

RCN

RCN #23

The World's #1 Recumbent Source

Late Summer 1994

The 1995 Rans V-Rex



The Introduction to the V-Rex is more of a story of how it got built. It is the story of a recumbent enthusiast, RCN subscriber and friend to the cause. The story jumps around from LWB 'bents, to homebuilts, to Prestos, Lightnings and onto the new V-Rex. I hope you enjoy it as much as I enjoyed writing it.

The new 1995 Rans V-Rex SWB recumbent marks the third new model from Rans this year. First the Response, then the new Tailwind and now the V-Rex, which marks an extremely positive change in direction for this company.

The V-Rex is the most interesting new recumbent to come out this year, partly because of the bike's unique design history. It was designed by a recumbent enthusiast in cooperation with the R & D department and owners of Rans Recumbents. The parties involved are John & Randy Schlitter of the Rans Company and Mark Colliton, RCN East Coast Correspondent, RCN recumbent tester and WHIRL member (DC rider group). This story is almost too good to be true, maybe a recumbent enthusiast's fairy tale.

The beginning of the story takes us back to the Washington, DC suburb of Kensington, MD, where a bicycle enthusiast by the name of Mark Colliton gets the recumbent-bug in a big way. After connecting with RCN, local riders and doing major recumbent bicycle studies, Mark's first bike was a Rans Stratus-B. Mark took an instant liking to the Rans design. The large main tube matched with a series of smaller secondary tubes offered both a fairly light LWB as well as a comfortable almost suspended ride. After much experimentation, including the addition of a 24" front fork and wheel, Mark sold the Rans to pursue a homebuilt SWB project.

Another DC cyclist, Mark Mattarella, purchased the Stratus and has continued to make this bike into the most custom Rans recumbent around. The bike now has a HED 24" front wheel, a custom built lightweight front fork as well as a custom paint job. The word we have is this guy is fast, as is the bike.

Long time RCN subscribers may remember Mark's next endeavor, the Flat-Black seriesContinued on page 4

EASY RACERS BREAKS WORLD 24 HOUR RECORD!

Dateline: Eureka, CA. August 2, 1994

Easy Racer pilot, Mhyee, rode the Gold Rush America, a fully streamlined, hard Kevlar body and suspended rear wheel former RAAM racer to a new 24 hour bike record. James Mergler, age 27 goes by just one name, "Mhyee," one the 24 hour race even at the International Human Powered Speed Championships August 1-7. The object of the race is to ride for 24 hours non-stop. Mhyee on his Gold Rush America rode just over 607 miles, he continued on for another hour to make the one million meter record. This is the third time in less than a year that this record has been broken. Mhyee does intend to do some more long distance rides and plans to ride an HPV in the '95 RAAM. Could we see a Gold Rush in RAAM next year?

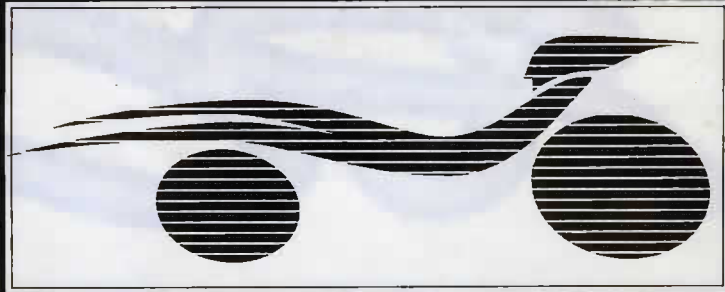
The Gold Rush America is the closest of Gardner Martin's race bikes to being a street useable vehicle having been ridden across America during HPV RAAM. The frame is actually a modified steel Tour Easy frame. Gardner Martin had this to say about the new record, "The superior ride and handling of the LWB Easy Racer allowed our rider, Mhyee, to stay in the bike seat for 24 hours straight, having never left the cockpit of the Gold Rush America. Again, proving the superiority of LWB racing HPV's." □

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Editorial License

By Robert J. Bryant



WELCOME RECUMBENT ENTHUSIASTS

This newest edition of RCN is a little different in both looks as well as content. We have some new staff members to help us to preach the recumbent gospel as best we can. The most notable is BJ Strass who is bringing some neat new articles to RCN. Other RCN insiders who are not always on the forefront of each issue are correspondents who are always out there scouting information for us and keeping us connected with the recumbent world.

FALL SUBSCRIPTION DRIVE

We recently asked a respected bicycle industry insider what it would take to make RCN a REAL success. He said only one thing, "DOUBLE THE CIRCULATION." RCN sincerely wants to be "THE" HPV/ recumbent publication that readers consider as the BEST. We LISTEN when readers talk, write, call or email. RCN is not about selling bikes, nor do I have any secret agenda. RCN is for recumbent enthusiasts, all recumbent enthusiasts. I personally would like to know if anyone has a better way, idea or even a gripe that we should here.

If you are a bike shop that does not sell RCN issues or buyers guides, we hope that you will reconsider. Many bike dealers think having RCN (with classifieds and display ads) will lose them sales. Think again. RCN legitimizes the industry and will help you sell more recumbents!

Doubling circulation is a tall order, but here we go. We have printed up a thousand extra copies of this issue with plans to give them away as samples. If you know of anybody who you'd like to send a copy to, please send their name and \$1 to cover first class postage and handling. For HPV clubs, bike shops or for recumbent/ HPV events, we will send as many as we can stuff into a priority envelope (2 pounds worth!) for \$2.90.

If you want samples, for a non-profit event and need us to send them *gratis*, please drop us a line (attn: Robert) and we'll see what we can do. If you are a bike shop and just want some to sell, we have a deal for that too. This special "Fall Subscription Drive" offer is only good until the next RCN comes out (RCN#24) and is only valid for issue RCN#23 only!

As for the Buyers Guide (RCN#19-20), there are plenty left. We offer quantity discounts to shops and/ or individuals. Please call us or drop us a line and let us know how many you may need. Recumbent Dealers: we will make it worth your while to sell the Buyers Guide in your store.

INTERBIKE '94

We are planning to hand out a bunch of RCN #23's at the Interbike trade show. Our goal here is to bring *RECUMBENTS* to the attention of the average American independent bicycle retailer and to show them that recumbent bicycles are the future, and a force to be reckoned with. Dealers who get on the recumbent band-wagon soon, can develop a regional (on national...internatio nal) following.

RCN INT'L GOOD WILL AMBASSADOR

Ron Schmid, just got back from a trip that took him to exotic destinations such as Lancaster, England to Bike Fest; Corvallis, Oregon to Da Vinci Days; and Eureka, California to IHPSC (HPV Speed Champ's), to cover events for RCN. Ron gave out sample RCN's, hob-knobbed with the who's who of the U.K. recumbent scene as well having a fantastic time. We have loads of pics and info from Ron's trip. We would also like to thank Gardner Martin who handed out sample RCN's at the races, however, at the next IHPSC, I will have to come personally to keep Gardner away from the racing pits and in the parking lot hangin' with the "Crew." A sin-

cere thank you to both of these great guys!

RCN T-SHIRTS

The official RCN T-Shirts and hats are now available. T-Shirts are the best quality we could find. They are 100% cotton Oneita Power-T. T-shirts are white with two colors (Purple & Teal) printed on the front and back. RCN script written across the back and our new "wave recumbent" logo and "Recumbent Cyclist News" written on the front. Since the cotton shrinks a bit, we have ordered large sizes: L, XL, XXL, even a couple of XXX). Shirts are \$16.99 + \$3 shipping and handling. (XXL add \$1.50).

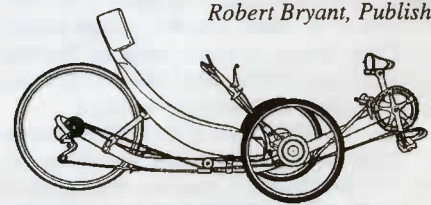
RCN HATS

The hats are made in the USA high quality white material with a white braided cord across the top and teal "recumbent wave" logo graphics and purple "Recumbent Cyclist News" lettering. The hats also have a leather adjustable strap. RCN hats are \$13.99 + \$3 shipping & handling. **SHIRT & HAT SPECIAL:** Pick any size of shirt and a hat, we will pay the shipping \$30.98.

Please send orders to: RCN, T-Shirts & Hats, PO Box 58755, Renton, WA 98058-1755. Washington residence please add 8.2% sales tax.

If you like the shirts & hats, and we sell out our initial order, we will start on a second design immediately, and we could do this two times per year! T-Shirt & Hat graphics were done by Mark Colliton of Kensington Design in Kensington, MD.

Viva Recumbency!
Robert Bryant, Publisher



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. We are cycling's future. **SUBSCRIPTION INFO:** See back cover of this issue for current

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INFINITY COMMENTS

Dear Robert,

Enclosed is my check for the European Encyclopaedia. I can't wait to read it. By the way, you're really showing some moxie if your reviews. The profile of the Infinity (RCN#22) was hard hitting and fair. Another great issue!

Best Regards,
David B. Seaver
Manhattan Beach, CA

Subj: WOW.. WOW.. WOW.. WOW...

Date: 94-07-28 21:12:10 EDT

To: DrRecumbnt@aol.com (from Internet)

Dear Dr. Recumbent:

I'm famous! I'm on the cover of a real magazine!!

What a surprise to open up the packet this morning and find the collection of RCN with Pam and my picture on the cover. Thanks a million for the extra copies...one goes on the coffee table in my office in the morning!

In the idle conversation mode, WHIRL just had its "First Traditional Annual Summer Picnic" with a ride out to the gliderport where I keep my sailplane. We had about 18 recumbent enthusiasts, including six who rode out to the site in northern Virginia. Mark Matarella was there with his trike and tricked out Rans, a brand new Haluzak was there, my Infinity, a Linear, two Vanguards, a Lightening, and a Tour Easy. The group had much fun visiting the east coast "home" of the Vintage Soaring Association,

Thanks again for the mag...

Jim Kellett

LIFE OUTSIDE OF THE TRENCH

Dear RCN,

Your magazine is excellent & detailed. You are going to have contradiction and complaints from many who live in a trench and can't see over the edge. They can view in only one direction & often die there. Stay with your test-proven reviews. There will ALWAYS be some one who differs. Best wishes for your continued success. Cheers to those recumbent riders on the outside of the trench!

Very truly yours,
Phillip E. Reynolds

INFINITY RESPONSE

Dear RCN,

Thank you for the evaluation of and comments on the LWB Infinity recumbent in your past issue. It is always a pleasure to receive positive feedback concerning our product line. We appreciated the suggestions for improvement. They are being taken very seriously and are currently under consideration as to how they

can best be implemented.

It is unfortunate that we have been unable to resolve the complaint of the dissatisfied customer to his satisfaction. We do, as you pointed out, want customers to be satisfied and we will continue offering service to back up the quality that has built our good reputation. We like getting to know our customers and hearing how much they enjoy our products.

It remains our goal to offer a QUALITY bike at a GREAT price. Thanks again for your articles. We enjoyed them and they gave us all a nice "boost." We believe fun, relaxation, and enjoyment are what bikes are all about!

Sincerely,
Infinity Management.

JEALOUS AS HELL

Dear Robert,

A few Infinity observations: my three year old Infinity frame broke through the chainstay, near the lower center weld area. The factory sent me a piece of aluminum flat stock that was welded in place after the tube was repaired, which makes the weld area much more robust.

I modified the stock seat by extending the seat back rails 6" and spanning the tubes with three wide pieces of tent webbing. This material looks like a seat belt. The upper body support is really noticeable. I also sit on a piece of 1/2" thick closed cell foam. I tried the Thermarest pad but found that it raised me up to far.

As far as shifting is concerned, I found that the Shimano Tourney system from CycloPedia works very well. It slides into the rear dropout slot since the Infinity has no derailleur hanger. I had mine up, adjusted and running in 15 minutes.

The last item has to do with gearing. I was never a fast cyclist in my prime and I am definitely slowing down. I think there is too much emphasis put on upper gearing. I hardly ever push higher than 90 (gear inches) and I feel that a lot of readers don't either. Simply state the range and let the reader make an educated choice.

In general, the magazine is excellent. I am jealous as hell of you seeing and riding the latest recumbents. Keep up the good work.

"Mr.Bill" Wagaman
Wescoville, PA

Dear Mr. Bill, thanks for the Infinity tips. Also, your gearing point is well stated and believe it or not, I agree with you. Back in '92, I tested a Counterpoint Presto (20" drive wheel) with a 102 gear inch high gear. I found that the bike

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RCN#23 COVER

Cover photo courtesy of Rans Recumbents. New RCN logo graphics provided by Mark Colliton of Kensington Design.

would spin-out at near 30 mph (unfaired bike) and I know of few riders who can sustain 30 mph on an unfaired bike for very long. Big gears are for high performance riders, racers and those who want to pedal fast down big hills. □

.....Letters continued on page 14

.....Continued from page 1. Rans V-Rex

of BMX-recumbent conversions (RCN back issue #9 available from RCN for \$5 first class postpaid). These bikes were named for their simple black primer paint. The article was probably the best article ever written on the subject of BMX conversions. Throughout the Flat-Black BMX conversion period, Mark utilized the easily mountable quick release Rans seat and mounting plate. This is an easy fix to the homebuilt recumbent seat dilemma.

The next chapter of the story leads Mark from the Flat-Black BMX recumbents into a quest for SWB performance. Mark purchased a demo 1991 Counterpoint Presto Performance from Angle Lake Cyclery in early '92 (Angle Tech). This was a very special Presto that was set up with 20" x 1-1/8" wheels with Campagnolo hubs (high performance option). This Presto was a common sight on the DC WHIRL rides as well as at the IHPSC Yreka Speed Championships (hangin' in the parking lot).

With the next recumbent season, came the



The V-Rex. photo courtesy of Rans Recumbents

quest for even higher SWB performance and time for another bike. Mark took over testing of our RCN Lightning P-38 test bike#2 (a '93-1/2 model) and the bike was shipped back to the Washington, DC suburb of Kensington, MD. Mark had agreed to continue long term testing on the P-38 for an RCN review. Mark still has the P-38 and is still working on a review for RCN.

I suppose the Lightning relationship can be summed up as love-hate. The bike is an awesome performer, but this particular example had several problems. Among them was poor powder-coat paint, poor index shifting and component selection, wheel quality problems and to top it all off, a broken seat frame and Lightning is refusing to honor the factory warranty, which are stories for another day. Mark had found a fantastic performance recumbent, but his experience with the Lightning company have left him yearning for something more.

In the winter of '93/'94, Mark started considering a new SWB based upon a design he'd been thinking about for some time. We spoke several times about SWB design, geometry and

wheelbase. A performance recumbent, short/medium wheelbase, lightweight, a stiff frame with triangulation and a design that was pleasing to the eye. A price lower than \$2000 would also help. A few months later came a computer generated drawing of an MWB recumbent with a tube-set very much like a Rans Stratus-B. This yet unnamed design was later to become the V-Rex.

I suppose this was not much of a shock since when Mark was at Interbike '93 with the RCN Crew, we spent a fair amount of time examining the new offerings at the Rans booth.

So far, the entire project was enthusiast speculation. No bike prototype or manufacturing deal had been made.

In the spring of this year, Mark took his design idea to the Rans Company. At this point in time, John & Randy Schlitter were very committed to the LWB design, with the new Response and Tailwind just entering the market. They are also LWB enthusiasts, however, the prospect of an SWB that could be built from parts already used in LWB production must have been intriguing.

In the months to come, Mark stayed in touch with John at Rans, sending him drawings, sketches and discussing theories on rake, trail and head tube angle. Over the next month, the phone lines between Hays, Kansas and Kensington, MD began to sizzle back and forth across the country. Mark wanted to have this bike built and Rans, John and Randy Schlitter were the chosen manufacturer.

In the past, and even elsewhere in this issue, I have said Rans is an under-rated and probably under appreciated recumbent company. Their facility in Hays, Kansas is very impressive, as Rans builds airplanes and airplane building kits. Much of the airplane building technology transfers directly to recumbent bicycles. You name it, composites (plastics), seat cushions, Lexan canopies, in-house painting and aircraft certified welders. This company's in-house resources are capable of surpassing all others in the race for a mass market enthusiast recumbent. Heck, I can imagine a human-powered fully faired HPV with the Rans badge on the front.

A few weeks later, Rans agreed to build the prototype SWB to be designated, "V-Rex." The bike was built utilizing many parts taken from other Rans models. New additions are the skateboard wheel idler and custom upright steering stem. The prototype sports a Rans custom in-house four color fade powder coat and has a 700c rear wheel and a 20" front wheel.

Over the July 4th weekend, Mark flew out to Hays, Kansas to ride the prototype and meet with John and Randy Schlitter. Mark was able to get the grand tour of the Rans plant, which is pretty spectacular. He was also offered a ride in one of the Rans airplanes, but Mark decided that experimental bicycles were enough excitement for his marathon trip to Kansas.

During this trip, an agreement was made

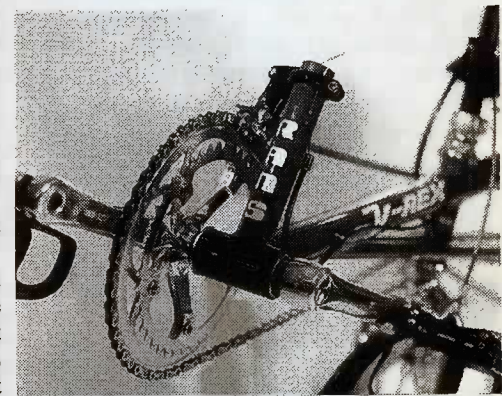
between Mark and the Rans Company for Rans to build and market the V-Rex along with their existing line of bikes. Mark would continue to do R & D and testing and would take prototype #2 back to Kensington, MD. V-Rex #2



The V-Rex photo courtesy of Rans Recumbents

was built and shipped a few weeks later. It is all black and has the capability to accept two wheel sets. The primary set is the 700c/20" and the secondary is a 24"/16" or 17." An option on the V-Rex will be the ability to have the two wheel size/sets. This will be achieved by having two front forks and a side-pull brake up front. The rear brake will be side-pull for the 700c and cantilever for the 24." The V-Rex can be set up either way or equipped for both.

The 1995 Rans V-Rex will make it's debut to dealers at the Anaheim Interbike Trade Show in September of this year. The weight of the V-Rex should be less than 29 pounds and the slated prices will start at \$1050 for a complete bike. There are all kinds of stories that make publishing RCN fun, but when a bike design dream becomes



The V-Rex photo courtesy of Rans Recumbents

reality, this is about as good as it gets.

Look for the Rans V-Rex at your Rans dealer. Also, keep your eye out for the new Rans brochure with the V-Rex photos. Write: Rans Recumbents, 4600 Highway 183 Alternate, Hays, KS, 67601. Phone #913-625-6346. To write to Mark Colliton: Recumbent Cyclist News, Mark Colliton, PO Box 58755, Renton, WA 98058. □

.....Rans article continued on page 9.

RCN Reader Road Test

The Lightning Cycle Tailwind Recumbent

by E. VILLARET

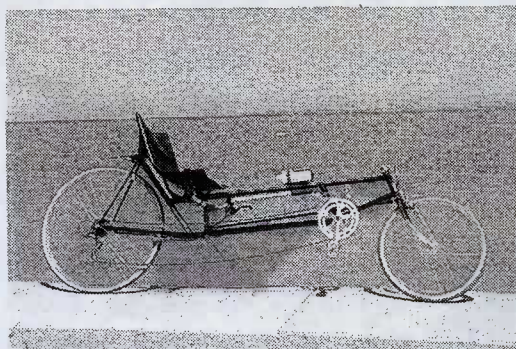


Photo courtesy of Gene Lemle

In early 1993, having decided to invest in a recumbent, I started looking at the various offerings. Primary decisions involved wheelbase length and handlebar locations. Recumbent literature suggested that the long wheelbase types are more stable. This got my attention, along with a few test rides. As for the steering systems, one advocate was reported to have suggested that "chopper" bars save perhaps as much as five percent on wind resistance as compared to the underseat bars. But another pointed out that highbar riders expend at least five percent more energy in holding their arms up as compared to riders with underseat bars. Then too, underseat bars allow the rider to lift himself partially off the seat for bad bumps and to change position.

So I decided that the bike for me would be long wheel base with underseat steering. I located a number of competing brands and launched an in-depth study. Price was at first one of my major considerations, and with figures ranging from under \$700 to more than \$1500 I found myself leaning toward the low side. However, the more I studied them, the more I realized that restricting my search to low end models would perhaps be unwise. This was to be a lifetime purchase, and so it was far better to wait until I had saved up enough so that price would not dominate as my main concern. Quality of construction, frame integrity, fit adjustability, ride characteristics, ease of disassembly: these now became the most important

factors in my search.

And so the process of elimination began. The frame of a new aluminum recumbent that I test-rode was conspicuously out of line. One contestant rejected. More than one of the others had quick release on only the front wheel, and most did not have it on the seat. Gear changing on one was uncertain and difficult. Seat adjustability on another was a complicated process requiring tools and patience. More contestants eliminated. Then there was the model whose handlebars were so low that I had to slump to reach the brake levers. Straight-legged forks on two of them gave no help at all in shock control up front. On still another the chain idlers added perceptible opposition to the pedaling process. A notable absence of bottle braze-ons and computer mountings on several of them was quite annoying.

In the end, I bought a "Tailwind," made by Lightning Cycle Inc. In addition to the above considerations, here's why: It is constructed entirely of 4130 chromium-molybdenum seamless aircraft tubing. The bottom bracket is fully lugged. All stress joints are TIG welded for extra strength, while filet brazing with brass at the remaining joints provides a smooth and effective bond. The aluminum handlebars are three-dimensionally adjustable, to suit arm length or other personal preference. And the vertical tube to which the handlebars attach is equipped with a grease fitting; aircraft quality, at that! "Powder Coat" paint, used on other

recumbents, is inferior to Imron paint, which the Tailwind has, from end to end.

While my riding style is not as precipitate as some, I must say that I have never experienced chain slap with my idler-free Tailwind. Maybe the chain is just the right length for the drive train. Or maybe the spring action in the Shimano Deore XT rear derailleur is firmer than others. Then too, the uninterrupted run of chain permits use of all 21 gear combinations, as it fully eliminates excessive chain/sprocket bias.

The Tailwind is the only recumbent of the group that has not just a single bottom tube, but a parallel pair, each tube smaller in diameter and thus lighter than normal, but as a set far stronger, designed and fully able to prevent frame distortion, both lateral and torsional. I took an unpleasant spill one day, my own damn fault. Picked myself up and hurried to my bike shop where, after extensive testing, the bicycle was pronounced as true as ever. What a relief!

My Tailwind came with five braze-on sets: two on the top of the top tube, one on its underside, and two along the backs of the seat's side frame supports. These braze-ons serve as attachments for bottle cages, a pump frame, and a computer bracket supplied with the bicycle. There are also studs for attaching a standard size pump. Optional lumbar support and a generous pocket on the back of the seat back are two more of several thoughtful additions on this bicycle.

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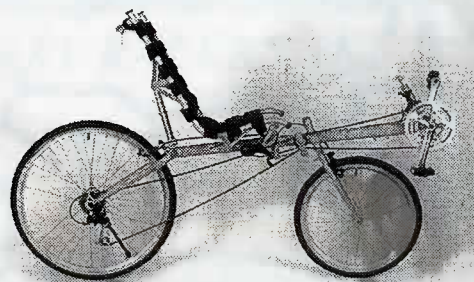
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1994-1/2 Haluzak Recumbent

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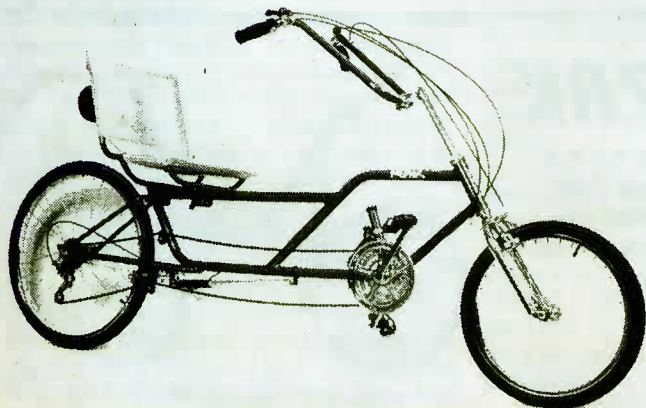
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lems by including quick releases not only on both wheels, but also on the seat and, believe it or not, on the handlebars too, while other manufacturers offer folding ability or suggest rooftop carriers. I'm sorry, but folding frames are just not my idea of adequate serious bicycle frame construction. As for rooftops, I still recall the job three of us had to wrestle an SWB off the top of a car and then set it up for the road. Apparently that bike's design deprived the poor devil who owned it of a better solution.

Opponents of recumbent bicycles like to sneer that all such bicycles are a problem to transport on or in automobiles. For me this has proven to be a non-problem. My car is a narrow little 4 1/2 foot wide sub-compact 1982 Toyota Starlet; my bike rack, attached by straps to the back of the car, is the cheapest I could find. In maybe two minutes I snap the bike seat away, hoist the remainder onto the rack, pop the right handlebar out, ease the bike all the way down the rack, then zip off the front wheel. The result is an overhang of a scant 12 inches on each side of the car and negligible wind resistance at turnpike speeds. I toss wheel and seat on rear floor of car, shock-cord the load and drive away, leaving the critics to eat crow. Mark you, Tailwind is the only rigid frame recumbent that can achieve this feat.

Gene Lemle, the unsung genius of Lightning Cycle

Gene Lemle, the unsung genius of Lightning Cycle Inc. of Ohio, is the sort of person anyone would be only too glad to count as a friend. He is highly innovative, a perfectionist, and almost astonishingly retiring. His little ads in the cycling periodicals are about as modest as such things can be, reflecting perhaps the remarkable humility of the man. Yet who else could have conceived the beautifully balanced ergonomic frame with its subtly canted rear triangle to snug in the seat position and share road shock absorption with the curved fork? Who else might have thought to route the front brake cable through the steering tube? Or devise the amazing double bottom tubes, guarantors of frame integrity, that then widen out to become the chain stays! Who else has engineered a QR seat attachment that serves not only for instant seat removal but also as a means of ample and instant seat adjustment and as an opportunity to invent — are you ready for this — a quick release rear luggage rack! Who else would readily agree to install chainrings and cassette clusters according to the buyer's specific gearing requests, or modify the seat design and angles to fit peculiar demands, or swap the standard wheels and tires for others on request, or provide a choice of paint jobs, or offer unlimited test rides, day-long if desired; and still hold to very competitive price!

TEAM EASY NEWS

A MAN CALLED ME

EUREKA! Another World Record is set on a Team Easy design. An Arizona man who goes by the single name of **Mhyee** pedaled 607 miles in 24-hours. He rode a modified **Tour Easy** recumbent bike mounted inside a **Gold Rush** streamlined body. His **607-mile record** was sanctioned by the IHPVA at the 20th Annual Human-Powered Vehicle Speed Championships held during August 1994 in Eureka CA

DEATH RIDE IRON BOBB

Not content with his 1993 conquest of the then five-Sierra-pass **Tour of the California Alps**, 48-year-old **Ron Bobb** met the 1994 six-pass **Death Ride** challenge. He rode his stock **Gold Rush Replica** and finished ahead of many un-recumbent riders. After climbing 18,000 ft and covering more than 144 miles in one day, Ron says:

"This is one recumbent that can climb."

Ron Bobb also rode **The Terrible Two**, considered the toughest Double Century in California. His **Gold Rush Replica** performed flawlessly as he climbed over 16,000 ft while covering 211 hot miles near Santa Rosa CA.

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Though the norm for touring bicycles is around 30 pounds, Lemle freely concedes 33 lbs of overall Tailwind weight, citing the seat as the main reason. He firmly espouses an absolutely rigid seat frame and invokes the cogent argument that one's pedaling effort should go wholly to the drive train and not be dissipated in a flexing seat. Thus aluminum is out, chrome-moly steel is in. For one who has experienced the difference between Tailwind pedaling efficiency and that of several other contestants, his point is hard to dispute. Then too, I recalled the day I came back from test riding one of the aluminum offerings with a question regarding its weight. The shop owner confidently hung the bike on a suspension scale and immediately regretted having done so. To our mutual astonishment, this FOB bare factory model weighed out at 37 full pounds.

I've had my Tailwind for six months now, and it has become clear that my early impressions were remarkably valid. Every time I ride I am impressed anew with the efficient power delivery. Responses to all orders (gear changing, braking, accelerating, steering) are immediate and smooth, and the frame's fine blend of strength with agility is most reassuring. On rough surfaces and even in sharp turns the bicycle feels exceptionally sure-footed, reinforcing my sense of security in the cockpit. As I flow comfortably up hills I am sometimes reminded of the question of weight, because this too has become a non-problem. I feel an affinity with this machine that was marginal at best with the others.

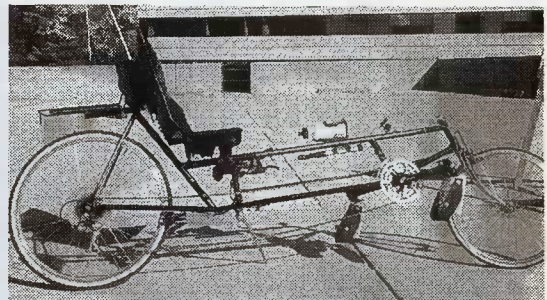
Earnest advice from a happy Tailwind owner to anyone in the market for a bicycle:



E. Villaret and his Lightning Cycle Tailwind Photo Courtesy of E. Villaret

well. As do our optional custom quick release racks. For complete bike orders, we have upgraded the component package to include Shimano Deore XT shifters and derailleurs and Shimano 105 wheel hubs and brakes. Bikes are available as complete ready to ride bike or frameset only.

Gene Lemle □



Lightning Cycle Tailwind Photo Courtesy of E. Villaret



Tailwind on the back of a Toyota Photo courtesy of E. Villaret

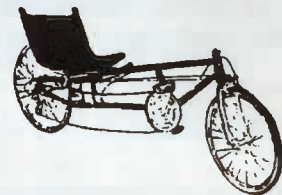
Do yourself a favor and write for info to: Lightning Cycle, Inc., 3819 Route 295, Swanton, Ohio 43558.

Lightning Cycle Tailwind LWB recumbent complete bikes sell for \$1595. A frameset is \$795. The Micro model is \$1695 for a complete bike and \$795 for a frameset only.

BUILDERS NOTE:

Lightning Cycle Tailwind and Micro (20" OR 20" / 16" wheels) recumbents and framesets are built to order to the customers specifications. This includes seat backs, seat angles, wheelbase etc. The patented quick release seat fittings have proven to work quite

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RANS UNVEILS THE 1995 V-REX

Dear Robert,

Here are some new photo's the V-Rex. As you know this all got started at Interbike last fall when I mentioned not to rule out the possibility of Rans making a SWB recumbent.

I believe it was January when Mark (Colliton) called and asked if we would be interested in doing a SWB recumbent for him. With Randy's OK (Schlitter-Rans Co. owner), I gave Mark the go ahead to send us some drawings of his proposed design.

Mark, as you know, was a former Stratus rider until he converted to SWB recumbents. He said that he almost chopped up his Stratus to make a SWB, but it was too good to do that. So low and behold, one of Mark's designs was a 40" size Stratus frame converted to SWB. The original design called for a 700c/ 16" wheel combination, but with the success of the Vision, there was a temporary shortage of the 16" chro-moly fork. Wanting to put this bike out at a reasonable price, I didn't want to build the forks in house. I told Mark that I would build the prototype with a 700c/ 20" setup. Maybe this would hold him until the 16" forks became available.

Early in May, the V-Rex was starting to take shape and I was getting pretty excited about checking this new machine out, when a local driver put an end to everything for me by making an unannounced left turn in front of me while I was riding my Honda Shadow 1100. This added about a month delay to the V-Rex program.

Shortly before the July 4th weekend, I got the V-Rex up and running. Mark must have caught the excitement in my voice, even though I've been a long time LWB 'bent rider. He was able to fly out to Kansas during the holiday weekend and check the bike out.

Well, to make a short story that's getting long, short, Mark liked the bike as it was and with very few changes to the bike, we're now able to offer the V-Rex.

The stock model is equipped the same as the Stratus and Nimbus models with Deore LX derailleurs, a double or triple (option) crank, etc. etc. Racks, kickstand and mirrors are options. The seat is currently a modified stock Rans. The modification is that the front is cut away and narrower overall.

The fiberglass shell makes a really good racing bucket seat, but I PROMISE YOU THAT YOU'LL SEE A RANS MESH SLING SEAT AT INTERBIKE that will retrofit to all of the Rans bikes, however, the complaint department has been real quiet with our existing seat. □

John Schlitter
Rans Company



Photo courtesy of Rans Recumbents

Rans V-Rex Specifications

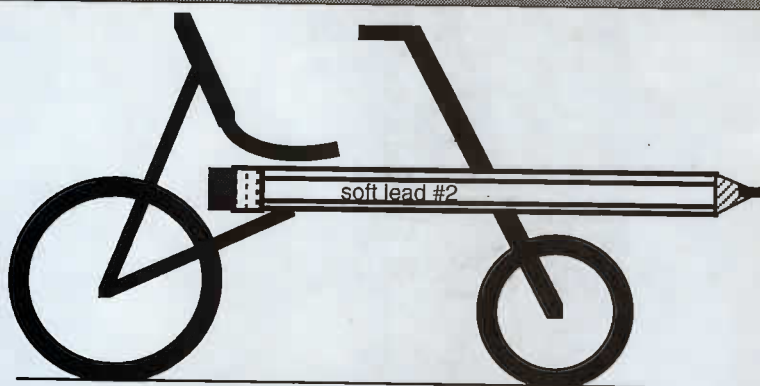
FRAME SIZE:	40"	COVER:	1/4" quilted material
WHEELBASE:	40.25"	FRAME MATERIAL:	TIG welded 4130 aircraft grade chro-moly steel
OVERALL HEIGHT:	68.5"	FINISH:	DuPont Chroma Base
HANDLEBAR WIDTH:	22"	WHEEL SIZE-REAR:	700c/ 24" optional
SEAT HEIGHT:	26"	WHEEL SIZE FRONT:	20" x 1.375" / 16" optional
SEAT WIDTH:	13.5"	WEIGHT:	28.8 LBS.
SEAT TO CRANK ANGLE:	+4 degrees		
FRAME SIZE RANGE:	40.5" - 51"		
SEAT ADJUST RANGE:	12.5"		
SEAT TILT RANGE:	25 degrees		
SEAT MATERIAL:	hand laid fiber glass		
CUSHION:	1.5" open cell hidensity foam		

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We are in the process of reorganizing the list & availability of RCN back issues that we offer for sale. Some early back issues may be phased out completely. If you have ever been interested in a complete set of RCN issues, now is the time to order! To validate this offer, please clip out or photocopy this ad. Offer valid through October 1994 only! No other discounts apply.

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Go Ahead And Tour!

View From The Big Chair

By BJ Strass

I had always wanted to take trips on bike. As a teenager I can remember riders crossing the country on the new transcontinental route and really envied them. I painfully recall my first tour in the mid 80's, a ride from my home near Portland OR, to the coast. I managed to ride the 76 miles but was badly saddle sore and had numb hands. The next day I was so sore I couldn't make the return trip. Dejected, I called for a ride and decided to forget bike touring forever.

A few years later I realized the dream never did really die and I tried to train for a tour again. Many dollars were spent trying pads, new seats, different gloves and different bikes to get that elusive comfortable fit. After another two years and getting nowhere I was ready to give up again. Then something wonderful happened, I discovered the RECUMBENT. At last I was able to sit and pedal a bike until I was physically exhausted from exertion, not soreness.

The summer of '93 was my first major "successful" tour. My wife, Monica, and I rode down the west coast from Victoria, Canada through Washington and Oregon into Northern CA. We rode two SWB (short wheelbase) recumbents with all our gear packed on the bikes. We camped, stayed in AYH hostels and spent one very rainy night in a motel. In all the trip was nothing short of wonderful. I was hooked! Our recumbent allowed us a wonderful view of the scenery, great loaded handling, excellent visibility to traffic, and never, ever was I sore from anything other than exertion. I will always remember the cheers and gasps of the locals in small towns as we rode through, the fresh fruit at roadside stands, humpback whales frolicking along the coast, and the many hours spent allowing sore but enthusiastic "conventional bike tourists" try our bikes at the campgrounds. We had many great experiences on that trip and so can you. This is why I want to encourage YOU to do it, TAKE THAT TRIP ON YOUR RECUMBENT!

There are many good books on touring,

equipment, and preparing yourself and your bike. One of my favorites is "The Bicycle Touring Book" by Rob Van Der Plas. Most of this information will parallel touring on a recumbent so I will generalize a bit and also talk of some of the differences for recumbents.

A good general rule to use when packing for a trip such as bike touring is to get together only the essentials you need, divide this in half, and then divide it again. Take what is left. This may sound extreme but the first timer (as I was) always seems to want to bring the kitchen sink. As a general rule try to keep the load to a weight of lighter than 55 lbs. If you absolutely need more, use a good touring trailer. I like the B.O.B. (Beast of Burden) out of Santa Barbara, CA. This is a single wheel trailer so it tracks behind the bike and keeps a narrow profile. Burley trailers and the like will work also but are more cumbersome.

Loading a recumbent for touring is similar to any other bike but with some benefits to take advantage of. As with any bike, you want to keep your weight secure, balanced and low. A good quality touring rack is essential. I use a copy of a Blackburn SX-1 Expedition rack. This rack is probably strong enough to stand on. The type of recumbent you own will have a lot to do with how you set up your load. Most LWB (long wheelbase) recumbents such as Tour Easy's and Vanguards can be fitted with modified front racks. This can be important for a LWB as most of the weight is already on the rear wheel. Small panniers on the front will help by spreading out the weight and thus lessening the chance for spoke breakage and rear wheel failure. A short wheelbase (SWB) will have the weight pretty much evenly distributed between the wheels so loading the rear is less of a problem. On a recumbent there is no problem with heel clearance for the panniers (saddlebags) as on a conventional bike so you can use as large as you want. Because of the width of the seat on a recumbent they can be loaded wider than a conventional bike and most of your gear will be out of the way. Heavier items (i.e. cook stove, etc.) go in the bottom of the panniers and

lighter items (i.e. extra clothes) near the top. It is a good idea to keep everything in little separate bags to make organization easier. Use the small exterior pockets for items needed often such as sun screen and snacks. The big panniers also make a good platform to place your sleeping bag/sleep pad crosswise along the back of the seat instead of lengthwise on the rack, thus more room is available. These items can be secured with bungee cords.

Tents have come a long way in the last few years and can be had very light and sturdy. We prefer a bit of extra room so ours is a 3 man tent of fairly large size. When packed it is also fairly long. I place the tent crosswise behind the seat either above or below the seat's crossbar. To secure I run short bungee cords from the seat frame above the tent to the seat frame below the tent. This pushes the weight forward and keeps it out of the way. Small tool bags or handle bar bags can be hung on the bike in various places to keep tools, camera, and other small items.

Water is the stuff of life and it is important to make sure you have enough to drink along the way. Most tourists will be in areas where water is fairly accessible. I have yet to have someone say no to filling my waterbottle. Most recumbents have at least one waterbottle mount. It needs to be easily accessible while riding so you get into the habit of drinking often. I recommend using 2 large waterbottles on the bike in normal circumstances and more if water accessibility may be a problem. A nice item is the Blackburn bottled water holder which holds either a 1 or 1.5 litre Evian type bottled water. Water is sold literally everywhere and ensures you will have good water in questionable parts of the world. The bottles can also be refilled and reused as needed.

We carry our own cookset and do a fair amount of cooking. You may decide to forego the cookset to save weight and space and eat along the way. It is nice to have hot coffee and oatmeal first thing in the morning though.

Tools are a place not to skimp. Bring enough tools to repair and maintain your bike

to your level of knowledge. My toolset is enough to disassemble most bikes completely, but then I have that ability. It is a good idea to take a class in bike repair at a community college, etc. for that little extra peace of mind. If you do not, and have a major failure you can't repair on the road, hitch a ride with some helpful locals to a shop or garage for help. Do carry spares though. Many small towns have a limited supply of quality bike parts. Most recumbents have at least one wheel of smaller, less common (16" & 20") size. Carry a spare tire for this one. The tire can be strapped flat against the back of the seat and left there until needed. Tubes, cables and spokes are also a good idea.

Visibility is a concern for all tourists and you can take advantage of the recumbent position to your benefit. Use one, two or even three of those orange flags mounted on the rear of the bike. We use one per bike along with two signs I had made at a sign shop of bright orange heavy vinyl. In black lettering on the back they say "CLEAN AIR R.V.". These are attached to the rear of the bike against the load. They help stabilize the load, good naturedly poke fun at the monster R.V.'s that chug by us and really add to visibility.

Lastly, and most easily overlooked, is attitude. Get into a laid back state of mind, don't worry, slow down and allow the world to pass calmly. Keep a loose itinerary. It is easy to over do at first. Make the first days short and

with rewards. Our tour day one and two were near hell as we encountered hills of which we were unaccustomed along with the long miles I planned. By the third day we had adapted and everything looked brighter. Just always remember this IS A VACATION and it should not hurt!

As for Monica and I, we take short tours as we can. Our next major tour will be for one month in the summer of '95. We will be going to the IHPVA (Int'l Human Powered Vehicle Association) Speed Championships in the Netherlands, touring there and then also in Great Britain. There is also talk of a winter tour in New Zealand, and then maybe a tour across the U.S. and□

My Other Vehicle Is Human Powered!



Design By BJ Strass, Introspect Cycle, 1029 Amberwood Road, Sacramento, CA 95864 Ph 916/973-1941

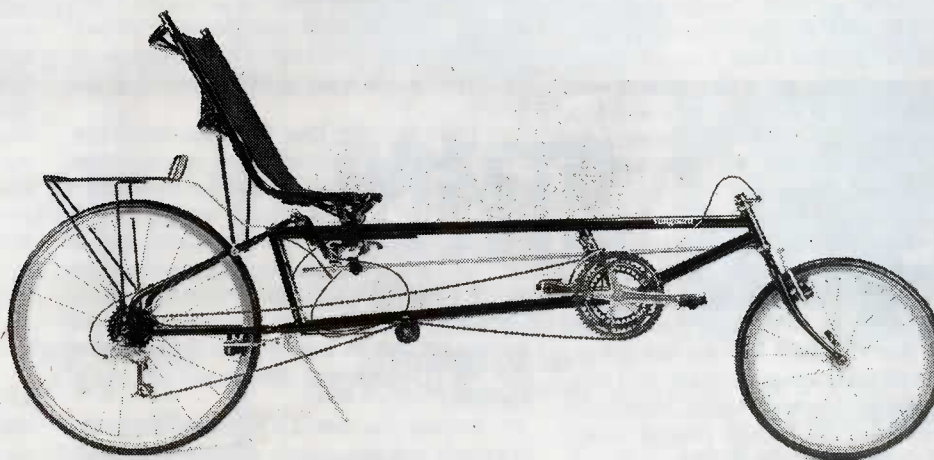
The graphic above is BJ's new bumper sticker that he designed. It is available from his company, Introspect Cycle for \$3 each. Write: BJ Strass, 1029 Amberwood Rd. Sacramento, CA 95864

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“Awake Again” on a Recumbent

By Martin Kreig Part One of Two



Computer graphics by Jerry Frezon

Having pretty much given up on riding bikes that go fast because of the discomfort factor, I just about lost my mind when I saw, then rode my first recumbent in 1981. I swapped, begged and borrowed for one that somehow made it out to nearby Berkeley from somewhere in New England. A homebuilt, long wheel base, it was beat up but well built. Its seat, the nerve center of every recumbent, was made out of a reconverted back pack that creaked and cracked every time I pushed hard into the pedals. But it was still heaven, for me a magic carpet ride.

You see, my body already misaligned from an automobile wreck, had been further traumatized by the tool that had first been used to rehabilitate it, the upright bicycle. In late 1977, I had been a passenger in a car that collided with a good sized truck. The two-month coma, paralysis and clinical death that then ensued had left my body in a completely debilitated condition.

Months later, after learning how walk, talk, go to the bathroom and balance myself without assistance, I started riding my bicycle. On it, I found that I could move around without slamming, jerking or pounding. It quickly became my number one rehabilitation tool. Not because it was comfortable, but because it was the less of the many evils I found myself having to resort to in order to get better. Winding my back up as tight as a clock was far better than feeling my jaw clink every time I took a step. I discovered that numb hands and a sore behind were preferable to tripping over my own two feet. Besides, on a bicycle, my handicaps were not as obvious for others to see. So I rode and rode and got stronger and stronger.

When it became time to assess the completeness of my recovery, I decided to perform such an acid test with a bike ride across the country. I would do so on the best touring machine I could find in 1979. Well, the 15-speed Eisentraut that I pressed into service got me from one coast to the other, but it was still painful. In my new book, *Awake Again*, I detail that ride and many of the ways I pushed myself through the pain of upright cycling.

While the confidence and people skills that my first TransAmerica bike ride helped me to rebuild far outweighed my physical discomfort, I paid the price of losing interest in bicycle touring.

For the next two years, I traipsed around my hometown, back in the San Francisco Bay Area, on an old English 3-speed that I had found

at a garage sale. The more erect seating position and the padded seat seemed to agree more with my body. But I went slow and my rides were short.

When I then experienced that first recumbent ride, I had to overcome some initial resistance. I remember conversations with myself about the value of working through the pain and then a sentimental allegiance to the one tool that had been such a huge part of my rehabilitation. When I was quickly able to reassure myself that it was all right to be comfortable while riding a bike, I felt as though I had found a new religion. I would spread the recumbent gospel.

But either people laughed at me or they turned their heads away. How could anyone tamper with their childhood memories of the bicycle, they seemed to be asking themselves. The only people that are “allowed” to look comfortable when they are shuttling themselves about, they appeared to reason, are those that have paid the price of internal combustion. How could anyone be so bold as to transport themselves on the roads I pay for and not pay for gasoline, insurance, registration, upkeep or repairs? And they look like they’re having a good time, they look comfortable. Must be a weirdo. But I was used to that kind of treatment. I had answered the doubters and hecklers and name callers with my first bike ride across the States in 1979. So I rode and rode the miles all over again. Only this time I did so in comfort on the recumbent I talk about at the beginning of this article.

Then in 1983, Dan Kirshner, Eli Rubin, Clive Buckler, myself and a few others formed the Berkeley Area Recumbent Club so we could show off our bikes at loosely organized club musters. As more and more groups started to crop up, I went to recumbent club meetings and musters and IHPVA events all over the state of California in search of the best one that I could go long distance on. I did so in the unlikely event that the TransAmerica road would call out to me again.

During this period, I had the opportunity to sample just about every different type of recumbent that has ever been made. From tri-cycles to tandems to hand and arm powered to short, medium and long wheelbase, cheap and expensive, I rode a great number of them. Then at the 1986 Interbike trade show I happened upon the beauty that would take me from ocean to ocean once again.

Called a Via and expertly crafted by Mark

Hajek of Houston Texas, this under the seat, long wheel base demanded that I put it to the test. I was on the TransAm road four months later towing the state-of-the-art trailer that Mark also built for me.

Except for the shakedown part of the ride where the spring on the trailer tongue hadn’t been strong enough, the bike performed perfectly. Unlike my first crossing, where I forced myself through my nightly camping chores, I had energy at the end of the day. I saw the country and not just the asphalt roadway. I worked my abdominal. I was able to get a great tan on the part of my body that I saw. My mind was not distracted by all of the upper body discomfort one must experience in order to move the pedals around on an upright. In fact, I oftentimes barely knew I was riding a bicycle. In my book, *Awake Again*, I show what it’s like on the recumbent road and how I reached 40 million people with my head injury message right up until the day I meet then Governor Michael Dukakis at the state house in Boston.

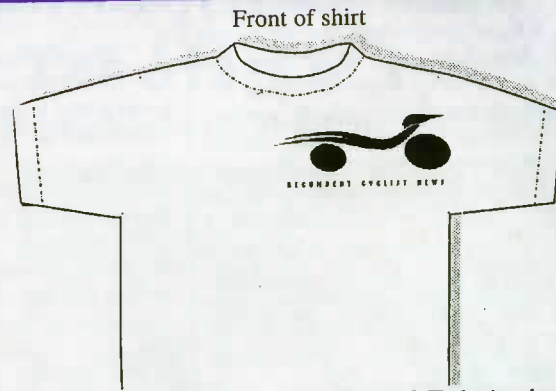
I used the next seven years to promote recumbents and the coast-to-coast bicycle highway called the National Bicycle Greenway with my small directory book publishing company called Cycle America. During that time, I published 70,000 books in four different areas of California and had the opportunity to talk with many different people in the small recumbent industry. A good number of them (Ryan, DH, Easy Racer, Linear, Cyclopeda, Lightning, Infinity, Laid Back, Angle Lake, Elliptic and Zip Designs), supported my efforts with advertising. I also road tested a lot of their bikes. Then when Robert Bryant started his recumbent newsletter in 1990 I watched the industry double then triple in size. □



Martin Krieg’s new book, *Awake Again, All the Way Back from Head Injury*, is available at bookstores everywhere. He will be biking across the US for a third time next summer. His next TransAmerica crossing will benefit the National Bicycle Greenway. If you can’t locate his book, would like to ride with him in 1995, or would like to help Martin with the 501c3 nonprofit National Bicycle Greenway, you can reach him c/o Cycle America, 147 River St. S. #222 Santa Cruz CA 95060. 408/426-7702 □.

RECUMBENT CYCLIST NEWS

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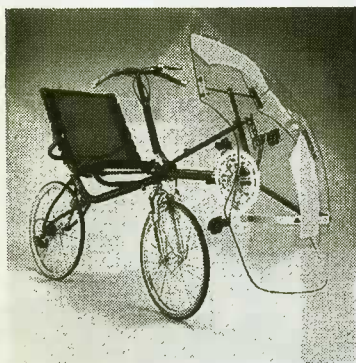
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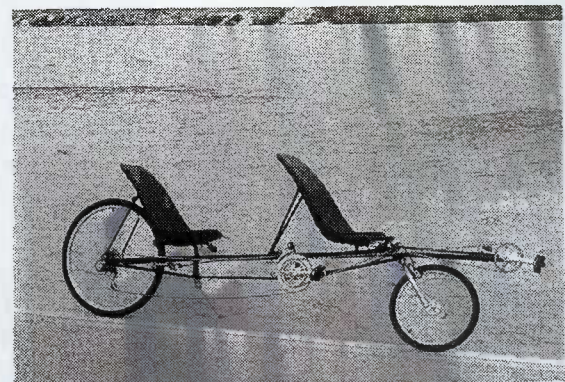


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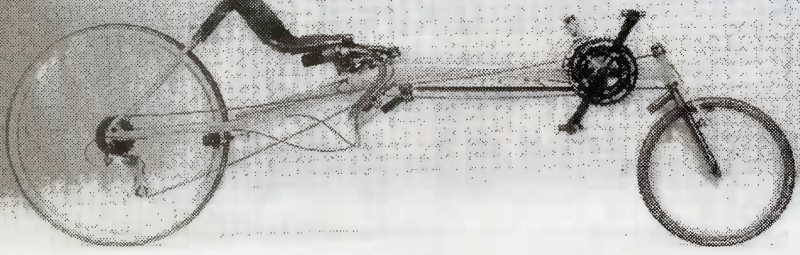
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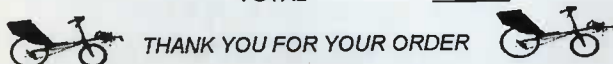
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Homebuilders Corner

by Steve Sussman

A Sailing Compact LWB



I really enjoy RCN, and especially look forward to articles and pictures from homebuilders. So hopefully sending in mine will inspire more from others.

This project all started with two Tour Easys I built from Gardner Martin's plans. My only modification to Gardner's design was to swap his seat for a sling seat, similar to the one in the photo. I've also put a self-inflating Thermarest pad in the seat base, a great idea I got from you. My wife and I have toured extensively on the Tour Easys, including a couple of two month cross-country trips and a month in New Zealand. I really love them. They're comfortable, quick, and real pack mules for touring. But flying them to New Zealand involved major disassembly, fabricating extra-big bike boxes, spending about 4 hours in the Auckland airport reassembling them, then another day plus in Christchurch at the end of the trip scouting up four boxes and going through the disassembly process all over again. By the end of the New Zealand trip I had decided to try and build a touring bike of my own design that would be a smaller LWB, knock down more easily, have two same-size wheels to reduce the number of spare tires and tubes to be carried, and change the steering position of my hands.

Building this bike has been a project without an end. I began the project believing I would get it perfect the first time. Dumb idea. I've shortened the frame, changed the steering angle and re-designed the steering system each three times. Now I think the bike's about as good as it's going to get. It's nimble and fun to ride. But I think I can make a better one, so this one's in the workshop waiting for a stiff breeze while I get started on a new frame design.

The bike is shorter than my Tour Easy by about 16". The frame is brass brazed chrome moly and the seat's 1" aluminum tubing. The seat is made in two halves held together by velcro straps sewed to the seat mesh, so it comes apart easily and takes little space when it's off the bike. The bike has 20" wheels with 100 psi ACS tires. The rear wheel is 48 spoke tandem hub. The front's a standard 36 hole with a Sachs drum brake. The rear brake is a Pit Bull from Cyclopeda. The bike stops quickly. When it's not in use the handlebar stalk folds forward down to the frame and out of the way. The front wheel

rotates 180 degrees and tucks under the frame. The whole thing should fit snugly in a bike box.

Steering linkage is the same as an underseat steerer's, using an aluminum rod with rod end bearings. My original design used two hand-cut nylon gear wheels and a timing belt instead of the rod. I wanted a design that was less susceptible to impact damage - which in my experience would happen when I was 100 miles from anywhere. One gear wheel was mounted under the handlebar steering stem, the other on top of the front fork's headset. They were joined by a rubber timing belt cut in half and rejoined us-

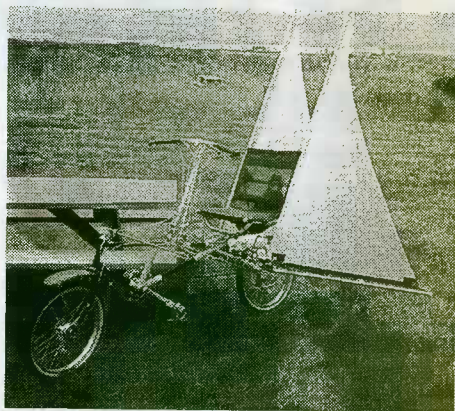


Photo courtesy of Steve Sussman

ing cable and a turnbuckle. The steering worked well. I especially liked that I could turn the wheel more than 300 degrees. And if the bike fell over there was no chance a rod would bend or worse, break. The belt was soft, flexible and resilient.

Unfortunately, to keep enough tension on the belt to make the steering work well I had to tighten down the turnbuckle, putting the whole linkage under compression. This meant that the bike went where it was pointed, but wouldn't self correct, which was very disconcerting. The front wheel wouldn't turn freely from side to side. So even though I liked the design, the belt is gone in favor of a rod. I'd sure be interested in hearing from anyone with other steering linkage ideas.

I kept shortening the frame for a couple of reasons. Originally I used Georgina Terry's recommendation of 80 degrees of castor angle, which gave me a steering angle of 70 degrees. But this made the bike absolutely squirrely. It

didn't want to go straight. Partly I think this is because recumbent geometry is just different from an upright bike's. Also, the rearward weight distribution of this bike seemed to exaggerate the squirreliness (?) even more. So I shortened the bike and decreased the steering angle. The frame's now about 3" shorter than when I started. It's wheelbase is 57 1/2" now. The steering angle's 64 degrees. My next frame will be about 62" long. I fit on the shorter frame but I think it moves the center of gravity too far backward. And I'll reduce the steering angle again to 60-62 degrees.

Then there are the sails. The idea of sails has been stuck in my head ever since I gave up on trying to lighten a bike by filling the frame tubes with helium. It turned out I'd need frame tubes so large I'd be pedalling a small dirigible. My wife and I have been touring in so many places when we've encountered strong tail winds or near-tail winds. It seems a shame to ignore all those opportunities for coasting instead of pedalling. The sails are made of kite cloth, an ultra light ripstop nylon. The masts are 6' and the booms 3'. Each boom has about 270 degrees of swing. The booms are independently controlled by mainsheets (lines) connected to the handlebar stem. I'm not sure yet how well this all works. We took the bike to the Washington coast on what turned out to be the one windless weekend of the year. When the breeze did finally come up the bike would sail along the beach nicely without me, but there wasn't enough wind to move it with me sitting on it. Since the picture was taken I've changed the mast mounts so that the masts are now perpendicular, rather than following the seat back angle, to increase the efficiency of the sails. So the jury's still out on sails. What's nice about them, if they do work, is that the added weight is probably less than 2 pounds. The sails weigh practically nothing and can be stuffed anywhere. The masts are telescoping and the booms fold up along the masts and out of the way.

I'm also interested in building a sailing trike. The Washington ocean beaches are wide and flat. It should be a blast. This is not a new idea, but I'm having trouble finding plans or photos. If any of your readers have information on sailing trikes I'd appreciate hearing from them. Steve Sussman, Box 415, Vashon Island, Washington 98070 □

RECUMBENT CYCLIST CALENDAR

SEPTEMBER 9-12

INTERBIKE 1994

Bicycle Industry Trade Show.
To be held in Anaheim, CA. Interbike
Ph#714-722-0990

SEPTEMBER 21-23

Bicycle Industry Organization (BIO)
Trade Show In Las Vegas, Nevada Ph# 303-
444-4BIO

SEPTEMBER 25

Great Lakes HPV Racing Series
Event somewhere in Ohio. Contact Gaylord
Hill Ph#517-263-5803 or Don Barry Ph#317-
831-8798

SEPTEMBER 26-28

**1994 INTERNATIONAL HPV
SYMPOSIUM**

Human-powered flight. Contact: Museum of
Flight, 9404 E. Marginal Wy. S., Seattle, WA
98108.

OCTOBER 2

**3rd ANNUAL SACRAMENTO VALLEY
RECUMBENT/ HPV RIDE & RALLY** will
be held Goethe Park in Rancho Cordova at the
edge of Sacramento. Ride will meet at 8:am
leave at 8:30 and Rally starts at ~12:30. Ride
will be of your desired length up to ~45 miles
along the American River Bike Path. Prize for
best homebuilt and best custom commercially

built. For more info contact: BJ/
Introspect Cycle Ph#916-973-1945

OCTOBER 9-12

**INTERBIKE 1994 Bicycle Industry
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To be held at the Pennsylvania Convention
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SUMMER 1995

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rans (ranz) vt. 1. to cycle in comfort and speed with superb handling n. 2. a form of recumbent cycle adj. 3. to be extremely well crafted, yet a great value n. 4. a really cool company bent on building incredible bikes. ADDRESS: RANS Inc. 4600 Highway 183 Altamonte, Flays, KS 67601 Phone: (913) 625-6346 Fax: (913) 625-2795

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A color magazine/ guide to Europe's finest cycles and related products has just arrived, and believe me, you want one. This premier issue of '93/'94 Encycloepedia features the latest SWB and LWB recumbents from Europe as well as trikes, work bikes, cycles for families and disabled people, plus a variety of cycle accessories--all designed by Europe's leading human-power innovators. For your own copy of the coolest, glossiest HPV "bookalogue" on Earth, just mail a check made out to "Recumbent Cyclist News" for \$10 + \$2. first class postage & handling -USA/ \$17 Worldwide Airmail.. Write to: RCN, Dept. E, PO Box 58755, Renton, WA 98058-1755

The 16" X 1" Wheel and What It Means

By Charles Brown

Primo has introduced a new 16" x 1" high-pressure tire in conjunction with Sun Metal Rims. This high performance combination was originally meant for racing wheelchairs, and all I've heard about it in the cycling press is two brief mentions in Recumbent Cyclist News.

What you're reading isn't so much an article as a WAKE UP CALL as to what this new wheel could mean for our favorite breed of bicycle.

Recumbent bicycles basically come in two flavors: Too long a wheelbase—making for a huge, unwieldy bike which is difficult to store and transport. And all the extra size adds weight. Too short a wheelbase—making for a bike with the ride of a jackhammer with reasonably high performance tires, and twitchy, skittish steering.

The narrow, high-pressure 16" wheel gives us the opportunity to make the LWB design lighter and more compact by using smaller wheels. Some people have tried putting 20" wheels at both ends of a LWB bike, which results in a greater tendency for the front wheel to skid out. For example: if you hit a patch of gravel during a high-speed turn. Many recumbents go faster than upright designs, thus we have to make sure they steer and stop well.

In order to shrink the wheels without making it more dangerous in a skid, we have to shrink both wheels in proportion to the load carried. The narrow, high-pressure 16" wheel allows us to safely use a 24" back wheel. Suntour, Shimano and Campagnolo now make "Micro-Drive" cassette freewheels with 11-tooth top cogs which when combined with a 52 tooth chainring, produce a 107" top gear, roughly equivalent to a 52/12 gear with a 700c/27" wheel, and perfectly adequate for an unfaired Tour Easy-like bike. The addition of

a Super Zipper fairing should allow about a 56 tooth chainring.

Are you not convinced? Well, have a look at the result. The drawings are not to scale, the first is a medium size Tour Easy type and the second uses the same rider position with 24"/16" wheel combination. It is ten-inches shorter than the first!

OTHER ADVANTAGES

The smaller wheels give a much needed weight reduction of about three pounds. This is mostly in rotating weight, providing quicker acceleration and hill climbing.

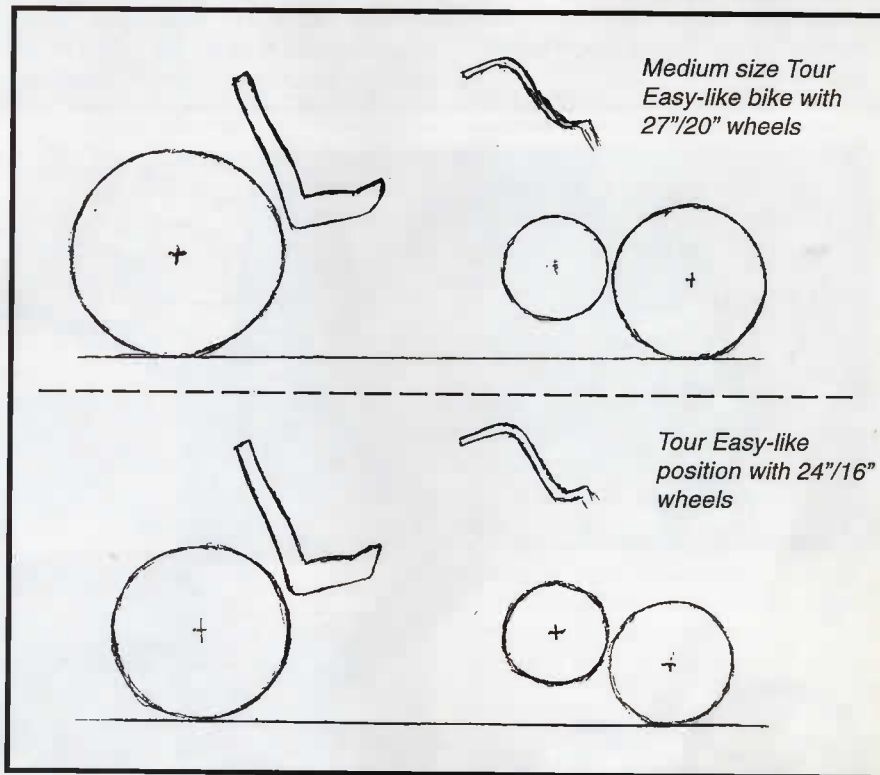
A partial or full fairing can easily enclose the front wheel, a big source of air drag—not so easy with a 20" front wheel.

With a direct steering angle, LWB recumbent advantages include, a more upright steering angle and less steering mass ahead of the steering axis.

Cyclopedia now offers this new wheel and tire. I am hoping we have even better recumbents in the future. □

EDITORS NOTE:

What Charles has described in this article is what the CLWB (Compact Long Wheel Base) is really about, at least for recumbent enthusiasts. It is amazing to me that nobody has used this formula to come out with a high-performance recumbent.....YET. Word has it that BikeE has the E-Racer and Easy Racers has the EZ-1, both slated to be 1995 models.



Drawings courtesy of Charles Brown

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Recumbent News & Rumors

ADVANCED TRANSPORTATION PRODUCTS: RCN just took delivery of our '94-1/2 R-45 test bike. It is an absolute jewel, with ultra-light, Shimano Deore XT components with Grip Shifts and Suntour XC Pro brakes. If you like your R-40/ R-42 you will love the 5-8 pounds the R-45 sheds as well as a possible speed increase of 2 mph! According to RCN Special Correspondent, Bill Dowling, his R-45 is 2 mph faster. Look for a full report in an upcoming RCN. Oh yeah, ATP also called to tell us about a special new model XXXXX which should be available sometime in '95. Ph#206-789-7323.

ANGLE TECH: Well, our report on the hydraulically activated drum brakes was a bit premature as there seems to be a snag. Although we heard some news that will knock recumbent technoids' socks off. The best selling model is the new AngleTech/ Couterpoint SE 63, the Sachs 3 X 7 (three speed internal gears that can be shifted at a stop + 7 free-wheel cogs = 21 speeds X a triple crank = 63. Just don't try and figure out half step/granny gear charts for the '63, it will put your mind on HPV overload. The Presto is arguably the most comfortable riding recumbent made with its neat seat suspension and optional RST (hard to find elsewhere) suspension. If you want one of these gorgeous machines built for you, plan ahead for '95. Head Angle Teechee, Kelvin Clark, called with these new additions for the bike. A Counterpoint built suspension unit, plus Deore XT derailleurs and '95 model Grip Shift SRT 800 X-Ray are now standard. Angle Tech Ph# 719-687-7475.

BIKEE: First a rave review in RCN, then being listed in the Sharper Image Catalog and now a new BikeE is on the way. The 16 spd. has gone by the wayside and a new Sachs 3 x 7 21 speed version which retails for \$1090 has taken its place. The 7 spd. model is now available with Sachs components (formerly Suntour). A couple of special options are available, like the "Knobby" is a BikeE outfitted with a 20" MTB tire. Jim Boeder says there is a BikeE rider who spends most of his BikeE time offroad, climbing up long gravel fire roads and even doing single track! Also, a new high performance version that has been spotted in and about Corvallis, Oregon, the "E-Racer" has a cut down seat (so you can lean forward), lower handlebars, narrow 16" front tire, and special 2/3 size Zipper fairing. BikeE expects to have the E-Racer as a 1995 model. Ph#1-800-231-3136.

CYCLOPEDIA: Word on the street is that Gaylord has 16" X 1-3/8" Kenda 110 psi tires as well as the 16" X 1" racing tires in stock. We even heard that he has a few 16" chromoly forks available. Ph#517-263-5803.

EASY RACERS: Gardner Martin finally fesses up! Remember RCN#21 page 27, the secret spy photo of the E-Z 1, well we have

confirmed that the EZ-1 is a new CLWB model from Easy Racers. We even got a chance to ride the prototype and is it neat! The compact wheelbase matched with the trademark (excellent!) Easy Racers handling & style should make for an excellent new model from Easy Racers. Look for the EZ-1 as a 1995 model. The EZ-1 pricing has not been worked out yet, but Easy Racers says that it should fall between \$695 and \$895.

HALUZAK HORIZON: RCN had a minor brain lapse as we laid out the last issue. We have just noticed that the new '94-1/2 Horizon has a mono-seat (adjustable) support and the bike's triangulation as well as seat tube (rack mounts?) have disappeared. I suppose this makes it lighter..... We also spaced out and forgot to list the price for the Horizon. The bargain price is \$1175, but be quick as we've already heard rumors of a price increase. Ph#707-544-6243. **LATE NOTE:** The new price as of the bike is \$1295.

LAIID BACK (Turner's): Milt called to say that he has a few Laid Back "E" frame kits from '92 and '93 that he is blowing out for \$250 and \$300, they are smaller sizes. Ask about the new E-Lite when you call. Ph#602-290-5646.

LIGHTNING: We've heard an rumor that will be a new SWB monotube Lightning model at the Interbike trade show in September. We've heard a price of \$1200 or so.....

MT. AIRY RECUMBENTS: News from the East Coast is that Larry Black is extremely busy marketing a full line of recumbents in Mt. Airy, VA. Larry also put on a great recumbent demonstration at the recent GEAR (LAW) Rally. Contact Mt. Airy for recumbent sales, service & rentals. Ph#301-831-5151.

PEOPLE MOVERS: Rumor has it that the Southern California recumbent king recently acquired a once lost shipment of the rare limited production Lightning F-14 SWB recumbents. A few of these bikes are available from \$899. Ph#714-633-3663.

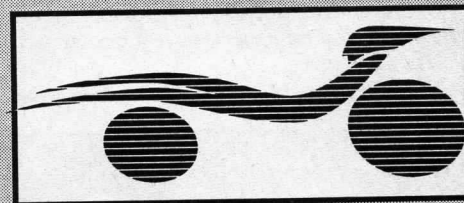
RANS: RCN East Coast Correspondent, Mark Colliton, was lucky enough to get the grand tour of the Rans Factory in Hays, Kansas. For those of you who don't know about the Rans history, their primary business is selling kit-airplanes, and they are very successful at it. The airplane/ bicycle factory now has its own paint shop that is capable of four color fade powdercoat, a plastics division for making airplane cockpit covers, a composite shop for making hi-tech plastic plane parts, metal shop where airframes (and recumbent bike frames) are welded by aircraft certified craftsmen, as well as a full R & D and CAD design facility. If you think about it, these guys could produce a fully faired recumbent commuter or race vehicle completely in house.....and we hope they do. Ph#913-625-6346.

RYAN: Dick "the Godfather of Recumbency" & Karl Ryan are busy at work in the

new facility in Nashua, NH. Both the DuPlex (formerly Fleetwood) tandem and Vanguard received some great (and well deserved) coverage in the latest Bicycling Magazine. They said about the Vanguard, "Could be the safest and most comfortable bike in the world." Everybody who rides the DuPlex is awestruck. Ryan has really found a niche market with their excellent fully recumbent tandem. Ph# 603-598-1711.

BJ at INTROSPECT CYCLE: has been busy this summer and has introduced some new items to the recumbent market. For the Vision there is the "Vision Chain Management System". This is a new set of double chain idlers which minimize chain slap, maximize tire and brake clearance, and are much quieter than stock. The custom rollers are urethane with double sealed bearings. Price is \$60.00 for the kit. Also for the Vision are: Fender sets (\$38.00), Single or double behind the seat waterbottle cage mounts (\$7.00/16.00), Kickstands (\$22.00), Seat set-back modification for early models (\$100), Touring rack with modified mounts (\$32.00). A similar set of quiet idlers can be purchased for the Reveille, (\$40.00), Also there are fenders kits (\$~38.00) and behind the seat waterbottle cage mounts (\$10.00) for most other recumbents. A must have item for any recumbent rider that occasionally drives a car is the "MY OTHER VEHICLE IS HUMAN POWERED" bumper sticker. It is white with blue print and shows five silhouettes similar to popular recumbents (\$3.00 each). For more info Contact BJ at Introspect Cycle, 1029 Amberwood Road, Sacramento CA 95864, Phone 916/973-1945.

Michigan's first recumbent shop is re-opening this fall. Formerly, Shel's Fat Tire Works, the store is re-opening with a new focus "instead of being a mountain bike shop that also sells a few recumbents we will be a recumbent shop that also sells a few mountain bikes. the name change reflects this change." says Sheldon Herman, the owner of the **RECUMBENT SEA**. The tide of the bike world is in the early stages of a sea of change away from mountain bikes towards semi custom recumbents made by small independent manufacturers in the USA. Recumbent Sea will stock Rans, Rebike, Reveille, ATP Vision and Linear. Call the Recumbent Sea at 616-454-3260 to set up a time for a test ride. Out of town guests welcome. Accommodations and meals can be arranged for more distant recumbent seekers.



RCN's Cool Bike of The Month!

THE BEVO-BIKE

BEVO=EASY COMFORT

Why another recumbent bike? BEVO-Bike is the result of 10 years of experience constructing and trying different designs and concepts plus 8 years experience selling and riding nearly all factory-built recumbents available in recent years.

Possible customers felt LWB recumbents were too difficult to handle in the city, too difficult to store and transport. Many didn't like the long chain and the sometimes complicated guiding of it to the rear wheel. So we built a Compact Long Wheelbase (CLWB) BEVO-Bike with FWD!

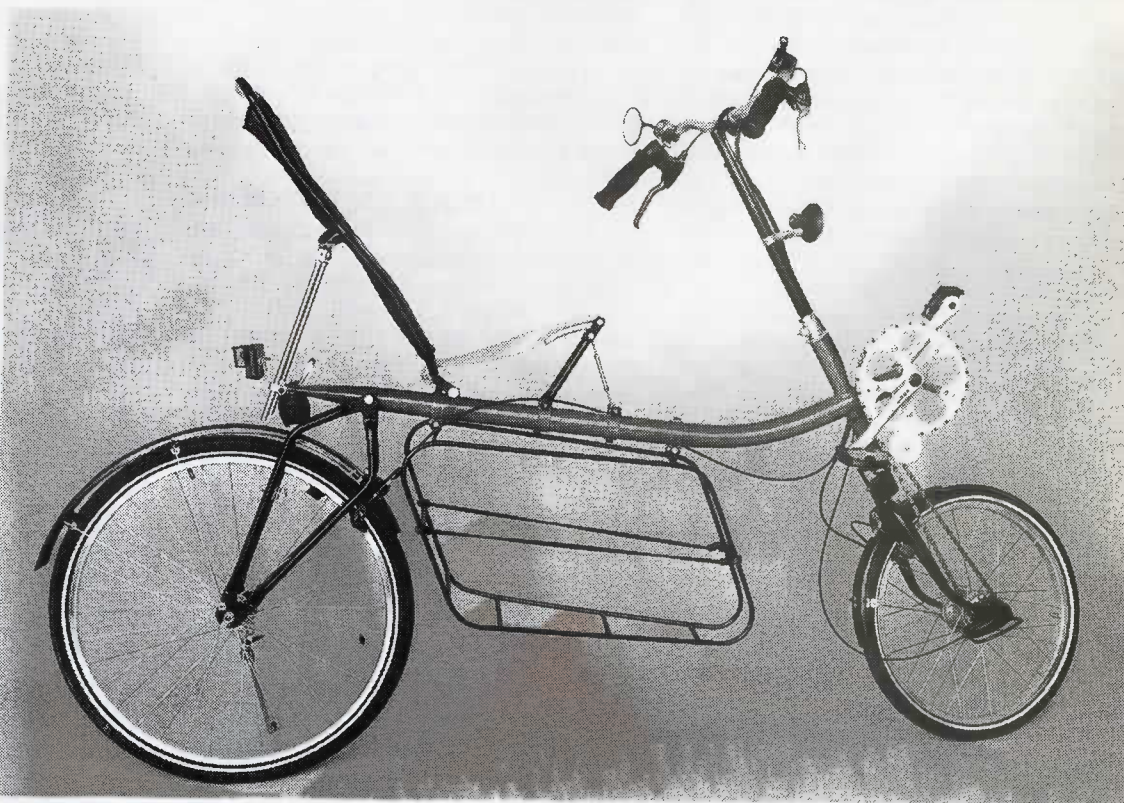
Many possible customers liked the seating position on one recumbent and the handlebars of another and the light weight of still another. They asked us to put seat A and the handlebar B to install on recumbent C.....

So we made the BEVO-Bike to fit and satisfy them altogether: with an ergonomical seat frame which adjusts for people up to 6'2," which adjusts the back-support-angle from "very upright" to "very flat," It's ventilating mesh cover is easily removable for storage and easily adjustable in seconds. The seat surface too can adjust to different angles (independently from the back support). The seat base is leather and can be tensioned accordingly.

The Handlebar is positioned where people expect it to be, which requires no extra training and allows every "current" bike-rider to ride the BEVO-Bike at the first try. It allows riding with nearly horizontally stretched arms, which in combination with the bottom bracket position 4" below the seat surface and offers the most favorable riding position for both aerodynamics and comfort. The bars can be adjusted in height and turning the stem or use of any commercially available stems and/or handlebar model, so that anybody can adjust the BEVO-Bike to his individual personal riding position unlike any other recumbents we know.

Where should the bottom bracket be? Racing recumbent have the BB higher than the seat surface, Comfort recumbents have it much lower than the seat surface.

BEVO-Bike's BB offers the best combina-



The BEVO-Bike from Germany--Photo courtesy of BEVO-Bike and Hans Voss

tion of aerodynamic and comfort under the condition that the seat back can be adjusted. So BEVO-Bikes combination of nearly forward stretching arms, relatively high BB and reclinable seat back grants a 30% lower air resistance than a conventional bike and much better aerodynamics than many underseat steered recumbents with low BB.

BEVO-Bike's FWD allows both fairings as well as auxiliary powered drive systems to the rear wheel. Unlike other recumbents, the baggage is between the wheels and improves the riding qualities instead of making it worse.

We have asked ourselves why most available recumbents have no suspension? Suspension can cause a "swinging effect" on conventional bikes, because the movement of the pedals and suspension are in one direction. But on recumbents, these movements are in different directions so there is absolutely no problem with suspension on a recumbent.

The Bevo-Bike has a light suspension like motorcycles, because we want to protect your neck from the shock of bad roads. If you have ridden an upsuspended recumbent over bad road, you know what we are talking about. BEVO-Bike is

made not only for comfortable seating, but also for most comfortable riding.

All of these features are possible by the unique FRONT WHEEL DRIVE of the BEVO-Bike which can be equipped with a 5-speed or 7-speed-Gear-Hub (Sachs Super-7 offers a 284% gear range). Brakes are Magura hydraulic on the front, and Dia Compe Hybrid on the rear. The front wheel is a 20" (406 ERT0) and a 26" rear. Wheelbase 1,36m; Overall Length: 1,95m; Bottom bracket height: 0,60m; chain wheel : 50T, Sprocket; 16-18T. Gearing Sachs Super-7 ratios: 0,593-0,667-0,809—1,236-1,476-1,585.

VOSS SPEZIAL-RAD GmbH, Hans Voss
D-25524, Itzenhac-Edendorf, Tulpenweg 2
Germany

EDITORS NOTE: Voss is an importer of American Recumbents to Germany and this is his first German production model. Linear Mfg. Inc. (importers of many fine European models and mfr. of the Linear LWB) is planning US Distribution for the BEVO and is waiting for the first bike. If you write to BEVO-Bike, please be sure to send along a US Postal International Reply Coupon or two (or a few bucks).

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 which something new!

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BIKE Rx: Arizona Full Service Recumbent Dealer We stock Vision, BikeE, Rans, Linear, Turner, ReBike, Plus Parts and Accessories. Just 40 minutes south of Tucson. David Sader, 28300 S. Foxwood Way, Amado, AZ 85645. Ph#602-398-9226. (AZ/23)

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