			
Ride Time	Distance	Max Speed	Ave Speed
57.2 min	11.0 mi	31.7 mph	11.6 mph
Vision: Homebound (uphill) Statistics:			
66.0 min	11.2 mi	28.6 mph	10.4 mph
Tour Easy: Workbound (downhill) Statistics:			
43.8 min	10.3 mi	31.1 mph	14.4 mph
Vision: Workbound (downhill) Statistics:			
49.0 min	10.4 mi	28.6 mph	12.3 mph

There are two reasons for the difference in commute distances shown on the chart: 1) I took a different route home than I did to work and 2) there was sometimes a train blocking my route so I often had to use another alternate route. To be fair, please note that I am comparing two out-of-the-box bicycles. The Tour Easy comes with a small Zipper-faring as standard equipment. The stock Vision has no faring. This Tour Easy also has the fat front tire (20x1.5) and a 27x1.25 rear tire. The Vision is equipped with 16x1 3/8 front and 26x1.5 rear tire.

My final statistic: it takes me about 15% more time to get to work on the stock Vision and about 12% more time to get home. For me, speed is important. I always seem to be in a hurry, so I will instinctively reach for the faster bike when there is a choice.

Now where is that Gold Rush Replica I ordered.....?

# Recumbent News & Rumors

## ATP News

*Kent, Washington*—With a best selling SWB, ATP does not get enough credit for their LWB models. They are compact, in fact, they could actually be considered CLWB models (60+” wheelbase).

Rumor has it that the boys at ATP will be introducing a SWB tandem as a '96 model.

## Backroads Tours

*Somewhere in Cyberspace*—Kudos to the folks at Backroads Bicycle Tours (1-800-462-2848). After some initial hesitation, Backroads has agreed to allow recumbent bicycles on their tours (you must let them know ahead of time). At least part of the credit must go to Kelvin at AngleTech and Grant Bower at ATP who put forth a special effort working with the technical people at Backroads devising a way that our Rans Stratus and ATP-45 could be carried by rack. My wife and I have traveled with Backroads two times in the past (by old-fashioned bike) and have been very pleased with their tours. Give them a call and consider them for your next bicycle tour. We should show our appreciation to those in the main stream bicycle establishment when they make it easier for those of us who ride recumbents. I'll keep you posted on how the ride through Glacier goes. Mark Graber mgraber@blue.weeg.uiowa.edu

## Bill Haluzak

*Santa Rosa, California*—Bill has introduced his new 24”/16” Leprechaun (small model) as well as a new MTB suspended bike. The last we heard, Haluzak recumbents were in stock and ready to go.....no waiting lists.....

## Easy Racers

*Watsonville, California*—The EZ1 is selling great. A bunch just went to Europe. RCN is in the process of working out details to get a Zap equipped Easy Racer to test. Maybe this will become an Easy Racer option? Easy Racers Tandem: Gardner Martin reports that he has just delivered a new custom built TooEasy tandem that has a separating frame feature.

## Greenspeed trikes arrive in the USA!

*Victoria, Australia*—The Australian high performance Greenspeed trikes as featured in "Encyclopedia" and the RCN 1995 Buyers' Guide, are now being exported to the USA, as well as the U.K. and Europe. Customers in California and Seattle have already taken delivery, and one should be arriving in RCN headquarters, as this issue is being distributed, for road testing in a future RCN issue. These trikes have been designed for long distance touring and commuting, yet are also superb for just having fun! They have been thoroughly developed and tested in and around Australia touring, the Great Rides, and various HPV events and competitions. They offer comfortable seating with a sprung mesh seat, light accurate steering with centerpoint ge-

ometry, and superb handling from a low C.G. and even weight distribution. For more information, contact Ian Sims, Greenspeed, 69 Mountain Gate Drive, Ferntree Gully, VIC 3156 AUSTRALIA. Phone +61 3 758 5541, Fax +61 3 752 4115, Email greenshp@ozemail.com.au

In another interesting development, Ian Sims reports that he has just taken delivery of a new Sachs "Mountain-Drive" 3 x 7 that offers an extended range of gears. This system will allow a gear-inch-range of 16"-193" with a single chain ring! I hope this unit makes it the USA. Ian says this is just the part he needed for his fully streamlined tandem trike to be used in next years Australian Energy Challenge event.

## Meridian SWB

*Sacramento, California*—BJ Strass has been testing and riding the Meridian prototype around and getting things dialed. He has changed the seat, its mounting, and the idlers. The Meridian will come in three different sizes to fit most riders. The kit comes with the front brake supplied, but not the rear brake. The steel frame is a combination of MIG welding and fillet brazing. Handling is good and the front wheel is not heavily weighted. On the large model the wheelbase is a bit under 44" and the seat height is 22." BJ says some of the new bikes may be available with 20" front wheels. Since things are going so well, it looks like he will start taking orders this month.

## South East Riders

*Daytona Beach, Florida*—Loose Assemblage of SouthEast Recumbent Riders, LASERR is looking for riders and members. Also will sponsor local chapter, FL, GA, AL. LASERR, 1964 Forest Ave, Daytona Beach, FL 32119-1591 or email to fredu@america.com

## NordicTrack

*Kent, Washington*—Bad news quad fans, all of the ForeRunner recumbent quad pedal cars are gone and the vehicle seems to be out of production. NordicTrack, a well known maker of fine indoor ski trainers, has a new recumbent exercisor available. It is called the WINDRACER and sells for \$359.

Rumor has it that one person bought out the remaining 500 ForeRunner's?

## Prairie Designs/ HPV Supply

*Pretty Prairie, Kansas*—A new mail order supplier of HPV/ recumbent parts for owner-built recumbents has opened in Pretty Prairie, KS, located 30 miles west of Wichita. The company grew out of owner Mike Conkling's 10 years of experience in designing, building, and riding recumbents. "Our goal is to provide quality, affordable parts and supplies to the recumbent enthusiast who wants to create his or her own custom-designed vehicle." he said. "All too often, people are building vehicles from old frame parts because they don't have access to the high quality parts the vehicle manufacturers use. My company is here to fill the void." A product catalog is available by

sending a self-addressed-stamped-envelope to: Prairie Design/ HPV Supply, Rt.2, Pretty Prairie, KS, 67570 or by calling (316)459-6237.

## Turner Enterprises

*Las Vegas, Nevada*—Milton Turner called to let us know that he does have the most affordable SWB recumbent, the "LB-Economy" at \$499! The Turner recumbents were recently praised in the SW publication appropriately named "Tailwinds." Dr. John Paul Utz, MD of Tucson, AZ has written great praise of this design.

## Rotator to Compete in World Solar Car Rally

*Santa Rosa, California*—Stephen Delaire's Rotator Bicycles is headed to Japan to compete in the Second World Bicycle races in Akita, Japan to be held July 22-23, 1995.

The Rotator team has received sponsorship support from the City of Akita and Zap Power Systems of Alameda, California

Rotator's streamlined "Super-7" recumbent bicycle will use ZAP Power Systems electric power assist system. The batteries will be recharged with a solar panel mounted on the bike. Stephen Delaire, Rotator's owner and designer specializes in recumbent designs.

This will not be the first time Rotator has combined bicycling and electric power. Stephen Delaire has previously developed an electric recumbent bike which attained top speed of 50 miles per hour.

The Super-7 specs are as follows:

Frame:	Aircraft CroMo steel
Wheels:	20"
Gearing:	35 speed with 1.5:1 low & 10:1 high ratio
Fairing:	Epoxy and fiberglass composite body
Weight:	60 pounds (with motor systems)

## Ryan Recumbents

*Nashua, New Hampshire*—Dick "the Godfather" Ryan & Company are hard at work on a new lower cost square tubing CLWB underseat steering Ryan. The target price is slated to be around \$900. The bike will be an early 1996 model. The Vanguard updates are now finished, they include quick release seat adjustment, new handlebars and other details. Also, the upgraded model is now the Vanguard XT, \$2350 not the XTR as previously reported. It seems that Deore XT components actually work better on some recumbents than do the upgraded XTR.

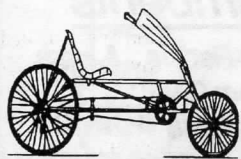
## WHAMM 15 Road Race and the Vision VR40

*May 15, 1995, Des Moines, Iowa*—This Mother's Day, Sunday May 14th, I woke up at 6:15am to participate in the WHAMM 15 Road Race. The hilly race went through the streets of Windsor Heights, a suburb of Des Moines. This is the 15th year they have had the race and the community and media were involved. This racer

.....Continued on page 24

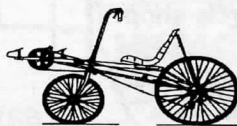
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Reebike, Lightening,  
Trailmate, Linear



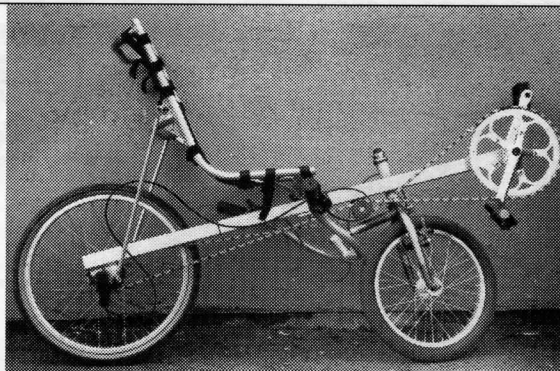
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Eugene Bicycle Works is part of the non-profit Center for Appropriate Transport located at 455 W 1st. Ave. Eugene OR 97401. Phone: (503) 683-3397



Human Powered Machines designed Trick short wheelbase recumbent (available in child or adult frame sizes)

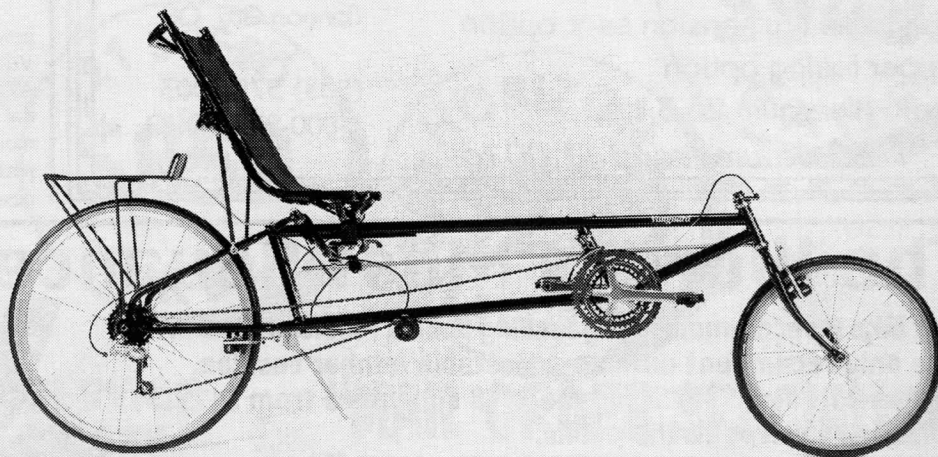
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.....Continued from page 22

draws competitors from all of Iowa.

I would like you to know that myself and trusty Vision R-40 were the lead bicycle throughout the entire race. I was never passed, although I did come close on some of the hills. It was such a good feeling to hear the spectators and volunteers yell, as I pass by, "look, there goes the leader." On the finish line straight away, I would see Police Cars that were holding back the traffic. It was just me and the unbroken finish line and no one in between.

While the other 500 competitors were finishing the race, the Race Director came up to me as I was still sitting on my Vision R-40. He smiled, shook my hand, and said that I would be invited back next year.

There is one important note to this story: Vision R-40 was the Official Lead Runner Vehicle in the WHAMM 15 10K foot race. You can't buy that kind of exposure.

David Hoss, Barr Bicycle & Fitness  
Des Moines, Iowa Vision Dealer

### Zzip Designs

Davenport, California—Zzip Designs has new fairings that fit the Lightning SWB, Rans V-Rex and others. The P-38 model will also fit ATP Visions for those who want a more substantial mount. Zzip Designs also builds fairings for most all LWB recumbent models as well as experimenter kits. Call Zzip today for info on the new V-Rex Zipper. □

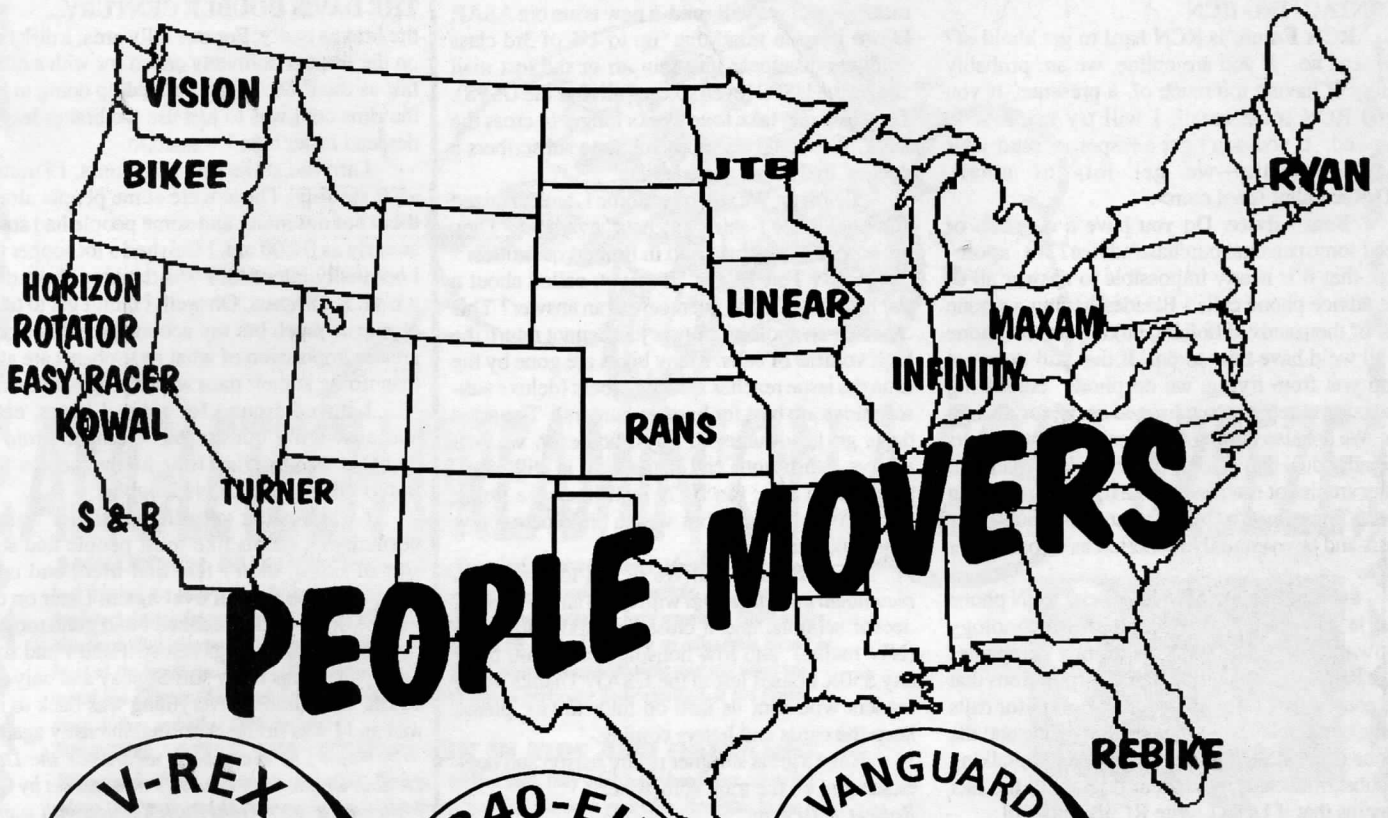
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.....Continued from page 2

### CONTACTING RCN

**RCN Email:** Is RCN hard to get ahold of? Yes and no. If you are online, we are probably guilty of having too much of a presence. If you send RCN some email, I will try my best to respond. If you don't get a response, send your message again—we get lots of email. <DrRecumbnt@aol.com>.

**'Bent Advice:** Do you have a question or need some personal purchase advice? We apologize that it is nearly impossible to answer all of the advice phone calls. Besides having a phone bill of thousands of dollars, talking on the phone is all we'd have time to do. If that still does not stop you from trying, we do phone consulting and custom reports on a limited basis for a small fee. We are also putting together road test packets for individual bikes that will include our road test, other articles or road tests and a report card/ rating sheet. These will be sold on an individual bike basis and be eventually marketed as a road tester book.

**#@&\*! Voice Mail:** The official RCN phone line is answered by the wonderful technology known as voice mail. This makes tiny companies (like RCN) seem like those large corporations that we constantly complain about. We monitor calls daily, but RCN is still a two person office and the phone is not staffed all of the time. I love talking to subscribers and recumbent riders, but the fact remains that if I don't write RCN, who will.

Do you have a subscription problem? Did

you miss an issue? Was your issue ripped or torn in the mail—if so drop us an email or voice mail message and we will send a new issue out ASAP. Please keep in mind that up to 1% of 3rd class mailings disappear into thin air or the lost mail void at the USPS (even so, we still love the USPS). They also can take four weeks longer to cross the USA. We would be happy to quote subscribers a deluxe/ first class upgrade rate.

**T-Shirts:** We still have some L and XL sized "Official RCN T-shirts and hats" available. They are each \$15 postpaid and in limited quantities.

**RCN Test Bikes:** Have you called about a test bike for sale and not received an answer? This deserves an apology, but we just cannot return the high volume of calls. Many bikes are gone by the time the issue reaches all subscribers (deluxe subscriptions are best for bargain hunters). The good deals go in a matter of days, however, we will always return your call if the bike is still available. As of late, the RCN test bikes are going primarily to dealers, but we do anticipate a few more bikes this year.

**RCN Relocation:** We're still looking for a *recumbent bicycle utopia* with clean air, low crime, decent schools, and a close proximity to water (NW native) and low housing costs...(are there any \$50K houses left in the USA)? Thanks to the readers who sent us info on their towns, please keep the cards and letters coming.

Have a great summer riding season and hope to see you on the trail sometime,  
*Robert J. Bryant,*  
RCN Publisher □

.....Continued from page 20

### THE DAVIS DOUBLE CENTURY....

the brakes badly. For our hilly area, a disk brake on the front is definitely called for with a bike as fast as the F-86. What I ended up doing to keep the rims cool was to just use the brakes less and descend faster than I wanted to.

I arrived at the finish 10 hours, 15 minutes after starting. There were some people already there but not many and some people had started as early as 04:00 am. I finished a lot sooner than I originally intended. I was thinking about doing it 11.5- 12 hours. Oh well. I didn't get to talk to people as much but my actions probably made a greater impression of what recumbents are about than riding at their pace and talking with them.

I stayed around for several hours, eating and answering questions. Someone told me that this was the first time he had seen a fully faired bike on the Davis Double.

I was feeling very little fatigue, walking normally (it seems like most people had some sort of limp), didn't feel that tired, and could have done the ride all over again. Later on during the drive back I realized I had gone too hard on the hills as my legs felt stiff and I had some knee pain. I was fairly stiff Sunday and only rode 17km. On Monday, everything was back to normal and I was riding at normal intensity again.

*Note: The recumbent record for the Davis Double Century is 9 hours 29 minutes set by Greg Miller on a stock Gold Rush Replica with a small Zipper. □*

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Ask about the improvements found in the V-RexGL63 with the new 24/20 format, and find out why we like it the best of any V-Rex!

**ROCKET BOTTOM PRICING ON A RECUMBENT BIKE.**

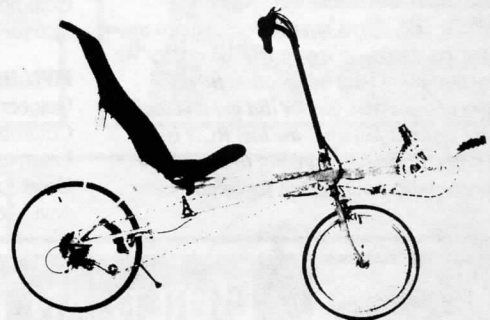
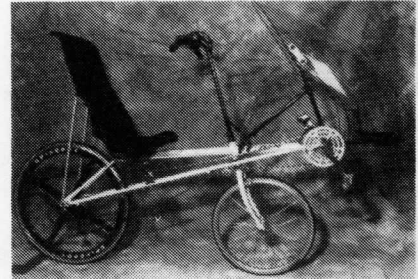
"I think a recumbents are cool, but my dream is a great seat and good build quality with a low price!" Check out the Rans Rocket to make this one come true. You could be on board sooner than you thought. Blast off today on your pocket Rocket to adventure.

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# RECUMBENT CYCLIST CALENDAR

People Movers is the official RCN Calendar Sponsor

## DaVinci Days

July 14-16, 1995

The 7th annual celebration of science, art, and technology. Contact OHPV, Paul Atwood, Ph# 503-752-6410 or Festival info, at Ph# 503-757-6363.

## The Wisconsin HPV Classic

July 15, 1995

State Fair Park, Milwaukee, WI.

The Milwaukee mile is a one mile oval auto race track. Great Lakes HPV Race Series. Contact Dennis Northey, c/o POW WOW Bicycle Tours, Ph# 414-671-4560.

## The Third WISIL Challenge

July 16, 1995

Parkside in Kenosha, WI.

There will be 15 and 20 mile road races, as well as the, "Cheddar Challenge," a standing-start quarter mile. Great Lakes Event. Contact: WISIL HPV'ers, Len Brunkalla, 260 S. Channing, Apt. 1, Elgin, IL 60120.

## Cycle Fest 1995

August 4th-7th, 1995

University College of St. Martin, Lancaster, U.K.

A Celebration and meeting place for people and ideas. For more info contact Peter Cox, 32 St. Georges Quay, Lancaster, LA1 1RD, England or call 01524 849083.

## CycloPedia Michigan Recumbent Rally

August 18, 19 & 20

Hart, Michigan.

Contact CycloPedia, Ph# 517-263-5803.

## World HPV Speed Championships

August 19-27, 1995

Lelystad, The Netherlands.

*This is the on-again, off-again IHPVA event. We have recieved no official notification from the promoters of this event, but we did get an email with these updates just after the last RCN issue went to press. If you are planning to attend, we suggest you contact the IHPVA for updates.*

## North American HPV Speed Championships

September 16-17 (registration no later than 9/15/95)

Michigan International Speedway

Brooklyn, MI (between Adrian-Jackson)

For more info contact: Don Barry at ph#317-831-8798 or Gaylord Hill Ph#517-263-5803

## People Movers/ RCN Cruise to the Beach and Open House

Saturday, September 9, 1995.

Orange, CA

Come ride with the recumbent manufacturers, reps. and RCN staff. We will leave People Movers at 10:30 am for a 25 mile cruise out to Huntington Beach. Store opens at 9am, ride starts at 10:30 am. Open House from 9am-3pm. See you there!

## Interbike Anaheim International Bicycle Expo

September 10-13, 1995

Anaheim Convention Center, Anaheim, CA.

(Trade Show) Contact: Interbike

Ph# 714-722-6975.

## 1995 Int'l Bicycle and Sports Show (BIO)

September 20-22, 1995

Sands Expo and Convention Center, Las Vegas,

Contact: BIO, Ph# 303-444-4246.

## Light Wheels Festival

Sept. 21st-Oct. 31st.

Ten Cities, Boston to Miami

Designers and builders from around the world and around the corner are invited to demonstrate cleaner, quieter, more pedestrian friendly urban vehicles. Call (212)431-0600.

## Ohio HPV Race

October 7th or 8th, 1995

Columbus Motor Speedway, Columbus, OH. A new race for the Great Lakes Series.

## HPV Race Official Workshop

October 15, 1995

Columbus, OH

Learn to be an HPV race director. For more info: Great Lakes HPV Racing Series, 1345 University Ave., Adrian, MI 49221

## CycloPedia Texas Recumbent Rally

November 17, 18 & 19.

Texas

Contact CycloPedia for more information, Ph# 517-263-5803.

*If you have items for the RCN calendar, please send them to: RCN Calendar, POB 58755, Renton, WA*

## People Movers/ RCN Cruise to the Beach and Open House

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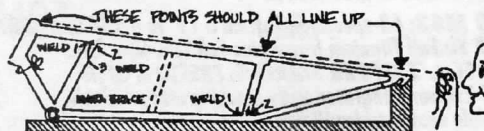
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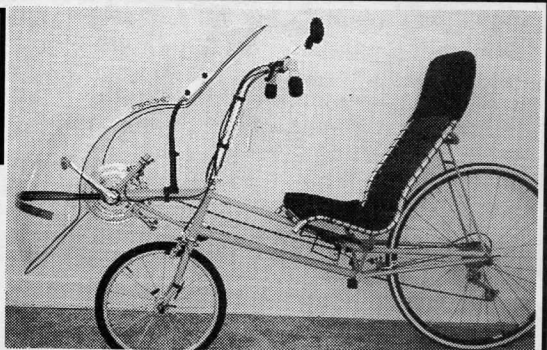
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For: Easy Racers, Rans, ATP Vision, Haluzak, Maxam, and more. Great bike path available for test rides and rentals. Contact Bob at The True Wheel, Box 1658, 400 N. Main, Hailey, ID 83333. Ph#208-788-5433, 1-800-473-0047.

**FLORIDA PANHANDLE: FOOL'S CROW CYCLES** Test rides, rentals, new & used recumbents. We buy used recumbents. Call 904.224.4767 Email: edde@freenet.tlh.fl.us 623 McDonnell Dr. Tallahassee, FL 32310.

**INTROSPECT CYCLE** Vision, Rans, Horizon, BikeE, others. Buy, sell, trade. Builders of the new \$575.00 MERIDIAN MWB; assemble a great low cost recumbent with components from your existing bike. Demos by apt. Honest mail order. VISA/MASTERCARD accepted. 1029 Amberwood Road, Sacramento, CA 95864 or call 916/973-1945, email BJSTRASS@AOL.COM

**SUPPORT YOUR LOCAL RECUMBENT DEALER** RCN would like to solute the recumbent dealers who advertise in and sell RCN in their stores. We hope that you will patronize their services and support your local recumbent dealer. Say you read about them in RCN.

## RCN Classified Ad Rates & Information

### Classified Ads Rates:

Classified ads run for one issue. Second consecutive insertions are half price. Each 25 words is \$10. Non-Subscriber rates are: \$20 for each 25 words. Commercial classifieds are \$1. ea. word (35 word minimum). Name, address & phone counts as 10 words. Classified ad orders must be paid in advance and are taken by mail only. Please phone 206-630-7200 to request a display-ad rate sheet (rates effective July 1, 1995).

### Free classified Ads:

Free ads run once and are for subscribers only. "Parts Wanted," "Parts For Sale," "Bikes for sale-under \$359 & "Personal ads" are all free to RCN subscribers.

## USED RECUMBENTS

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**FOR SALE: 1994 COUNTERPOINT PRESTO SE63** Custom fade paint, 63 speeds, XTR, DuraAce, modified suspension, very low miles. Cost over \$2800/ Sell for \$1900. Call John Ph#719-683-2713 (CO / 28)

**FOR SALE: 1994 Counterpoint Presto**, excellent condition, low miles, blue, Shimano Grip Shift setup, 21 speed, 20 X 1 1/8 high pressure tires. Includes seat bag, rear Blackburn Rack, Uni Wheel Cover kit. \$1400 + shipping. Call Tim 303.499-9450, or email to tgoode@infonomics.com (28-29)

**FOR SALE: Windcheetah**, new, never used Windcheetah trike. \$4750 or trade--looking for solar panels--wind generator--hydro--or electric car or bike. Wis. Phone 414-774-5000 (28-29)

**FOR SALE: 1995 Linear LWB**, 21 spd., underseat steering, 45" frame (6' rider), new in the box) \$799 shipped/ or trade. Ph#206-630-7200 (WA)

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**FOR SALE: ATP Vision**, under-seat steering, assembled and tested, less than 10 miles \$900. Call (607) 734-2802 (NY/ 28-29)

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**FOR SALE: Ryan Vanguard**, 92/93 model, black, bar-end shifters, Zzipper fairing, 1200 mi., excellent condition. \$1300 Carole, Ph#607-547-8571 (NY 28/29)

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**USED IN STOCK:** 16 speed BikeE, \$600. Late model medium Tour Easy, \$800. INTROSPECT CYCLE, Phone: 916/973-1945

## WANTED MISC:

**WANTED:** Any tips or info on electric assist bikes. I want to build a 45 mph recumbent and would like to learn from your successes and failures. Mike Huss, POB 265432, Daytona Beach, FL 32126-5432 or email: WEEEE@AOL.com

**WANTED: Used Tour Easy & Ryan Recumbents.** Also interested in Econ Bent. Ph#206-630-7200.

## RECUMBENT/ HPV PARTS:

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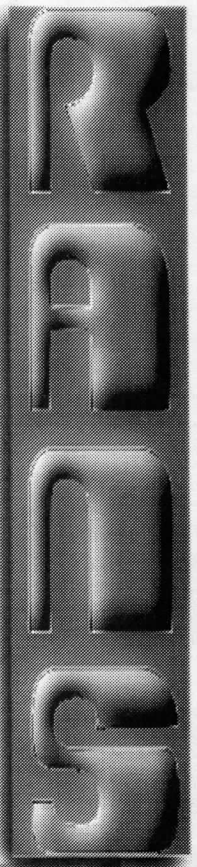
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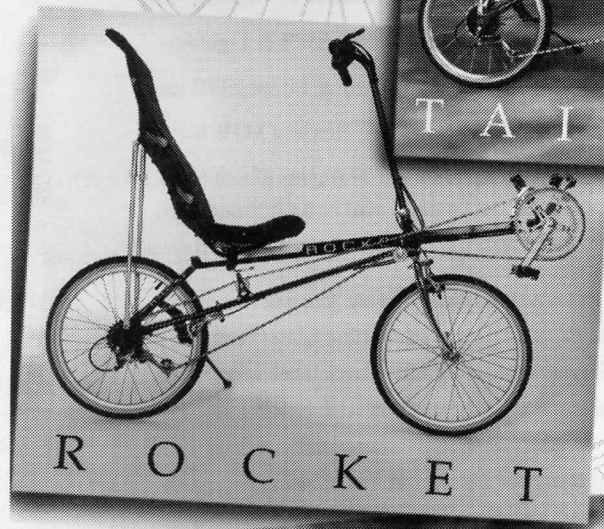


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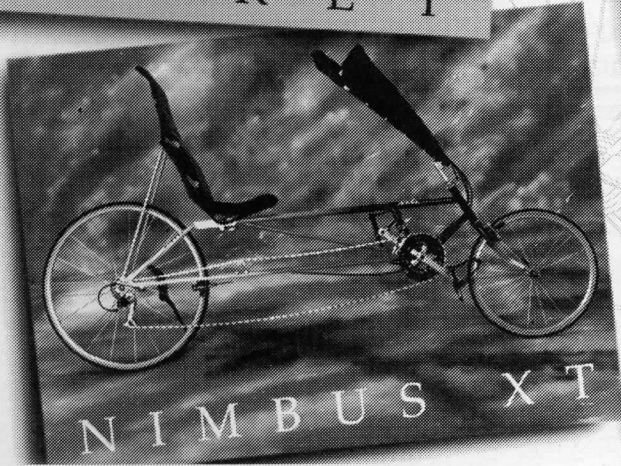
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