The Most Innovative Recumbent builder in the USA & the Amazing Presto Ti XL Titanium SWB Recumbent!
BMX: Bicycle Moto Cross: very tough (generally) kids bikes that use tough steel or sometimes alloy components.

FWD: Front Wheel Drive

GEAR INCHES: A formula used to determine range of gears: front chainring divided by rear cog multiplied by drive wheel diameter.

FAIRING TERMS:
FAIRING-PARTIAL: An aerodynamic windscreen, usually made of Lexan plastic (Small Zipper).

FAIRING-FULL: This fairing shields both the legs and upper body (Super Zipper/ Ryan Zipper/ Presto Zipper).

BODY-PARTIAL: A front nose cone or fairing used with a soft material such as that Lycra or Nylon that fairs the vehicle, removes easily and is usually open at the bottom (Gold Rush Replica or Counterpoint Presto body stockings).

BODY-FULL: An aerodynamic body consisting of front, rear, side and bottom sections. Streetable HPV’s use a combination of hard/soft fairing materials (Lightning F-40/F-86). Racing HPV’s use hard shell bodies throughout (Gold Rush / Lightning X-2).

FRAME CONSTRUCTION TERMS:
TIG WELDING: Tungsten-Inert-Gas; a proven no-lug process common in mountain bikes. Tubes must be metered perfectly. TIG quality is plainly visible. Common on recumbents: Tour Easy, Ryan, Presto &A.T.P.


FILLET BRAZING: A joint is created by flowing brass around the tubing junctures. Most builders then file or sand to create a smooth nice looking joint. This can be the highest quality of all joints, but there is no way to tell the quality by looking. Skilled builders use a minimum of heat and time to braze; others cover mistakes with body putty and paint. Fillet Brazing is used on some recumbents and the favorite of homebuilders.

H.P.V. Human Powered Vehicle.

HYBRID: a) A popular cross bicycle that is 1/2 road and 1/2 trail, b) human/ Electric power. c) human/ gas power.

IDLER-CHAIN: A modified skateboard wheel, partial rear derailleur cage or derailleur pulley on a custom mount used to carry or direct the excess chain on a recumbent bicycle. These are necessary on SWB & LWB recumbents with wheelbases of 66” or longer.

I.H.P.V.A: International Human Powered Vehicle Assoc. Publisher of HPV News & Human Power

I.H.P.S.C: I.H.P.V.A.’s Speed Championship Event held yearly.

INDEX SHIFTING: One click per gear shifting common on most new bicycles

INDIRECT STEERING: Sometimes used to describe underseat steering. This actually means steering via a rod, linkage or cable that connects the handlebar to the fork.

INTERMEDIATE DRIVE: Having two chain drive system with a means of shifting gears in between the crankset and free wheel. This is traditionally done with a freewheel and a front or rear derailleur to shift the cogs. The bike may then have another rear derailleur at the rear wheel or another front derailleur at the crankset or both.

LWB: Long wheelbase 56”-71” + (crankset low and behind front wheel).

LOW RACER: A SWB recumbent whereas the chain does not go up through idlers to clear the front wheel. The chain travels directly back to the rear drive wheel. Low Racer’s are build as low as possible for HPV racing.

CLWB: Compact Long Wheelbase 46”- 64”. Recumbents that have the LWB configuration where the crank is low and behind the front wheel. The CLWB is for bike where the designers have made an effort to shorten the wheelbase by raising the seat and/or using smaller wheels. This design is compact and user-friendly, but mainly suited for entry-level bikes. With the seat high, and located farther back on the frame, high speed performance/handling can suffer. Hard-cornering on a CLWB is next to impossible. As a fitness bike, neighborhood/beach cruiser, rental unit or extra bike for the wife and kids, the CLWB cannot be beat. This is also the largest selling type of “bent in North America.

SWB: Short wheelbase 33”-45” (crankset high and in ahead of front wheel).

MOULTON: An English full suspension conventional bicycle that utilizes 17” rims and tires (100 and 130 p.s.i.) specially made and commonly used on SWB recumbents.

R.B.C.A: The Recumbent Bicycle Club of America founded by Dick Ryan. This organization is now active (us) in name only.


RCN CREW: A) This generally refers to the RCN staff/ Robert Bryant's wife (owner of RCN) Marilyn and kids, Amy (5) and Dan (1.5). B) At recumbent/ HPV events, this can refer to anyone in the RCN traveling entourage (anyone who chooses to hang out). C) RCN readers who volunteer/choose to write on a given subject suggested by RJB. D) RCN volunteers.

RWS: Rear Wheel Steering.

STEERING ROD: The steel or aluminum rod that connects the fork to the bars.

STEERING STRUT/STEM EXTENSION: Mainly used on SWB recumbents with above the leg steering, although sometimes used on LWB recumbents. An extension that rises from the stem, head tube or false head tube to lift the handlebars high enough to clear the legs.

UNDERSEAT STEERING: Steering via handlebars that on a LWB pivot underneath the bikes seat, or on a SWB mount to the fork or extend from the head tube.

ZZIPPER: A Lexan recumbent fairing built by Zzip Design.
HAVE YOU EVER CONSIDERED A RECUMBENT BICYCLE?

WHY RECUMBENT BICYCLES?
There are many reasons to consider a recumbent. First and foremost is comfort. When you ride a recumbent bicycle, you will no longer have an aching back, stiff neck, numb wrists or sore bottom. You will sit in a relaxed easy-chair position. You will be able to ride longer with less fatigue and arrive at your destination feeling refreshed. The recumbent position offers you a great view of the countryside, while seated you will look straight ahead, this allows your lungs and chest more open and free breathing. Recumbents are very versatile machines, they can be used for a wide range of applications: recreational/spor riding, for the daily commute, a fast double century and they are great for long distance touring.

RECUMBENT PERFORMANCE:
Recumbents hold all of the human-powered speed records. This is because they are aerodynamically superior to conventional bicycles; less frontal area means less wind resistance. The Lightning F-40 currently holds the Race Across America speed record of five days and one hour. Gardner Martin’s Easy Racer Gold Rush ridden by Fast Freddie Markham was the winner of the Dupont Prize for breaking 65 m.p.h. You can currently buy production versions of these bicycles. Fairings for street use are common and optional equipment on most commercially built models. They protect you from rain, cold and wind with up to a 30% reduction in drag. The general rule is that a recumbent is about 10% faster than a conventional bike. With a fairing, it can range from 15%-25% faster. With a full body it can be even more. Street use recumbents are not always faster than conventional bicycles. It depends mainly on the individual rider. Your best bet is to do your homework and if your goal is performance and speed, be sure that you look for a recumbent designed for this purpose.

COMMONLY ASKED QUESTIONS ABOUT RECUMBENT BICYCLES: 1) Do recumbents climb hills well? Yes they do, although climbing on a recumbent requires a different technique, you must gear down and spin. Maintaining an efficient spin takes some practice & conditioning, once mastered it takes less physical effort to climb hills. Depending on your riding style, your speeds can range from slower to even faster than on a conventional bicycle. 2) Can recumbents be seen in traffic? Recumbents with a higher seating position may be better suited for riding in traffic than some of the low-slung designs. The use of proper safety devices such as safety flags and reflective devices is recommended. Recumbent bicycles are different, futuristic and they get noticed. Many riders feel they get more respect from motorists while on their recumbents. 3) Are they safe? Recumbents are safer than a conventional bicycle due to the low center of gravity, they stop faster. Brakes can be evenly applied to both wheels simultaneously providing more traction without throwing the rider over the handlebars. In crash situations, the rider goes down to the side absorbing the impact with the hip and leg rather than flying over the handlebars and absorbing the impact on you head and shoulder. Straight ahead vision is also better on a recumbent, however, rear view mirrors are necessary for proper rearward vision.

RECUMBENT PAST HISTORY:
Why are recumbents such a rare sight? Space age technology? New type of bicycle? Not really, recumbent bicycles actually go back as far as the mid to late 1800’s with the Macmillan Velocipede and the Chaldan Recumbent. In the 1930’s a series of events took place that changed bicycling history. A French second category professional track cyclist named Francois Faure rode the Velocar, a two wheeled recumbent bicycle designed and built by Charles Mochet, to record-shattering speeds breaking both the mile and kilometer records of the day. This created a storm of controversy within the U.C.I. (United Cycliste International), bicycle rating’s governing body. The debate centered on whether the Velocar was a bicycle and were these records legal? In 1934 they ruled against the Mochet-Faure record, banning recumbent bicycles and aerodynamic devices from racing. Were U.C.I. members worried that the recumbent bicycle would displace the conventional design? Did they realize this would freeze bicycle and human-powered vehicle development for the next forty years? This is why bicycles of today look

Continued on page 4.
WELCOME RECUMBENT CYCLISTS!
to our 3rd Annual RCN Recumbent Buyers Guide!
This issue has historically been the most popular, media-attention getting and information-packed ‘bent issue of the year for us. We have compiled the most complete package of recumbent information ever put together. We have also tried to help would-be buyers and homebuilders to learn about the various types of recumbents and be able to select the proper type for their budget and style of riding. We hope you enjoy this issue.

Why Wait! With this buyers guide we hope to achieve several things. First and foremost, we want to bring you into the world of recumbent riding. You will soon learn that recumbents are the wave of the future and the absolute most comfortable way to enjoy cycling. If you are a seasoned veteran, welcome to 1994’s line of bikes & products.

Why Wait! Some RCN readers are what we would describe as “Couch Enthusiasts.” If this is you, listen up, this is the BEST time in the history of recumbency to come on board. There are more new manufacturers, bikes and dealers to show you their wares than EVER BEFORE!

Why Wait! If you cannot afford that new dreamy Easy Racer, Lightning or Presto, why not drop your sights a bit and get on the road? Pete Lardo, an RCN reader from Florida was in the same boat. Thanks partly to RCN, he now has three ‘bents. Pete’s first was an Ed Roeters Alternative Bikestyles unpainted frameset plus a second hand upright equals a recumbent for less than $200! Is this too much? We have listed sources for building plans & homebuilts so, it’s time to get on the road. Why not consider a new ‘entry level recumbent? These start at around $600. If you sell it next year, you can probably get nearly $500 for it. And you’d have been on the road for a year! Once you get some recumbent experience, you will quickly compile your personal list of likes & dislikes.

Why Wait! Are you waiting for the major manufacturers to come on board? Why? If and when they do, the bikes will probably be just fine, but who has done their research, design and road trials? Are their bikes similar to what’s on the market already? RCN Fact: You don’t become a recumbent expert overnight, even if you have mastered MTB Technology or Gel Seat Consistency Studies. It is our faithful manufacturers, designers and marketers who know recumbents. 1994 marks the best year ever for recumbent selection. Do you want a LWB? Who do you call? Dick Ryan (Ryan), Steve Hansel (Linear) or Gardner Martin (Easy Racers). These are the LWB experts. Do you want a SWB? Who do you call? Joel Smith/Grant Bower (ATP Vision), Kelvin Clark (Presto) or Milt Turner (Mr. Laid Back). These people and many others listed in this issue are the experts. There is no reason to wait for for “Vapor-Bikes,” go with the recumbents that our experts are building NOW! Where are they? They all read and most advertise in RCN! Just order up a recumbent bike and get on the road.

Viva Recumbency!

Robert Bryant, Publisher

PS: Please see our reader survey/ renewal/ order form on page next to the last page of this issue. Check out the special savings!

NEW FOR 1994!

The 3rd Annual Recumbent Cyclist News Buyers Guide is full of the latest & greatest of the year. There are lots of changes for this year, as well as brand new manufacturers & models. Here is a small sampling of what you will find in this issue.

Right away you will notice ATP’s deluxe offerings for ’94. The spec’s, options and bikes looked so good to us that we awarded ATP with “Editor’s Choice For Best Recumbent of 1994.” Please keep in mind that you may need a degree in engineering to decipher all of the model names & parts designations. Rans is on the move, now more than ever with the new Response, Tailwind and upgraded service. Reports are that the ’94 Linear is looking good with Grip Shifts, and upgraded brakes.

New Manufacturers to watch in ‘94 are as follows: The Haluzak Horizon & Rotator Pursuit are getting good feedback and seem to be value leaders. The S & B & turner frame-kits are real bargains and offer riders the opportunity to get on a SWB for a discount price. From the East Coast comes two bikes from the drawing boards of Bill Darby, The Sprite, was pictured in RCN last fall, the NeoByke is like the Sprite, but in a CLWB format. This looks like an excellent bargain. Also, just before going to press, we heard about the new Maxim $359 recumbent. We hope you enjoy our 3rd Annual Buyers Guide!
The RCN Crew
POLAR-BENT
Dear RCN,

I got my first recumbent about 10 years ago from Gardner Martin. I had seen an article on the bike and loved the look of the recumbent seat. I’ve been in love with recumbent riding ever since. I now own four different Tour Easy models ranging from my original large frame, a custom frame for my 6’5” height, a custom frame that allows for a MTB tire which I use here in Barrow, Alaska where we have nothing but gravel roads and a small frame for my wife which she loves dearly.

For all those years, I rode in relatively ignorant bliss never knowing there was a world of enthusiasts out there. That all changed the day I saw your ad in the back of a bicycling magazine. I immediately subscribed and the whole world of recumbent innovation and enthusiasm opened up. Since then, I’ve acquired a Linear, ReBike, Turner LB-2000 and LB-E for my wife. They are all fun bikes with their own niche. I would have never known of them without your great publication. In case you’re wondering what I do with all those bikes, I have a bike rental business in Barrow, Alaska, called “Arctic Circle Cycle.” So, if you are ever in Barrow and want to try a recumbent, give me a call (Ph#907-852-2010).

Yours Truly,
Jim Vorderstrasse
Barrow, Alaska

Have You Ever Considered a Recumbent Bicycle? Cont’d From Page 2.

very similar to the Starley and Sutton Safety (upright/conventional) of 1885. Just think where bicycle technology would be today if the U.C.I. decision had gone the opposite way.

MODERN RECUMBENT HISTORY:
Recumbent development was fairly quiet until the late 1960's. Dan Henry received some media attention for his long wheelbase design in 1968. In the early 1970's, the human-power revolution was starting up on both the east coast by David Gordon Wilson, designer of the Avatar, and on the west coast by Chester Kyle. These pioneers recognized the need for further development of human-powered vehicles. In the late 1970's and early 1980's this lead to the first commercial recumbent bicycle designs such as the Avatar, Easy Racer and Hypercycle. In 1990, the Recumbent Bicycle Club of America was founded by Dick Ryan who currently manufactures the Ryan Vanguard and was also involved with the Avatar project in the early 1980's. In 1988 Recumbent promotor Robert Bryant got his start writing “Recumbent Ramblings,” a column for “HPV News.” In the Summer of 1990 Robert founded the “Recumbent Cyclist Newsletter,” and in just under four years, RCN has become the source for recumbent bicycle information in the world today.

Viva Recumbency!
Robert J. Bryant
LWB-FAST/ SWB-CLIMB WELL?
Dear Robert,
I enjoyed the comparison between the Tour Easy and the Presto by Ollie Deex in RCN#18. But, But, But; there was one very important attribute I would have liked to hear more about (which for me is the basis for comparison)- climbing ability! I own three recumbents a LWB Rans, A CLWB BikeE, and a SWB Presto. I have noticed that the LWB (low bottom bracket) is very fast going down hill, but a little tough on the climb. The SWB (high bottom bracket) Presto, on the other hand, has excellent climbing ability.

Sincerely,
Richard Belcastro
Schaumburg, IL

Richard, we have had similar results from these bikes. It seems like high bottom bracket bikes get more leverage to the pedals and climb better and the low aerodynamic LWB recumbents are fast down hills and on the flats.

READER DOESN'T LIKE RCN'S "STYLE"
Dear Robert,
I have enclosed my subscription and back issue order. Some friendly advice, Robert. Your publication will be more appealing when you stop your pleas for sympathy and your tendency to snivel. Your current style is not likely to bring any investors.

Sincerely,
Jeff Fettig
Monument, CO.

Blah blah, blah blah blah, blah blah blah

SPEEDY 'BENTS
Hi Robert,
I ride with a group of road riders 100-150 miles per week. I am the only rider who also does the mileage on a recumbent. I have an Infinity.

Next Summer, we plan to ride from Vancouver BC to Lodi, CA; our home. I plan to ride a recumbent. Most of the riders plan to draft the only tandem in our group in order to average some 150 miles per day.

Presently, I can only think of three recumbents that I feel might be able to maintain 21-25 mph on. They are the Kingcycle, Lightning P-38, and Tour Easy. I am not asking you to choose the best for me, however, I would appreciate your insights, suggestions or comments.

Thanks.
Richard Bonjour
Lodi, CA

Dear Richard, thanks for the letter. I must be very careful in answering a letter like this, but, I think the subject needs to be addressed. Here are some candid personal thoughts on how I feel about these bikes, hopefully, this will help you in your decision making.

I have ridden all of the above bikes except the Kingcycle. I have the fondest memories of my original Tour Easy purchased back in 1987. My current Gold Rush Replica test bike is the fastest recumbent that I have ever ridden--with or without the Lycra body. The Tour Easy with a Zipper was designed for fast touring, the lighter Gold Rush Replica is more of a high performance bike, however, I've seen them tour before. The drawbacks of the Tour Easy is the bikes weight. If flat land speed and rugged dependability are what you are after, Easy Racer is the bike.

A Lightning P-38 with Moulton front wheel and a Zipper would be another excellent choice. The bike is light and the high bottom bracket makes it an excellent hill climber. The drawbacks would be that the bike is not really built for loaded touring, although I know several riders who've done it successfully. And don't go anywhere without at least one extra front tire and a few extra tubes. If out and out speed was the most important factor, the Lightning F-40 would be my choice. When the body is added to the Lightning, it makes for a very fast bike.

The Kingcycle is beautifully crafted bike. The drawbacks for a ride like yours would be that it uses a really odd 18" front tire size. For fast cruising, a Moulton equipped Lightning would be better choice than a Kingcycle. The seat on the P-38 is fabulous and light years ahead of Kingcycle or Tour Easy. Kingcycle has a unique trunk and nose fairing. This will make the bike more aerodynamic than the P-38 with Zipper, but not in the range of the F-40.

Other bikes to consider are the Counterpoint Presto and ATP. I have owned and ridden one extensively. Although not as fast as the Gold Rush, the handling, plush suspension and seat make it an excellent choice. If comfort was my #1 goal, this is the bike I'd choose. The new Presto Zipper and a set of IRC Road Lite EX tires, this bike may give the Lightning a run for its money.

I suggest that you ride all of the bikes that you are considering buying. Call the manufacturers for local riders and get the Easy Racer and Lightning videos. Good luck.

EXPENSIVE RECUMBENTS
Dear Recumbent Cyclist,
I have been a subscriber for over two years. I dream of my ultimate recumbent with every issue of RCN. Here lies the problem. All the recumbents that I like are way out of my price range. For instance, Lightning's P-38, is my current dream. But, $1800 dollars is... way too much for my thin wallet. I don't intend to just target Lightning, but all of the recumbents that I would like to own are in that price range.

I understand the dynamics of supply and demand, but the demand will never be high if the cost is too high. If I purchased a butt numbing, hand sleeping diamond frame bicycle for $1800, I could have a twenty pound carbon fiber bullet. What's a bikeless rider to do?

Sincerely,
Anthony Wason
Tuscon, AZ.

Anthony, thanks for the great letter. First of all, the top of the line recumbents are not that far out of line when you consider the following: Recumbents are built in small numbers, thus more expensive. If you compare price-wise that $1800 recumbent to any built in the USA custom bike, you will find that they are not that far out of line. I think the only thing that will bring the price of the $1800 recumbents down is...continued on the next page.
would be if a company like Specialized or Schwinn builds a recumbent. I can almost guarantee you that it will not be anything as thoroughbred as a Lightning P-38 either. If you take a look at Specialized road bikes, you will see that one equivalent to an $1800 recumbent is over $1000...and made in the US of A. Another thing, would you want an upright bike at all? Or a bike made of, uh, carbon fiber....The RCN retrogrouche are partial to steel bikes or aluminum ones with great warranties....well, that's a story for another time.

Now that I have defended these blue blooded speedsters, I will tell you how to make the most of your recumbent-buck$:

A) Take a look at the new “affordable” enthusiast bikes. You can usually get a better deal from an upstart company. Keep in mind that there is no free lunch and veteran manufacturers have learned how much they need to sell bikes for to stay in business. A long term reputation does not come cheap.

B) Buy a frame-set and strip your MTB or roadie down to the frame.

C) Watch RCN classified ads for a used bike. You can save $500-$800 on a one to two year old bike. You could even advertise for one-RCN Want ads.

D) Build a ‘bent. RCN has done many homebuilder stories and company's like CycloPedia make it easy with the kit-parts they sell.

D) Save your money and/or sell your car. Think of how much money you will save if you get rid of your car in favor of a recumbent (if you have a car). Most people spend more on car insurance and gasoline in one year than an $1800 recumbent would cost.

RCN ROAD TEST STANDARDS QUESTIONED
Dear Robert,
Since it is obvious that you and your staff listen closely to readers. I would like to offer what I hope are some useful ideas to enhance your great publication. Specifically, I have been thinking that more quantitatively formatted reporting may lessen the “personal impression” nature of your tests. This formatted reporting may lessen the “personal impression” nature of road tests. The testing may take the form of “standard condition” tests. For example, turning radius.test could always be done on a designated marked out course, the braking portion starting always at the same point at the speed, with the same size/weight rider. Handling could be carried out on a standardized slalom course, entering the course always at the same speed, then measuring the speed and elapsed time at the end of the course. A turning radius test would also be enlightening. Straight away speed tests would likewise be standardized, always using a similar bicycle computer to record speeds. Local wind speeds can be measured with a hand held wind velocity meter and reported along with the associated test data.

The second feature of such testing would be the format. A standardized “check list” format would be used for all road tests. You could even create a formatted report file in your computer. Readers would then have a handy tool for comparing various features and characteristics of the bikes reported on.

I hope that some of these ideas may help to take some of the “heat” off your faithful and daring road testers. You are, to this reader, doing a great job and deserve your readers enthusiastic support.

Keep ’em rollin’
Ed Katz
Northridge, CA

Dear Ed,
Thank you for your support of the Recumbent Cyclist. We strive to make our road test evaluations better with each one we do. The “personal impression” format which you describe was my original intent when I started publishing RCN. Over the past three years, I have tried, with every new road test, to print more fact/spec based information. RCN strives for accuracy and to offer readers the best test we can given RCN’s limited resources. RCN road tests offer the best of both personal impression and the quantitative information. I would be concerned that the testing you described could possibly lead to false representations of various recumbents as the variables during any given test day or bike are just too hard to control. This may lead to huge errors without much effort. I found this to be the case during my experimentation with coast down and braking tests this past summer. No other bicycling magazine does any performance testing. Bicycles are not like cars, where power/speed=1/4 mile times is nearly a given. The limits of human power, the wind, the pavement, the tire air pressure, power to weight ratio, and how the human machine feels on any given day will affect testing. Your thoughts are most definitely appreciated and I always want to hear what RCN readers have to say. I am always open to new ideas and ways to test and if it's within our means, we'll try it.

RCN #1 FAN!
Dear Recumbent Cyclist,
That was an excellent article about the BikeE in the September-October issue. Although it is straightforward, well-thought out design, it is so unusual that many people probably wouldn’t find it attractive, unless perhaps you can see it in glowing anodized colors). Your article made me see this bicycle in a whole new light.

Steve Smith’s bike looks great too, and thanks for the article. Can he be reached for detail sketches?

Your magazine is absolutely great! I’m like a twelve year old waiting for Christmas between issues. Where else can a person see truly new engineering and design concepts emerging, read about HPV Speed Week and find tips on building your own bikes? Just great stuff!

Sincerely,
Armand Gibbons
Omaha, NE

Please send more letters just like this one.....
DOCTOR RECUMBENT

RECUMBENT HILL CLIMBING
Dear Dr. Recumbent,

Why isn’t there a believable or consistent answer to why many recumbents bicycles do not climb as well as traditional bicycles.

I own two recumbents, a MWB and a LWB. The MWB seems to climb a little better, while the LWB offers a more shock absorbing ride. (although each bike has its advantages for other factors). What’s your opinion, Doc?

Sincerely,
Richard J. Belcastro
Schaumburr, IL

Dear Richard,

First off, I better say that I am personally slower climbing steep hills on recumbents, but on smaller rolling hills, I am able to keep my flat-land speed up, which keeps my climbing speed faster. We regularly get letters from readers who say they are faster up hills. These are generally very fit athletic riders on performance machines. Gearing, bike weight, bike design, rider weight and fitness level all play a large part in hill climbing. The best hill climbing recumbent we’ve tested is the Lightning P-38 with its stiff boom, high bottom bracket and tight weight. We have also heard that the front wheel drive homebuilts are good climbers. Gearing is also important. Make sure your bike has low gears (a minimum of a 20-25 gear inch low) and learn to spin. After all this ride and practice going up those hills.

Dr. Recumbent

'BENT TIRES
Dear Dr. Recumbent,

I own an Infinity and live in Austin, TX. I often travel streets that are well paved. There are many areas of my travels where the streets are not in good shape or the traffic forces me to ride on the sidewalks. I want to go from the skinny IRC 100 psi type tire to a fatter tire (front and back) to make these rough roads easier on me and my bike. Question, how wide & beefy can I go and still have a relatively high psi tire.

Keep up the good work!
Eric Ebner
Austin, TX

Dear Eric, we checked our recumbent tire sources for you. First of all, the side-wall pressure rating is somewhat misleading. Usually, this psi rating means that the tire blows out at twice that pressure. We know many riders, dealers and manufacturers who run the Haro 1.5 slick and others rated for 65 psi tires at 100 psi. I will not condone this, but I have done it myself. We called Angle Lake Cycle, the West coast small wheel specialists. They offer the following tires: A Specialized Ground Control 20" x 1.5" 50 psi knobby (which they have run on the Presto before) at $16; the Haro 1.5 65 psi slick at $16.99; the Mitsibishi ST Comp 1.75 90 psi street tread at $20. This is probably your best bet for an urban assault tire. Haro also has two new tires in their catalog for ‘94: a 1.75 and 2.125 street tread 20'ers that will sell for under $20. We have also heard of a new Perrigrine 100 psi tire as well as the ACS 20" x 1.75 tire that is available from CycloPedia.

Bicycles By Haluzak

The All New "Horizon" is equipped with top-of-the-line components, a 26'/ 20" wheel combination and the finest craftsmanship found on recumbents today.

Bicycles by Haluzak
2166 Burbank Ave.
Santa Rosa, CA 95407
Phone# 707-544-6243 Pager# 707-491-8814
Welcome to the 3rd Annual Recumbent Cyclist Buyers Guide!

We hope that you will find this issue useful and full of new information for the recumbent enthusiast. Recumbent related companies are offered a chance to be listed in this buyers guide at no charge. As you will find out, many manufacturers and dealer do not respond to our request for buyers guide listings. It is our contention that manufacturers or dealers who do not effectively use this free opportunity to promote their products should not be considered as the most serious in the business. You will also notice some manufacturers do not subscribe to RCN. How do they stay connected with our niche of the bike industry? How do they promote their products? And the final question should be, are they serious and should you do business with them.

With this 3rd Annual buyers guide as with our previous two versions, we have searched North America for manufacturers of recumbent bicycles. If you know of any recumbent manufacturer not listed here, please let us know and let them know about us. If you do business with any of the manufacturers listed in this issue who are not advertisers or subscribers to RCN, please let them know where you heard about their products. RCN cannot survive without the support of the recumbent industry and those who are making a serious effort to produce & promote recumbent bicycles.

Congratulations to our RCN Editor’s Choice Award Winners for this year! We especially want to congratulate Advanced Transportation Products (ATP), builders of the "Vision" for winning, "Editor’s Choice for Best Recumbent of 1994."

HOW TO CHOOSE A RECURBENT & DESIGN INFORMATION REVISED FOR '94!

SWB: Short wheelbase (33"-45"): Short wheelbase recumbents have their front wheel tucked underneath or just ahead of the riders knees. The SWB is a popular design amongst enthusiasts, homebuilders and racers. The SWB design does not have as large a market share as their LWB brethren, but they are gaining popularity every year. These bikes are agile, quick handling, quick accelerating and extremely maneuverable. They can be lighter, with some of the better models weighing in the mid-20 pound range. They fit car racks better and can stow easier than LWB recumbent bicycles. They also have more complicated and slightly noisier drivetrains. Some use two 20" wheels, which offers a great all-around ride and a large selection of tires; however, this can make the seat too tall for some riders. Other models use the larger rear wheel (26"/27"/700) matched with a 20" front wheel. This works well and makes gearing choices more easily obtainable. The most popular configuration seems to be the 700c/27"/26" rear wheel matched with a 16"/17" front wheel. This lowers the seat height considerably, but the lack of a high pressure performance rated 16" tires is a consideration. As you are reading this RCN issue, a new 100 psi 16" wheel should hit the market. This is an upgraded version of the current 16" X 1-3/8" tire currently available, but with a stronger side-wall, thus a higher psi capacity. Continued on page 11.
Tim Brumer’s Lightning F-40
photo courtesy Tim Brumer

The ATP Vision LWB VR-40BU-photo by ATP

The composite Lightning R-84
photo courtesy Tim Brumer

The Ryan Fleetwood Tandem-photo by Ryan

John Cunningham of Peyton Colorado with the new Presto Zipper & body stocking-photo courtesy of Angle Tach.
HOW TO CHOOSE A RECURBENT CONT'D

SWB recumbents have various degrees of heel interference with the front wheel. With some bikes, you will need to become accustomed to this personality trait. Other SWB models have shorter wheelbases and the seats can appear closer to the front wheel. This is done so that riders of many sizes can pedal with virtually no heel interference. How much heel interference you have on any given bike depends on the bike (ask the manufacturer!) and also on your size. Also, first-time riders may have a harder time with heel interference than seasoned enthusiasts who hardly even notice it after awhile.

The final consideration is handling. On wet pavement or riding in sand, gravel or snow, the SWB can be harder to control. A longer & lower SWB with some tires that bite is probably the better choice for slick pavement. Most SWB riders are almost religious about their choice of bike. It seems to be the choice for HPV racers and enthusiasts. For these riders, this is all worth while to achieve that fast and exciting ride that only a SWB or MWB recumbent can offer.

Pros: fun and exhilarating to ride, quick handling, lighter, more compact, easier to stow, easier to transport, easier to maneuver.
Cons: more complex drivetrains, quick handling, some have heel interference with the front wheel, good 16" tires can be hard to find, SWBs can be harder to master for the beginner.

CLWB: Compact Long wheelbase: (46"-64") This is the newest designation for recumbent bicycles and has quickly become the most popular choice in the world (This is primarily due to the entry level ReBike). A CLWB recumbent has the same configuration as a LWB with a higher seat and low bottom bracket and the front wheel is ahead of the crankset. These are bikes where the designers have made a conscious effort to shorten the wheelbase by making the seat higher or wheel smaller or a combination of both. These bikes are the absolute easiest for new riders to learn on. The shorter LWB, matched with the format of the traditional LWB design format, makes for the perfect all around design. Many new wheel combinations have developed with this new design format. The originals are the 26"/27"/700 rear with a 20" front, but the latest arrival, the ReBike uses a 20" rear wheel and a 16" front wheel, making for a very compact, nimble, and user-friendly bike. New for '94, we have heard of a CLWB with two 20" wheels!

CLWB Performance: If the CLWB falls short in any respect it's in mildly suffering performance. The way in which designers achieve the CLWB design is to move the rider rearward on the bike. This usually means raising the seat up over or near the rear wheel, thus moving the center of gravity (e.g.) of the bike up and back. With more weight on the rear end of the bike and the c.g. higher, the bike just does not handle as well as the LWB or a SWB design. If you use your bike for touring, commuting and recreation, you will probably not notice anything missing. A benefit to the CLWB design is it's superior ability to be seen in traffic and offer the rider the best view of the road possible on a recumbent.
HOW TO CHOOSE A RECUMBENT CONT’D

They are comfortable, stable, track straight, predictable and riding quickly becomes second nature. They make excellent commuters and tourers. For most riders this is exactly the ticket.

For "Advanced Riders" who want more out of their ride, a performance recumbent is the only way to go. You don't need to be a veteran recumbent rider to want "advanced riding characteristics" - just feel the need for speed and handling. Gardner Martin's Easy Racer is one of a few LWB 'bents that offers the exhilarating "ride" of a performance bike. The Tour Easy with a Super Zipper is a fast bike. The Gold Rush Replica is faster yet and nearly five pounds lighter. The Counterpoint Presto can also be set up as a performance bike. It handles like an absolute dream, possibly the best recumbent handling we've ever experienced. The Presto has a high seat height and a perfect geometry for weighting and deweighting your body into the turns. If your need for speed or racing is more important than any other characteristic, the Gold Rush Replica, Rotator Super-7 or F-40 Lightning are good choices.

RECUMBENT COMPONENTRY: Recumbent components are the same as what is found on hybrid, mountain and road bikes. Major recumbent manufacturers use what works best on their bikes. The only non-standard parts are: chain idlers, long chains (standard chain/two-three lengths spliced together), steering rods and linkage (underseat models) and the small front wheels that are generally BMX or other smaller sized wheels. You will find more SunTour equipped bikes than Shimano, which is the exact opposite of the conventional market. The reason for this is SunTour's commitment to the small builders. Shimano components can be much more expensive and harder to get. General replacement, drivetrain parts and accessories for recumbents are as close as your local bike shop or mail order company.

RECUMBENT SEATS: There are two distinctly different variations of recumbent seats. The (steel/aluminum) frame with sling/mesh is what is found on the Presto, Lightning P-38 and the new ATP "Vision." We have found these seats superior in comfort for long distances or when many hours will be spent on the bike.

The foam/shell seats are like what is found on the Easy Racer and DH work well with their respective designs and offer good comfort. These seats can sometimes offer better lumbar or lower back support than the sling/mesh. They also aid in power generation. Leaders within this category are the Easy Racer Kevlar composite "Cobra" and the DH with it's terrific lumbar support. Seat selection is something that should not be overlooked, it may possibly be the most important feature on your bike. Seat conversions are not impossible, but can be very costly and may not work as well as the seat the bike's designer intended.

SEATING POSITION: Every recumbent rider develops his/ her own theories and ideas on this subject. You should try out many different recumbents to see what type of seat recline angle appeals to you. Bikes like the Ryan & Presto recline you fairly far. The Tour Easy, Infinity & Lightning are slightly more upright, but reclined far enough to take pressure off the tailbone. The ReBike, BikeE and Lincar offer the most upright positions.

Ryan Recumbent Cycles, Inc.

"The best Recumbent Value."
says Robert Bryant of Recumbent Cyclist News

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The Finest Touring & Commuting Bicycles Available. Test ride a Ryan today and find out for yourself.
HOW TO CHOOSE A RECUMBENT CONT’D

which are great for being seen and riding in traffic, however, this position puts more weight on your tail-bone, which is not as comfortable. Quite possibly the perfect option is the ATP, which offers an adjustable seat recline.

BOTTOM BRACKET POSITION: Seating position in relation to your foot/ bottom bracket position is another important consideration. All designs are not created equal. In layman terms, here is what we have found. The downward pedal angle such as the CLWB ReBike, BikeE, and DH offer the easiest learning/ riding position. For the most part, this is not the most efficient pedal position, but certainly the most comfortable. The Tour Easy/ Rans Stratus-B position is slightly different. These two bikes have downward pedal angles like the above CLWB’s, but also have low seats and long & low frames make for an added bonus in performance, especially when a fairing is used. Power generation is superior, and the tiny footprint into the wind makes for an unequalled aerodynamic advantage, especially when a fairing is used. The downward pedal angle SWB, such as the Vision, S & B and Laid Back are the easiest of the SWB recumbents to ride.

SWB recumbents such as the Presto with a foot position/ bottom bracket height that is level with your hips would be the second easiest. This position is very comfortable and aids in hill climbing as power output is improved. The upright seat position with the high bottom bracket (higher than hips) such as the Lightning P-38 offers superior hill climbing abilities and excellent quick acceleration, however, this comes at a price. If asked to pick the hardest recumbent position to become accustomed too, this would be it. It takes practice to learn and some riders complain of poor leg/ foot circulation. If you can be certain this will not be a problem, this format is the high-performance riders dream.

RECURBENT WHEELS: Most recumbents use standard wheel sizes including BMX & kids bike sizes. REAR WHEELS: Many manufacturers still use the venerable 27” X 1-1/4” which is considered a US Touring wheel. Most conventional bike manufacturers have now started offering various sizes of the 700c in place of the 27.” When ordering your new enthusiast quality recumbent, consider the 700c if you have the choice. Next is the 26” standard mountain bike wheel, which is tough, durable and many excellent street tires are readily available. For speed, the Specialized FAT BOY 1.25” or Nimbus 1.15” are excellent choices. For durability and comfort, the Tioga City Slicker type of tire should fill the bill. We like the 26” wheel mated with a Specialized Nimbus tire which makes for a total wheel/ tire combo with an overall diameter of 25.”

FRONT WHEELS: The 20” is the standard for LWB models and a good choice for the SWB. 20” tires come in three main configurations: the 20” X 1-1/8” IRC 100 p.s.i. Roadlike is the 20” performance leader; the 20” X 3/8” Cheng Shin 65 p.s.i.(a comfortable choice) and finally the extremely durable 20” X 1.5 65 p.s.i. Haro slick and ACS 20” X 1.75” 100 p.s.i. which are the #1 choice for commuters and tourists. NOTE: the 20” X 1.5/1.75 uses a different size rim than the 20” X 1-1/8/1-3/8”.

Many SWB recumbents use the smaller 16 &17” front wheels. The two most popular sizes are the 16” X 1-3/8” and the 17” Moulton high performance wheel. The only problem at is the availability of a good high performance tire for the 16” size. 16” X 1.75” is ReBike size, which is readily available and offers a very nice ride. The Weinmann/ Alesa Company seems to have a renewed interest in supplying many small sizes of alloy rims, which is great news for recumbent enthusiasts.

The current high-performance leader, if you don’t mind paying the price, is the Moulton 17.” There are two models available, with the 100 p.s.i. version selling for $51 for a tire and tube. The hottest tire available for high performance enthusiasts is the Moulton C3 130 p.s.i.. The cost for the C3 is $147 for a tire and tube.

For ’94 we are expecting several new recumbent front tire options. A 16” X 1-3/8” 110 psi front tire as with 20” X 1-3/8 & 1.5” tires are being imported by J & B Imports and should be in the country as you read this. Sun, the rim company, is said to be offering new 16” & 20” X 1” (clincher) high performance rims & tires. These were originally designed for wheelchair use, but will make great HPV racing tires. These new options may displace the expensive and hard to find Moulton as high-performance choice.

RECURBENT SHIPPING: If you cannot buy your new recumbent from a local dealer, be sure to ask the manufacturer how much assembly is needed. The key question to ask is if the bike is pre-assembled, bench tested or test ridden before being packed up. This is a good indication if the bike will be easy for you to set up or not. If the bike is not, better shop for bike tools and a manual or look for a bike mechanic or bike shop to do the job for you. Be prepared to spend from two to eight hours (sometimes even longer if you have a problem) assembling your new recumbent or pay a bike shop between $35-$135 for the job. Sometimes you can find a shop that is interested in taking a look at how recumbents go together. Other times, shops will want to charge you full price or more.

Listed here are several recumbents that have relatively easy set-up for customers. The easiest of all are those shipped by truck on pallets. This type of shipping is expensive. Ryan Recumbents offers it as an option ($100-$200 vs. $35 UPS +$100 in bike shop assembly costs). Some manufacturers now ship their trikes fully assembled by truck or Grey Hound. The easiest set-ups on UPS’able recumbents are from Counterpoint, A.T.P., Easy Racer and BikeE.

HOMEBUILDERS TAKE NOTE: Yeah, we know this issue is even more commercial than usual, but remember, this is the cutting edge of what is being built and sold in North America. The ideas that you’ll see on these pages cannot be seen anywhere else in the world. Please keep those homebuilder stories & articles coming. Nothing gets into RCN faster than a concise, well written article about recumbent homebuilder experiences.
There are vast differences in the costs of recumbent bicycles. There are four primary steps in choosing a recumbent:

**STEP #1:** Order all the back issues of RCN.

**STEP #2:** Read all the back issues of RCN.

**STEP #3:** Decide how much you are willing to spend on a new bike and stick to it, as you can easily fall victim to the recumbent shopping syndrome, “one-step-itis.” This is a key step.

**STEP #4:** Narrow your choices based on how much bike you can afford, what bikes attract you and what bikes fit you (physically). (Short or tall riders can narrow the choices more easily).

**STEP #5:** Do your best to decide between a CLWB, LWB or SWB. If you can ride some bikes, do it! We don’t want to here excuses about half-a-day drives. We’ve heard of people flying in from Europe to view bikes. Your best bet is to contact rider-groups and manufacturers/dealers of the bikes that you are considering. CLWB recumbents are the best-sellers, LWB are a distant second overall (and the best seller for “enthusiasts”) and the SWB is third, however gaining on the LWB in the enthusiast market.

**STEP #6:** Try to choose between underseat and upright handlebar steering. This can be a difficult choice. Tourists, low-key riders, those who value comfort a #1 concern and finally, anyone with hand/wrist problems should consider underseat steering. Performance riders, racers and cycling traditionalists who are having a hard time in their recumbent transition should consider upright steering.

**STEP #7:** Consider a used recumbent. Some models are very rare, such as a used Presto or Easy Racers, but they occasionally come available. Watch RCN, your local paper, and get connected with a local recumbent rider group or bike club. We have never heard a single complaint from anyone using RCN classifieds, but please BE SMART and take necessary precautions anyway. Some dealers offer escrow services for used bike buyers/sellers. If you are actively searching for a used bike, we suggest a first class subscription to get early access to the classifieds—especially on the East coast.

**NOTE A:** Some good deals can be found from new manufacturers/models.

**NOTE B:** Contact the manufacturers, some factory second bikes. RCN subscriber “Supporter” jump on used classifieds.

**NOTE C:** Underwrite the level to get a bike grade your

**NOTE D:** Order a frame-set and build up a bike yourself (this usually doesn’t save you money unless you have a bike to strip down or a box of spare parts). Be sure to make an accurate price estimate when considering a frame build up. Also ask the manufacturer if there are any special/hard to find parts needed. Example: most SWB recumbents need a special front brake that pulls from the left side. This is why the BMX brakes and Dia Compe GX series side-pulls are so popular on recumbents.
RCN EDITOR’S RECUMBENT RATINGS:

What RCN Ratings Mean

Star Ratings: ★★★★★ is best. Our idea of a five star bike is one with quality construction & finish. A bike suitable to ride around the world. It must be durable, proven and trouble free. This bike will have near top of the line components. Overall star-ratings are based on what the bike was designed to do as it would be difficult to compare a $500 bike to a $2000 bike.

★☆☆☆☆ This is our top Rating, "Product Perfection"
★☆☆☆ This is an "Excellent Rating."
★☆☆ This is a Good to Very good (add 1/2) Rating
★☆ This is a "Needs Work" to "Fair (add 1/2)."
☆ This is a "Poor Rating"- product needs attention.

A rating of ★☆☆☆ will be an average rating which should please most daily riders/enthusiasts. All of the bikes that we have rated are done with the same criteria.

The Overall rating ★★★★★★ rating is a compilation of the categorical ratings combined, however, we have allowed for up to a half-of-a-star variance at the editors discretion.

Categories Frame/ Welding Quality through Manufacturer Service Rating; we will rate these if we have dealt with or have reader input on the particular manufacturer. As for Overall RCN Bike Rating, we will not rate this classification unless we have road tested the bike or ridden the bike enough to make a fair judgement.

Recumbent durability rating. Has your recumbent had frame failures? How have they been handled? Is the bike notorious for these problems or is the bike bulletproof. Find out.

Recumbent performance & design ratings are up to the discretion of the RCN editor. These are editorial based ratings on how good the bike design is and how the bike performs.

Value Rating: "bang for the buck" or whether or not the bike is a bargain. It may or not be a great bike, but offers uncommon value for your money.

Manufacturer- Service Rating: is based on our own experience, but more so on reader feedback. This includes: Brochure etc., Phone Staff Service and Shipping/ Pre-assembly. A ★☆ 1/2 to ★☆☆☆ rating would be considered average. ★☆☆ is average and is the highest rating a manufacturer can get if their recumbent needs derailleur/ brake adjustments or extreme amounts of setup for the direct-mail customer. Highest ratings will go to manufacturer in business for several years and who have consistently offered excellent service for direct-mail and dealer sold bikes. Poor ratings are for areas listed that need work.

Manufacturers: this star-rating system is a bold new move for the RCN buyers guide, please regard this as an industry report-card, meant only to help improve our industry. A ★☆☆☆ 1/ 2 to ★☆☆☆☆ rating would be considered average. Hopefully, you can learn from it, and improve if necessary. Readers keep in mind that it is the smaller & new companies with potentially lower ratings can offer exceptional bargains.

Company Status: New Manufacturer/ New Model is self explanatory. Veteran Manufacturer is several years of building recumbents.

Recumbent Cost Rating: $-Recumbents under $500; $$-Recumbents costing $501-$1000; $$$-Recumbents costing $1001-$1500; $$$$-Recumbents costing $1501-$2000; $$$$$ Recumbents costing $2000 or more.

Types of Riding: this is a guideline for the types of use a particular recumbent would be good for. Keep in mind that this is a guideline, and sure enough I’ll get a letter from someone who commutes on a racing bike or visa-versa.

Manufacturer Notes: In reading this guide, you will come across the term, "(manufacturers name)- NOTES," this information was supplied to us by the manufacturer and is not editorial or RCN verbiage.

We are ALWAYS interested in hearing about our readers experiences with recumbent manufacturers, but we cannot always respond personally to your letters. If you need a response, please send an SASE with your letter.

RCN brings you these ratings as our continuing commitment for Excellence in Recumbency. The following is the entire range of ratings that a bike would be awarded.

The “1/2” or “3/4” refers to half of a star, the maximum stars a bike can get is ★★★★★★★.

RCN RECUMBENT RATINGS
BIKE RATED:

| Frame/ Welding Quality | ★★★★★ 1/2 |
| Paint/ Finish Quality | ★★★★★ 1/2 |
| Drivetrain Components | ★★★★★ 1/2 |
| Brake System Rating | ★★★★★ 1/2 |
| Wheel Quality Rating | ★★★★★ 1/2 |
| Seat Rating | ★★★★★ 1/2 |
| Durability Rating | ★★★★★ 1/2 |
| Performance Rating | ★★★★★ 1/2 |
| Recumbent Design Rating | ★★★★★ 1/2 |
| Value/ "bang for buck" Rating | ★★★★★ 1/2 |
| Manufacturer Service Rating | ★★★★★ 1/2 |
| Overall RCN Bike Rating | ★★★★★ 1/2 |
| Cost Rating | $$$$$ |
THE A.T.P. VISION R-40
Editor’s choice for the Best Recumbent of 1994

This is the single BEST enthusiast recumbent that we have seen for under $1,000. And it is also the best SWB outset steering recumbent that we have ever seen. The Vision takes advantage of the previous design work of similar SWB models matched with the design talents of Joel Smith, former Boeing Engineer and founder of ATP (R-20) and Grant Bower, former Engineer and Bower-Bike SWB designer. The Vision has the best attributes of the original ATP R-20 and Grant Bower’s Bower-Bikes (which have never been sold commercially). If there is a drawback to the Vision it is the almost limitless adjustments and options to dial-in the bike just for you. It is the perfect entry level/beginner enthusiast recumbent. Why you may ask? For around $1200, you can order up enough Vision parts to try out SWB, LWB, upright steer, outset steer and try and figure out what your personal tastes are for a recumbent bicycle. The Vision could be called the “Ultimate Recumbent Bicycle Experimenters Kit.”

After you shop or own a recumbent for awhile, you come to realize that recumbent bicycles are a series of compromises. Contrary to manufacturer claims, no one bike is the perfect end-all-design. You will also come to realize that your personal recumbent “vision” may change as you gain experience or as you change as a human being. The Vision may not be the perfect bike for everybody, but it is an excellent place to start your recumbent journey. Our pick for “Best Recumbent” is for the entry level R-40, with our favorite version being the SWB R-40 or R-42. MICRO-CRITIQUE: We will allow ATP to bask in their glory for awhile. The critique will be in the RCN road test of the Vision—coming soon. NOTE: You will notice that ATP has a lengthy list of options & models. Two models for this year are upgraded bikes in the upper echelon of recumbent pricing.

THE COUNTERPOINT PRESTO:
Editor’s choice for the Best SWB Recumbent of 1994.

What can we say, we love this bike. The Counterpoint Presto is a wonderful riding, truly multi-purpose, SWB recumbent. It handles like an absolute dream. The Presto has a high seat height and a near perfect ‘bent geometry. It is quick, stable, easy to ride and it is the only SWB that we would consider taking on a long tour. What makes Counterpoint different than any other recumbent is the time and energy put into component selection, research & development, compatibility and testing. Mail-order sales is another strong point for Counterpoint. The bikes are tested by two different staff members and then taken apart for shipment. Presto’s have their own specially designed shipping box, along with the bike’s compact size, makes for very easy set-up. Two Time Winner of this Award.

In the ‘93 buyers guide we had this to say about the Presto.” Counterpoint/Angle Tech have become trend-setters in the recumbent industry. We suggest you pay close attention.” In the past year, we have seen even more innovations from Counterpoint/Angle Tech. The bike continues to get better with additions such as a suspended front fork, handlebar/ stem extension upgrades, a trike prototype, but the best idea yet is the new ‘94 Presto SE-63 which offers gear-heads 63 speeds to chose from courtesy of the new Sachs three speed internal hub. “So what” you say, who needs “63 gears.” Anyone who has had trouble get some personalized gearing ranges from a bike with 20” wheels will appreciate the ability to have almost unlimited choices with the SE-63. Another custom Angle-Tech feature are the Tom Shirey custom paint (Delron) jobs for Counterpoint bikes. They are the nicest paint finish (optional) on any recumbent we’ve ever seen. We heard a story of an Angle Tech customer who picked out a helmet in the Angle Lake helmet case and asked to have his bike painted to match. The Shirey custom fade paint job was absolutely stunning. MICRO-CRITIQUE: Now that we have your attention, bikes worthy of awards, are also worthy of a critique, so here goes: The only thing we can really pick on for now, is the brake options. How about something stronger, in between the sidepulls and the Magura’s...... Also, we liked the commitment to cold-forged cranks, what happened? For 1995, we would like to see an updated idler cage (chain-guard), a taller seat/ headrest options and a soft body......which is now available.

THE EASY RACER TOUR EASY:
Editor’s Choice for the Best LWB Upright-steerer 1994.

The venerable Easy Racer, the grand-daddy of long, low & sleek recumbent bikes. This popular design gets better every year. The LWB upright steering is in a league of it’s own; it’s fast, stable and completely predictable in handling. To quote Jim Langley of Bicycling Magazine, “I’ve never flown a plane, but I’ll bet it’s similar to piloting the Tour Easy.” I second that opinion, the Tour Easy is the only recumbent that I have personally ridden at over 50 mph (downhill), and it was a total thrill (do not attempt this at home....). Marketed for more than a decade by recumbent legend, “Gardner Martin,” the Easy Racer was honored as the “Best Buy Recumbent” in the March, 1992 Bicycling Magazine. The Easy Racer continues to be the recumbent by which all others are judged, a fast performance machine for Joe-average and one of the easiest enthusiast recumbents to ride. Two Time Winner of this Award. MICRO-CRITIQUE: Now that we have your attention, bikes worthy of awards, are also worthy of a critique, so here goes: Our primary motivation for this 1994 award is the fact that so many recumbents have been inspired by the Easy Racer (We won’t go into which ones, we’ll let you figure it out). With each new CLWB/ LWB innovation, we appreciate the years of work that went into perfecting this design. For ‘95, we want to see custom paint, a Shimano component option mixed with the fantastic Specialized crank & hubs and we want to see the new seat technology that we keep hearing about............ The Tour Easy makes such a great commuter bike that we’d like to see more commuter related options: bags, braze-ons, weather protection.
1994 Recumbent Cyclist Buyers Guide

MORE RECUMBENT BESTS

Best Recumbent Deal 1994: The Infinity 21st Century at $649. Two Time Winner of this Award.
Best Craftsmanship on a Recumbent Bike: Ryan Recumbents.
Best Craftsmanship on a Recumbent Trike: Pedalcraft QuadraPed.

THE MOST....1994
The Most Over Rated/Over Priced Recumbent: The Windscheetah Trike. $5,700 (This, of course, makes us want one even more!) (price quoted doesn’t include the body) Imported by Linear Mfg. Inc.
The Most Ultra-over Rated/Over Priced Recumbent: Lightning R-84/ F-86 composite - $7000+options!
The Most Anticipated Recumbent Model: The new $675 Rans Tailwind twin 20” wheel CLWB!
The Most Promising Bike for 1994: “Horizon” by Bill Haluzak/Bicycles by Haluzak. (Tie)

THE BEST COMPONENTS
Best Recumbent Component Group: Presto XL Ti (titanium model)
Best Upgrade Components: Shimano XTR
Best ‘Bent Accessory: Clapless pedals--we like SPD’s
Best Recumbent Paint Job-stock: Rans
Best Recumbent Paint Job-Optional: Presto Custom Deltron by Tom Shirey.
Best ‘bent Clapless Pedals-all around: Any Shimano SPD clapless pedal
Best ‘bent Clapless Pedals-high performance: Speedplay lollipop.
Best Recumbent Brake (Low End): Bull Dog dual pivot side-pulls (Linear) or FSE dual Pivot (Easy Racer).
Best Recumbent Brakes to buy: Shimano Dual Pivot RX100/105SC/ Ultegra/Dura Ace.
Best Recumbent Chain: Sachs ATB
Best Recumbent Shifters: Grip Shift SRT500.
Best Recumbent Hubs: Specialized (stock on Easy Racers) or Phil Wood.
Best Recumbent Performance Front Wheel & Tire: 20” IRC Roadline and the new 16” x 1-3/8” 90 psi tire!
Best Recumbent Workstand: Blackburn WorkStand. Two Time Winner of this Award.
Best Recumbent Rear View Mirror: Mirrycle or Zefal Wide Angle car-like bar-end mirror, new for ‘94!
Best Recumbent Grease: Phil Wood.
Best Recumbent Bell: Specialized Dirt Ringer. Two Time Winner of this Award.
Best Recumbent Brochure: The new Easy Racer color brochure & video

Best Recumbent Fairing: Karl Abbe’s world famous Zzipper.
Best Recumbent Crank: Shimano XTR, Ritchey MTB triple or Mavic (cold Forged).
Best Recumbent Warranty: Rans-lifetime on frame.

THE BEST RECUMBENT OPTIONS/ UPGRADES
A.T.P. Vision fairing
Counterpoint Presto: RST front Suspension.
Counterpoint Presto/Zzipper Fairing which comes with a body zipfer presewn in the bubble.
Easy Racer: Super Zzipper fairing and Specialized Triple Crank.
Ryan Vanguard: Ryan Bar End extensions (now standard equipment).
Linear: Big Dog dual pivot point side-pull brakes (now standard equipment!)
Rans: Deore XT Option & custom splash paint.
Infinity: Upgrade brakes, pads and handles.
Lightning: Upgrade to the “S” model (XC-Pro).

THE BEST RECUMBENT HOMEBUILDER PLANS
LWB-The Easy Racer Building Plans
SWB: The Econo-Bent

THE BEST ‘BENT CHEAPSKATE BETS
The Best (Proposed) Ultra-Cheapskate Recumbent Deal 1994 I: Maxam’s New Reveille!
The Best Cheapskate Recumbent Component package: ReBike durable and extremely tough low-cost-chrome steel.

THE BEST ‘BENT RUMORS
The Cannondale Recumbent Rumor......that turned out to be true.
The Trek Recumbent Rumor......that turned out NOT to be true......or did it?
The Angle Lake/Angle-Tech new Colorado store rumor......that turned out to be true.

THE BEST RECUMBENT PROMOTERS
We would like to honor some of the professional recumbent manufacturers who displayed their wares at the Interbike Trade-show in Las Vegas this past September. Recumbents have come a long way since the first Interbike that I attended and these ‘bent builders deserve a special thank-you for promoting the bikes we all know and love in the most professional manner:

ReBike: Kathie Skewes & Co: (ReBabes, ReReps, ReTechs and ReGis!) has brought our industry to a new high standard. We are very proud of what Kathie and ReBike have done for recumbents.

BikeE Corporation: An industry new-comer whose professional efforts to promote ‘bents everywhere they go has not

**Advanced Transportation Products**: Another new company whose professionalism has brought our industry to a new level. Congratulations Joel Smith, Grant Bower & Co.

**THE BEST RECUMBENT DEALER**
Jim Wronski of People Movers in Orange, California. Congratulations gang, we are proud to have you as part of the "RCN Crew."

**THE MOST INNOVATIVE RECUMBENT DESIGNER OF 1994**
Jim Weaver of Counterpoint in Edmonds, WA. Jim is most creative cutting, edge recumbent designer we know. Take a look at the new Ti Presto & Presto Trike.

**RECUMBENT PREDICTIONS:**
We predict a weeding out of recumbent manufacturers in 1994. Especially those whose marketing is the lowest priority. The reason for this is the upgrading in the professionalism of our industry along with the possibility of mainstream manufacturers coming into the market.

Recumbent Manufacturer To Watch In 1994: There are several, but Rans & ReBike are hot......tssss!

Mainstream Bike Manufacturer To Watch In 1994: Cannondale & Trek (?????)

**RECUMBENT BOO BOO'S 1994**
Recumbent "Boo Boo" Seat: Comfy Cycle Sprung "gel."
Any "Boo Boo" Manufacturer Displaying their bike OUTSIDE the Interbike Trade-show.

---

**Finally, a 'bent that won’t break you!**

At $650.00, NEOBYKE is the most affordable, high quality, CLWB recumbent bicycle available. With 20 speeds, choice of 3 gear ranges, durable construction and an ultra comfortable riding position, NEOBYKE is as kind to your body as it is to your wallet. If you've been searching for practical size, good looks, sensible style, performance, and flexibility in a safe, easy-to-ride recumbent bicycle, you've found it!

**NEOBYKE**

It's the most fun you can have... on a bike!

For a free brochure, call
1-800-NEOBYKE
or write to us at
PO Box 2303
Lowell, MA 01851-0503


1994 Recumbent Cyclist Buyers Guide

RECUMBENT MANUFACTURER LISTINGS

ACE TOOL & ENGINEERING
INFINITY RECUMBENTS
PO BOX 326
Mooresville, Indiana 46158

Phone: #317-831-8798
Contact: Don Barry
RCN Editors Choice for Best Recumbent Deal 1994

NOTES: Information $1.

ROAD TEST:
RCM#20—will be available as a regular subscription issue or as a back copy this summer.

DISCOUNT FOR READERS: 5% off factory direct sales only.

EDITOR’S NOTE: ROAD TEST: RCM#20 or 21 available this summer for $5 postpaid USA or $7 Can./overseas. The Vision will be tested in RCM#20.

RCN AWARDS: 2nd year winner The Best Recumbent Cheapskate Deal 1994.

COMPANY PROFILE: Ace Tool is a machine shop that has been building recumbents for many years. They are a Veteran Manufacturer having built thousands of entry level aluminum recumbents. Infinity is one of the best selling recumbents of all time. Ace Tool is an RCN Supporter-X Subscriber.

ADVANCED AMERICAN BICYCLE CONCEPTS:
1408 S. Shamrock
Verdale, WA 99037
Phone# 509-924-9480 FAX: 509-924-1029
Contact: Clive Buckler


NEW FOR ’94: The unique design of the Advanta and the Wedge provide a balance very similar to an upright, and are thus easy for first-time riders to master. They fit on standard trunk-racks and work stands. The higher seat position ensures visibility in traffic, forward-opening handlebars allow safe dismount without contact with bars or stem. Please write for AABC descriptive brochure, “Why Get High,” which contains photos, reasons for selecting this layout, and a history of the 10-year development leading to this different approach to recumbent cycling. Send $2 for info-pack.

COMPANY PROFILE: Clive Buckler has been a part of the HPV world for many years. He has been refining his unique high SWB design for many years. We can hardly wait for his “Why Get High” article. AABC is an RCN subscriber.

<table>
<thead>
<tr>
<th>RCN RECUMBENT RATINGS</th>
<th>BIKE RATED: Infinity 21st Century</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame/Welding Quality: ☆☆☆ 1/2</td>
<td>Performance Rating: ☆☆☆</td>
</tr>
<tr>
<td>Paint/Finish Quality: ☆☆☆☆☆</td>
<td>Recumbent Design Rating: ☆☆☆☆☆ 1/2</td>
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<tr>
<td>Drivetrain Components: ☆☆☆</td>
<td>Value/“bang for buck” Rating: ☆☆☆☆☆☆</td>
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<tr>
<td>Brake System Rating: ☆☆ 1/2</td>
<td>Manufacturer Service Rating: ☆☆☆☆☆</td>
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<tr>
<td>Wheel Quality Rating: ☆☆ 1/2</td>
<td>Overall RCN Bike Rating: ☆☆☆☆ 1/4</td>
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<tr>
<td>Seat Rating: ☆☆☆ 1/2</td>
<td>Cost Rating: $$</td>
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<tr>
<td>Durability Rating: ☆☆☆</td>
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Clive Buckler’s high SWB photo by AABC
ADVANCED TRANSPORTATION PRODUCTS (A.T.P.)
6201 Ravenna Ave. NE
Seattle, WA. 98115
Phone: #206-771-3719
Contact: Joel Smith & Grant Bower

Winner of the RCN Editors Choice for Best Recumbent of 1994

BIKE: ATP Vision VR-40BU TYPE: LWB-remote underseat steering WEIGHT: 31 lbs. WHEELBASE: 60” SUGGESTED RETAIL PRICE: $1125. NOTE: VR40BT is the upright steering version of this bike ($1150).

NOTE: Other specifics are the same as the VR40AU


BIKE: ATP Vision VR-42BU TYPE: LWB-remote underseat steering/connected to fork. WEIGHT: 30.5 lbs. WHEELBASE: 60” FRAME: TIG welded Chro-molly frame with aluminum seat stays. CRANKSET: Sakae Triple SUGGESTED RETAIL PRICE: $1450. NOTE: VR42BT is the upright steering version of this bike ($1470).

NOTE: Other specifics are the same as the VR42AU

BIKE: ATP Vision VR-45AU TYPE: SWB direct underseat steering/connected to fork. WEIGHT: 22.5 lbs. WHEELBASE: 35” FRAME: TIG welded Chro-molly frame (1.75” dia main tube) with 6061 aluminum boom/seat stays. This frame has a CRANKSET: Ultegra double or Deore XT triple DRIVE TRAIN: Shimano 16/24 Speed index/ Shimano Utegra/ Deore XT/Grip Shift 500rt 8-spd./12-28 cassette BRAKES: XC Pro Cantilever

WHEELS: 16” X 1-3/8” Kenda 90 psi front tire and 26” X 1.0 with a Specialized turbo S Tire. PAINT: Custom Powdercoat six colors available. HANDLEBAR: Custom aluminum-two styles available. SEAT: ATP aluminum frame sling/mesh/seat quick releases off bike. SEAT HEIGHT: 22” CRANK HEIGHT: 19.” SUGGESTED RETAIL PRICE: $2250. NOTE: A: VR45AT is the upright steering version of this bike ($2275). NOTE: B: R-45 comes in SWB only and will be built to order.

EDITORS NOTE: ATP Vision R-40 & R-42 models are fully convertible from SWB to LWB and back as long as you have the correct set-up. This is the only recumbent in history that offers this feature.

ATP NOTE: ATP has designed the VISION’s to be high performance bicycles. We also designed the special tooling necessary to offer them at these low prices. Compare a VISION to any other recumbent on the market - we are confident that you will not find a better combination of features and quality - at any price! Please write or call for free information.


ROAD TEST: RCN #9 (ATP R-20) - Back issue is available original
available for $5 postpaid USA or $7 Can./overseas. The Vision will be tested in RCN#19 or #20.
COMPANY PROFILE: A.T.P. has come a long way since the inception of the ATP R-20 three years ago. ATP is a member of the new breed of recumbent manufacturers and a serious contender in the enthusiast market. ATP was originally founded by partner Joel Smith who marketed the R-20 two years ago. Grant Bower has been an HPV enthusiast who has experimented with SWB and suspension for many years. These two forces united forming the new ATP in late '92. The union of these two HPV forces has created one of the strongest and most promising new companies to come into the recumbent scene in years. ATP is an RCN Supporter-X Subscriber

ALTERNATIVE BIKESTYLES
P.O. Box 1344
Bonita, CA 91908

NOTES: Please enclose S.A.S.E with correspondence. Used bikes, prototypes & demo's are available.
EDITOR'S NOTE: Ed Roeters's do-it-yourself bikes & framesets that can be had for under $200 unpainted will be in short supply during 1994. If you have been waiting for the right moment, it is now, as Ed reports that a few bikes are still unspoken for. Ed has been building and teaching about recumbents for years and is one of the unsung pioneers of the CLWB design. Also worthy of mention and on the RCN Want List is Ed's one-off woodie recumbent.

ARRIBA RECUMBENTS
529 S. Chestnut St.
Lindsborg, KS 67456
Phone#1-800-532-4407
913-227-2800.

PRODUCTS: Arriba recumbents are designed to be adaptable in their geometry, adjustable in wheelbase, seat-position and headtube angle. This allows for ergonomic optimization for riding ease, comfort, stability & safety. Arriba recumbents are SWB in design. Three models will be available: The Montana will be fitted for rough terrain use. The Corrida will be fitted for high-speed touring and the Andale will be the less expensive street model.
COMPANY PROFILE: New models & new manufacturer. Ariba is an RCN Supporter.

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The 1994 Arriba Recumbent photo by Arriba.

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RCN RECUMBENT RATINGS
BIKE RATED: ATP R-40

Frame/ Welding Quality: ☆☆☆☆ 1/2
Paint / Finish Quality: ☆☆☆☆ 1/2
Drivetrain Components: ☆☆☆☆ 1/2
Brake System Rating: ☆☆☆☆ 1/2
Wheel Quality Rating: ☆☆☆☆☆
Seat Rating: ☆☆☆☆ 1/2
Durability Rating: ☆☆☆☆☆
Performance Rating: ☆☆☆☆ 1/2
Recumbent Design Rating: ☆☆☆☆☆
Value/ "bang for buck" Rating: ☆☆☆☆☆ 1/2
Manufacturer Service Rating: ☆☆☆☆☆
Overall RCN Bike Rating: ☆☆☆☆☆
Cost Rating: $$

RCN RECUMBENT RATINGS
BIKE RATED: ATP R-45

Frame/ Welding Quality: ☆☆☆☆☆
Paint / Finish Quality: ☆☆☆☆ 1/2
Drivetrain Components: ☆☆☆☆☆
Brake System Rating: ☆☆☆☆ 3/4
Wheel Quality Rating: ☆☆☆☆☆ 1/2
Seat Rating: ☆☆☆ 1/2
Durability Rating: ☆☆☆☆ 1/2
Performance Rating: ☆☆☆☆☆
Recumbent Design Rating: ☆☆☆☆☆
Value/ "bang for buck" Rating: ☆☆☆☆☆
Manufacturer Service Rating: ☆☆☆☆☆
Overall RCN Bike Rating: ☆☆☆☆☆ 1/4
Cost Rating: $$$$$
Recumbent Cyclist News

BICYCLES BY HALUZAK
2166 Burbank Ave.
Santa Rosa, CA, 95407
Phone: #707-544-6243
Contact: Bill Haluzak

Co-Winner of the “Most Promising Bike for 1994”

BIKE: Haluzak Horizon
TYPE: SWB-
underseat remote steering (upright steering optional for '94).
FRAME: Chro-moly construction.
WEIGHT: 29 lbs.
DRIVE TRAIN: Shimano or SunTour/Twist Grip Shifting.
WHEELBASE: 40.5” wheelbase.
WHEELS: 26” rear /20” front.
BRAKES: Dia Compe. SEAT:
Slings/mesh. SEAT HEIGHT:
23”
SHIPPING: UPS SET-UP:
Shipped partially disassembled-20 minute to put together.
DELIVERY: 3-4 weeks.
SUGGESTED RETAIL PRICE: $1715.
HALUZAK NOTES: BBH is offering a new recumbent bicycle to the expanding market of alternative transportation.

DISCOUNTS: Bicycles by Haluzak will offer free shipping in the USA for RCN readers. SASE for brochure.

ROAD TEST: Look for an upcoming test coming up this summer. RCN AWARD: Co-Winner of
RCN Editor’s Choice for Recumbent to Watch in 1994.
EDITOR’S NOTE:
RCN has just taken delivery of a new “Horizon for testing this summer.

BRAMPTON BIKES
5992-27.15 Lane
Glandstone, MI 49837
Phone: #906-428-4341
Contact: Tom Bell

BIKE: Roadmaster LWB
TYPE: LWB/
upright handlebar steering
WEIGHT: NA.
WHEELBASE: 65.5”
FRAME: welded mild steel/ Chro-moly DRIVETRAIN: 21 speed index/ Shimano SIS.
BRAKES: Dia Compe Bulldog sidepull. WHEELS: 26” rear & 20” front
SEAT: Aluminum/high density foam cushion.

SUGGESTED RETAIL PRICE: $549.

BRAMPTON NOTES: We offer high quality, good performing recumbent bikes at an affordable price. Send $1 for information.

COMPANY PROFILE: New model & new manufacturer.
**1994 Recumbent Cyclist Buyers Guide**

**BIKEE CORPORATION**
5460 SW Philomath BLVD.
Corvallis, OR 97333
Phone: #503-753-9747
Fax: #503-752-8004

**Best Urban Commuter Recumbent 1994:**
BikeE 16 spd.

**BIKE: BikeE**
TYPE: CLWB
WEIGHT: 32 lbs.
OVERALL LENGTH: 72" WHEELBASE: 54" FRAME: TIG welded rectangular section 6005-T6 aluminum.
FORK: Custom BikeE 1018 steel brazed.
DRIVETRAIN: 8 index spds./SunTour XC Expert rear derailleur/ XC Expert Twist Shifters/ SR/ SunTour 54T.
170mm single crank (16-sp 42/54 double)/11-28 (8-sp) cassette.
GEARING: 8-sp.
37-94 gear inches.
16-sp. 29-94 gear inches.
BRAKES: SunTour XCE Cantilevers.
PEDALS: Odyssey Svelte Sport.
WHEELS: 20"X 1.5" 28 spoke rear and 16"X 1.75" 18 spoke front.

**SEAT:** Chro-moly steel tubing, mesh back, dual density foam seat. SEAT HEIGHT: 26"
PAINT: Anodized Violet, red or blue. RIDER HEIGHT RANGES: 4'10"-6'1" approx.
SUGGESTED RETAIL PRICE: 8-sp. from $895, 16-sp. $1015, Frameset $680.
ASSEMBLY: 15 minute. SHIPPING: std. UPS box.

**OPTIONS:** Foul weather kit (front fender, mud flap & chain guard) $42.90, Kickstand $39.90, Custom stem $36. Pannier rack $79.95, chain-ring disc. $16.80, 16-sp. kit $140, Odyssey Svelte Comp. (matching anodized colors to fit your BikeE) $28.20 as well as two variations of E-shirts are available.

**AVAILABLE IN '94:** Zippers front and rear kit (avail. Jan. '94). Trailer hitch & Rain bonnet (full body rain protection) (avail. Feb. '94) and Messenger bag & garment bag (avail. Mar. '94).

**BIKEE NOTE:** The bicycle that beautifully combines comfort, rideability and quality components. The BikeE offers the ideal reason to switch from a traditional bicycle and invites you to experience a truly unique ride. Send $1 for information pack.

**NEW FOR '94:** The big news is the expanding line of BikeE options being unveiled during early '94. Watch for other new BikeE offerings soon. Send $1 for information pack.

**ROAD TEST:** RCM#17-Back issue reprint is available for $5 postpaid USA or $7 Can./overseas.

**RCN AWARD:** Best Urban Commuter Recumbent 1994: BikeE 16 spd.

**COMPANY PROFILE:**
The BikeE company unites several recumbent industry notables as well as several qualified bike industry professionals. BikeE is an RCN Supporter Subscriber.

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**RCN RECUMBENT RATINGS**
**BIKE RATED:** BikeE 16 spd.

<table>
<thead>
<tr>
<th>Frame/ Welding Quality</th>
<th>Performance Rating</th>
<th>Recumbent Design Rating</th>
<th>Value/ “bang for buck” Rating</th>
<th>Overall RCN Bike Rating</th>
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<td>☆☆☆☆☆☆</td>
<td>☆☆ 1/2</td>
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<td>☆☆☆☆ 1/2</td>
<td>☆☆☆☆ 3/4</td>
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<tr>
<th>Paint / Finish Quality</th>
<th>Recumbent System Rating</th>
<th>Manufacturer Service Rating</th>
<th>Cost Rating</th>
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BURROWS WINDCHEETAH TRIKES
See Linear Mfg., Inc.

COUNTERPOINT RECUMBENTS
ANGLE-TECH
PO Box 1893, 318 N. Hwy. 67
Woodland, Park, CO 80866
Contact: Kelvin Clark
Phone#719-687-7475 or 1-800-793-3038 (24 hours)
(In WA Call #206-776-6787)

Counterpoint Presto: Two year winner of the RCN Editors Choice for Best SWB
BIKE: Counterpoint Presto SE Tour TYPE: SWB-direct upright fold-forward handlebar steering. WEIGHT: 29 pounds WHEELBASE: 36" WEIGHT DISTRIBUTION: 54% front & 46% rear, FRAME: TIG welded 4130 chro-moly, stainless and hi-tensile steel, one size adjustable boom (inseams of 28-35”). DRIVETRAIN: Shimano Deore LX with Bar-Con/ Grip Shift shifters. CRANKSET: Shimano RX100 38/50/61 GEARING: 21 spd. index shifting/ Grip Shift SRT500 (bar con option)/ 11-28 cassette. CHAIN: Sedis BRAKES: Dia Compe Nippon 883 pulls with Aztec pads. WHEELS: 20” front and rear/ Araya RB17 Rims with 36 stainless spokes. 20” X 1.5” Haro Street Concept. SEAT: Pro- Flex style suspension/ alum. framed/ Sew What full mesh SEAT HEIGHT: 24” PAINT: Powdercoat Rhysdoby Blue or Black. (Custom Deltron is optional). FAIRING: Zipper fairing with body stocking prep. or Roots In The Sky. SUGGESTED RETAIL PRICE: SE Tour model: $1849.99

The Presto SE with optional Zipper fairing & suspended fork photo courtesy of Angle Tech


1994 Recumbent Cyclist Buyers Guide

Pro-Flex style suspension/ alum. framed/ Sew What full mesh. SEAT HEIGHT: 24". PAINT: Powdercoat Rhapsody Blue or Black. (Custom Deltron is optional). FAIRING: Zzipper fairing with body stocking prep. or Roots In The Sky. SUGGESTED RETAIL PRICE: SE Tour model: $2699.99

SIMILAR MODEL: Presto Triad AT CL is the entry level 21 spd. (single chainwheel up front) version andretails for $2499.99

NOTE: Titanium Triads are available on special order.


OPTIONS: The Counterpoint option list is the most extensive of any recumbent manufacturer currently in the business. If it's not on the list, there is still a possibility that it can be done. Counterpoint offers highly customized hand-crafted recumbent bikes. Here is a partial list of options: Pivoting (folding) boom; Presto performance option group: Araya 20A rims, IRC Roadlite EX 20" X 1-1/8" tires, 11-24 cluster and Dia Compe 630GX brakes; Racks; Custom 20" fender-sets; Trunks; packs; bags and even a hand crank & landing gear option for the Opus. Angle Tech also has a wide selection of 20" tires for recumbents, including the Avocet FasGrip 20" X 1.75" baldy designed for solar cars.

COUNTERPOINT NOTE: In developing the Presto model, the primary goal was to create a recumbent that felt as natural as possible to ride. The bicycle must have great handling characteristics and have exceptionally comfortable ride as well. Though it may seem like too much to ask, most of these features have been maximized in the Presto. The handlebar position gives the rider firm and natural control of direction & balance. The handlebars

TRY A NEW

Experience the comfort, fun and performance of seated cycling™!

"The most deluxe recreational/city bike-recumbent built" Recumbent Cyclist News

"The bike I primarily use" Dave Sader, Bike Rx

"Like riding a magic carpet with pedals!" J. W., Dublin, CA

BIKEE CORP.
5460 SW Philomath Blvd
Corvallis, OR 97333
☎️(503) 753-9747
fold forward for safety & easy access. The suspended seat is sprung to cushion the shock of the rear wheel. Counterpoint bikes do not come with standard pedals, there are several optional pedal systems available.

**EDITOR’S NOTE:** The Jim Weaver Counterpoint/Angle-Tech team is certainly an industry leader and builder of what we consider, the finest SWB recumbents available in the world today.

**ROAD TEST:** RCM#11-Presto test/RCN#18 Easy Racer vs. Presto Shootout! Back issue reprint is available for $5 postpaid USA or $7 Can./overseas each.

**RCN AWARDS:** The Counterpoint Presto is the “Two year winner of the RCN Editors Choice for Best SWB” as well as the “Best Recumbent of 1993.” Jim Weaver, the Presto designer was named “Most Innovative Recumbent Designer of 1994!”

**COMPANY PROFILE:**
Counterpoint recumbents & tandems are designed by Jim Weaver of Edmonds, WA. The Angle Tech group does component R & D as well as spec’s and builds up each Counterpoint recumbent. Counterpoint is a leader in HPV technology and is a Veteran Recumbent Manufacturer. Angle-Tech is an RCN Supporter-X subscriber.

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### RCN RECUMBENT RATINGS

**BIKE RATED: Presto SE Tour**

| Frame/ Welding Quality: | ★★★★★ |
| Paint / Finish Quality: | ★★★★★ |
| Drivetrain Components:  | ★★★★★ |
| Brake System Rating:    | ★★★ 1/2 |
| Wheel Quality Rating:   | ★★★★★ 1/2 |
| Seat Rating:            | ★★★★ 1/2 |
| Durability Rating:      | ★★★★☆ 1/2 |
| Performance Rating:     | ★★★★ 1/2 |
| Recumbent Design Rating:| ★★★☆☆ 1/2 |
| Value/ “bang for buck” Rating: | ★★★☆☆ |
| Manufacturer Service Rating: | ★★★★★ |
| Overall RCN Bike Rating: | ★★★★★ 1/2 |
| Cost Rating:            | $$$$$$ |

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### RCN RECUMBENT RATINGS

**BIKE RATED: Presto Ti XL**

| Frame/ Welding Quality: | ★★★★★ |
| Paint / Finish Quality: | ★★★★★ |
| Drivetrain Components:  | ★★★★★ |
| Brake System Rating:    | ★★★★★ |
| Wheel Quality Rating:   | ★★★★★ |
| Seat Rating:            | ★★★★☆ 1/2 |
| Durability Rating:      | ★★★☆☆ |
| Performance Rating:     | ★★★☆☆ 1/2 |
| Recumbent Design Rating:| ★★★☆☆ 1/2 |
| Value/ “bang for buck” Rating: | ★★★☆☆ 1/2 |
| Manufacturer Service Rating: | ★★★★★ |
| Overall RCN Bike Rating: | ★★★★★ 1/2 |
| Cost Rating:            | $$$$$$ |
CUSTOM TRANSPORTATION ALTERNATIVES
6922 Union Ave.
Cleveland, OH 44105
Ph#216-341-6939
Contact: Bart

PRODUCTS: Custom built to order Don Harse Coo's Bay Flyer trikes, Runabout trikes, side by side tandems and the Unicorn Mach II MWB recumbent.

NEW FOR '94: CTA is going into full production with their first full production runs of the Coo's Bay Flyer trike, SWB Unicorn and Runabout models. By the time you read this, every model will be in stock and ready for delivery.

EDITOR'S NOTE:
TA builds and sells some custom utility, high performance and very useable designs. Don Harse is the official head-designer, many of you have seen Don's trikes in RCN before.

COMPANY PROFILE: CTA is a recumbent specialty shop & manufacturer, producing several "Don Harse" design recumbents as well as other interesting HPV's. CTA is an RCN Supporter-X Subscriber.

CUSTOM TRANSPORTATION ALTERNATIVES
Not another kind of bicycle, Another kind of car FAST, STABLE, PRACTICAL COMFORTABLE

The COOS BAY FLYER
Shimano drive train Phil Wood Hubs Sun Mistral Rims UPS shipable $1600.00 Call or write for free catalogue CTA 6922 Union Cleveland Oh 44105 (216) 341-6939
DH RECUMBENTS, INC.
18512 Carroll St., Ste. 428
Spring, TX 77379
Phone: #713-251-5413
Contact: David Hechart


NEW FOR ’94: Fat tire option is now available on the DH5000. Magura HydroStop brakes and the new Sachs Twist-Grip shifter are now optional equipment. All DH recumbents now come outfitted with dual (2) steering rods. Send $1 for more information.

ROAD TEST: RCM#3-Back issue is available when purchased in the complete RCN set only.

RCN RECUMBENT RATINGS
BIKE RATED: DH 5000

- Frame/ Welding Quality: ★★★ 1/2
- Paint / Finish Quality: ★★★ 1/2
- Drivetrain Components: ★★★★
- Brake System Rating: ★★★
- Wheel Quality Rating: ★★★★ 1/2
- Seat Rating: ★★★ 1/2
- Durability Rating: ★★★
- Performance Rating: ★★★
- Recumbent Design Rating: ★★★ 1/2
- Value/ “bang for buck” Rating: ★★★★ 1/2
- Manufacturer Service Rating: ★★★★
- Overall RCN Bike Rating: ★★★★ 1/2
- Cost Rating: $$$$
ECO CYCLE
1500 NW 9th St.
Corvallis, OR 97330
Phone: #503-753-5178
Contact: Ken Trueba

TRIKE: Trice LC TYPE: two wheels in front trike (SWB configuration)/underseat steering via extension type handlebars.
WEIGHT: N.A. WHEELBASE: 39.4". TRACK WIDTH: 32" or 26".
FRAME: Steel, one size adjustable boom. DRIVETRAIN: SunTour XCE derailers/ SunTour Bar-Con shifters GEARING: 21-speeds Sakae crankset BRAKES: Sturmey Archer hub brakes (front wheels), WHEELS: 26" rear, 20" X 1-1/8" 100 p.s.i. or 1-3/8 65 p.s.i. front. SEAT: fiberglass shell with cushion and head rest. SEAT HEIGHT: 12" SHIPPING: UPS requiring assembly or full assembled by motor freight (est. $150). SUGGESTED RETAIL PRICE: $1695.

TRIKE: Trice XT TYPE: two wheels in front trike (SWB configuration)/underseat steering via extension type handlebars.
WEIGHT: N.A. WHEELBASE: 39.4". TRACK WIDTH: 32" or 26".
FRAME: Steel, one size adjustable boom.

BIKE: Ross TYPE: SWB-underseat or up-right steering.

NEW FOR '94: Eco Cycles has revamped the model line-up for 1994. Now available are two models of trikes built in the USA as well as the new redesigned Euro-Trice imported from England. Also available is the Aero Trice, the Mark Murphy Aero-Coupe body designed to fit Trice Trikes.

ROAD TEST: RCM#16-Back issue reprint is available for $5 postpaid USA or $7 Can./overseas.

COMPANY PROFILE: Trice trikes are built under license by Eco Cycles. Eco is Recumbent Cyclist Supporter-X subscriber.
Recumbent Cyclist News

EASY RACERS, INC.
2891 Freedom Blvd.
Watsonville, CA 95076
Phone: #408-722-9797
Contact: Luke or Gardner


<table>
<thead>
<tr>
<th>RCN RECUMBENT RATINGS</th>
<th>BIKE RATED: Easy Racer Tour Easy</th>
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<tr>
<td>Frame/ Welding Quality: ★★★☆☆</td>
<td>Performance Rating: ★★★☆☆ 1/2</td>
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<tr>
<td>Paint / Finish Quality: ★★★☆☆</td>
<td>Recumbent Design Rating: ★★★☆☆ 1/2</td>
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<tr>
<td>Drivetrain Components: ★★★☆☆</td>
<td>Value/ “bang for buck” Rating: ★★★☆☆ 1/2</td>
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<td>Brake System Rating: ★★★☆☆</td>
<td>Manufacturer Service Rating: ★★★☆☆</td>
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<td>Cost Rating: $$$$</td>
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<td>Durability Rating: ★★★☆☆</td>
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<td>Durability Rating: ★★★☆☆</td>
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chro-moly, available in four sizes. FORK: All chro-molly with bright chrome finish. DRIVETRAIN: 21 speed index shifting/ rear- Suntour X-1 derailleur front-XC-LTD/ Bar-End shifters/ Specialized triple crank 24/46/ 52 (or similar)/ Sachs Aris 12-30 freewheel.

CHAIN: Sachs. BRAKES: SunTour Roller-Cam rear/ Dia Compe dual pivot front. HUBS: Specialized cartridge sealed.
WHEELS: 27" rear, 20" X 1-1/8" IRC 100 p.s.i. or 1.5" Haro 65 p.s.i. front. PAINT: Powdercoat Candy Red & Black. SEAT: The “Cobra” seat, a composite shell with layered foam and Lycra cover.

The Easy Racer Tour Easy
photo by Frank Kral

REBIKE—THE FASTEST SELLING, LOWEST PRICED RECUMBENT IN AMERICA

* HOT RACING FENDERS add a brand new sporty look to trikes
* REMOVABLE REAR SHOPPING BASKET is a guaranteed consumer pleaser
* WIDE SEAT AND PADDED BACK for extra comfort

CHOOSE FROM 3 NEW MODELS!
* ReTrike 707 - the full sized three wheeler...
* ReTrike 707SS - the super sport model - another first...
* and ReTrike 707VP - a variable position seat that moves up & down and back & forth!

© 1994 ReBike, Inc.
ReTrike is a trademark and ReBike is a registered trademark of ReBike, Inc.

THE TRIKE.
REDESIGNED. REDEFINED.

WE CONTINUE TO REWRITE THE RULES OF THE ROAD!
* ReBike 707 - the instant classic that revolutionized an industry... and + ReBike 818 - our 18-speed bike!

THE TRIKE.
REDESIGNED. REDEFINED.

FEATUREING OUR NEW CAMBERED BACK WHEEL SYSTEM FOR THE MOST STABLE PERFORMANCE TRIKE ON THE MARKET TODAY!

ReBike’s
103 NW 43rd Street
Boca Raton, FL 33431
407/750-1304

EXCLUSIVE!
SEAT HEIGHT: 20.5"-22" ASSEMBLY: Each bike is fully bench tested, all cables set up and adjusted. Requires only set of seat, wheels & pedals to be rideable/ ships UPS. FAIRING: Super Zipper fairing upgrade-$99 (sml. Zipper standard). SUGGESTED RETAIL PRICE: $1695.


PLAN-SET: 40 page instruction book on how to build an Easy Racer $40.

NEW FOR '94: Easy Racers has introduced a new size for the Tour Easy, medium-large, this fits riders in the upper limits of the medium or the lower limits of the large. A new configuration body stocking available soon. Easy Racers is a seasoned veteran in the world of recumbents offering among the finest recumbents in the world today.

EASY RACER NOTES: Ride a world-champion Easy Racer bicycle. Comfortable-Stable-Fast. A pleasure to ride. This low-profile, heads-up riding style cuts wind resistance by 30%, allowing you to travel faster and farther with more comfort. Since 1979 Easy Racers has proudly sold and serviced its products in Freedom, CA. Send $5 for an info-pack color brochure and video.

ROAD TEST: RCM#6-Back issue reprint is available for $5 postpaid USA or $7 Can./overseas.

RCN AWARDS: Two year winner of the RCN Editors Choice for Best LWB Upright-Steer & Best High Performance Recumbent.

COMPANY PROFILE: Gardner Martin wrote the book for veteran recumbent manufacturers. Easy Racers bikes are among the most respected and finest built recumbents in the world today.
Recumbent Cyclist News

Zach Tech: Speedplay Pedals by Zach Kaplan

“No Compromise in the Name of Human Powered Transportation”

Every now and then, I find a product which is far ahead of its competition. After extensively using the Speedplay X-1 and Magnum pedal systems, I am convinced these two systems are by far the best clipless pedal systems on the market. The X-series road pedals and Magnum ATB pedals are far superior to more conventional clipless pedals in terms of weight savings, free lateral rotation, ergonomics, ease of entry, and retention security. Both SP systems are double sided for easy entry and use common spindles with user-serviceable cartridge bearings. Richard Bryne, a former HPV racer, designed the pedals.

The compact, lollipop shaped titanium spindled X-1 and stainless steel spindled X-2 weigh 140 g and 198 g per pair respectively. Compare that with 400 g to 500 g for conventional clipless pedals. The cleats which fit over the pedals weigh 127 g per pair and are available with the Look 3 hole pattern or Time 4 hole pattern. The X-series features easy ingress/egress and 37 degrees of knee saving free float. The design of the pedals makes them completely immune to inadvertent release while sprinting, yet exiting is quick and simple due to the lack of heavy spring action on the cleat. The X-series is primarily a racing system, although the cleats are easier to walk on than Look or Time racing cleats, just be sure not to walk on dirt with them. The high degree of free float was much appreciated as conventional clipless pedals have given me knee problems on long rides, but not these. The large amount of rotating weight I lost with the X-1s was immediately noticeable. Acceleration and hill climbing were easier and I found my natural cadence increased by about 5 RPM. The X-2 pedals cost a competitive $165, while the X-1 versions go for a whopping $290, which isn’t bad compared to a top of the line Time pedal which weighs about three times more. Speedplay sells only through retail bike shops.

The Magnum ATB pedals come in two flavours, $165 steel and $285 titanium, weighing 224 g and 270 g per pair. The recessed cleats which are compatible with any SPD shoe weighs 94 g per pair. Being designed for mountain bikes, the Magnums are as general purpose as the X-series are specialized. The Magnum pedal will probably appeal more to the majority of recumbent riders, in fact it may just be the world’s best all around clipless pedal. Entry and exit are effortless, smoother and quieter than any other pedal, including the X-1. I was impressed by the 56 degrees of float. The float has even less resistance than the X-1. For my first day of riding, I found myself occasionally hitting my heels on the crankarms, but my feet quickly became used to the freedom. The cleats are walkable and vent mud upon engagement with the pedals. I didn’t find the cleats quite as easy to walk on as SPD cleats due to larger surface area, but this could easily be remedied by gluing some tread from old mountain bike tyres onto the sole to isolate the cleat from the ground.

SP pedals have one significant drawback which only affects a small subspecies of recumbent riders, those who ride fully faired HPVs. The high degree of lateral rotation can make it impossible to exit the pedals due to lack of foot twisting space. SP can modify the X-1 to have reduced rotation before release. Anyone with a Dremel tool can easily modify the Magnum cleat for inward release and or reduced angle outward release.

For nearest dealer call 319-252-1637
Linear Bicycles, RR 1, Guttenberg, IA 52052
JUST TWO BIKES, INC. (JTB)
JUST TWO BIKES, INC. (JTB)
1777 Stillwater St.
White Bear Lake, MN 55110
Contact: Jim Muellner
Phone # 612-429-9081

BIKE: The Montage  TYPE: Underseat steering side by side SWB recumbent tandem.  WEIGHT: 120 lbs.  OVERALL WIDTH: 43" (26" spacing between bikes).
FRAME: Steel.  FRAME SIZES: Fits riders from 5' - 6' 4"  DRIVETRAIN: Two independent 21 speed indexed systems.  BRAKES: (Two of each) front & rear brakes.
WHEELS: 26" rear, 20" front.  SEAT: Two-sling/ mesh.  STANDARD FEATURES: Fenders, front & rear, headlight & tail lights, two tone horn, speedometer, two water bottles and a large trunk. The trunk is lightweight aluminum and can be replaced with a child carrier or a golf bag holder.  OPTIONS: A light canopy can be fitted on the cycle.

SUGGESTED RETAIL PRICE: N.A.

COMPANY PROFILE: New model, new manufacturer.

JTB NOTES: Cycling over the years has become a lonesome sport, especially to those who go any distance. While tandem type cycles have brought the riders closer together, they still lack the convenience that JTB has brought to the ride.

Finally a cycle that you can see, talk and share things with your fellow rider, be it a snack, refreshing drink or the scenery. In addition—stability. No more do you have to weave back and forth as you approach a stop sign or in going up a steep incline.

The Montage allows both riders to pedal at their own pace! Each rider gravitates to a gear setting that handles their own weight. Over time, riders tend to cycle in close to the same gear setting. If one rider stops pedalling, the other can continue with little problem.

The height of the seat allows riders to easily sit on the cycle. There is no leg interference when putting your feet on the pedals because of the unique center steering. The rider is visually in contact with drivers of cars on the road.

Only one rider has to steer, allowing the other to enjoy the scenery, read a map, use a camera, have a snack or get a drink. The vertical steering handle is very responsive requiring minimal motion.

The Montage, while geared for the fastest riders, can equally as well handle a blind or physically challenged rider. It is ideally suited to adapt to riders of different physical skill. Each can get an excellent workout, while riding in comfort through the park, grocery store, or for long distance cross country rides.

The uniqueness does not end here. If you like, the cycle can be separated and ridden as two individual recumbents by removing a few bolts and the trunk.

Cycling will never be the same again. Share the great outdoors with someone you enjoy. You will change their life forever. Be the first in your community with this unique cycle.

Marilyn and Jim Muellner, the developers of the Montage, have ridden "The Ride Across Minnesota" (TRAM) for M-S. for the past two years on the JTB, a distance of 325 miles. We never had to walk up any hill like many others. We carried our own personal gear unlike other riders.
KOWAL DESIGNS
202-A W. 18th St., #27
Merced, CA. 95340
Phone: #209-722-3107


LINEAR MFG. INC.
R.R.1, BOX 173
Guttenberg, IA 52052
Phone: #319-252-1637, FAX#319-252-3305.
Contact: Steve Hansel

BIKE: Linear folding aluminum. TYPE: LWB-underseat or upright steering/ folding frame indirect underseat via rod, (pullup upright bars area an option). WEIGHT: 32-33 lbs. WHEELBASE: 62"-68", FRAME: aluminum I-beam extrusion, chromoly fork and head tube. FRAME SIZES:


LIGHTNING CYCLE DYNAMICS
312 -Ninth St.
Lompoc, CA. 93436
Phone#805-753-0700


BIKE: Lightning F-40. TYPE: P-38 + body SUGGESTED RETAIL PRICE: $4000.


ROAD TEST: RCM#27/ #15 are available for $5 postpaid USA or $7 Can./ overseas each. Watch for the upcoming F-40 test in '94!

COMPANY PROFILE: Lightning Cycle Dynamics is a veteran recumbent manufacturer and an RCN Supporter subscriber.

S & B Recumbent
The Most Affordable On The Market Today!
Providing Bicyclists with attractiveness, comfort and speed.
Drivetrains of 6,12,18 & 24 spds. Sizes: Small (for ages 7-12 yrs.), Jr. (5'2"-5'4" tall), and Adult (5'4" & taller).
DEALERS- We have frame-kits for you to customize yourself! Tandems available Jan. '94. For details, call Ph #310-608-0008 Phx FAX: 310-762-2243
Or Write: S & B Recumbent, PO Box 3061, Compton, CA. 90222
The Kingcycle: I rode the Kingcycle at the Interbike Trade Show in Las Vegas, September 1993. I think it is an excellent bike, very high quality with lots of attention paid to the details. The hand ovalized Reynolds 531 frame is beautiful, a very functional minimalist design. The bike handled and accelerated about like a P-38. I don’t like the handlebars as much as the Lightning’s though, as they hit my knees while cornering, even on some not so sharp corners. Part of the problem was the bars were set slightly too low for me and the seat was too far forward. Seat adjustment is one of the few problems with the Kingcycle design. To adjust the seat, two nuts must be loosened, one in front of the seat cross member and one behind it. They are both on a long threaded bolt which passes through the seat cross member. Basically, this means no quick seat adjustment. Also, having a moveable seat rather than sliding boom on a SWB can be a problem weight distribution shifts. On the plus side, no adjustments need to be made to the drivetrain when adjusting the seat and the Kingcycle is available in three frame sizes. I personally liked the seat. It had adequate support and a minimum of of excess material. Heavier riders may find the seat too narrow. I asked Graham Bell (Networks, U.K.) about suspension, he said Kingcycle is introducing a retrofittable elastomer front fork early next year. After my previous SWB suspension experiences, I believe SWB bikes with out at least front suspension have only two purposes-track racing and setting speed records on smooth surfaces. SWB without suspension is too difficult for the average non-cyclist to handle on rough surfaces, in other words, day to day street riding in places like L.A.

The Kingcycle has the overall highest build quality of any production recumbent I have seen. A well integrated set of accessories is available too, including wheel discs, front fairing, rear trunk fairing, headrest, and nylon rain cover. The rigid rear trunk is unfortunately too small for American style self sufficient camp touring. The full fairing package is open on the bottom and certainly not as fast as an F-40. I think the Kingcycle would be best as a commute/racing bike.

The Windcheetah: I rode the Windcheetah. I loved it. It is certainly more than the sum of its parts. Now I understand why it is the most sought after HPV. Everything felt like it was in the right place. Although I normally prefer mesh seats and less reclined seat-backs, the seat on this trike felt nearly perfect and gave me a very secure feeling. This is the friendliest, most fun HPV I have ever ridden. Anyone can get on it and not have to worry about balance or any special handling tricks. Cornering ability and security in turns is excellent. I found myself going into turns faster than I should and scrunching off the excess speed in a controlled way. The handling is very predictable, it is easy to go into a controlled skid to get around a corner faster where any other recumbent tricycle would have flipped over and any two wheeled recumbent would have skidded out from beneath you. I could feel the inside front wheel deweight under very hard cornering, but wasn’t able to get it off the ground. As fast as braking goes, I believe the brakes were a bit out of adjustment. Never the less, I sprinted up to speed on a short course behind the Interbike and then slammed on the brakes. I came to a stop almost instantly without lifting the rear wheel! This leads me to believe the Speedy has the best braking and balance of any tricycle. I love the way the Speedy can be ridden in such a care free manner. Heavy braking in the middle of a corner is no problem. Due to its excellent handling and stability, I think Speedy would make the ultimate winter commute in icy conditions. The overall width is narrower than most tricycles. The body would be warm and rain-proof, as well as increasing visibility. Then riding without the body, the only way to carry a load is to bolt pannier mounts through the seat shell on the side curvature. Most Speedy’s are sold without the body, and I believe it was initially designed to not have a body, but to be used as a training HPV.

This brings me up to the optional body. The one piece fiberglass body with cloth upper portion is hard to ship and Mike Burrows won’t ship it, the customer must ship it on their own. The body adds a lot of weight, bringing the total up to about 35 lbs. The body retails in England for 900 pounds ($1300 USA). Shipping to the USA would be about $500, but it might arrive damaged. The Windcheetah is sold exclusively through Linear dealers for $5700. For more information, contact: Linear Mfg. Inc., Rt. 1, Box 173, Guttenberg, IA. 52052. Ph#:319-252-1637.

WINDCHEETAH NOTES: The world famous classic, the Windcheetah, designed by Mike Burrows and developed by him over a ten year period; from the MK1 to the MKIII a "Speedy" version. Immortalized by Richard Balantine his books. This HPV has won design and practicality competitions as well as road and track events throughout Europe, the USA and Canada. The Windcheetah is a practical vehicle whether used for shopping, touring, racing or just having fun!

NEW FOR '94: Linear Mfg. Inc. has now become the exclusive North American distributor for Radius Peer Gynt LWB suspended recumbent, priced from $3500. Linear also imports high quality English Brompton English folding bicycle from $740. Linear has announced it's new Blue-Star line. Custom anodizing and upgraded components. Linear has upgraded the rear stay section of the frame and equipped all Liners with Grip Shifts.

ROAD TEST: RCM#5- is available for $5 postpaid USA or $7 Can./overseas

COMPANY PROFILE: The Linear Mfg. Co. is a Senior Recumbent Manufacturer. Linear markets recumbent bicycles exclusively through recumbent dealers. Linear is an RCN Supporter-X Subscriber.

MAXAM Manufacturing
5595 Fawnwood Lane
Cincinnati, OH. 45247
Contact: John or Chris Day
Phone#513-741-0420


NOTES: The bike shown is the Reveille prototype. We are making final modifications to the handlebars, seat and chain guide, however, the basic appearance will remain the same. We expect to have units available for sale by April 1, 1994. We have spent over four years developing this product and are very happy and excited with our results. We are anticipating the same response from the bicycling consumer.

NEW FOR '94: The frame material has changed, and the bike has a new look, the components are cheaper, basically it's an all new bike with an all new approach for 1994! Last years model was a rare bargain at $650, but $359 is a steal. 1994 marks Maxam's second year in the recumbent business, but this year with an ambitious all new model.

EDITOR'S NOTE: The new $359 bike should be an excellent bargain.

RCN AWARDS: The Best (proposed) Ultra-Cheapskate Recumbent Deal 1994 I: Maxam's New Reveille!

COMPANY PROFILE: Maxam is an ambitious second year manufacturer. They are an RCN subscriber.

M5 Recumbents
(USA distributor is Lightning Cycle Dynamics)
Tales From A Recumbent Bike Shop

Do you recall the movie, “Brainstorm” with Christopher Walken & Natalie Wood (her last film). In it Christopher Walken rode a recumbent bike. It looked so sleek, comfortable and fast that I was immediately intrigued. I’d never ridden one, but I knew that I had to have one.

My search started at local bike shops. No luck! The yellow pages were also a dead end. Where next? Someone suggested looking in the back of magazines. Didn’t Popular Science have some kind of bike like that? I was reading my local newspaper’s classified ads every day with no luck.

SEPTEMBER 1991: My search had been going on for about a year or so when I spoke to a local bike dealer. He suggested going to the Anaheim Interbike (Bicycle Trade Show) Convention.

The Interbike show was indeed fruitful. I found recumbents there and I didn’t just order one, I ordered three! My next hurdle was to explain that to my wife, Linda. She bought the line that I would sell two and keep one for myself.

I discovered more recumbent manufacturers as time went on, and I ordered and sold more bikes. I set up display booths at local sports & fitness shows. Soon there were ten or twelve bikes in my living room, kitchen and hall. Linda “suggested” that I look for a store....if I expected our marriage to continue. Thirty-five locations later, I found the spot which was to be the first home for People Movers.

JULY 1992: Doors are open for business. I was ready to sell-sell-sell!

JANUARY 1994: It’s been eighteen months since People Movers opened it’s doors. During that time I have met hundreds of people and made a lot of new friends. We must be doing something right because our customers keep coming back with their friends and families to buy more recumbents. Yet, I realize that I cannot claim all of the credit for our success. Recumbent manufacturers are becoming more interested in a long term dealer, rather than making quick sales. They are starting to realize that the Recumbent Retailer is vital to their continued growth and success. Those who are establishing dealer territories and networks will be the ones that stay in business when the mainstream manufacturers jump into the recumbent business. The vital resource for recumbent manufacturers and retailers today is the very publication that you are holding in your hands. Recumbent Cyclist publisher, Robert Bryant, spends hundreds of hours gathering information to pass it on to eager readers. Much of this information is only available through RCN and it helps keep everyone informed on current events in the recumbent industry. The Recumbent Cyclist is an important part of our business plan here at People Movers and should be for everyone else to guarantee future growth of the recumbent industry.

We are very optimistic about the future of recumbents. More manufacturers are bringing new and exciting products into the market. As the number of units sold increases, the prices should come down to a more affordable level. Our goal is to make People Movers a leading retailer in the recumbent field. While profits keep us in business, it’s customers who are responsible for our success. We are committed to providing our customers with dependable service, accurate information and competitive prices. Our #1 goal is to help our customers make an informed decision on the perfect recumbent to suit their needs.

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NordicTrack
Dept.: Recumbent Cyclist News
104 Peavy Rd.
Chaska MN, 55318-2355
Phone# 1-800-444-7509 Ext. Recumbent Cyclist News

TRIKE: “ForeRunner” TYPE: Four wheel-upright handlebar steering. WEIGHT: approx. 78 lbs.
DRIVETRAIN: Patented 9 speed “Reflex-Action Transmission.” 9 gears at the touch of a button (ala Yankee/NordicTrack Fitness Bike). GEARING: 9 speeds 41”-82” gear inch range. BRAKES: Rim band brake (ala Yankee/NordicTrack Fitness Bike). WHEELS: 16” front (2) & 20” (2) rear. SEAT: sling/ mesh with padded base. SUGGESTED RETAIL PRICE: $599+ approx. $99 shipping.
NORDICTRACK NOTES: Ask for their brochure & free video!
EDITORS NOTE: NordicTrack is a new recumbent manufacturer with an all new product. If you call and ask for information etc. PLEASE BE SURE to mention that you read about the “ForeRunner” in Recumbent Cyclist News! SPECIAL THANK YOU’s to RCN readers & “Crew Members” Vic Sussman of Washington DC and Ron Schmid of Portland Oregon for bringing this new HPV to our attention just hours before press time.
NEOBYKE
PO Box 2303
Lowell, MA 01851-0503
Phone #508-459-0779/1-800-NEOBYKE
Contact: Tom Priest

NOTE: NEOBYKE is an affordable, 20 speed recumbent bicycle designed and built by Bill Darby for Neobyke. The bike is designed for maximum comfort, performance and durability. "It's the most fun you can have ... on a bike!" Call 1-800-NEOBYKE for a brochure.

OPTIONS: Underseat steering, basket, fenders, water bottle cages, mirror and chain guard.


PEDALCRAFT
5460 SW Philomath BLVD.
Corvallis, OR 97333
Phone/Fax: #503-752-5035.
Contact: Richard Rau

The Most Finely Crafted Trike Available.

DISCOUNTS: 5% Off to RCN subscribers (direct only).
NOTES: Send $1 for information pack.

NEW FOR '94: Ferrari, Lotus, Bimota, Ducati, Quadraped. What do they have in common? All are hand built, precision, performance roadsters. The Quadraped is handmade, hand-assembled, road tested, and shipped ready-to-ride from Corvallis, Oregon. What don't these wonderful vehicles have in common? You

The Thebis 201 Touring Trike

Colour Brochure and Information Pack: Send $5.
To:
Thebis International, Ltd.
#110-2031 Malaview Ave.
Sidney, B.C., Canada, V8L 3X9
(604) 656-1237
can afford a QuadraPed. A wide variety or options are available, and customized versions of the QuadraPed are available at extra cost. The QuadraPed provides an excellent aerobic workout. It also strengthens and tones the muscles in your thighs, calves, buttocks, arms, chest and shoulders. The QuadraPed will fit anyone, even people with special physical needs.

**RCN AWARDS:** The Best Craftsmanship on a Recumbent Trike.

**COMPANY PROFILE:** Richard Rau has been building, refining and marketing the first class Quadraped for several years now. He is also a principal in the BikeE Co.

---

**RANS RECUMBENTS**

1104 E. HWY 40 By-Pass
Hays, KS 67601

Contact: Randy or John Schlitter
Phone: #913-625-6346

**BIKE: Rans Nimbus**

**TYPE:** LWB-upright handlebar steering.
**WEIGHT:** 30 lbs.  
**WHEELBASE:** 67-3/8” (37” frame)  
**FRAME:** TIG welded 4130 chro-moly in three sizes.  
**FORK:** Rans Steel.  
**HANDLEBAR:** Rans “C” type (closed loop) DRIVETRAIN: 14/21 spd. index/ Shimano LX de-railleurs/Grip Shift / Sugino or SR/SunTour 42/52 double or 28/38/48 triple crankset/ 12-28 7 spd.  
**BRAKES:** Dia Compe Alpha II side pulls.  
**WHEELS:** 700c rear and 20” X 1-1/8” front.  
**HUBS:** Shimano.  
**TIRES:** IRC Duotour & Roadelite EX.  
**PEDALS:** SR Low-Fat.  
**SEAT:** laminated fiberglass with foam cushion.  
**SEAT HEIGHT:** 24”  
**PAINT:** Gloss White, Gloss Black, Racing Green, Metallic Blue, Ferrari Red or Saturn Yellow powdercoat.  
**FAIRING:** Rans fairing.  
**SUGGESTED RETAIL PRICE:** $1195

**STANDARD FEATURES:**  
- Chain idler, “C” Bar,  
- Fairing & kickstand.

**OPTIONS:**  
- Cantilever brakes, rack, water bottle bosses and custom paint (fares & splatter).  
- “B” bars on request only.

**BIKE: Rans Nimbus XT**

This is top of the line for Rans offering a full Shimano Deore XT II Gruppo as well as other upgrades.

**BIKE: Rans Stratus**

**TYPE:** LWB-upright handlebar steering.
**WEIGHT:** 30 lbs.  
**WHEELBASE:** 63-3/8” (37” frame)  
**FRAME:** TIG welded 4130 chro-moly in three sizes.  
**FORK:** Rans Steel.  
**HANDLEBAR:** Rans “C” type (closed loop) DRIVETRAIN: 14/21 spd. index/ Shimano LX de-railleurs/Grip Shift / Sugino or SR/SunTour 42/52 double or 28/38/48 triple crankset/ 12-28 7 spd.  
**BRAKES:** Dia Compe Alpha II side pulls.  
**WHEELS:** 700c rear and 20” X 1-1/8” front.  
**HUBS:** Shimano.  
**TIRES:** IRC Duotour & Roadelite EX.  
**PEDALS:** SR Low-Fat.  
**SEAT:** laminated fiberglass with foam cushion.  
**SEAT HEIGHT:** 22.5”  
**PAINT:** Gloss White, Gloss Black, Racing Green, Metallic Blue, Ferrari Red or Saturn Yellow powdercoat.  
**FAIRING:** Rans fairing.  
**SUGGESTED RETAIL PRICE:** $1195

---

**Pedalcraft**

Quality craftsmanship, passion for service and excellence. Options for performance & comfort...standard features on all Pedalcraft recumbents. Fun and excitement to engage body, mind and spirit!

- Quality components  
- Chro-Mo steel frame  
- Wide range gearing  
- Quick fit adjustments  
- Comfortable seating  
- Wide track stability  
- Tilt steering  
- Hub brakes

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**Recumbent Cycles**

5460 SW Philomath Hwy, Corvallis, OR 97333
(503) 752-5035
OPTIONS: Cantilever brakes, rack, waterbottle bosses and custom paint (fades & splatter). "B" bars on request only.

BIKE: Rans Stratus XT: This is top of the line for Rans offering a full Shimano Deore XT II Gruppo as well as other upgrades. Customers will also have a choice between XT thumbshifters or Grip Shifts. The braketset is XT cantilevers. The XT option also includes upgraded wheels.

SIMILAR MODEL: Rans Stratus A: Loop bars and joystick on frame for controls.

OPTIONS: Triple crank, cantilever brakes, kickstand, rack, waterbottle bosses and custom paint (fades & splatter). "B" bars on request only.

TO BE INTRODUCED SOON
BIKE: Rans Tailwind TYPE: LWB-upright handlebar steering. SUGGESTED RETAIL PRICE: est. $675

SPECIAL FEATURES: The Rans Recumbents offer quality & performance at a competitive price. The bikes are lightweight compared with other LWB’s and the frames come with a LIFE-TIME warranty.

NEW FOR 94: Rans is a seasoned veteran in the recumbent business and is a company to watch for 1994! Our major changes for 1994 are in the pre-assembly we will not provide with each Rans recumbent. When a customer or dealer receives his ‘94 Rans, there will be two boxes. The first will have wheels with tubes, tires, cassette installed. The seat will also be in the box with seat cover installed. If they request “B” type handlebars, these will also be in the box with stem, shifters and brake levers installed. The second box has the frame with fork, bottom bracket, crankset, brakes and derailleur all installed. All the customer has to do is install the wheels, sprint braces, seat and handlebar. For ‘94 we have made the “C” bars (a unique closed loop-a cross between the “A” & “B” bars) standard. Other improvements are the addition of 700c rear wheels as standard and using Shimano RM-50 hubs front & rear for all bikes except the Deore XT upgrade bikes. In addition we are offering SRAM Grip Shifts on the “C” bar, which makes for very comfortable shifting.

RANS NOTES: Now that we install seat cushion & cover at the factory, we’ve had very few complaints about seats hitting the frame. We are also using a new 1.5” higher density foam that offers a more comfortable ride. Rans also sells frame-kits and parts. Look for a 1994 updated Rans catalog soon!

WARRANTY: Rans frames are warranted for the lifetime of the original owner.

RANS NOTES: The Rans Co. is a pioneer in the recumbent industry. We built our first recumbent in 1974 and continue to be the innovative leader in the recumbent industry. Please write or call for more information.

ROAD TEST: RCM#12-Back issue is available for $5 postpaid USA or $7 Can./overseas.


COMPANY PROFILE: Randy & John Schlitter of Rans are veteran recumbent manufacturers and certainly a company to watch in 1994! Rans is a serious player in the kit-airplane business and much of the technology and advanced eventually show up on their recumbent bikes. Rans was really the first commercial recumbent manufacturer with their sail trike. Rans is an RCN Supporter-X Subscriber

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**RCN RECURBENT RATINGS**

**BIKE RATED: Rans Nimbus-std. Model**

- Frame/ Welding Quality: ★★★★★ 1/2
- Paint / Finish Quality: ★★★★★ 1/2
- Drivetrain Components: ★★★
- Brake System Rating: ★★★
- Wheel Quality Rating: ★★★
- Seat Rating: ★★★ 1/2
- Durability Rating: ★★★★★ 1/2
- Performance Rating: ★★★★★
- Recumbent Design Rating: ★★★★ 1/2
- Value/ “bang for buck” Rating: ★★★★★
- Manufacturer Service Rating: ★★★★★
- Overall RCN Bike Rating: ★★★★★ 3/4
- Cost Rating: $$$$$$

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**RCN RECURBENT RATINGS**

**BIKE RATED: Rans Stratus B - “XT”**

- Frame/ Welding Quality: ★★★★★ 1/2
- Paint / Finish Quality: ★★★★★ 1/2
- Drivetrain Components: ★★★★★ 1/2
- Brake System Rating: ★★★★★ 1/2
- Wheel Quality Rating: ★★★★★
- Seat Rating: ★★★ 1/2
- Durability Rating: ★★★★★ 1/2
- Performance Rating: ★★★★★
- Recumbent Design Rating: ★★★★ 1/2
- Value/ “bang for buck” Rating: ★★★★★
- Manufacturer Service Rating: ★★★★★
- Overall RCN Bike Rating: ★★★★★ 1/4
- Cost Rating: $$$$
BIKE: ReBike 707 TYPE: CLWB-upright handlebar steering. WEIGHTS: 49 lbs. (with ReRack & kickstand), WHEELBASE: 52" FRAME: TIG welded square section steel. DRIVETRAIN: 7-spd index/SunTour Edge derailleurs/thumbshifters/Steel single crankset BRAKES: Cantilevers. WHEELS: 20" X 1.75 rear, 16" X 1.75 front with matching ReBike 70 p.s.i. tires SEAT: Foam cushion with backrest. PAINT: Powdercoat Blue, Black, Red or Pink. SUGGESTED RETAIL PRICE: starts at $428.95 + shipping.

BIKE: ReBike 818 TYPE: Similar to the ReBike 707 but with a triple crank/18 speeds. SUGGESTED RETAIL PRICE: starts at $499.95 + shipping.

BIKE: ReTrike 707 TYPE: CLWB-upright handlebar steering. WEIGHTS: 58 lbs. OVERALL LENGTH: 72" TRACK WIDTH: 29.5" FRAME: TIG welded square section steel. DRIVETRAIN: 7-spd index/SunTour Edge derailleurs/thumbshifters/Steel single crankset BRAKES: Cantilevers. WHEELS: 20" X 1.75 rear, 16" X 1.75 front with matching ReBike 70 p.s.i. tires SEAT: Foam cushion with backrest. SEAT HEIGHT: 25" PAINT: Powdercoat Black or Red. SUGGESTED RETAIL PRICE: starts at $549.95 + shipping. OPTIONS: Removable shopping basket or small basket. NOTE: The full size adult version.

BIKE: ReTrike 707SS TYPE: CLWB-upright handlebar steering. WEIGHTS: 57 lbs. OVERALL LENGTH: 72" TRACK WIDTH: 29.5" FRAME: TIG welded square section steel. DRIVETRAIN: 7-spd index/SunTour Edge derailleurs/thumbshifters/Steel single crankset BRAKES: Cantilevers. WHEELS: 20" X 1.75 rear, 16" X 1.75 front with matching ReBike 70 p.s.i. tires SEAT: Foam cushion with backrest. SEAT HEIGHT: 18" PAINT: Powdercoat Black or Red. SUGGESTED RETAIL PRICE: $NA OPTIONS: Removable shopping basket or small basket. NOTE: The Super-Sport Model, another industry first.

ReNOTES: ReBike-the fastest selling, lowest priced recumbent bicycle in America–proudly presents ReTrike, the remarkable new design destined to redefine the three-wheeler. Available in three distinctive models, the 7-spd. ReTrike features all of the original ReBike’s design elements which made it an instant classic. An extra wide seat, padded back rest and high handlebars provide unprecedented riding comfort. Unique to the ReTrike is our exclusive cambered back wheel system making this the most stable performance trike on the market.

ReOPTIONS: “ReGear, the premier collection,” the exciting new line of jewelry, clothing & accessories for select riders. Order, ReBike logo pins in your choice of Gold, Silver or Austrian Crystal studded, T-Shirts, license plates, hats, coffee cups, and even a ReWatch. Classy stuff!

NEW FOR ‘94: While Regis wasn’t looking, our RCN Ace Recumbent Detectives saw a super-spy photo of a ReTrike Tandem. We are sure that this will not be the only ReSurprise from the Recumbent capitol of the USA. One surprise is so hot it would melt this page,,,,,,,,,,we must be patient.

EDITOR’S NOTE: Kathie Skewis’s famous ReBike has changed the face of recumbent history with it’s introduction and soar to the top of sales charts. ReBike continues to achieve media recumbent fame, which will undoubtedly help the future of recumbency!

ROAD TEST: RCM#15-Back issue original is available for $5 postpaid USA or $7 Can./ overseas.

RCN AWARDS: The Best Selling Recumbent in the World!

COMPANY PROFILE: ReBike has sold more laid-back semi-recumbent cruisers than any other company in recumbent history. ReBike is an RCN Supporter-X Subscriber.

RCN RECUMBENT RATINGS
BIKE RATED: ReBike 707/818

Frame/Welding Quality: ★★★
Paint/Finish Quality: ★★★☆
Drivetrain Components: ★★☆ 1/2
Brake System Rating: ★☆ 1/2
Wheel Quality Rating: ★☆ 1/2
Seat Rating: ★☆☆
Durability Rating: ★☆☆
Performance Rating: ★☆
Recumbent Design Rating: ★☆☆ 1/2
Value/"bang for buck" Rating: ★☆☆☆☆
Manufacturer Service Rating: ★☆☆☆☆
Overall RCN Bike Rating: ★☆☆☆☆ 1/4
Cost Rating: $#
NOTE: The ReBike is NOT an “enthusiast” ‘bent.

RCN RECUMBENT RATINGS
BIKE RATED: QuadraPed Trike

Frame/Welding Quality: ★★★★☆ 1/2
Paint/Finish Quality: ★★★☆☆ 1/2
Drivetrain Components: ★★★★★☆ 1/2
Brake System Rating: ★★★★☆ 1/2
Wheel Quality Rating: ★★★★★
Seat Rating: ★★★☆ 1/2
Durability Rating: ★★★★★☆
Performance Rating: ★★★☆
Recumbent Design Rating: ★★★★★☆
Value/"bang for buck" Rating: ★★★★☆ 1/2
Manufacturer Service Rating: ★★★☆ 1/2
Overall RCN Bike Rating: ★★★★★
Cost Rating: $$$$$
The World's Most Advanced Bicycle

The Turner LB Recumbent: One ride says it all! Complete frame-kit...including fork, seat & handlebars. From $375!

For complete information:

Turner Enterprises
1350 E. Flamingo Rd. #73
Las Vegas, Nevada 89119
Call (602) 290-5646

RCN RECUMBENT RATINGS  BIKE RATED: Ryan Vanguard
Frame/ Welding Quality: ★★★★☆  Performance Rating: ★★★☆
Paint / Finish Quality: ★★★☆ 1/2 Recumbent Design Rating: ★★★☆ 1/2
Drivetrain Components: ★★★☆  Value/ “bang for buck” Rating: ★★★★★
Brake System Rating: ★★★☆ Manufacturer Service Rating: ★★★★★
Wheel Quality Rating: ★★★☆ Overall RCN Bike Rating:★★★★☆
Seat Rating: ★★★☆ 1/2
Durability Rating: ★★★☆☆ Cost Rating: $$$

RCN RECUMBENT RATINGS  BIKE RATED: Ryan Fleetwood Tandem
Frame/ Welding Quality: ★★★★☆ 1/2 Performance Rating: ★★★☆ 1/2
Paint / Finish Quality: ★★★☆ 1/2 Recumbent Design Rating: ★★★☆ 1/2
Drivetrain Components: ★★★☆ Value/ “bang for buck” Rating: ★★★★★
Brake System Rating: ★★★☆ Manufacturer Service Rating: ★★★★★
Wheel Quality Rating: ★★★☆ Overall RCN Bike Rating:★★★★☆ 1/2
Seat Rating: ★★★☆ 1/2
Durability Rating: ★★★☆☆ Cost Rating: $$$$$
Rotator Cycles
915 Middle Rincon Rd. Santa Rosa, CA 95409
Phone: #707-539-5203
Contact: Stephen Delaire

Co-Winner of the "Most Promising Bike for 1994"

Rotator Super-7 with body photo courtesy of Rotator

Rotator Pursuit with accessories photo by Rotator

1994 Recumbent Cyclist Buyers Guide

RYAN RECURBENTS
One-Chestnut St., 4th Floor
Nashua, NH 03060
Contact: Dick or Karl Ryan
Phone: #603-598-1711

Editor's Choice for the Best LWB Underseat-steerer 1994.

The Vanguard "S"-photo courtesy of Ryan Recumbents


BIKE: VANGUARD-S. TYPE: Suspended (Trek) LWB-underseat steering via indirect underseat single steel rod. WEIGHT: 33 lbs. WHEELBASE: 66" FRAME: TIG welded 4130 chromoly. DRIVETRAIN: Component selection was not available at press time. WHEELS: 26" rear & 20" X 1.5" SEAT:

The Ryan Vanguard-photo courtesy of Ryan Recumbents

NEW FOR 94: Rotator Interceptor will be introduced mid-year. It is similar to the Pursuit, but offers upgraded components. The frame will be a revolutionary two piece unit with a unique aluminum panier that creates a monocoque rear section of the bike. The monocoque section will incorporate the seat, rear frame, panier and rear stays. When stowed, the two 20" wheels fit into the panier. The gearing is 35 indexed speeds with one front chaining and a five speed intermediate drive (and seven speed freewheel). The gear inch range will be 20" to 170." The Interceptor will come stock with a Super-Zzipper fairing.


ROTATOR NOTES: The Rotator Pursuit is a development of 10 years experience in recumbent racing, fabrication and design. S.A.S.E. for correspondence.

RCN AWARDS: The Pursuit is the Co-Winner of RCN Editor's Choice for Recumbent to Watch in 1994.

COMPANY PROFILE: Stephen Delaire has been involved in the HPV business for several years. He has done preproduction work for Lightning and currently is the frame-builder of the Easy Racer Gold Rush Replica aluminum frames. Rotator is an RCN Supporter.
aluminum frame/mesh. SEAT HEIGHT: 24" PAINT: Not available at press time. FAIRING: Ryan Zzipper is available from Zzip design. SUGGESTED RETAIL: Component selection was not available at press time.

WARRANTY: Lifetime guarantee on frame and all parts manufactured by Ryan Recumbents, Inc. (excluding seat cover & rod end bearings.

RYAN NOTES: The Vanguard is the direct descendant of the costly and rare Avatar. As one of the four people responsible for the Avatar, Dick Ryan is uniquely qualified in the design and manufacture of a recumbent that has been imitated but never equaled. The Ryan Vanguard! Uncompromising quality! $2 for information package.

NEW FOR '94: Advent bar-ends are now standard on all Ryan models.
ROAD TEST: RCM#4-Back issue reprint is available for $5 postpaid USA or $7 Can./overseas
RCN AWARDS: Two year winner of the RCN Editors Choice for Best LWB

Underseat Steerer. Best Craftsmanship on a Recumbent Bike.

COMPANY PROFILE: Dick Ryan co-wrote the book on veteran recumbent manufacturers, Dick is the “Godfather of Recumbency!” Ryan bikes are among the finest built and most respected in the world today. Ryan Recumbents is a Veteran Recumbent Manufacturer as well as an RCN Supporter-X Subscriber

The S & B “Frame-kit” photo by S & B

S & B RECUMBENTS
PO Box 3061
Compton, CA 90222
Ph#310-608-0008 Ph/FAX: 310-762-2243


OPTIONS: Cloth seat $20 extra.
S & B NOTES: The S & B is the most affordable recumbent on the market today. We offer fine workmanship at a moderate cost, below all recumbents on the market. Our package sets this recumbent a level above all the rest. NOTE: Frame-kit= frame, seat & pad, fork, head-set & bottom bracket. S & B also builds Jr. size framesets from $300. Accepts Mastercard & Visa. Call or write for a brochure.

EDITOR’S NOTE: This is the value-leader in SWB recumbents. “It looks like it’s going 100 mph just standing still.” Quoted from the ‘94 S & B brochure.

COMPANY PROFILE: New manufacturer & model. S & B is an RCN subscriber.

SPECIAL PURPOSE BICYCLES
120 Prospect St.
Somerville, MA 02143
Ph#617-625-9030
Contact: Bill Darby


Custom Vehicles: Genie. A high quality, space frame construction mid-wheel recumbent with 24 speeds and sling seat. Prices start at $2400. Sandblaster: A sporty trike for 7-12 year olds. This single speed coaster brake trike comes with dual joystick steering. It is an off-street recreation vehicle with exceptional stability. Adult Tricycle $595. Four-wheeled two person vehicle with plenty of room from golf clubs to baby seats.

EDITOR’S NOTE: We have seen the Genie SWB and the four wheeler.....very nice. Bill Darby has been in and around HPV’s for years.

COMPANY PROFILE: SPB is a new manufacturer and an RCN subscriber.
1994 Recumbent Cyclist Buyers Guide

STIBER TECHNICAL
1621-Occonee St.
Athens, GA 30605

PRODUCTS: One of our readers alerted us to the “What’s New” section of the January '94 Popular Science issue. This hand-built semi-recumbent bicycle is designed with front & rear suspension integrated into the frame. The bike also has an adjustable steering system that tilts to accommodate different arm lengths and torso sizes, and a padded adjustable seat for lower back support (a very low-back recumbent seat—by RCN standards). The bike costs about $5,000.

EDITOR’S NOTE: New bike and new manufacturer currently in the prototype stage.

COMPANY PROFILE: At this time, Stiber is not an RCN subscriber. Please mention our name when you contact them.

THEBIS INTERNATIONAL
110-2031 Malaview Ave.
Sidney, BC, Canada V8L 3X9
Phone: #604-654-1237

NOTES: $5 for a brochure/ information package.
ROAD TEST: RCM#10-B tack issue original is available for $5 postpaid USA or $7 Can./ overseas.
EDITOR’S NOTE: The Thebis has been in development for many years. 1994 marks an exciting new low price and more changes for this interesting rear-wheel steered trike.

COMPANY PROFILE: Thebis is a Veteran Recumbent Manufacturer and an RCN Subscriber.

TURNER ENTERPRISES
1350 E. Flamingo Rd. #73
Las Vegas, NV 89119-5263
Contact: Milton Turner

SIMILAR MODEL: The Turner LB2000 is a TIG welded chro-moly high performance version.

*Turner Frame-sets include: painted frame, seat shell & cover, handlebars and fork.

TURNER NOTES: “The World’s Most Advanced Bicycles.” Turner Enterprises offers a wide variety of frames, forks, seats, demo’s etc. Send for their new brochure today.
ROAD TEST: RCM#10-B tack issue original is available for $5 postpaid USA or $7 Can./ overseas.
COMPANY PROFILE: At this time, Turner Laid Back is an RCN Supporter-X subscriber.

VARNA RECUMBENTS
Site 54, R.R. 2
Gabriola Island, B.C.
Canada V0R 1X0
Phone: #604-674-8379.
Contact: George Georgiev

PRODUCTS: Varna SWB Recumbent from $1400, Varna Bicycle and FWD trike (as pictured in RCM#13).

COMPANY PROFILE: Varna/ George Georgiev is a custom HPV builder & fabricator.

RCN RECUMBENT RATINGS
BIKE RATED: Thebis Trike
Frame/ Welding Quality: ☆☆☆☆ 1/2
Paint / Finish Quality: ☆☆☆☆ 1/2
Drivetrain Components: ☆☆☆☆☆ 1/2
Brake System Rating: ☆☆☆☆ 1/2
Wheel Quality Rating: ☆☆☆☆☆ 1/2
Seat Rating: ☆☆☆☆ 1/2
Durability Rating: ☆☆☆☆☆ 1/2
Performance Rating: ☆☆☆☆☆ 1/2
Recumbent Design Rating: ☆☆☆☆☆ 1/2
Value/“bang for buck” Rating: ☆☆☆☆ 1/2
Manufacturer Service Rating: ☆☆☆☆☆ 1/2
Overall RCN Bike Rating: ☆☆☆☆☆
Cost Rating: $$$$$

RCN RECUMBENT RATINGS
BIKE RATED: ’93 Turner LB “E” Frame-kit only
Frame/ Welding Quality: ☆☆☆☆
Paint / Finish Quality: ☆☆☆☆
Seat Rating: ☆☆☆☆
Durability Rating: ☆☆☆☆
Recumbent Design Rating: ☆☆☆☆ 1/2
Value/“bang for buck” Rating: ☆☆☆☆ 1/2
Manufacturer Service Rating: ☆☆☆☆☆ 1/2

NOTES: The majority of LB’s are sold as “Frame-kits only. We have never tested a “complete bike.”
EUROPEAN RECUMBENTS
The following is a list of European recumbents that are available within the USA or companies that will ship to the USA. For information on any of these recumbents, please send two International Postal Reply coupons. Europe is advancing very quickly in the world of recumbents. Your best bet for coverage of the Euro-market is through Bike Culture and Encyclopedia and Richard Ballantine's, "Richard's Ultimate Bicycle Book." Another new book has just come on the scene, "Das Liegerad," by Gunnar Fehlau. This book is written in German, but has great pictures. It is a fantastic book on recumbents. (see publication listings). USD$ USA Dollars.

BURROWS WINDCHEETAH: The legendary "Speedy" is finally available in ready to ride form and it will be expensive. Casting kits are available from the manufacturer in England. The Speedy body will now ship to the U.S., but is indeed pricey. The exclusive North American distributor is Linear Mfg. Inc.

LEITRA: The only fully faired commuter trike in the world. These trikes have been sold in 11 countries including Japan and Canada. The price for a ready to ride trike is $2000 USD for total $4000 USD. Shipping from Denmark is $700-$800 USD. Designer and builder C.G. Rasmussen reports 1,000,000 kilometers without anyone being hurt. Mr. Rasmussen has been building three wheeled commuter vehicles since 1950. Leittra APS, PO Box 64, DK-2750 Ballerup, Denmark. Send two Int'l Postal Reply Coupons with correspondence.

KINGCYCLE: This very competitive SWB recumbent is built in England. The exclusive North American distributor is Linear Mfg. Inc. See Linear Mfg., Inc.

RADIUS: German LWB similar to the Avatar/Ryan. The Peer Gynt model comes with rear suspension and Magura Hydrostop brakes. This is certainly the Mercedes Benz of recumbent bicycles. The exclusive North American distributor is Linear Mfg. Inc. See Linear Mfg., Inc.

ROSS & TRICE: See Eco Cycle
TWIKE: Side-by-side recumbent tandem with complete body, electrical system and auxiliary power. We have been told this bike sells for nearly $14,000 USD. TWIKE AG, Kirchrain 11, CH-4460, Gettkindern Switzerland. If you write them, let 'em know where you heard about it.


COUNTERPOINT

PRESTO RECUMBENT
"The best recumbent of 1993"
Recumbent Cyclist

New!
Titanium Presto, Presto Trike, & Presto with front suspension fork!

Send $2.00 For Catalog

"BIKE TECHNOLOGY FROM A DIFFERENT ANGLE."
NOTE: This is only a partial listing of the dealers within the USA that stock recumbents and consists of RCN subscribers, advertisers and dealers who answered our call for mfr/dealer information ONLY! To find a dealer in your area, we suggest calling the manufacturer of the bike you are considering and have them find your closest dealer. There is no way that we can list every dealer that stocks recumbents.

**ANGLE LAKE CYCLERY**
20840 Pacific Hwy. So.
Seattle, Wa. 98198-5999
Phone: #206-878-7457/1-800-793-3038
Contact: Matt, Dale or Bob
**PRODUCTS:** A full service bike shop selling Counterpoint recumbents.

**ANGLE-TECH**
PO Box 1893, 318 N. Hwy. 67
Woodland, Park, CO 80866
Phone#719-687-7475 or 1-800-793-3038
**NOTE:** The newest location from the Angle Tech group.

**BIKE RX**
PO Box 1346
Green Valley, AZ 85622
New number as of Feb. 1, 1994 Ph#602-398-9226
Contact: David Sader
**PRODUCTS:** Full service bike shop, Rans, Linear, Laid-Back, BikeE, Vision R-40 and ReBike, come see us at 28000-300 Foxwood Way, in Amado, AZ.

**BUCKINGHAM BIKE SHOP**
3170 N. Broadway
Chicago, IL 60657
Phone#312-975-0050
Contact: Josh Samos
**PRODUCTS:** Full service bike shop selling BikeE, Linear & ReBike.

**Cyclopedia**
PO Box 884
Adrian, MI 49221
Phone #517-263-5803 Information
Phone#1-800-678-1021 order-line.
Contact: Gaylord Hill
**PRODUCTS:** hard to find bicycle parts and accessories, wheel-building and HPV/ recumbent parts specialty. A full line of 16", 20", 24", 26" & 700c wheels and tires.
**NOTES:** Main Catalog $2, Frame Building Parts Catalog $1 and the legendary

HPV/Recumbent Parts Catalog $1.
**BUILDING PLANS:** Econ-Bent SWB Recumbent $30.
**NEW FOR '94:** Now offering Sun M14A 28/36 hole aero-rims (not available anywhere else). New triple-cross recumbent lace wheels. New recumbent tire line: 16" x 1-3/8," 20 X 1-3/8," and 20" X 1.5 CycloPedia is also offering the all new 16" X 1" & 20" X 1" rims and tires coming from Sun. All new rims & tires will be available in mid-March.

**ELLIPITIC RECUMBENT BICYCLES**
2306 American Ave.
Hayward, CA 94545
Phone: #415-591-3737
Contact: Steve des Jardins, Owner.
**PRODUCTS:** Ryan, Turner, Lightning, ReBike, new lines are being added all of the time. Try before you buy. New, used, accessories repairs and rentals. Call for showroom hours.

**EUGENE CYCLE SPORTS**
446 E. 13th Ave.
Eugene, OR. 97401
Contact: Kurt Jensen
Phone#: 503-343-5362
**PRODUCTS:** ReBike, ATP Vision & Ryan Vanguard. Eugene Cycle Sport is a full service bike shop.

**HAL'S CUSTOM BIKES**
Phone# 310-376-5882
**PRODUCTS:** Los Angeles area recumbent dealer specializing in Radius, Windcheetah, Kingcycle & Linear.

**INNOVATIVE BICYCLE COMPONENTS**
3832-148 Ave. NE
Redmond, WA 98052
Phone#1-800-473-6457
Contact: Mike Regan
**PRODUCTS:** IBC Hydraulic brakes.

**INSCOPIC CYCLE**
1029 Amberwood Rd.
Sacramento, CA. 95864
Phone: #916-481-2906
Contact: B.J. Strass
**PRODUCTS:** Wheels, tires, parts & custom modifications available. Upright handlebar steering kits.
**NOTE:** Send $2 for 1994 Info-Packet.
New Millennium Recumbents-Coming Soon!

**J & B PACIFIC**
7845 S. 212
Kent, WA 98032
Phone#:1-800-333-0441
Contact: Joe Sandshulte.
**PRODUCTS:** The USA's premier recumbent wholesale supplier. J & B just unveiled a line of recumbent tires that appear to be excellent quality. We have seen a 16" x 1-3/8" 90 psi gum-wall, 16" x 1.75" 90 psi gum-wall, 20" x 1-3/8" 90 psi gum-wall and a 20" x 1.75" 90 psi gum-wall. These tires are specifically designed for recumbents.

**NOTE:** J & B is a wholesale only source. This means bike dealers, designers and manufacturers. Others should contact their local recumbent manufacturer or dealer for orders. Second location: Call Phil Sweet at J & B East in Florida, ph#1-800-666-5000.

**PEOPLE MOVERS Recumbent Bicycles**
811 S. Tustin Ave. (At 22 Fwy. in Orange)
Orange, CA. 92666
Phone: #714-633-3663
Contact: Jim Wronski
**PRODUCTS:** ATP Vision, Haluzak, Ryan, Linear, Laid Back, ReBike, Rotator, Infinity and most other major brands. We Buy, Sell & Trade Used Recumbents. We are a full service bike shop specializing in recumbents and accepting Visa, Mastercard & Discover. We ship anywhere. You can now charge your RCN subscription, renewal or back copy order here 7 days a week. A visit to the greater L.A. area is not complete without a stop at People Movers. Shop us last for your best price! RCN Editors Choice for Best Recumbent Dealer of 1994.

**RECUMBENT CYCLIST NEWS**
PO Box 58755
Renton, Wa 98058-1755
**PRODUCTS:** RCN Test bikes & demos—SAVE $$$$. We also buy and sell used recumbent bicycles. See RCN Classifieds for available bikes.

**WHISTLE STOP**
410 Jefferson
Ft. Collins, CO. 80524
Phone: #303-224-5499
Contact: James Fentress
**PRODUCTS:** Rans, Ryan, Infinity, Lin-
ear, Turner, and ReBike. Framesets, new and used parts.

**SERVICES**

**CURREN’S CYCLES**
PO Box 5123
Klamath Falls, OR 97601
**SERVICES:** Custom built recumbent frames and complete bicycles. Emphasis on SWB designs, but LWB, tandems and special purpose designs also available.

**INTROSPECT CYCLE**
1029 Amberwood Rd.
Sacramento, CA. 95864
Phone: #916-481-2906
Contact: B.J. Strass
**SERVICES:** Recumbent parts, fabrication, and modification etc.

**RECUMBENT CYCLIST T-SHIRTS**
Kensington Design
2815 Peregoy Dr.
Kensington, MD 20895
Contact: Mark Colliton
**SERVICES:** Official RCN T-Shirt’s are now being designed. Send SASE for information when it becomes available.

**RECUMBENT CYCLIST CONSULTANTS**
PO Box 58755
Renton, WA 98058-1755
Phone: #206-852-8179 office.
Contact: Robert & Marilyn Bryant
**SERVICES:** Recumbent-HPV Consulting/ Manufacturer-Dealer Market Information/ Market Research & Study. The #1 source for recumbent & HPV information for potential dealers, manufacturers and research. Let us help you select your new recumbent bike. Phone consulting & customized reports available.

**SEW WHAT!**
Design & Manufacturing
1000 E. Street SE
Auburn, WA 98002
**SERVICES:** Custom recumbent seats, panniers etc.

**WORKBIKES**
Human Powered Machines
PO Box 1005
Eugene, OR 97440
**SERVICES:** HPV design & custom fabrication.

**KITS and PLANS**

**ECON-BENT**
(see above CycloPedia listing).
**RCN Rating** ☆☆☆☆ 1/2 “Best SWB Plans.”

**EASY RACER PLANS**
(see manufacturer listing).
**RCN Rating** ☆☆☆☆ 1/2 “Best LWB Plans” and “Best Recumbent Homebuilder Plans.”

**BIKECAR CORPORATION**
PO Box 72
Ocala, FL 32678-0072
**PRODUCTS:** four wheel recumbent bike-car plans, parts and information.
**RCN Rating** ☆☆

**COMPOSITE FRAME RECUMBENT PLANS**
D. KERN
2751 Union St.
Lake Station, IN 46405

**DIET RIDE**
PO Box 16614
Duluth, MN 55816
**PRODUCTS:** Plans for a unique four wheeled two seat recumbent pedal-car.

**CUSTOM TRANSPORTATION ALTERNATIVES**
6922 Union Ave.
Cleveland, OH 44105
Ph#216-341-6939
**PRODUCTS:** Don Harse Coo’s Bay Flyer Trike Plans.
**NOTES:** $29 for plans.
**RCN Rating** ☆☆

**HARPER FWD PLANS**
W.A. HARPER
P.O. Box 491871 Dept. RC
Redding, CA 96049
**PRODUCTS:** front wheel drive recumbent building plans.
**NOTES:** $2 for information package and $12 for plans.
**RCN Rating** ☆☆ We liked these plans, but two star rating is due to lack of text. Required FWD reading.

**TRAYLOR F.W.D. PLANS**
T.D. Traylor
22407 Warmside Ave.
Torrance, CA 90605
**PRODUCTS:** front wheel drive recumbent building plans.
**NOTES:** $13 for plans.
**RCN Rating** ☆☆☆ We liked these plans, but two star rating is because the bike depicted in the plans is outdated. Current Traylor bikes are monocoque. Recommended FWD reading.

**PRELUDE RECUMBENT PLANS**
J. Benditt Co.
P.O. Box 335
Pennsboro, WV 26415-0335
**PRODUCTS:** Prelude LWB kit & plans.
**RCN Rating** ☆☆ 1/2 The plans were good, many sets have been sold, many bikes built, but the plans are hard to read. They are worthwhile because they are the only LWB undersit plans available.

**REBEL CYCLE PLANS**
Tony Woodroffe
Aardmore Airfield
Papakura, Auckland
New Zealand
**PRODUCTS:** Rebel Cycle (SWB) NOTES: Info Pack $2, plans $20.
**RCN Rating** ☆☆ 1/2 The plans were good, however, the plans are now outdated as there have been many changes to the original Rebel. The Rebel design looks like a poor mans KIngcycle.

**RECUMBENT CYCLIST NEWS**
PO Box 58755
Renton, WA 98058-1755
**PRODUCTS:** Many RCN issues have our column, “Recumbent Homebuilders Corner” or related homebuilder articles. Back copies or reprints are available for $5 each or 6 for $25.

**HOMEBUILDER PARTS**

We do not have the space to list every single recumbent manufacturer here, but most manufacturers will sell at least some parts from their bikes. If you see something you need on a factory built bike, give the manufacturer or your local recumbent dealer a call.

**ADVANCED TRANSPORTATION PRODUCTS (ATP)**
(See recumbent manufacturers)

**ACE TOOL & ENGINEERING/INFINITY RECUMBENTS**
(See recumbent manufacturers)

**ANGLE TECH/ ANGLE LAKE CYCLE**
(See Counterpoint/ recumbent manufacturers)

**PRODUCTS:** Full service bike shop/ small wheel specialists/ parts etc.

**AIRCRAFT SPRUCE & SPECIALTY**
PO BOX 201 W. Truscav Ave.
Fullerton, CA 92632
Phone: #714-870-7551
**PRODUCTS:** Steel and aluminum tubing. Catalog available.

**EASY RACERS, INC.**
(See recumbent manufacturers)

**PRODUCTS:** Tour Easy building parts: seats, frame tubes, fairings, etc.

**INTROSPECT CYCLE**
1029 Amberwood Rd.
Sacramento, CA. 95864
Phone: #916-481-2906
Contact: B.J. Strass
**PRODUCTS:** Wheels, tires, parts & custom modifications available. Upright handlebar steering kits.
**NOTE:** Send $2 for 1994 Info.

**LAID-BACK RECUMBENTS**
**TURNER ENTERPRISES**
1994 Recumbent Cyclist Buyers Guide

(See recumbent manufacturers)
PRODUCTS: Recumbent parts, seats, frame-kits, etc.
LOOSE SCREWS
12225 Hwy 66
Ashland, OR, 97520
Phone:#503-488-4800
PRODUCTS: Bicycle small parts, large catalog.

RYAN RECUMBENTS, INC.
(See recumbent manufacturers)
PRODUCTS: Recumbent parts, seat bar-end extensions, seat pads, etc.
THE THIRD HAND
PO Box 212
Mt. Shasta, CA 96067
Phone: #916-926-2600
PRODUCTS: Bicycle repair tools and books. Catalog available.

WICKS AIRCRAFT SUPPLY
410 Pine St.
Highland, IL 62249
Phone: #618-654-7447
PRODUCTS: Steel and aluminum tubing, foam, fiberglass, resins etc.

FAIRINGS
ADVANCED TRANSPORTATION PRODUCTS
(See Recumbent Manufacturers)
PRODUCTS: Zzipper large size (similar to Ryan/Super Zzipper) fairing bubble & mounts for SWB recumbents. This fairing should fit most SWB recumbents with a front derailleur tube.

BLUE-SKY DESIGN
PO Box 26154
Eugene, OR 97402
Contact: Mark Murphy
PRODUCTS: Aerocouple Cyclecar body shell kit for three wheeled HPV's (AeroTrice).

COROPLAST INC.
3025 Skyway Cir. N.
Irving, TX 75038
Phone #1-800-435-2241
PRODUCTS: Twinwall corrugated plastic sheeting suitable for recumbent fairings.

FOMEBOARDS CO.
2211 N. Elston
Chicago, IL 60614
Phone #1-800-362-6267
PRODUCTS: Light-weight foam/plastic laminate suitable for recumbent fairings.

SIERRA PLASTICS
7601 4th St.
White City, OR 97503
Phone:#1-800-888-0532
Contact: Scott
PRODUCTS: Sierra builds injection moulded plastic parts and can build one-off HPV bodies, tooling or production. Services are geared for the small businessman.

ZZIP DESIGNS
P.O. Box 14-RC
Davenport, CA 95017
Phone #408-425-8650
FAX: 408-425-1167
Contact: Karl Abbe
PRODUCTS: Largest recumbent fairing manufacturer. Fairings & mounting kits for Ryan, Tour Easy, Linear, Infinity, Lightning and Presto along HPV experimenter kits and fairings for conventional bicycles.

ZZIP NOTES: “Streamline your dreams with a Zzipper Fairing!”

NEW FOR '94: Zzip is currently working on a Presto body skin that will mount to the new Presto Zzipper.
NOTES: Call or write for a free brochure.

UNUSUAL COMPONENTS

ANGLE TECH/ANGLE
LAKE CYCLERY
(see other listings)

CYCLOPEDIA, INC.
(See Recumbent Dealers and Parts Suppliers)

INNOVATIVE BICYCLE COMPONENTS
3832-148th Ave. NE
Redmond, WA. 98052
Phone #1-800-473-6547
PRODUCTS: Paradigm CV Posi variable ratio drive system & Mathausen hydraulic brakes. The NEW, new Paradigm transmission will be available soon (soon = does this mean sometime in the next decade?).

LIGHITNING CYCLE DYNAMICS
(See Recumbent Manufacturers listing.)
PRODUCTS: Lightning fiberglass & composite wheel covers, aerodynamic panniers and high-performance parts.

LOWRIDER BICYCLE
INC.
PO Box 702
Walnut, CA 91788
Ph#909-594-7411
FAX#909-594-5471
PRODUCTS: Lowrider bicycle components, chrome chains, 20"/24" suspended forks, trike conv. kits, Stingray-type frames, 16"/20" fenders and custom fat white wall tires in 16"/20"/26." Custom gold-plated parts are also available.

OHO DESIGNS
Contact: Conrad Oho
Phone:#415-924-9143
PRODUCTS: Component R & D, special drivetrain modifications including custom free-wheel/gearing and grease ports.

PARAGON MACHINE WORKS
61 Industrial Way
Greenbrae, CA. 94904.
Phone:#415-927-0348
PRODUCTS: Aluminum & Titanium Chainrings (sizes 20-

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DH Recumbents
• Solid Foam Padded Seat
• Shorter Wheelbase
• Conventional Steering
• 21 Speed Touring Capability
• Lightweight
• Reliable Components

Comfort Never Before
Experienced on a Bicycle!
For more information send $1.00 to:
DH Recumbents, Inc. 18512 Carrot St.
Suite 428 · Spring, TX 77379 (713) 251-5413
Recumbent Cyclist News

T-62-T.) & custom work. Also available a kit to convert a double crank to a triple.

SACHS BICYCLE COMPONENTS
22445 E. LaPalma Ave. Suite J
Yorba Linda, CA 92686
Phone #714-692-6696
Contact: Russ Okawa
PRODUCTS: Sachs Components: Orbit ATB hubs: 2 spd rear drum brake hub, matching front ATB drum brake hub. Three piece Twist-Grip ATB Shift system including two controls and a rear derailleur. Available direct or through many bike shops, recumbent dealers and manufacturers.

TECHNIBIKE
3350 Kurtz St.
San Diego, CA 92110
Contact: Robert W. VonHeck

INDOOR RECUMBENT EQUIPMENT

This product listing contains rear wheel stands to move your recumbent indoors. The ones we list offer adjustable rear wheel size. Also listed are stationary recumbent bicycles. This is a market-segment that we have not been able to move into. Recumbent exercise equipment is now main stream and apparently they do not need the likes of RCN? Of the ones we have seen, these are the ones we liked. The one we would buy is the NordicTrack Fitness Rider or the Precor. The one we would not buy is the new Schwinn (not listed). They apparently haven’t learned that recumbent seats should be comfortable. In searching for a stationary recumbent you will find salesman who KNOW more than you do. They have their own terminology that will be fun for long time recumbent enthusiasts to here. If you contact any of the listed company’s, please let them know where you heard about them.

BLACKBURN RX-6 TRAKSTAND
Ph#1-800-776-5677
PRODUCTS: Adjustable rear wheel size indoor training stand. Rated Best Overall by Bicycling Magazine.

LIFEFITNESS
Ph#1-800-351-3737
PRODUCTS: Top-of-the-line stationary recumbent exercise bike.

NASHBAR C-FORCE (same as Quickstand)
Ph#1-800-NASHBAR
PRODUCTS: Adjustable rear wheel size indoor training stand. Rated Best Value by Bicycling Magazine.

NORDICTRACK
104 Peavy Rd.
Chaska, MN 55318-2355
Ph#1-800-441-7510
PRODUCTS: The Fitness Rider is a beauty. As with most of the NordicTrack exercisers, they as nice to look at with the many wood parts as they are to ride. This model offers upper body training too. Ask for a brochure and free video! Rumor has it that NordicTrack has recently introduced a 4-wheeled recumbent vehicle.

TUNTURU
Ph#1-800-827-8717
PRODUCTS: Stationary recumbent exercise bike.

P E R F O R M A N C E TRAVELTRAC II
Ph#1-800-727-2453
PRODUCTS: Adjustable rear wheel size indoor training stand.

PRECOR/ MODE-1
Ph#1-800-786-8404
PRODUCTS: Stationary recumbent exercise bike.

AUXILIARY POWER FOR RECUMBENT VEHICLES

This is one of the most controversial subjects within bicycle and human power. We have found a few good sources for small gas motors and electric assist kits, so here is our listing.

CHRONO'S
4186 Sorrento Valley Blvd., Suite H
San Diego, CA 92121

EVFAB & SUPPLY
PO Box 47
Elk, CA 95432
Phone #707-877-3541
PRODUCTS: Electric motive packs, minimalist HPV & frame sets, kits for recumbent hybrids & zero emission vehicles. Company builds a Cycle Car Chassis frame that is compatible with Mark Murphy Aerocoupe trike body. The chassis weighs 24 lbs and is MIG welded rectangular 1 x 2 steel. Cost is $1050. SASE for information.

MX-5 National Sales
PO Box 7205-E677
Santa Cruz, CA. 95061-7205.
Ph# 408-479-4362
PRODUCTS: offers a bolt on 33.6 cc two stroke gas motor. It has a friction roller drive, automatic clutch and offers 30 mph & 200 mpg. RCN NOTE: This is the bike motor that was designed for the Korean Military and offers speeds to 30 mph, making it one of the rare bike motors that offers faster speeds than recumbent peddler can sustain.

MCGREEN DEVELOPMENT-ZAP
PO Box 1217
Alameda, CA 94501
PRODUCTS: Single or dual electric bicycle motors that mount on front forks at the brake-bolt.

STATON PHILLIPS
4303 Ryan Dr. NE
Piedmont, OK 73078
Ph# 405-373-1620.
PRODUCTS: small motors from 24cc-48cc.

SACHS MOPED KIT
Sax Energy Corp.
PO Box 91702
West Vancouver, Canada, V7V 3P3
Ph#604-922-5562 or 604-945-7695.
PRODUCTS: Includes a small Sachs two-stroke gas 30cc motor, clutch, 26" aluminum mag wheel with drum brake, muffler, gas tank (in a waterbottle). This efficient unit gets 150 MPG (during constant use), weighs 22 lbs. and offers a top speed of 22 MPH. For more information:

PALMER INDUSTRIES
PO Box 707
Endicott, NY. 13760
Ph#1-800-847-1304.
PRODUCTS: Builder of an electric bicycle/tricycle kit.

SOLAR MIND
Dept. Recumbent Cyclist
759 So. State St., #181
Salt Lake, UT 84111
Contact: Joe
PRODUCTS: Electric vehicle source

WHIZZER MOTORBIKE
15671 Commerce Lane
Huntington Beach, CA 92649
Ph#714-893-7674
PRODUCTS: a real-to-life kit to convert your cruiser bike into a Whizzer-bike right out of the
1994 Recumbent Cyclist Buyers Guide

40's! Whizzer is manufacturing their own 4 cycle 4 hp engine. Information is $2.95

ZIPPER BICYCLE ENGINES
Seismic Engineering
715 7th Ave.
San Diego, CA 92101
Ph#619-232-1158
PRODUCTS: A gas motor for bicycles.

PUBLICATIONS OF INTEREST

BRITISH HUMAN POWER CLUB (BHPC)
The newsletter from the likes of the Kingsbury's and Burrows. We love the dry English humor and state of the art HPV's & discussions. We rely on BHPC to keep me informed on Euro-happenings. Send a couple of bucks for a sample issue to: John Kingsbury, 22 Oakfield Rd. Bourne End, Bucks, England SL8 5QH. An RCN Favourite!

BICYCLE GUIDE MAGAZINE
Mainstream cycling publication whose new ownership has not shown signs of recumbent friendliness—the new format seems to be directed at racer types. Former recumbent-friendly editor has gone to Winning Magazine, which is now looking more like the old Bicycle Guide (whew!). BG's all-new coverage of "fast" (racing type) bicycles promotes the sad state of the bicycle media today.

BICYCLING MAGAZINE
Mainstream cycling publication. We keep hope'in and cross'in our fingers that Jim Langley (friend to recumbentists) can get more bent stuff in North America's premier cycling publication.

BIKE CULTURE
The former editor and writers of the New Cyclist have started two new publications of interest to recumbenteurs. Encyclopedia is a full glossy color book that spotlights interesting HPV's, recumbents and unique products of interest to the alternative cycling fan. This 93/94 version includes a closeup look at the Radius Peer Gynt, the new Radius SWB, the Swiss Twike and many other unique HPV's. Bike Culture is the best alternative cycling publication (aside from RCN) that we have ever seen. It is like a cross between RCN Bicycling and Human Power, but with no advertising whatsoever. These publications get two thumbs up from RCN! A yearly subscription costs £25 including postage. Your subscription includes the yearly Encyclopedia issue as well as the quarterly Bike Culture. Bike Culture, Open Road Ltd., 4 New Street, York Y01 2RA, England. An RCN Favourite!

BICYCLE USA: League of American Wheelmen
90 W. Ostend St., Ste. 120, Baltimore, MD, 21230. Voice 410-539-3399/ fax 410-539-3496.

COUNTERPOINTERS
A newsletter for Counterpoint Presto & Opus owners & enthusiasts published by Rick Pope. Counterpointers, Jim Weaver, Po Box 763, Edmonds, WA. 98020.

CYCLE AMERICA Regional Directories
Recumbent enthusiast Martin Krieg publishes regional cycle directories for California and beyond. These are of particular interest to bicycle/recumbent tourists. Martin always manages to get several recumbent "plugs" into each publica-
tion. His latest efforts include a new book called, “Awake Again.” Martin plans a cross country bike tour to promote his new book. 147 S. River St., Ste. 222 Santa Cruz, CA 95060

DAS LIEGERAD: A German book that outlines recumbents & HPV’s. The text is in German, but we have been told that there are great pictures of new & rare Euro-HPV’s. To order this book, send $34 to: “Das Liegerad” c/o Babette Schemesky, 108 Ryerson Ave., Newton, NJ 07860

HUMAN POWERED VEHICLES NEW ZEALAND (HPVNZ) Editor, Paul Dunlop has really made this into a nice publication. The last two issues had a great interview with David Gordon Wilson that I wished I’d done (David and his wife recently toured NZ). Format is similar to BHPC and equally enjoyable. Send a couple of bucks for a sample issue to: Paul Dunlop, 4 River St., Mataura, Southland, New Zealand. An RCN Favorite!

IHPVA (International Human Powered Vehicle Assoc.) The IHPVA membership includes the newsletter HPV News and Human Power. The new monthly HPV News is on the upswing. The best news is that former notoriously late editor Kor has been replaced by Len Brunkalla. Len is a friend of recumbents and has the right idea, although articles are short & sweet. David Gordon Wilson edited, Human Power, is reliable and as always, an excellent resource for HPV tech-fans. Membership is $25 per year. IHPVA, PO Box 51255, Indianapolis, IN 46251-0255.

LOWRIDER BICYCLE MAGAZINE From the producers of low Chevys with hydraulic suspensions now brings you a glossy color magazine for customized bicycle builders. The action is mainly in the SW and California. Some of the parts, techniques and styles will be of interest to ‘bent experimenters. Lowrider Bicycle Magazine/ Park Ave. Publishing, PO Box 648, Walnut, CA 91788-0648. Ph#909-598-2300.

MnHPV ASSOC. NEWSLETTER See rider groups

NEW CYCLIST: An English cycling magazine with waning HPV coverage. Most of the HPV’s went to Bike Culture. £57.75 Pounds, anywhere in the world air mail subscription to: New Cyclist, Unit 1, Hainault Rd., Romford, Essex, RM6 5NP, England.

OREGON HPV ASSOC. NEWSLETTER (See rider groups.)

RICHARD’S NEW BICYCLE BOOK/ RICHARD’S ULTIMATE BICYCLE BOOK by Richard Ballantine, Ballantine Books. These excellent books on cycling give equal coverage to HPV’s and recumbent bicycles.

ZZIP DESIGNS: Karl Abbe has several copies of the 1993 Encyclopaedia (Bike Culture Yearly) issues available These are $20 postpaid USA.

RECOMMENDED COMPUTER CONNECTIONS:

GENie: This is the first recumbent bulletin board (BB) that we know of. As of late, attendance is down due to GENie’s rate hike. “Recumbent’s & Cycling” is in the cycling area. We hope GENie BB and former (post rate hike) BB/ recumbent enthusiasts will consider coming back to this formerly quite busy BB. RCN & Robert Bryant log on to GENie on a weekly basis.

AMERICA-ONLINE: We are aware of a recumbent BB on AO. Bicycling Magazine has just opened a BB here, so the recumbent area may take off. RCN is considering a BB here.

COMPUSERVE: We have heard of recumbent activity from this system. RCN is considering a BB here.

INTERNET: For techies & HPV racers with access to Internet, the “HPV Mailing List” is a busy BB.

SO YOU WANT TO GET INTO THE BIKE BIZ?


BICYCLE REPAIR. OF AMERICA, INC. PO Box 24106 Minneapolis, MN 55424. SERVICES: Sells mobile bicycle shop training & business opportunity. Info $1

FRUSTRATED MECHANICS? PO Box 7355 Menlo Park, CA 94026 Ph#510-713-2669 SERVICES: Start your own mobile bike shop. Training & business opportunity.

PATEREK FRAMES Rt. 2, Box 234 River Falls, WI 54022 Ph#715-425-9327 SERVICES: Frame building courses and manuals.

UNITED BICYCLE INST. 423 Williamson Way PO Box 128 Ashland, OR 97520 SERVICES: Professional bicycle mechanic & shop management training.
I have just finished building an Econ-Bent SWB recumbent from plans by Cyclo-Pedia, (517) 263-5803. It is my first recumbent bicycle, as well as my first metalworking project and my first welding project. It is also the first time I’ve ever built anything from plans alone, rather than from a kit. It all began when I was talking to Gaylord Hill at Cyclo-Pedia while placing an order for some conventional bicycle parts. In addition to selling me on the benefits of recumbents in general, he mentioned that you could make one from muffler pipe and an old ten-speed! Cyclo-Pedia has both an HPV Parts and a Frame Builder’s Catalog ($1 each). The plans for an Econ-Bent are $30. To my unskilled eye, it looks most like a Lightning P-38. The plans consist of a thirty-page booklet, with a few oversize drawings. (Since I bought mine, a new edition is out, with a few additions.)

I. Get the Parts

The first step was to locate an old ten-speed, preferably one with side-pull brakes. It’s best if the front brake cable pulls from the left, and the rear from the bottom. I wound up with a girl’s frame Sears Free Spirit. These go for about $25 around here. The next major component, the muffler pipe, was a pleasant surprise. Meineke Muffler bent it to shape and sold it to me for only $25. My understanding is that Midas would not have done it, because they use pre-bent pipes, while Meineke bends their own. The guys at Meineke also offered to weld it into a bike for me, but I declined! At this point, you retire to the workshop with a hacksaw and a 10” half-round file and perform surgery. Really, these are the only tools you need. Filing the bicycle steel is tougher than the muffler pipe, but it all goes faster than you might think. The joints are pretty complex, since it’s always two cylinders intersecting at an angle. You can’t measure everything, sometimes you just file until things look good.

II. Buying Welding Equipment

This was the toughest phase for me. The local welding supply houses carry brazing supplies, but they know almost nothing about it. They want to sell you a MIG welder for from $500 to $2000. I took a welding class, but that only covered arc welding and oxy-acetylene cutting. The bike shop people generally don’t remember where they got their welding equipment, or how much it costs. It’s just always been there. They do know brazing, but they can’t tell you why a MIG welder won’t work just as well. To make a really long search short, I bought a Victor portable oxyacetylene torch. It came with brazing and cutting tips and it’s own carrying case. The total cost was $360, more than I wanted to spend. You could probably save some money by buying a cheap torch, then going to the welding supply house for “portable” tanks. When the tanks are empty, they cost about $10 each to refill (one tank for acetylene, one for oxygen). The torch came with excellent instructions. There are several good books in print (see references below). One, Practical Welding, is available at Northern Handyman stores, a good source of welding supplies. You’ll also want to pick up a hand-held disc grinder with a wire wheel ($60). This amazing device will clean up any welding splatter in a jiffy, just remember to WEAR YOUR SAFETY GLASSES.

III. Assembly

Learning to braze is easy. In part, this is because the oxyacetylene torch produces an abundance of heat, far more than you need. The object is to melt the brass brazing material without melting the steel tubes. Therein lies the distinction between welding and brazing: in welding the steel melts together, in brazing a thin layer of molten brass bonds the steel together. It is rather like soldering, but with brass instead of solder. The Econ-Bent plans say nothing about welding, but give many hints on how to insure alignment of the pieces being assembled. It is now that you must spend more money: $4 on electrical conduit (for the seat), $90 for a front fork and head tube (from Cyclo-Pedia), $7 for a bottom bracket shell. The latest plans include some scheme for building your own fork, but I haven’t seen them. Attachment of the various bits requires some guesswork unless you have a finished Econ-Bent to take measurements from. The plans don’t, and can’t, cover all possibilities. The trick is to take your best guess and move on to the next step. After ordering a few more miscellaneous brazing-on’s (hey, this is fun!) you will be ready to paint. Realize that no paint job you do at home will be as tough or as pretty as a factory’s. The closest you can come is to use something like Imron paint, but even that requires special skills and equipment to apply (I’m told). The cheapest you can have it done is probably about $100. Since I wasn’t sure the thing would work, I just used cans of regular primer and spray paint. It looks OK and I’m not worried
about damaging the finish. By now you have something that looks like a bike frame. I waited until this point to order the remaining parts because I wasn’t sure I’d get this far. Now you’re spending money fast, but you’re on your way to riding a recumbent: front wheel & tire $46, rear tire $17, 3 chains $36, brake cables and housing $10, new thumb shifters and derailleur $47 (Cyco-Pedia). At this point it’s really shaping up. Your friends will be amazed (at least mine were). Gaylord will even send you a an Econ-Bent sticker for it.

IV. Road Test

My nearest recumbent dealer (Morgan’s Cyclery, Rocky Mount NC) gave me a test ride on an LWB recumbent once. The starting technique is to put the right crank arm at 12 o’clock and push off with your left foot. The same thing works on SWBs. The initial rides were scary. The steering is very sensitive until you get used to it. You can hit the front wheel with your heel in sharp turns (usually at slow speed). You can relax your arms or use them to lift yourself slightly to ride over rough spots. How does it compare to a regular bike? It’s very fast on the level, but seems to use different muscles than those I developed for regular bikes. It’s heavy (40 lbs.) and going up hills is tough. When I buy some new cogs for the intermediate drive gears this should improve. Weight distribution is roughly 72% front, 28% rear - if I built another one I could do a little better. It’s hard to know what dimensions are important from the plans alone, and I could have moved the rear wheel forward several inches if I had known.

(All of these books are still in print.)

Editor’s Note: RCN has rated the Econ-Bent plans ★★★★ 1/2 “Best SWB Plans.” Gaylord Hill’s Cyclo-Pedia is an indispensable resource for recumbent / HPV enthusiast. We also find the editorial filled HPV catalog a wonderful read.

Welding Options

If the cost of an oxyacetylene rig seems too high, here are the problems with the other options: Propane with a brass nozzle - Not enough heat. Propane with stainless steel nozzle - Lots more heat than the simple brass nozzle, but still not enough. Some of these can use MAPP gas as well. MAPP gas is hot, but you don’t get much control with the broad flame these generate. Oxy-MAPP - The advantage here is that small disposable tanks of MAPP gas and oxygen are available at local stores (like Builder’s Square). The drawback is that oxygen costs $8 a tank. I’m not sure, but my estimate is that a tank of oxygen might last about 10-15 mins. That could get expensive quick! AC Arc Welder - You can buy a small arc welder for about $100. This can’t be used for brazing (see MIG below), but there is an attachment called a carbon-arc torch that can. It costs about $25. It consists of two carbon rods held close together. When the spark jumps between them the heat it generates can be used to braze. Unfortunately, as the rods burn down you must slide them closer together. This can be pretty tricky while you’re working on a big joint. It also seems to spray carbon dust on the work, and cleanliness is important for a good brazed joint. In short, I couldn’t get it to work. Oxy-Acetylene - The cheapest torch kit is about $100 and add $100 for small tanks. You’ll need a holder for the tanks (for safety reasons) and $10 each to fill the tanks. You may also need to pick up an adapter when you buy the small tanks. One of them takes a fitting different than the more common large tanks. MIG welder - This is an improvement over the simpler “stick” electrode welders. The welding rod is a small wire that is fed into the work with a trigger. The problem with all arc welding is that the amount of heat generated not only melts the steel, it also warps everything near it. On a bike, this is unacceptable. Plus, although the muffler pipe is pretty tough, most bike tubes are so thin they would just burn through. TIG welding - From what I’m told, this is the dream tool. It’s uses electricity to generate a controllable flame, protected from the air by an inert gas. Unfortunately, you just left my price range! Hire a Welder? - This might be an option, but there’s plenty of setup to do between brief periods of welding. Hiring a pro could get expensive.
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The RCN alter-ego, mostly correct, but always provocative. This is the back parking lot gang that hangs around the back doors of recumbent shops, spies on manufacturers and reports the no-holds-barred truths of recumbency. Like it or not, the “Underground HPV’er” is at it again.....

Component Shootout!

Presto Grip Shifts vs. Bar-Cons: We pride ourselves on being retrogourches, but the new SRT 500 Grip Shifters are absolutely heavenly! The Bar Con’s are an ooooh soo close second.

Crankset Shootout: Presto Shimano RX100 vs. Easy Racer Specialized Triple vs. Lightning SunTour XC LTD. Easy Racer wins this one. Second is the Presto, but we recommend upgrading to the optional Mavic. The P-38”XC LTD comes in third (our test bike had a very cheap XCT, which we are glad to hear has been upgraded).

Derailleur Shootout: ATP SunTour XCE vs. Presto Shimano Deore LX vs. BikeE XC Expert. Ooh a close one. We will always choose Shimano for quality shifting, but the BikeE shifts ooh soo sweet, a close second.

Zzipper Fairing Shootout: Counterpoint Zzipper ($599) vs. Vision Fairing (Zzipper bubble)($350). The Vision fairing mounts with a single mount—a MTB converted stem inserted into the derailleur tube (which should mount onto most SWB ‘bents). The Counterpoint comes with specially designed mounts to fit the Opus & Presto AND has a built in z zipper “track” for future fairing use. The winner? Both win! Buy the bargain rated Vision fairing if you are on a budget or own an ATP product. If you own a Counterpoint, hold out for the Counterpoint Zzipper.

Wheel Shootout: Easy Racer Tour Easy wheelset vs. Linear wheelset. No contest, the Tour Easy has the BEST wheelset available on a stock recumbent. The Specialized cartridge sealed bearing hubs are built up using top quality parts by Fast Freddie himself. The Linear wheels are good, but what can we say.

Brake Shootout: Linear “Big Dog” dual pivot point side pull brakes vs. Rans Stratus side-pulls. The new Big Dog’s are great stoppers using the latest BMX technology, however, upgrade the Rans to the Deore XT model and the XT cantilvers win hands down.

Seat Shootout!

Counterpoint Presto vs. Lightning P-38. We prefer the “bend” and the height of the P-38 seat. The Presto seat is suspended (a big plus!), has a better quality mesh and ingeniously removes from the bike leaving just a tube on the frame. The Lightning leaves unprotected stays, so be careful. Tie.

Linear vs. BikeE. These two even look alike. We have to say that the Linear seat is better on all counts. We’d like to see BikeE “shape” the foam a bit.

Easy Racer vs. Rans. Easy Racer hands down. This layered foam “Cobra” seat is excellent as shell seats go. The Rans seat needs upgrading, however it does suspend the rider and has been improved since the last bike we’ve seen. Randy Schlitter has some neat ideas, but we think this is the one component on the Rans that keeps it from being world class! Continued on the next page.

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Underground HPV'er—continued from page 56.

Ryan vs. ATP. Both seats have a similar problem, they have a "seat horn" which seems to cause discomfort for some riders (but not the employees of ATP & Ryan...). There is a solution! Buy the optional "Thermarest" inflatable seat bag from either company, you won't even notice the "horn." We like the way the ATP seats "pops off" the bike with just two quick releases... Dick, are you listening......

DH vs. Easy Racer. This is a tough one. In the past RCN has rated both "Best Shell Seat." The DH is more curvy & comfy, but the Easy Racer seat fits the bike better and is built tougher than the DH. Both are winners here, take what you get on your respective bikes.

Frame Shoot-Out!

Presto vs. Lightning P-38. The space frame of the Lightning is a work of art and must be labor intensive to build. It is also very light. We like the simplicity, suspension and durability of the Presto frame when pushed for a decision, but both are great designs.

Rans Stratus vs. Tour Easy. So similar, but so different. The Tour Easy frame is bullet-proof strong and very rigid, offering a very firm ride. This gives an added boost for getting power to the pedals. The Rans frame is designed to suspended/ flex and soak up the bumps. This makes it incredibly comfortable, moreso than the Tour Easy. We favor the Tour Easy's confidence building rigidity, but are impressed by the Rans commitment and lifetime frame warranty. Both winners, you must choose between the Cadillac Rans ride or the Corvette Easy Racer ride.

Linear vs. Infinity. The underground HPV'er has to be careful here. The Infinity is made with square aluminum stock and Infinity has had frame failures. The Infinity frame is one of the most shock absorbent available, some riders feel too much so. The Linear is an I-beam aluminum. It soaks up the road shock & folds too! The I-beam has never caused any problems that we've heard of, but you must learn to live with the different look of the beam. Linear "beefed" up the rear stays in '94 making the rear-end less flexy. Keep in mind when buying an aluminum frame. You must have 100% trust in the manufacturer of your bike in case warranty or post warranty claims become a reality. Do some warranty research prior to purchase. Bottom line on these two, we like the Linear reliability & construction quality better, but the Infinity is a superior bargain, costing just a hair more than half the price of a Linear. The Infinity design is low-tech, simple & utterly brilliant.

Ryan vs. All other LWB Recumbents. The Ryan frame is a fortress. The overside TIG welded tubes are sheer recumbent art, and there is no flex here. This is one of the nicest recumbent frames in the world, brough to you from the "Godfather" himself.

Recumbent Suspension Shootout!

Presto vs. Lightning P-38. The new Lightning fork looks like a technical work of art and performs fairly well. Counterpoint uses an RST elastomer 20" BMX/ MTB suspended fork. It isn't as much of a high-tech work of art as the Lightning fork, but we liked the cushion elastomer RST ride better. Counterpoint offers to paint the RST fork to match your bike for a few bucks more.

Presto vs. All others considering suspension. Yeah, we know, this is not the way motorcycle or car suspensions work. Yeah, we've heard it all before about suspended seats vs. suspended bikes. Yeah, we are aware that a suspended seat and suspended fork is an odd combination. We also feel this is the simplest, most trouble free and best ride of any suspension recumbent we've tried.

THE TOP TEN FASTEST RECRUMBENT BICYCLES

Disclaimer: RCN firmly believes that some recumbents are faster than others. This is the closest approximation of the top ten fast recumbents in North America. We write this as editorial and not, by any means, proven fact. A ** will show bikes that we have not actually test-ridden, but believe them to be in the noted approximate performance position. Performance estimates are give or take two-three positions. Hill climbing performance would be different from the below positions.

1) Lightning F-40*
2) Rotator Super-7 (with body)
3) Kingcycle (with nose & tail body)*
4) Easy Racer Gold Rush Replica (with Super Zipper)
5) (tie) Rotator Pursuit (with Super Zipper)*
6) (tie) Easy Racer Tour Easy (with Super Zipper)
7) Rans Stratus-B (with Super Zipper) (fairing).
8) ATP Vision R-45 (with Vision Zipper)
9) ATP Vision R-40/ R-42 (with Vision Zipper)
10) Burrows Windcheetah Trike (with body)

NOTE: we have no idea where this elusive performance machine would fit in, we will list it #10, but believe that it should be much higher on the list.

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FOR SALE-1-17" Sun Mistral Rim, 2-17" Moulton 100 psi tires, 3-17" Moulton tubes with DT Stainless steel 14g spokes & brass nipples. $175 US dollars incl. shipping. Aubrey Wieve Ph#204-786-0958 (CA/19)

FOR SALE: 1 Moulton rim $17.; 2-17" tires $20. ea.; 2-17" tubes $20. ea.; ATP Vision long wheelbase conversion $80. + shipping on all items. Call Ray at Ph#719-269-3825. (CO/19)

RECU MBENT MISC.

INTERNATIONAL HUMAN POWERED SPEED CHAMPIONSHIPS (IHPCS) VIDE- EOS: 19th Now Available. Also Available 17th & 18th Two Hour NTSC-VHS or 8mm. $25 US, $5 Extra overseas. Send To: Steve Iles, 5419 Crestlawn Dr., E. Canton, OH 44730. Ph#216-488-2470 (WA/19)

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USED RECUMBENTS

FOR SALE: COMFY CYCLE (CLWB) One year old. Blue, Rans Fairing & bars, 7-spd. Shimano drivetrain, adjustable Gel seat & computer. $400. Mike @ Ph#913-462-7794 (CO)

FOR SALE-Rare Avatar LWB recumbent. Excellent condition. Rides like a magic carpet. $850 or trade toward a Mac Powerbook computer. Call Martin at Ph#408-426-7702. (CA/19)


FOR SALE: Large Tour Easy '86 Fully Equipped, including small Zzip fairing & wide range gearing. $950 complete. For SALE: Linear, large size, silver, 21 spd. good condition $860. Call Stephen@ Elliptic Ph#510-782-4566 (CA/19)

FOR SALE: RYAN VANGUARD, standard size, blue, about 2,000 miles total, recently overhauled with replacced chairings and chain. Asking $700 OBO. Call Bill Ph#206-228-0653 evenings till 8:15 PST. (WA/19)

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**FOR SALE: 1993 Counterpoint Opus IV,** show quality bike. Custom paint (Giro) Ocean Spray Deltron Turquoise to Purple fade with painted custom fenders, crank-arms & rear Blackburn rack). Two seat pots & two seats: easily convertible for 54/71'-61" Captains. Deore XT drivetrain, Magura's, Avocet Altimeter computer & Transverse trunk. This bike is less than a year old and is in MINT condition. Could be sold as new. Includes Opus Kidfront. Save $$$ over new $3499 + shipping. Ph: 206-852-8179. (WA/19)

**FOR SALE: 1994 Easy Racer Tour Easy,** fat tire 21 speed, Super-Zipper. This bike is new and still in the box. $1700+shipping. Call Robert at (206) 852-8179. (WA/19)

**FOR SALE: 1994 Haluzak Horizon**, RCN test bike with front suspension. Size for a 6' rider. This bike will be available in the Spring. Save $$$ Call Robert at (206) 852-8179. (WA/19)


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**FOR SALE: EAGLE DUO-Recumbent Trike Parallel Tandem,** 2 adjustable seats (side by side) with forward folding fluted back cushions and padded rollbar. Robust frame, 6061 aluminum square tubing: 1-1/2 x 1-1/2 x 1/8 wall, 2-position stoker bottom bracket. 15-speeds, 28-78 gear inches (31/226 OP). SR 175mm cranks, 42teeth, Sedisport primary chains to Saksae triple chaining (40-50-60) on ball bearing counter- shaft, secondary chain to 14-38 SunTour free wheel. Shimano Deore front and rear derailleurs, K & S thumbshifters, Dia Compe center pull brakes, 26 x 2.125 Carlyle “Lightning” tires (22-

## RECYCLING PERSONALS

**"DAS LIEGERAD" Author, Gunnar Fehlau, will be visiting the USA August 1-7, 1994 to attend the Eureka, CA., IHPS. He is interested in finding a cheap place to stay possibly in the home of a recumbent/ HPV enthusiast. Gunnar is also looking for a ride from LA or SF to Eureka for he and his bike (a SWB Harig Aeropoe). If you can help, please write to Gunnar Fehlau, Richard-Zanders-Strabe 42, 51496 Bergisch Gladbach, Germany. Ph: 001-2202/37775 Fax: 41822. (Euro 19)
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Somewhere in WA. State. The event will be held on a Saturday afternoon from noon to 5:30 pm. Bring your bike for the show and you old parts etc. for swap. This will be a pot-luck affair, so bring some food or whatever. This is the most fun NW event of the year! We may go for a ride—depending on where this years event will be held (we don’t know yet, ourselves.) If you would like to be on our mailing list for this event, please send an SASE to the RCN address.

JULY 15-17
SEER (SOLAR ENERGY EXPO & RALLY)
Redwood Empire State Fairgrounds, Ukiah, CA. Alternative energy expo & vehicle races which include a class for Hybrid Pedal/ Elecricities, and for the first time, there will be HPV races on the Fairgrounds 1/4 mile oval track. Contact SEER Ph#707-459-1256

JULY 22, 23 & 24
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AUGUST 1-7, 1994
IHPVA SPEED 20TH ANNIV. CHAMPIONSHIPS
These are the dates for next year's event to be held in Eureka, California (not to be confused with Yreka, Ca.). The newly formed official IHPVA Chapter Redwood HPV Assoc. is the host chapter. If you would like to offer advice, sponsorship, or volunteer to help, contact: REHPV, Al Krause, 2338-18th St., Eureka, CA 95501 Ph#707-443-8261.

AUGUST 26-28
EUROPEAN HPV CHAMPIONSHIPS
Contact: Jurg Holzle, Future Bike, Spizackerstrasse 9, CH-4410, Liestal, Switzerland. FAX 33-28-30-39

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☐ $5.00 RCN#4-Ryan Vanguard Review.
☐ $5.00 RCN#5-Linear LWB Review.
☐ $5.00 RCN#6-Tour Easy/ Gold Rush Reviews.
☐ $5.00 RCN#7-Lightning P-38 Review.
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☐ $5.00 RCN#11-Presto Test/ SWB Homebuilder.

☐ $5.00 RCN#12-Rans Road Test/ Underground HPV News (Yreka ‘93)
☐ $5.00 RCN#13-R & D Tech E-Z Rider Trike/ Homebuilt SWB.
☐ $5.00 RCN#15 -The ReBike & Tim Brummer’s P-38 design.
☐ $5.00 RCN#16-The Trice Trike
☐ $5.00 RCN#17-The BikeE/ Draasing/ RCN Policy
☐ $5.00 RCN#18- Presto vs. Tour Easy Shootout/ LWB homebuilder
☐ $5.00 RCN#21- ATP Vision test.(avail. May 15, ’94)

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RECUMBENT INFORMATION
Questions #1-10, please list your favorite recumbent type. Please select one choice only.
1) Wheelbase: SWB____; LWB____; TRIKE____; FWD/ Other____
2) Wheel Choices (select one front and one rear) Rear wheel: 24”____; 26”____; 27”____; 700c____; 20”____. Front wheel: 16”____; 17”____; 18”____; 20”____; 24”____.
3) Your favorite frame material: Chro-moly____; mild-steel____; aluminum____; composite____; Other____
4) Built for: performance/racing____; touring____; recreation____; commuting____
5) Handlebars: Above the leg handlebars____; underside remote steering____; Other____

YOUR INTERESTS
6) What kind of recumbent do you own____
7) Please rate it: Poor____; Fair____; Good____; Excellent____
8) What is your favorite recumbent bicycle? (please limit your choices to bikes that are currently available in this issue of RCN____
9) What is the recumbent design of the future: SWB____; CLWB____; LWB____; Trike____; FWD/ Other____
10) Is it a currently available bike? Yes____; No____. Brand name:
11) Are you interested in fairings____; bodies____
12) Are you interested in European recumbents that are not available here? Yes____; No____
13) What else are you interested in? (short answer please)

RCN ADVERTISING
14) Do you read RCN advertising? Yes____; No____.
15) Do you patronize RCN advertisers over non-advertisers? Yes____; No____.
16) Do you enjoy the advertising in RCN? Yes____; No____.
17) Do RCN ads tell you how serious a manufacturer is? Yes____; No____
18) How many recumbents do you own? 1____; 2-3____; 3-5____; 6 or more____
19) Are you planning to make a bent purchase in the next year? Yes____; No____.

RCN ARTICLES
20) Do you enjoy RCN road tests? Yes____; No____. Would you like our road tests to: remain the same____; more tests of a shorter length____; more reader written tests____. Fewer road tests____
21) RCN has become somewhat equipment oriented. Do you like this. Yes____; No____
22) Would you like more articles on: ‘bent people____; touring____; commuting____; HPV racing____; ‘bent comparisons____; ‘bent accessories____; reader written articles____; homebuilder stories____
23) What do you like the most about the current RCN: road tests____; letters Dr. R____; ‘bent News____; Homebuilder corner____; reader written stories____; Zach-Tech____; Classified ads____; display ads____
24) What do you like least about the current RCN: road tests____; letters/ Dr. R____; ‘bent News____; Homebuilder corner____; reader written stories____; Classified ads____; display ads____

RCN ISSUES/ PRICES
We are currently experimenting with different issue sizes, printing and mailing types. We would like your input on this. 25) Our current format calls for six issues (24-32 pg.) per year, however, we have had a double issue buyers guide in both ’93 & ’94. What format would you like best? A) Six issues per year (24-32 pg) with no buyers guide____; B) Five issues per year including the annual buyers guide____; C) Quarterly 42-48 page RCN (no buyers guide____; D) Quarterly 42-48 page RCN (incl. buyers guide____; E) Eight or ten smaller RCN issues per year (no buyers guide____)
26) We have found that First Class mail speeds delivery of RCN by up to three weeks. We would like to see if the majority of readers would be willing to pay more for this type of delivery. How much would you pay for your choice of Q#26 mailed first class? $25____; $30____; $35____; $40____. This is too expensive, $____ is all I am willing to pay.
27) What type of paper do you like for RCN issues: RCN#9 (newsprint____; RCN#8/#10 (bleached newsprint____; RCN#14/#17 (#60 bond____; RCN#18 (#50 book-white____
28) What RCN format do you like the best? RCN#2 (non-computer____; RCN#5/6/7 (basic computer____; RCN#8-#17 (basic computer____; RCN#18/#19 (in-house computer____. Any ideas?
29) Would you support a second publication devoted to homebuilder road HPV’s? Yes____; No____
30) Are you interested in seeing unconventional upright bikes in RCN? Yes____; No____.

OPTIONAL QUESTIONS
31) What is your annual household income: $0K-10K____; 11K-20K____; 20K-30K____; 30K-40K____; 40K+____
32) Would you like info on becoming an RCN advertiser? Yes____. I am a mfr./ dlr/designer: ____________________________(please sign)

Reader Surveys must be postmarked by May 15, 1994, to be counted.
Please mail to: RCN, PO Box 58755, Renton, WA. 98058-1755.
RECUMBENT RIDER GROUPS

BAY AREA RECUMBENT RIDERS GROUP: To join the “BAARG” Call: Steve des Jardins at Ph:#415-591-3737.

GREAT LAKES HPV RACING: CycloPedia 1345 University Ave., Adrian, MI, 49221. (Newsletter available)

H.P.V. SOUTHERN ONTARIO: Dennis Taves, 7-Claremont St., Toronto, Ontario, Canada, M6J 2 MI Ph:#416-601-1124. (Newsletter available)

INDIANA HPV: David Pearson, PO Box 46158, Mooresville, IN 46158. Ph:#317-831-0767


MICHIGAN HPV ASSOC.: Meetings, race events and a quarterly newsletter Contact: Linda Jayne, 2878 Renewal, Troy, MI, 48098. Ph:#303-689-7898. (Newsletter available)

MINNESOTA HPV ASSOC.: HPV Chapter that has a newsletter, meetings, rides, homebuilder workshops and is putting on the 1993 IHPS! Write to: MnHPVA, 4139 Brookside, St. Louis Park, MN, 55416. (Newsletter available)

NW RECUMBENT RIDERS/ HOMEBUILDERS: NW Recumbent Rider/ Homebuilder Group is meeting the 2nd or 3rd Saturday of each month at the downtown Kent, King County Public Library. We are planning events for ‘94. For more information, please call Jim Kneebone at Ph:#206-481-5598.

OREGON HUMAN POWERED VEHICLES: (Portland area) Meetings, Muster’s and a bimonthly newsletter. Contact: Rick Pope Ph:#503-244-0908. (Newsletter available)


SACRAMENTO VALLEY HPV & RECUMBENT: B.J. Strass, Introspect Cycle, Ph#916-973-1945.

SOUTHBAY RECUMBENT RIDERS: (Los Angeles area) Riders meet at Burton Chase Park every third Sunday of the month at 10-11 am. Contact: Tom Howe, 10634 Valparaiso #23, Los Angeles, CA 90034. Ph# 310-838-8634 Eves. or 310-798-5850, Gerry Pease 310-379-6663 Eves.

SOUTHERN RECUMBENT CYCLING ENTHUSIASTS: 3rd Saturday of each month; 25 mile ride in New Orleans with a stop for lunch. For more information contact: Ashby Spratley at Ph:#504-885-2508/ Scot or Dave Hughes at Ph:#504-271-5540.

WISIL HPVers: The Wisconsin HPV Chapter, 260 S. Channing, #2, Elgin, IL 60120-6619. A very active “IHPVA” chapter. Ph:# 708-742-5818 (Alternative Cycling newsletter available)

WASHINGTON DC AREA: W.H.I.R.L. (Washington’s Happily Independent Recumbent Lovers) The folks meet at the Viers Mill Rec. Center, MD, north end of Beach Dr., weekend mornings, weather permitting, 9 am (winter hours). For more info contact: Vic Sussman at Ph#: 301-565-3050 or Allan Pollock at 202-363-2244.


HPV NZ New Zealand, Paul Dunlop, 4 River St., Mataura, Southland, 03 203 8050 New Zealand. (Excellent publication available/ send $3 for sample issue).
We’re Serious

...and so are you...serious about comfort, serious about quality and performance. Easy Racers has been producing the best-performing, most user-friendly recumbents since 1979. Ask an owner about the legendary performance and reliability.

The Bottom Line....

...the serious money skips the learning curve and rides a real recumbent. The chromoly Tour Easy or our aluminum Gold Rush Replica.

Dynamite Video...

...$5 gets you a rich info pack...four-color brochure, glossy spec sheets, order form and a twelve-minute professionally-made color video. Serious stuff.

Or call for free info brochure.
(408) 722-9797

Dear Gardner,

I had meant to write long before this, but I wanted to put some miles on the Gold Rush Replica before dropping you a line. In a word: I totally love this bike! However corny it may sound, the GRR really is the recumbent I've only dreamed about. The awesome speed, stability, and traffic-stopping good looks (the bike, not me) thrill me every time I hop on the machine.

We recumbent hardcore are fond of talking mystically about being "one-with-the-bike." I know I feel that way about my Gold Rush Replica.

Man, We are one happy machine.

Best Regards,
Vic Sussman
Nationally published writer

EASY RACERS, INC.
Box 255-H
Freedom, CA 95019
or call
(408) 722-9797

Recumbent Cyclist
NEWS
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Forwarding & Address Correction Requested
If your renewal date (top line of label) says 12/93, 1/94 or 2/94 this is your last issue.