

# Recumbent Cyclist News

The Recumbent Enthusiasts' Newsletter - Since 1990 - #093 Mar/Apr 2006



The super-cool TerraCycles TailSock! See page 21



The 2006 WizWheelz TTC tadpole is now available for \$1299 retail See page 14

# **Inside**

RCN RT: Bacchetta Café . . . Cover and page 6

MY BIKE: A Lightning F-40 . . . 10

BCN RT: HP Velo GTe .... 12

RCN RCT: WizWheelz TTC . . . 14

RCN RT: Easy Racers Fold Rush 18

High-Racer Blues . . . 22

CLASSIFIED ADS . . . 27

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Photo courtesy of Mary Arneson

# The Bacchetta Café

"The mission of the Café is to get people on a bike that looks great, rides great and isn't a total slug — for under \$1,000. It also shows that just because it is under \$1,000 it doesn't have to be a super-long, super-low bottom-bracket bike. We have a reputation in the high end for superior quality and we think it's time to bring that quality to the entry level." — Mike Wilkerson, Bacchetta

BIKE: BACCHETTA'S AFFORDABLE

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**CONTACT**: www.bacchettabikes.com

he Café is the new entry level enthusiast recumbent from Bacchetta. The Café is very similar to the Bacchetta Giro SWB, but has a longer wheelbase, a higher bottom bracket and a shorter boom. This unique new bike can best be described as a medium wheelbase (MWB). The benefit is less chance of heel strike with the front wheel, and no risk of knee interference (as with the "tweener" bars on the Giro).

For this review we have invited two additional road testers; both are RCN readers, recumbent owners, riders and commuters. Our testers are:

Mary Arneson is 5'6 and a lifetime cyclist from Minneapolis, MN. She commuted on a three-speed bike for over 30 years, but now rides an Osell LWB and a Cab-Bike velomobile. Other members of the family include a RANS Stratus, a RANS Screamer, a Junik Brekki Brompton recumbent folder and Greenspeed GTO trike. You can reach Mary through her website at www.velomobiling.net.

John Climaldi is 5'9" and a lifetime cyclist from the Portland, OR area. In addition to riding, building, and racing recumbents, John also races Cyclocross and uses various bicycles for transportation and commuting 24

Continued on page 6

# Recumbent **Cyclist News**

Recumbent Cyclist News was published by Bob & Marilyn Bryant from 1990-2007, 101 issues. RCN was closed in December of 2007 when it became no longer financially feasible to publish a print newsletter. bryantrj@gmail.com



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## Editorial License 2006 Update

by Bob Bryant, Publisher

RANK-FORWARD (CF) I'm amazed at the number of letters we received about our article about Crank-Forward bikes (RCN 091) - more letters than on any other topic we've written about in YEARS. We printed about 60% of the letters. Including the letters from enthusiastic RANS Fusions owners, most writers fit into one of these three categories:

- 1. Want to see CF coverage in RCN -51%
- 2. Seemed to enjoy CF coverage, but not interested in further coverage -32%
- 3. Negative about CF coverage, and/or don't think CF's are recumbents — 17%

Readers who've been around for a while will recall my ALTERNATIVE CYCLIST column, and my coverage of Kinetic racers, folding bicycles, electric bicycles and even recumbent water craft. My passion is the real-world use of bicycles, whether recumbent or otherwise. It saddens me to think that we, as recumbent riders, may not be open-minded enough to respect this transformation of the recumbent into a mainstream, marketable comfort bike - the CF. That said, RCN is an ENTHUSIAST publication. We won't be writing about any bikes that aren't for serious use. Our future CF coverage will be limited to serious bikes such as the RANS Fusion. However, prepare to read about my cycling diversions once in a while as our mission is really to explore alternative forms of cycling.

Another interesting note: I recently spoke with two public relations folks from mainstream bicycle companies. Both were extremely enthusiastic about the CF bikes in their lines (they don't use that term, but neither one really had another descriptive term for the bikes). Both companies were interested in selling comfortable, user-friendly bikes to non-cyclists. I compared my experiences with the Townie and Fusion and explained how vastly different the CF seats on these two bikes were. One of the company representatives told me that his company's CF model, which isn't cheap, was really designed to be ridden up to FIVE miles and to be sold to non-cyclists. (Keep in mind that the Holy Grail of the bike industry is increasing the size of the market by bringing in the non-cyclist.) The representative from the other company told me that he expected the CF models in his company's line to completely take over upright comfort bikes, and that he was counting on selling a lot of these bikes.

RANS CF NOTE: Randy Schlitter mentioned that RANS will have a new lower priced Fusion model (under \$600) as well as a Zenetik models priced at under \$1000, \$1500 and \$2500). I want to know when this guy sleeps.

RCN RATES 2006: We're making some changes to RCN. Due to increased postal (+5 to a rumored 20% for 3rd class) and printing costs (+10%), we have raised the standard subscription rate to \$32 ... the same price it was back in 1997! We lowered the subscription rate a few years ago to see if we could gain more subscribers. (It didn't really work; our circulation went down 10% in the last year). We make a bit more profit on our deluxe \$38 first-class mail subscriptions. This is the fastest way to get RCN, because the magazine is mailed directly from the printer to you. We will also be scaling back our in-store sales as we don't make any money on those issues. PLEASE consider subscribing if you've been purchasing on the newsstand. And please continue to support your local recumbent shop.

FUTURE RCN: Each year we take a look at our readership, costs and profit and try to determine how we can better provide recumbent news to our readers. I also keep an eye on technology to see if there are any new and easier ways to publish RCN online. We will again be taking a look at offering an eRCN (online magazine). Publishing RCN online would save us as much as \$60,000 per year in printing and mailing costs. If you have any expertise in this field, or know of any unique small newsletters or magazines publishing online, please drop me a note via email, bob@recumbentcyclistnews. com. ♦

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## **Recumbent News**





These are preproduction versions of the new RANS Formula 26. Right, shown with optional Schwalbe Big Apple tires. Photo courtesy of RANS.

RECUMBENT NEWS: RANS F26! In a "January Surprise" RANS has introduced the new Formula 26, a dual 26" version of the Velocity Squared Formula. This new bike has a Truvativ Elita crank, SRAM X7 drivetrain, Tektro disc brakes, Deore Mach 1 wheels, and a clear coated aluminum frame. The new bike comes in standard and XL sizes, and sells for \$1595. Optional are the M5 seat (\$185) and Zephyr seat (\$85). The bike comes with your choice of 3-way or Chopper bars. You can also modify your existing V2 Formula to be a dual 26", for this information, visit: www.ransbikes.com/ITR37.htm or www.ransbikes.com.

**NEW EUROPEAN MAKERS**: Two new recumbent makers is Slyway from Italy (www.slywayprojects.com) and Zohrer from Brazil (www.zohrer.com.br). Australian Tri-Sled trikes are available at Recumbent Bike Riders (www.rbr.info).

**BRAKE TIP:** Here's a cool tip for those running road brakes on their recumbents and nonram's horn handlebars on diamond frames. Try using Shimano Deore LX brake levers. They have a special increasing leverage action that gives a lot of movement at the beginning and a lot of leverage at the end of travel. With dual pivot brakes this means that you can set up the brakes with ample space between the pads and still get good pressure for quick stops. Ample is about 1/4 to 3/8 inch space on each side of your average road rim. I never need to use the quick release on my brakes to remove wheels. Special thanks to Mark Meuller for this tip.

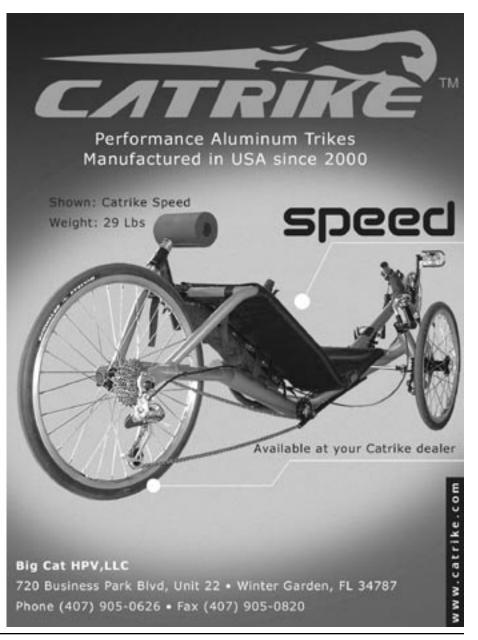
**LATE BREAKING NEWS:** Just as we were putting this issue to bed, ICE announced their 2006 changes, see page 23, this issue.

Sorry we're a bit light on news this issue. All of our news and rumors were published in the 2006 Buyers' Guide in RCN 092 (last issue).

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# **Letters**

Please write us. Letter limit is 300 words (or write an article). We edit for clarity, content and space limitations. bob@recumbentcyclistnews.com



### CF DESIGN TROUBLE

Your recent articles about "crank-forward" (CF) bikes in RCN 091 got me thinking, and you know what kind of trouble that leads to. You see, I have long thought that "recumbent" is French for "silly short piece of tubing the front derailleur hangs on" but this whole business of crank-forward designs has led me to believe "recumbent" should mean "something to push against." As a hardened crackpot and a "traditional" recumbent rider, I'm not going to consider buying a CF bicycle. I have enough self-inflicted problems in my life. But they violate the UCI rules for bicycle geometry, and that's good enough for me to recommend you continue to report on them. Hopefully two goals can be achieved: to show enough legitimacy so more people get off their fattened butts, and to provide a reasonable intermediate step between diamond frames and what I think of as a recumbent. For I have to believe that is where the future lies.

Curmudgeonly, Martin Neunzert

### RCN TOWNIE & CF

Amy, Thank you for reviewing Electra Townie 24 for RCN! Your review is informative; your writing style is refreshing. I enjoyed the article, including your dream for a pink Vespa! Way to go, girl!

I recommend that RCN adopt crank forward bicycles within its mission and audience. First, they are alternatives to the mainstream diamond frames. Second, if their popularity increases the way industry predicts, then your audience for magazine sales also increases.

Steve Fuhrmann

### SHORT CRANKS & LOWER GEARING

I have an Easy Racers Gold Rush Replica. I recently replaced my original 30/42/52 175mm crankset with a Sugino XD 24/36/46 165mm crankset. I immediately noticed a difference in my knees. They have never hurt, but they used to when I was a runner. I had to quit running, but I don't want to quit biking. My cadence also went up with the shorter crank arms. The original gearing range was way too high for me. With the new lower gearing and shorter crank arms — everything improved.

Tom Green

### SHORT CRANKS — BIKESMITH DESIGN

Thanks to your articles, we will have no problem paying for Christmas this year. At the rate things are going I'll make more in the 4th quarter than the first three combined. Since the articles came out (RCN 091), most days I've been working breakfast till bedtime. Doesn't seem much like retirement anymore.

Much of my time is spent answering emails and phone calls related to short cranks. I've also spent a great deal of time trying to put the answers to any questions they might have onto the web site, which most seem to ignore. Occasionally I do find time to get into my workshop though. See short crank options at: www.bikesmithdesign.com.

I think this short crank thing is reaching critical mass. There will soon be enough of them out there that the happy owners will convince others, who will convince others. Till they become so popular that some smaller crank manufacturer will introduce a line of short triples. I've already heard rumors for 2006. At which time I may have to find another line of



work. Maybe start building custom 'bents. I don't think any 'bent makers. are ready to take the plunge yet. Offering 165s on their smallest frames seems like a big step for them.

You (and Bryan Ball at Bentrider) are the most influential 'benters in this country. With you at 6' and him at 5'11", people are starting to understand that short cranks aren't just for short folks anymore.

Mark Stonich

### CF GLIMPSE

One reason I like RCN is the exposure I get to new and unusual bikes. I'm impressed with the RCN 091 CF coverage. A once a year glimpse of hybrids and different types is probably a good mix.

Gene Galipeau

### CF DYNAMIK

Yesterday I tested a 2005 Fusion and the Dynamik. I was surprised how different these two bikes are. I think anybody considering a Fusion series really needs to ride both. The standard Fusion didn't really "speak" to me, but the Dynamik did. I agree with you that the 2005 handlebars just seem to low. I hope to try a 2006 soons. Please keep covering these bikes. I think they're relevant to RCN readers for a few reasons:

- 1. They solve many of the same problems (i.e. comfort) that attract people to recumbents.
- 2. Even if many RCN readers don't want a CF bike in their stable, it might be the perfect bike for us to recommend to others.
- 3. CF bikes might be the "bridge" that introduces people to full recumbent bikes.
- 4. Recumbent cyclists are open-minded by definition, otherwise we wouldn't be riding recumbents.

You might be right that the Townie-style bike could become the entire "comfort" segment of mainstream bikes.

Michael Graff

## CF: NO SEAT BACK, NOT A RECUMBENT!?

First I'd like to thank you for providing *Recumbent Cyclist News*, the industry's best specialty magazine "... by and for Recumbent Enthusiasts". I look forward to receiving each issue and always read the magazine from cover to cover.

Regarding Crank Forward bikes, frankly I don't understand why they're being covered in "Recumbent" Cyclist News. Once the seat back is eliminated from a "recumbent", it ceases to be a recumbent, and many of the advantages of recumbents are eliminated (aerodynamics, reclined seat, weight distribution, etc.). In my opinion CFs are an attempt by the mainstream cycling industry to revive the waning "comfort bike" market. These bikes are well covered in the mainstream press; why devote precious

space in a specialty magazine to a non-recumbent, comfort bike? Thanks for your time and keep up the great work.

Alan Barnard

Editor's Comment: Webster's dictionary defines RECUMBENT as, "lying down." Since we don't ride lying down, we are actually riding in the semi-recumbent position. The fact that Crank Forwards don't have a back rest is a pesky detail. If we're not open to these bikes, we're just not very open minded. Also of note, the "waning" mainstream comfort bike market is 15% of the US bike industry, as recumbents have < 1%. We love our niche, but growth is a serious issue that few manufacturers are planning for. Please be sure to see my comments on this topic in the editorial section of this issue.

### **COVER CF BIKES**

I say by all means cover crank forward bikes. I have enjoyed your previous coverage of folding bikes, etc. in the past and CF bikes claim a true 'bent influence in their design. I think that they can generate at least as much excitement that adding big wheels to the front of recumbents has done. The CF can become a significant niche in development of bents, as have CLWB, lowracers and the recent stir of highracers. There's a RANS dealer 150 miles away and I may just bent over and see what all the fuss is about.

Roger Fuller

### RECUMBENT, CF & DYNAMIK

I own a number of bicycles, including a Bacchetta Strada, a Double Vision, a standard comfort bike, and a RANS Dynamik. I've ridden the Dynamik for one season now and would not willingly part with it. If I want to do a fast day ride — I choose a recumbent. For me, there is nothing that is as comfortable or as fast as a recumbent. However, if the weather is bad, or I need to run errands, the Dynamik is hard to beat. I live in Minneapolis, so I spend four months of the year cycling in less than ideal conditions (cold and snow). The Dynamik is the bike for these conditions. The ability to shift my weight around makes it possible for me to ride in conditions that I would never attempt on a recumbent. It's a great town bike for errands. The lower height makes it easier to mount, and the ability to remain seated when stopped is a luxury.

I switched to recumbents because of a herniated disk in my neck — my right arm goes numb for anything but short rides on a standard upright. I've ridden the Dynamik for rides up to 35 miles with no discomfort in my neck or arm. I test rode a Townie, and my belief is that the Dynamik is a better fit for me. There is just no comparison in comfort, components or performance. Randy Schlitter is correct — the

... Letters continued on page 24





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The Café with a load of groceries, which was enough to make it a little jumpy at low speeds — Mary Arneson

miles per day. The bikes currently in his stable include a homebuilt carbon-fiber highracer, a home-built Tour Easy, a Bacchetta Corsa, a Bacchetta Café, a Whyte MTB, a Fuji cross bike, and an MTB XtraCycle cargo bike. You can connect with John through his blog at http://homepage.Maryc.com/john4bho/iblog.

### WHY THE CAFE?

Mary: I heard that the Café was supposed to be easy to ride, with a stable geometry, and I wondered whether it would be a good replacement for my aging Osell LWB. So it was a pleasant surprise to be invited to test-ride one. Calhoun Cycles in Minneapolis set up the bike. I rode it to and from work and on errands until the snow stopped me, probably about 60 or 70 miles in all.

John: I attended the "Hotter Than Hell 100" ride in Texas and helped John Schlitter and Rich Pinto at the Bacchetta booth. There was an Aero in the booth as well as the new Café. At first

glance the bike looked interesting, but a closer look revealed that this was a decent entry-level bike and more. I spent a little time on the bike in the parking lot and thought this platform would make a great commuter and a good light touring bike. A "jack-of-all-bents."

### **USE**

The Café is Bacchetta's entry-level, more recreationally-oriented sport model. "Around the town or around the country, the Café may be the ultimate expression of cycling freedom. A great bike for everyday riding" — Bacchetta

Mary: My five-mile commute runs along dedicated bike paths and quiet city streets, but with plenty of stop signs and a couple of busy intersections to cross. I also bike to grocery stores using panniers and a trailer (or a velomobile). Minnesota's winter days are short and my work hours are long, so night riding is a fact of life.

John: I've been riding the Café on my com-

mute from Milwaukee into Portland, OR (24 miles round trip).

### SEAT/COMFORT

The Bacchetta ReCurve offers a foam covered seat base and mesh back. Unlike other similar seats, the top of the ReCurve angles forward and up instead of rearward and straight up. This offers added support when you are in the very reclined position. (The seat was designed for the Bacchetta SWB and highracers).

Mary: The mesh-back seat features a lumbar curve and a large cushioned seat pan. It adjusts from upright to very laid-back. The Café's seat has effective lumbar support and cushioning that works without being too soft.

John: The ReCurve seat is quite comfortable, and begs to be laid back a little due to the higher bottom bracket (compared to most other MWB-LWB bikes). The curve at the top of the seat frame really works well when laid back.

"The key to Café fit is using the ReCurve seat as it is designed — reclined." — John Schlitter, Bacchetta

### RIDING POSITION

The Café offers an adjustable recline seat and a rather high bottom bracket (above seat height). Bacchetta has suggested to RCN that the seat is designed to be very reclined, like their highracer models. Mary chose to have her seat rather upright (but more reclined than the dealer positioned it), and John has his very reclined.

Mary: I've been intimidated by high bottom brackets on other bikes, but the small size of the Café's front wheel keeps the pedal position low enough that I can put a foot down at stop lights and can kick off to start smoothly. Even going uphill, I could get started without wobbling. When the bike was first set up, the seat was in an airline-style "full upright" orientation, which seemed to magnify the road shocks and felt cramped. While mounting the rack, we changed it to about 30 degrees. Any further back and it would have interfered with putting things on top of the rack. Even at 30 degrees, the seat crowds into the rack-top space. I



don't usually ride this reclined, even when the seat back isn't interfering with storage. At 30 degrees, there is enough back support, and my neck position is comfortable.

### FIT

Fit is one of our concerns for the Café. The similar Giro model comes in three sizes, but the Café is only available in one size. Bacchetta suggests that the bike will accept riders from 5'2" to 6'2". However, any riders near or over 6' will have to have the seat reclined way back or they won't have enough leg extension to fit properly (see photo page 8).

### RIDE

Mary: When I tried a Bacchetta highracer I could hardly get started and had a terrible time if I stopped going up a slope. In that case, the high bottom bracket seemed to be the problem. My feet were just too far from the ground, and if I had one foot on a pedal, it was too awkward to do anything useful on the ground with the other foot. The Café doesn't have that problem. The smaller front wheel keeps my feet close enough to the ground, and it is easy to have one foot down at an intersection. The Café's steering is responsive and not too twitchy. Going slowly, coming to a stop, slowing down at intersections and riding through narrow spots were no problem on the Café. I tried some tight turns and didn't encounter any difficulties with foot or crank interference with the front wheel. However, the Café is not as smooth riding as a LWB or my suspended SWB.

John: It feels like a stable and solid handling SWB and less like a LWB bike. The high bottom bracket position and short boom are a plus, and performs better than many entry level bikes I have tried (EZ-1, BikeE type bikes). I did not experience any foot or crank interference with the front wheel with this bike.

### PERFORMANCE

John: There is a little flex in the chain stay area when hammering, but as this was not designed as an all-out performance model I don't consider this a bad thing. The ride is smooth, and the boom is stiff. A good combination. "Tweener" bars, a shorter fixed riser, a lighter wheel set, and skinnier tires would go a long way to making this bike perform with the best. As an inexpensive commuter/ first bent/ bike path bike it works great with room to upgrade later. Disc tabs for brakes, bolt-on modifications like hard-shell seats, TerraCycle idler, stem riser combos, and "tweener" bars make this a bike that could last a while and take many forms.

Mary: The Café feels lively, but not superlight and fast. There is no feeling of being on a racing bike, but it isn't a dog either. It's quite similar in sprightliness to the two-wheelers that I usually ride.

### **FRAME**

The Café's frame and seat are based on the more expensive Giro short wheelbase (SWB). The frame is an imported TIG-welded ChroMoly steel. The design is mono-stays (no triangles) and a short boom. The ChroMoly fork is custom designed to fit this unique steering geometry (long and raked fork). The frame and fork both have disc tabs in case you want to upgrade to disc brakes.

John: I like the frame design as a MWB with a short boom. It is executed well, and has all the bells and whistles that one would want in a quality frame. Braze-ons for racks and fenders, disc brake tabs on the frame and fork, quality rear dropouts, beautiful red paint, and good chain management. I also like the teardrop tube and seat mount. The fork aesthetics are a bit interesting, but the geometry works well. I personally think a curved fork like an Easy Racers Tour Easy would make the bike more attractive.

Mary: The steering riser is hinged and tilts forward. This allows for extra room getting on and for changing hand positions while riding, but it's not as easy to walk the bike around by the handlebars. There frame has no triangles, which makes for a nice, smooth line, although it leaves you with relatively few places to fasten a lock.

"We wanted to add a more user-friendly handlebar set up to the line." — Mark Colliton

### STEERING

The Café has a hinged fold-forward steering riser and slightly bent aluminum bars (not "tweeners" like the Bacchetta highracer models).

John: I've never been a fan of fold-forward stems. I find them to be overkill. I just like knowing the mast will not move. It's also good to have something to push against while seated or stopped at a light with one foot clipped in.

### WEIGHT

The bike that was shipped to RCN weighed just over 33 pounds with pedals (RCN digital scale).

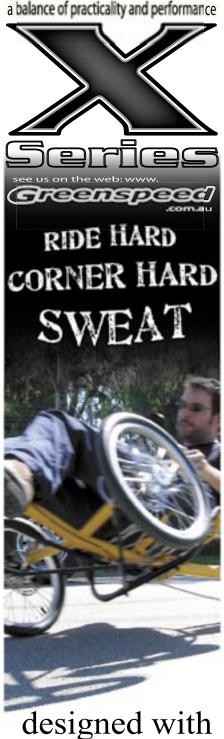
John: In fighting trim (fenders, rack, bottle cage, mirror) it weighs 35 pounds.

Mary: This is not a featherweight bike. I weighed the bike with the fenders and rack and came up with 37+/- pounds on a bathroom scale.

### **COMPONENTS**

The components are mostly in line with the cost of the bike. The drivetrain is SRAM X-4/4.0 and Shimano Sora with an RPM road triple crank.

Mary: The shifting is smooth. I like the SRAM twist shifters with easy-to-read indicators for the gears. The shifting had to be adjusted once after initial cable stretch, but it worked perfectly



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Bacchetta's John Schlitter in the recommended riding position

otherwise.

John: The SRAM twist shifters and derailleurs work fine, and the 1:1 cable pull gives seems to keep the shifters and derailleurs in adjustment more while riding in the Northwest winter weather. It's real easy to change cables with no tools, since the cable end is at the corner of the grip (not under a plastic plate like the older SRAM shifters). The off brand crank and rings do the job without any complaining. Shifting is crisp and solid.

### **GEARING**

The Café comes with an RPM road triple 30/42/52 and an 11-32 8-speed cassette. The gear range is 23.7-119.4 gear inches. Both of our testers found the stock gearing adequate. For those who want lower gearing, this 74mm/130mm crankset could easily accept a small chainring down to 24-tooth and middle to 38-tooth.

John: The stock gearing is fine for me. I consider myself to be in relatively good shape and can get up all the hills around Portland with a gear or two to spare. Enough gearing for the downhill as well.

Mary: The bike's low gears handled the hills in Minneapolis nicely, and I didn't run out of gears riding downhill.

### CHAIN MANAGEMENT

The Café has Bacchetta's trademark X-path idler system. The power side of the chain goes under and the return side goes over. The system works well and is reasonably quiet, but the X-path system has a bit more friction due (mainly due to power-side of the chain under the idler).

John: The chainline is good in stock form,

and is aesthetically pleasing. It resembles other Bacchetta models. I'm sold on the after-market TerraCycle idler. It works real well and is long-lasting. I have them on my Corsa and on my carbon homebuilt highracer and have had no issues so far. Of course the Bacchetta idler works fine, and it might be silly to have such a costly upgrade to a \$995 bike, but I consider the cost worth it as our Northwest weather really takes its toll on parts, especially idlers.

Mary: The chain runs open along the boom, so this is not a bike for loose clothing. It seemed a bit close to my right leg, but it didn't actually get in the way or catch on anything.

### **BRAKES**

John: The Alhonga V-brakes are less than perfect. It would be nice to see better quality Tektro or Avid brakes. Perhaps this isn't possible at this price. Lately I have been experiencing the death squeal from the brakes. I have adjusted the toe-in of the pads, added lube to the brake posts, and prayed to the V-brake gods with no success. I am swapping the pads tonight to Koolstops in an effort to restore my sanity (they have been squeaking for two days).

### WHEELS

The Café's wheels are machine-built in Taiwan and neither tester reported any difficulties with them at all. Our recommendation is to have the tension checked by the selling dealer, and again after 100-200 miles.

John: So far no issues with the wheels. My commute has a spot or two that is a short run of gravel and rough pavement, and I don't slow down to much, and they are still running true. I have had one flat, but that comes with the territory. The tires are Kenda Kwests with

a tread pattern (non slick) in a nice width for commuting. I run them at 100 psi, but they can be run at a lower PSI giving an even smother ride given their volume. I will be trying lighter road tires this week.

#### TIRES

The Café comes with Kenda Kwest tires, which are excellent all-around tires and an RCN favorite.

### **UPGRADES**

John: I have swapped the stock riser and stem for the shorter fixed Bacchetta riser and "tweener" bars (just like the Strada, Corsa and Aero) — big improvement! I have also installed Shimano bar-end shifters (running in friction mode) along with an Ultegra rear derailleur. I've also equipped the bike with a standard rear rack, fenders, lights, and a mirror. I plan on swapping the mesh ReCurve seat for a hard shell for comparison.

### **ACCESSORIES**

Bacchetta offers three different seat back bags (Big Bag, OFA (One for All) and Brain-Box) and a fender seat. Which bag you can use really depends on how much you recline your seat. Bacchetta makes a mid-ship rack and a petite rear rack called the Back Rack. TerraCycles also makes a mid-ship pannier rack.

The best choice for hauling cargo on the Café is probably an under-seat rack or a two-wheeled trailer such as a Burley Nomad.

Mary: Bacchetta recommends against the use of one-wheeled trailers. Despite having been warned that handling might be poor, it wasn't. The Café pulled the trailer and handled 33 pounds of groceries (some in panniers and some in the trailer) without affecting the handling. However, it's hard to use the BOB trailer's skewer because the kickstand mount gets in the way on the left, and the derailleur cable interferes on the right. Trailers that require a rear triangle to hitch to won't work at all. I also tried a milk crate bungeed to the rack, with a pannier attached to the back of the crate. It's an arrangement that doesn't destabilize my LWB, but it had a noticeable effect on starting with the Café: the steering felt twitchy until the bike was moving. There also wasn't much room on top of the rack when the seat was reclined. This is not a bike for carrying big loads.

### VALUE/RESALE

Value for the Café is exceptional. Despite the fact that medium wheelbase (MWB) recumbents haven't been that popular historically, this is a sub-\$1,000 Bacchetta and should be quite popular.

### COMPARABLES

There are very few MWB recumbents. The closest bikes are the Bigha and the HP Velo Spirit.

### RECOMMENDATION

John: I think this bike can be a great first bent. It's not as fast as some highracers or a Tour Easy with fairing, but performance improves with upgrades that can be added to the bike over time, making the bike a solid performer and a good value. Unlike other entry-level bikes, this bike can last a while before the user outgrows it. I also plan on making this my winter training bike, somewhat mimicking the Corsa in riding position with a hardshell seat.

Mary: The Café's easy handling and maneuverability make it a good fit for commuting and riding around town bike.

**NUMBERS**: Wheelbase: 57"; Seat height: NA; Weight: 32 lbs.

FITS: Normal proportioned riders 5'2"-6'2" (taller riders in very reclined position only)

**WEIGHT LIMIT**: 275 lbs. (Rider and gear)

FRAME & SEAT DETAILS: Frame: Chro-Moly TIG-welded steel. Fork: TIG-welded ChroMoly unicrown. Chain idler: Bacchetta X-path. Seat Back: Aluminum frame with mesh. Seat Base: Foam with cover. Handlebar: Aluminum. Stem: Alloy. Color: Red.

COMPONENTS: Rear derailleur: SRAM X-4. Front derailleur: Shimano Sora. Shifters: SRAM 4.0 twist. Crank: RPM alloy with steel rings 30/42/52. Bottom bracket: ISIS Gigapipe. Cassette: SRAM 11-32 8-speed. Chain: KMC Z72. Brakes: Alhonga V-brakes. Brake levers: Alhonga. Hubs: NA. Rear rim: Alex DA 16. Front Rim: Alex DA 16 28°. Wheel build: machine. Tires: Kenda Kwest 26"/20" X 1.5" 100 psi. Pedals: Wellgo LU 975 ◆

### THANK YOU

We'd like to offer special thank you to our testers: Mary Arneson, and John Climaldi, and to Calhoun Cycle in Minneapolis, Minnesota for supplying Mary's test bike. www.calhouncycle.com.





John Climaldi's personal Café with Bacchetta shell seat, fixed riser and tweener bars

### **EDITOR'S COMMENTS**

By Bob Bryant

We had a Bacchetta Café here for a few days last September. Sadly, I could not get an adequate leg extension on the bike without reclining the seat all of the way back (see photo on page 8). Since I'm at the outside edge of the fit range (6' tall and 44.5" x-seam), we decided to recruit additional road testers to help us review this new model.

The build quality and sum of the Bacchetta parts is very good. We had a few component problems. The cheap-looking Alhonga V-brakes squeal (Bacchetta plans to update the brakes) and I broke the SRAM front twist shifter (an internal detent broke off making it unable to shift to the middle chainring) and the gearing may be too high for riders in hilly areas.

With the great price point and Giro quality frame, something had to give, and it was components. Clearly, choices were made to get the cost down. Our RCN tester, John Climaldi, has some great ideas for upgrades. I think this would be ideal for a 155mm crank with some lower gears (see RCN 091).

The Café has a very unique front end and steering geometry. The head tube is very laid-back and the fork is longer than similar forks. I can't recall another recumbent like this. It's like a laid-back long wheelbase steering geometry

on a short wheelbase. The steering and handling seems a bit floppy at low speeds, but was fine at cruising speed. The fold-forward stem works well, and the bars are more user-friendly than the Bacchetta "tweeners." The laid-back geometry and riser/bar setup is somewhat ungainly when you're off the bike. I expected heel/front wheel interference but didn't experience any on my brief ride. However, larger tires and/or certain fenders may bring this on.

Some riders may not find the suggested very-reclined seat position ideal for riding in city traffic. When laid back, it can be more difficult to see, glance around, or be seen. Some riders will find this riding position just too extreme. It really is a more aggressive road/sport position than an entry level riding position. Medium height riders can place the seat more upright (as some dealers are doing). The most important factor in determining if the Café will work for you is whether you're comfortable with the recommended riding position.

The Café could be an ideal entry level sport, recreational, or bike trail commuter recumbent. The medium wheelbase (MWB) makes it more compact, which is well suited to apartment dwellers who just can't own a long wheelbase (LWB). The Café will most certainly outperform and climb better than most CLWB (compact long wheelbase, à la EZ1-style) bikes, it may be more user-friendly than a SWB and is lighter, more compact and should climb better than similarly priced LWB machines. So if you're looking for a more affordable High Racer style riding position, or just want a bargain priced Bacchetta — the Café could be it.

**FOR**: Fantastic value; excellent entry-level Bacchetta; unique look and feel; more user-friendly than first appears.

**AGAINST**: Some mediocre parts (brakes, crank and shifters); gearing range is high; very reclined position not for everyone; probably doesn't need fold-forward stem. ◆

# **MY BIKE: A Lightning F-40**

### My Practical Production-Made Streamliner

By Wally Kiehler wkiehler@comcast.net

**BIKE**: Lightning F-40 (P-38 with fiberglass nose and fabric body)

**PRICE**: \$5,400

CONTACT: www.lightningbikes.com/f40.htm

"For racers and high-performance enthusiasts, the record breaking fully-faired F-40 can't be beat. In fact it holds some 12 world speed records." — Lightning Cycle Dynamics

peed can be additive. Last year I saw a used Lightning F-40 for sale on the Internet. These bikes are very rare. They have been around for over 15 years and only 200 were made. Having owned and raced four very different recumbents since 1992, I was feeling the "need for speed".

The four other 'bents that I've owned are a Linear LWB/USS, a Lightning P-38, a RANS Velocity Squared (V2) and a Bacchetta Strada.

Last December I drove from Detroit to Cincinnati and purchased the F-40 after a two-hour test ride. After riding a P-38 exclusively for five years, I knew that I liked the upright seat position. In recent years I have tested the popular "low racers" but was uncomfortable with the extreme laid-back seat position. I felt that I had to strain my neck to hold my head up so that I could see where I was going, and the head rests I tested would make my head bounce with every bump in the road. I also did not feel safe riding a low racer in automobile traffic because my head was below the car window and I did not think that drivers could see me.

Before I talk about the performance of this bike let me speak a little about how it's built. The F-40 is basically a P-38 made into a streamliner. The fiberglass front nose cone fairing has aluminum tubing supports. These supports attach to the front of the bottom bracket with hose clamps. When changing a P-38 into an F-40, the bottom bracket has to be sent to Lightning so that a "fairing mount tube" can be welded onto the bottom bracket to support the weight of the nose cone. Lightning will do the welding and will repaint the bottom bracket.

The tail fairing is made and welded from lightweight aluminum tubing. There are four clamps for attachment to the mesh seat and two plastic brackets for attachment to the rear drop-outs.

Stretchy spandex material connects the front nose cone to the rear tail fairing. It attaches to the nose cone with heavy duty Velcro and is sewn perfectly to fit around the rear tail fairing. The spandex totally encloses the rider on the top, sides, and bottom except for the neck and head. There are only three openings in this spandex, for the rider's head, the rear wheel and the front wheel. Heavy-duty zippers are strategically placed to allow the rider to enter and exit the vehicle in less than a minute. Since the bottom of the F-40 is totally enclosed, there are two "slits" just below the rider's feet for use when the vehicle has to come to a stop or when starting from a stop. (I have learned how to pace myself when coming to a red light so that I do not have to unclip my pedals and put my feet down.)

My F-40 is built on an older 1991 P-38 chassis. The serial number 166 means it was the 166th P-38 made. The second owner of this 'bent purchased the F-40 fairing and front shock four years ago. I'm the third owner. The components are almost entirely original. 21-speeds. Barend shifters. 16" (349) front wheel. 700cc rear wheel. Everything still works fine. Eventually when things wear out I will replace them with newer technology.

There is one problem that I had to correct. This P-38 came with a 24/46/50 crankset and a seven-speed 12-32 cassette. With the F-40



Wally and his F-40



The F-40 is a P-38 chassis with a fiberglass nose cone (front) and aluminum body work (rear)



The F-40 from the rear

fairing I would "run out of gears" very easily at around 25 mph. I never experienced this problem before with any of my earlier 'bents. I changed the crankset to 32/46/56 and now have plenty of gears to take me as fast as I can pedal "in the flats." I will still "run out of gears" with a strong tail wind or a slight downhill, and I am planning to change to a 11/32 cassette. This gearing is what the newer F-40's run and should be sufficient for me.

Performance-wise, I've never experienced any 'bent like this. I used to average 16-17 mph on my normal local ride on my recumbents without fairings. Now I average 21-22 mph. That's about a 30% increase in average speed. Also this year I have only been passed twice on the road. Both were stronger MHPVA (Michigan Human-Powered Vehicle Association) club members riding their faired low racers.

Friends know that I have purchased and sold 'bents for years and only own one bent at a time. So what I own has to be used for everyday riding, touring, and HPRA (Human Powered Race America) racing. The F-40 gives me the best of all worlds. I can ride safely in traffic (and be easily seen). I can store lots of cargo inside the tailbox. And I can race with the streamliners in the HPRA Racing Series. And if crosswinds become

too dangerous, I can remove the spandex and store it in the cargo box. This 'bent really fits my needs.

And yes. Speed is addictive. ◆



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### **ROAD TEST: HP Velo Street Machine GTe**

TITLE: Euro Style Laid-Back Touring BIKE: HP Velotechnik Street Machine GTe

PRICE: \$2,199

CONTACT: www.hpvelotechnik.com

By Bob Bryant

P Velotechnik builds some world-class recumbent bicycles. They specialize in European-style laid-back, full-suspension touring bikes. We recently tested the Street Machine GT, which is the ChroMoly steel version of this bike. The GTe is a more refined and updated version of the GT — in aluminum. The benefits are a lighter frame, choice of under-seat steering (USS) or over-seat steering (OSS) and a smoother-running drivetrain (thanks to a new large-diameter chain idler).

**USE**: The GTe is a dedicated touring SWB recumbent. This bike is at its best loaded up on for an epic pedal-powered adventure.

**SEAT/COMFORT**: The BodyLink seat is the best-engineered and most comfortable of the European style shell seats. The seat base and seat back are separate parts, and each can be adjusted to provide maximum lumbar support and no "pressure points." The stock seat pad is poor and not that comfortable. The Airflow pad is a must for this bike, but adds to the cost (\$109). I managed to strip out a proprietary seat mounting nut that rotates inside a tube in the frame. I didn't notice it until the new owner found my glitch. HP Velo was wonderful about sending a replacement part immediately.

**RIDING POSITION**: This is a laid-back bike. The seat angle is 35° and will adjust 5° in either direction. A headrest is a MUST for me with this recline angle. The HP Velo headrest is simple and bolts right onto the seat. The problem is that it really works best when you ride WITHOUT a helmet (a big taboo and illegal in some parts of the US). If you ride with a helmet, you can feel the lower section of your helmet resting on the headrest.

Some riders (perhaps 10% of recumbent riders; me included) may experience toe/foot numbness with a BB this high. This is truly a bike designed for those who love to be laid back.

The riding position is not very user-friendly for urban riding and around lots of cars. It's also difficult to get accustomed too. Some riders just love these bikes and other riders don't get them at all — it's a bike you really must test ride first.

**RIDE**: The GTe is all about ride quality, not so much speed. The No Squat suspension works great, and is super plush, as long as you carefully select the correct shock for your weight and intended load. The USS is relaxing and comfortable to ride, but the direct steering makes low-speed maneuvering difficult.



Our GTe in the meadow a few miles from Port Townsend, WA

**PERFORMANCE**: All the fancy and well thought-out touring racks, gear and plush front-and rear suspension come with a weight penalty. The bike is rather heavy, and gains weight fast if you add touring options. There are some lighter weight options to keep your GTe trim. Even set up in trim form, the GTe isn't a super fast bike. It likes to glide along taking in the world, offering a magic carpet-like ride.

**FRAME**: The large diameter 7005 T6 heat-treated aluminum frame is stunning. Ours was finished in a beautiful metallic Dormant Orange (something was lost in translation here, I think). Anyway, the bike is beautiful. The frame is made for HP Velo in Taiwan, and painted and built in Germany.

The aluminum frame also has a bolt-on rear derailleur hanger. This protects you in case you snap your derailleur hanger off the bike (frame replacements can be expensive).

The bike is adjusted for rider size by a telescoping boom, which means when you get the bike set up for you, leave it alone. Changing the boom for different size riders is a big hassle. The GTe was designed as a USS bike, but an optional OSS TerraCycles FlexStem setup is available.

WEIGHT: The GTe can get down to 33 pounds if you order it with the DT-Swiss rear shock, Meks Carbon AC fork, XT-upgrade, new HP Chain wheel disc instead of crash guard and standard EVA foam seat cover. Unfortunately, the bike gets heavier when you add the touring options.

**SUSPENSION**: The GTe has 2" of front suspension travel, and 3.75" of rear suspension travel. That said, the GTe offers a very smooth SWB ride. There are three springs: one for

riders under 183 pounds; one for riders under 230 pounds; and a third for riders under 275 pounds. The heavier spring is an option (\$29). A DT Swiss SSD225 super light air shock is also available and saves 200 grams in weight (\$290). You can also upgrade your front shock to a fancy MEKS Carbon AC (\$169).

New for 2006 is the Spinner Grind2 suspension fork. Meks discontinued the A11 and AC forks so the Spinner is the new component (see at www.spinner-usa.com).

The GTe differs from the GT in that it comes standard with direct USS, but can also be ordered with a TerraCycles Glideflex OSS unit as well (\$149). The bike was designed for USS, and OSS is an added option that will work best for slender riders who don't might the old "begging hamster"-style steering.

**COMPONENTS**: The components are actually weak for this price point, but the value of this bike is in the high-quality frame, seat and suspension. Menu upgrades allow you to improve the drivetrain. The stock component is a SRAM DualDrive 24-speed (three-speed internal hub plus eight-speed derailleur), SRAM twist shifters and a Tracer 39-tooth single chainring crankset.

The DualDrive is a three-speed internal hub mated to an 8/9-speed cassette offering 24 or 27 gears at the rear wheel. The #1 gear is a 27% reduction, #2 is a 1:1 lockup, and #3 is a 136% over-drive. The over- and under-drive have some added internal friction. The most efficient of the gears is #2. The DualDrive works well, removes the triple crank, but adds the complexity of a non-standard part to the mix.

You can order a GTe with a straight 27-

speed (nine-speed cassette plus triple crankset). The upgrade includes a 27-speed with a Tracer triple crank (155mm or 170mm) and either Deore/Tiagra (\$79) or Deore XT/105 derailleurs and an 11-34 9-speed cassette (\$179).

HP Velo offers only one hub set for this bike, a Quando hub branded as HP X-Light. According to HP Velo, "It's a high quality hub with cartridge sealed bearings, a super light aluminum axle and a reliable freewheel — and it is light."

GEARING: The stock DualDrive gearing includes an 11-32 eightspeed, and a single chainring Tracer crankset 39-tooth, with a gear range of 22.63-122.4, which is a bit high for a loaded touring bike.

CHAIN MANAGEMENT: The GTe chain travels through low friction PTFE chain tubes (Polytetrafluorethylene used in teflon). The power-side of the chain rolls under a large-diameter idler. Chain tubes can wear out, but are more durable than you'd expect. HP Velo chain tubes are very high quality

BRAKES: The stock brakes are Avid V-brakes and levers. There are also several brake upgrades including Magura hydraulic rim brakes (\$179), Avid disc brakes (\$179) and even special discs for the Rohloff hub (\$90).

WHEELS & TIRES: The bike ships with Schwalbe Marathon slicks, but Stelvios, Marathon Slicks, or Big Apples can be installed for a small premium.

UPGRADES/ACCESSORIES: There are many, many ways to customize this bike beyond belief, including, a fairing (\$399), Avid disc brakes (\$179), Magura hydraulic discs (\$229), Rohloff hub gears 14speed (\$1149), dynamo lights (\$139-\$339), etc. Download the complete .pdf upgrade list from the HP Velo website.

Our bike was fairly basic and came outfitted with a rear rack (\$109), short (155mm) crank arms (\$59), Airflow seat pad (a must; \$109), kickstand (\$19) and SKS Bleumels fenders(\$49). These fenders are better than anything out there except for Sykes wooden fenders from Angletech. An under-seat rack is also available (\$119).

VALUE/RESALE: The Street Machines are a bit soft on the resale market and resale value is lower than for other bikes. The reason for this is that expensive options can dramatically raise the price of the bike, and options seem to depreciate faster than the bike itself (at least initially).

COMPARABLES: Challenge has similar SWB USS machines, and the most similar bike is the HP Velo Street Machine (steel). The GTe is just a tad lighter, a tad stiffer and has a better chain idler. Other than that, it's your choice between steel and aluminum for the frame.

**RECOMMENDATION**: While the GTe is a more refined GT in aluminum and is definitely an upgrade in components, steel is still preferred by tourists and bike traditionalists everywhere. However, you don't really notice any better ride quality with the steel GT since both the GT and GTe have such smooth rides. Aluminum frames are popular, trendy, look great and they are a bit lighter than steel.

The GTe is a very high-quality European style SWB touring recumbent; not a bike for afternoon jaunts, but for real self-contained adventures. Not everyone will adapt to the laid-back position and hard-shell seat for touring. With this bike, people either "get it" or they don't, and there isn't much in between. It's not a recumbent with mass appeal. It's a specialized machine for unique individuals. That said, HP Velo is a great company and attention to detail is found in every aspect of every model in their line.

FOR: Super plush suspension, very comfortable ride, high quality build, paint and attention to detail, excellent wheel build, lots of great options to customize

AGAINST: Some components just okay (crank hubs & stock brakes), DualDrive not as popular as it once was, menu options can make for an expensive bike, chain tubes wear out

NUMBERS: Wheelbase: 41"; Seat height: 25"; Bottom bracket height: 27"; Weight: 33 lbs.

**FITS**: Riders from 5'4" - 6'7".

FRAME, SEAT DETAILS: Frame: 7005 T6 Aluminum rear suspension. Fork: Spinner Grind2 suspension. Seat: Fiberglass shell with foam mesh. Chain idler: Power-side oversize HP Velo, return-side chain tube. Handlebar: HP Velo USS alum. Stem: HP Velo alloy. Color: Orange or Silver; custom available (\$119).

**COMPONENTS**: Rear derailleur: Shimano 105. Front derailleur: Shimano Deore. Shifters: SRAM DualDrive/5.0. Crank: Tracer alloy 155mm or 170mm 30/42/52. Bottom bracket: Token cartridge superlight hollow axle. Cassette: SRAM 11-32 eight-speed. Chain: SRAM. Brakes: Avid linear (V). Brake levers: Avid. Headset: Aheadset. Hubs: HP X-Lite (Quando cartridge). Rear rim: 26"x1.5 Alex DA16 36°. Front rim: 20"x1.5" Alex DA16 36°. Spokes: Straight gauge DT SS. Tires: Schwalbe Marathon 100 psi. Pedals: Platform/clipless. ◆



The GTe is also available with over-seat steering as an option.

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## **Road Test: 2006 WizWheelz TTC**

TRIKE: WizWheelz TerraTrike Cruiser

**PRICE**: \$1,299 + shipping **CONTACT**: www.wizwheelz.com

By Bob Bryant

he TTC TerraTrike Cruiser is the newest and lowest priced trike in the Wiz-Wheelz line. It's basically a TT 3.6 with an imported ChroMoly frame and lower-line components; but the deal is not just good, it's great. WizWheelz has refined the TT 3.6 over several years before introducing this more affordable version. The mission of the TTC is "Affordable Comfort," and to provide a trike "great for just cruising around." The verdict: Mission Accomplished, and incredibly well.

**USE**: The TTC is NOT a performance trike, a tourer or a commuter; it's a recreational tadpole trike. However, this same basic geometry is the basis for other WizWheelz models which are more specifically set up for sport riding or touring.

**SEAT/COMFORT**: The TTC seat is more upright than most other tadpole trikes, AND the seat recline angle is easily adjustable. This is a rare and excellent option for first-time trike owners or those experienced riders who would rather ride in a more upright position. The seat mesh is soft and comfortable, and is more comfy than many seats for me.

The seat position adjusts via bolt holes through the main tube. The seat has a triangular plate underneath with multiple holes. The bolt and nut are a bit clumsy, but do the job. Keeping the bolt tight is very important. The adjustment is not infinite (like a telescoping boom), but a lot easier to use (than a sliding boom). I've always been able to find an acceptable leg length adjustment.

RIDE: The TTC has THE most compliant ride of any (hard tail) trike we know of. The monotube frame design (big main tube, no trusses or triangles), suspension in the seat and fat low pressure tires make for a very soft ride. Even if you upgrade to 100 psi tires, the trike still offers a silky ride. This isn't the best-handling or fastest trike, but it's a great all-arounder. I rode it on varied terrain including gravel rail trails and hard pack wide singletrack and it handled everything with ease. It's perfect for those who like to ride on varied terrain.

**PERFORMANCE**: High speed handling is NOT the TTC's forte. The 40 psi tires are relatively slow and the non-trussed frame has passive suspension. The ride is smooth and comfy, but this makes it a bit of a handful on descents over 20 mph. This is a casual bike trail cruiser. You could certainly speed the trike up by installing some Kenda Kwests or Primo Comets, but I still wouldn't feel comfortable



A January morning on the Kai Tai Lagoon trail (ground is frozen) in Port Townsend, WA

on fast rough road descents, on busy streets or on our rough local roads.

**FRAME**: The TTC and TT Tour frames are TIG-welded overseas for WizWheelz using ChroMoly tubing. Both models also share the same frame, steering assembly, and seat assembly. The frame design and geometry are based on the previous TT 3.6 model (tested in RCN 088). The fabrication quality is fine — while not the finest I've seen. I didn't notice any differences between the US-built and imported frames.

**STEERING**: The TTC has linkage underseat steering. The bars are adjustable fore-aft for optimum angle. The bars are stiff and the steering is as solid as can be. The steering geometry is not the best steering geometry available for stability and handling, but it's decent and works well. The stock lower pressure tires seem to make the bike more comfortable at low speeds, but not as stable or predictable at higher speeds.

**WEIGHT/LIMIT:** The TTC is fairly light for an entry-level, steel-framed tadpole. Ours weighed 39.5 lbs. with fenders, rack and pedals. The TTC can handle 300 lbs. of rider and gear.

**COMPONENTS**: The component choices on the TTC are mostly very good for a \$1,300 tadpole trike. The crankset, brakes and derailleurs have been downgraded from last year's TT 3.6 (now called the TT Tour). The TTC has SRAM twist shifters instead of Shimano barends; Unique disc brakes instead of Hayes; and a Sora/Altus drivetrain instead of Tiagra.

The TTC comes with 170mm RPM cranks with steel rings. Better cranks have alloy rings (at least in the middle and outer). RPM cranks are new to the recumbent scene, and the crank and the all-black generic triple look great. If

you're considering short cranks, check out our article in RCN 091, and make sure to allow for the extra inch or so in x-seam when you make the change.

The Shimano Altus rear derailleur is rather low end, but shifted great and even looks good. Since you're saving so much money on this trike, you can upgrade when it wears out a few years from now.

**GEARING:** The TTC has near PERFECT gearing for an entry level trike. The road triple works great with a 19.5" diameter (RCN measured) 406mm 20" wheel. The TTC has an 11-34 eight-speed cassette and a gear inch range of 17-92. You can climb hills at walking speed and pedal up over 20 mph if you care to. Perhaps low by modern bicycle standards, but not low once you've ridden the TTC. What we're not crazy about is the long crank arms, but that is solved easily enough.

CHAIN MANAGEMENT: Like all Wiz-Wheelz trikes, the TTC has a double power-side and double return side idler system (X-path rear and both chains under the front idler). Wiz-Wheelz' designer Jack Wiswell has sacrificed some efficiency (added friction in the system) and drivetrain smoothness in favor of aesthetics by having the chain run parallel and just under the frame, from crank to rear wheel. The WizWheelz idlers are improved over previous versions. However, the pleasing aesthetics put more stress on the idlers which could make for a shorter life. A serious WizWheelz rider should carry a complete spare idler set (\$60), or perhaps even consider an aftermarket TerraCycles idler set (\$108 aluminum cog/\$122 in Titanium

**BRAKES:** Our TTC preproduction test trike came outfitted with Hayes mechanical disc brakes. These worked great on our 2005

TT 3.6. Production TTC's will have "Unique" brand mechanical disc brakes. I've never heard of them, nor have I tried them. WizWheelz will stock replacement pads and rotors. Replacement disc kits are for \$20 for each brake. Upgrading to brand-name disc brakes usually costs about \$100 per brake (at your local dealer).

The thing you never read about in trike reviews is brake modulation. With independent disc brakes on small wheels, the rider has to carefully place equal pressure on each brake lever. If you don't you can veer and even lose control. This could be a very dangerous situation in traffic or at speed. CAUTION is the key word. Ride your trike (or bike) only as fast as you feel safe crashing (my new motto).

**WHEELS:** The TTC has machine-built wheels that are imported and are the same as those on our TT 3.6 spring 2005. We had no problems with these wheels.

TIRES: WizWheelz ships the TTC with fat "CST" 20" 1.75" tires. At just 40 psi, these are comfortable tires that offer good stability and offer sure-footed handling for new riders. For a fairly basic tire, they are of good quality, actually round, seat well on the rims and have a reflective safety stripe around the sidewall. Those wanting a more performance oriented tire might consider Schwalbe Marathons, Kenda Kwests or Primo Comet 1.5" tires.

**UPGRADES/ACCESSORIES:** WizWheelz has a complete list of accessories including a rack, flag, trunk, seat bag, mirror, fenders, bottle cages, tires and even a stationary trainer (for 20" drive wheels).

The WizWheelz Planet Bike fenders (\$100) are simple, but can be time-consuming to install and there isn't much clearance over the stock fat front tires. Here are some tips: 1. Use Locktite on the fender struts and plastic threads. These little wheels cause vibration that makes the fender mounts come loose (particularly on our rough roads). 2. Cold set (bend) the fender struts (remove the plastic nut and bend the strut into position, and then retighten).

I ride on rough roads and the front fenders tend to vibrate and dance around at times, sometimes uncontrollably and I have to reach out and grab them. I finally just removed the front fenders and ran without them. WizWheelz is working on new fenders (which should be available now) with longer stays and better clearance over and around the tires. (This may not solve the vibration problem on rough roads). WizWheelz is also studying a more rigid mounting method (which is the ultimate answer).

The Old Man Mountain rack (\$65) fits this trike perfectly and worked great. We also got to try the WizWheelz panniers (\$90 for the pair) and rack top trunk bag (\$65). All are great and are recommended options. The one minor glitch is that the rack top trunk is longer than the rack, and so you have to be creative when attaching the Velcro straps. While not the best bicycle gear, it's priced right, works well and is convenient to buy for your new trike. The WizWheelz two-piece flag (\$20) looks great, but just one little plastic clip holds the flag onto the pole. I was certain mine would fall off, so WizWheelz told me to use some Shoe Goo to fasten it to the

pole. I'm familiar with Shoe Goo (a great way to fix over-the-hill and beloved shoes), and it should answer the flag problem.

You can also get a Schlumpf Speed Drive two-speed bottom bracket (\$500). This is a fine option, but not really suited for this entry-level model.

VALUE/RESALE: The resale on this model should be very good as the value is so high. The downside to any trike's resale is that if you can't sell it locally, you'll have to ship it; and that can cost as much as \$100 if you strip the trike down to the bare frame, or double or more that cost if you ship it fully assembled in the original box. (WizWheelz trikes come fully assembled in a giant box.)

ASSEMBLY (direct purchases): For those who purchase from WizWheelz and order the TTC fully assembled, here is how it goes: Randall at WizWheelz emailed me the tracking number and link via email. A few days later a semi truck rolls up to my house and unloads this gigantic box. I had the box open and put the trike on my work table. I mounted the seat, attached the rack, the rear fender struts and the front fenders to the struts. I checked the brakes and derailleurs and everything was set A-OK from the factory. I installed the flag, did a test sit and went zooming out the door in less than one hour (mostly spent on front fender installation).

Despite the excellent job WizWheelz does in making assembly easy for new owners, you should learn to do basic indexed shifting adjustments. After a few miles the cables will stretch





Our TTC on the road



Note custum fitting, rear X-path chainline and seat-cap bag (works great, but very small)

# Coventry Cycle Works

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2025 SE Hawthorne, Portland, Oregon 97214 Tel. 503/230-7723 www.coventrycycle.com and you'll have to turn the shifter barrel adjuster one half turn (at a time, then test) to tighten up the cable.

WizWheelz sells both direct fully assembled trikes, or through dealers. A local dealer is highly desirable for such tasks as wheel tension after breakin. The WizWheelz website (www.wizwheelz.com) has a list of dealers

COMPARABLES: The TT Tour, a/k/a last year's TT 3.6 (\$1,899) has a similar frame geometry, the same wheels, but upgraded components. The TTA (\$1,999) or Access is a similar trike with lighter (-2 lbs.) and stiffer aluminum frame. The HiTen steel Sun SX tadpole (\$1,125) weighs 49 lbs.; the CX ChroMoly (\$1,495) weighs 47 lbs. I have yet to ride or test either Sun tadpole. The most affordable Catrike is the very lightweight Pocket (\$1,750) that weighs just 27 lbs. It uses a rather odd size 18" 355mm wheel and has direct steering (no linkage like the Sun, WizWheelz or Greenspeed models). The Actionbent tadpole (\$1,395) is sold direct from the distributor, with extra charges for shipping and set-up. I haven't seen this trike, but be sure to check out the shipping and set up costs. (Trike set-up is NOT recommended for the meek or uninitiated).

**RECOMMENDATION**: WizWheelz has outdone themselves. Everything we wrote about the TT 3.6 last season goes for the TTC; only the components have been downgraded. This is the best entry-level bargain tadpole trike available. A WizWheelz trike that weighs under 40 lbs. for under \$1,300. Wow! This is the highest-quality trike at the lowest price-point that we know of. If you want better shifters, brakes and other parts, go for the TT Tour. Having not tried the new brakes, it's difficult to comment. However, my advice would be that if you don't care about getting the bar-end shifters on the TT Tour, take a chance on the new brakes. The WizWheelz trike are not the fastest or best-handling trikes we've reviewed, but they are the best first tadpole trike. They offer unsurpassed seat comfort, seat adjustability and value for the money.

**FOR**: Excellent value & quality; rides just like our 2005 TT 3.6; sliding seat & adjustable recline; great warranty and guarantee.

**AGAINST**: SRAM Grip Shifts; extreme chainline/chain management (idler life?); no-name brand disc brakes; low performance tires; tendency to "dance" at speed.

**NUMBERS**: Wheelbase: 39". Width/track: 34"/31.5". Seat height: 9.5". Weight: 37 lbs.

FIT: 39"-49" X-Seam in three sizes. The TTC uses three different fixed boom lengths and the seat slides for rider adjustment within size ranges. (For definition of X-Seam measurement, check: www.wizwheelz.com/xseammeasurement.htm.)

**FRAME & SEAT DETAILS**: Frame: 4130 ChroMoly TIG-welded steel. Chain idler: Double power-side and return side skate-wheel type idlers. Seat: Aluminum frame with breathable mesh (back & base). Handlebar: WizWheelz USS. Stem: WizWheelz. Color: Michigan blue.

COMPONENTS: Rear derailleur: Shimano Altus. Front derailleur: Shimano Sora triple. Shifters: SRAM MRX Comp twist grip. Crank: Alloy 30/42/52 triple. Bottom bracket: Square spindle cartridge. Cassette: Shimano Mega-Range 11-34 eight-speed. Chain: KMC Z. Brakes: Unique mechanical disc (two front). Brake levers: Promax. Hubs: Shimano Alivio. Rear rims: WizWheelz 20" 36°. Spokes: 14g stainless steel. Wheel build: WizWheelz machine-built. Tires: CST 20" x 1.75". Pedals: Platform. ◆

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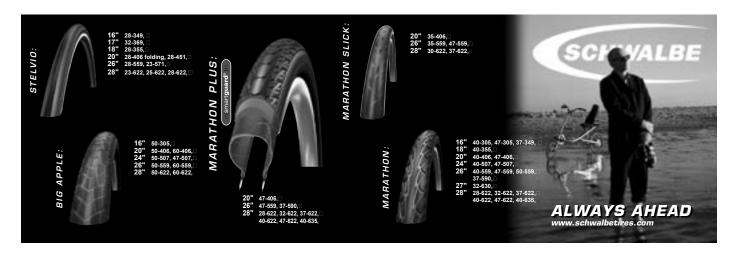
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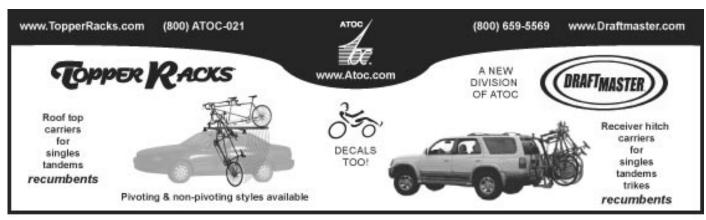
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## **Road Test: Easy Racers Fold Rush**

TITLE: THE FOLDABLE SPEED BIKE BIKE: EASY RACERS FOLD-RUSH

**PRICE**: \$3,995 + shipping

AS TESTED: \$4,487, shipped + local taxes

CONTACT: www.easyracers.com

By Bob Bryant

he Easy Racers Gold-Rush — designed by recumbent legend Gardner Martin — is one of the most respected recumbents ever to grace the pavement. This sweet bike's unique combination of light weight, stiff frame, recumbent comfort, sleek aerodynamics and user-friendliness has made it a favorite for years.

The Fold-Rush is a rear suspension and folding version of the venerable Easy Racers Gold-Rush Replica recumbent. The front section of the frame is the same as a Gold-Rush, but the rear end has a pivoting rear triangle that folds under the frame and an elastomer rear shock absorber that allows a small bit of travel (an inch or so) and makes it possible to fold the bike for easier transport.

USE: This bike can be used for almost anything except perhaps off-road riding. I didn't even try to take our test bike off the pavement. The Fold-Rush is offered in SS (sport) and EX (touring) versions. The main difference is the brakes and the front wheel size: the SS has a 451mm front wheel and Shimano 105 side-pull brakes; the EX has a 406mm front wheel and SRAM 9.0 V-brakes. Easy Racers says it sells three EX models for every two SS models sold.

**SEAT/COMFORT**: The Koolback seat is lightweight, well made and comfy. The seat base comes in two sizes and has three layers of laminated foam: two layers of open-cell and a top layer of closed-cell. According to Easy Racers, the closed-cell is less likely to soak up moisture. This is undoubtedly the most well thought-out recumbent foam seat base available.

The riding position is upright and some riders do complain about recumbent butt. Easy Racers has said that this goes away for most riders. I had not ridden an Easy Racers bike in a few years and I did experience some minor discomfort. The problem is that my XL-sized hiney put me into a position where I was too far forward on the seat, and I needed an extra inch or two between me and the seat back.

Since the Easy Racers seat base does NOT adjust in relation to the seat back like the Sun seat does, the only way to adjust for this is to loosen the seat cord — which is a hassle. Easy Racers' Ron Bobb said that the seat base foam could have been recontoured to improve my fit and that they will do this for customers.

While Sun's seat is more adjustable (the



Our 2006 Easy Racers Fold Rush test bike

seat base moves in relation to the back, and the mesh has adjustable straps), the contoured and layered Easy Racers seat foam is superior to Sun's.

SEAT MOUNTS: The Fold-Rush's Koolback seat utilizes four homely little hose-clips for mounting, and has perhaps THE most complicated seat mounting system I've seen on a recumbent. While the hard tail Gold-Rush has clamps at the rear dropouts to hold the rear seat braces, the Fold-Rush can't utilize this system because you can't attach the seat braces to an active suspension swing arm. Easy Racers solves the problem with two additional rods (one on each side). One starts under the seat base (a small cross tube intersects the top tube). The rod comes back beside the front along side the swing arm. The other comes upward from the swing-arm bolt. The two rods intersect and bolt together with a seat brace clamp in between.

The Fold-Rush has a different seat base mount, but is not quick release. It's a half-round machined clamp with two Allen bolts and a centering bolt (that helps to level the seat base). The seat is a bit more difficult to mount and adjust because of the extra seat brace mounts and leveling seat base, though the system works fine.

**RIDING POSITION**: Easy Racers bikes feel best with the seat back very upright. It's great for pushing against and provides ultimate Easy Racers performance. If you recline the seat too far, it feels like you've sucked the power out of the position. If you prefer a more laid-back seat, this isn't the bike for you.

**RIDE**: The ride of the Easy Racers Gold-Rush is legendary and never fails to leave a grin on the rider's face. The Fold-Rush ride is elegant and refined like a Gold-Rush, but



The Fold Rush suspension, swing-arm and seat braces (swing arm bolt/hinge is where lower brace attaches)

smoother due to the suspension. The front end geometry is trademark Easy Racers with graceful handling that tends to pull you in and out of the corners like you are on rails. There is a "magic groove" to the steering of an Easy Racers bike that is just as "right" as it can be.

**SUSPENSION**: The Fold-Rush has a bolt-on rear swing arm, and an elastomer suspension inside the top tube of the frame. This is a very simple suspension. Some of the pieces are not as refined as you'd expect from a mainstream suspension bike. Keep in mind that the Fold-

Rush is really hand-built, and definitely not mass-produced.

The suspension isn't bouncy. I detected no pogo, but it is active. I tried the medium elastomer, but also had a heavy duty elastomer here. This might have helped for climbing, but would have taken some of the comfort away. The suspension takes the edge off small bumps in the road (estimate 1" of travel) and makes the ride more pleasant. It doesn't work so well over larger bumps (like speed bumps) because it can't react fast enough; nor does it have the travel of a bike like the HP Velo Street Machine or the Burley Spider. The ride of the Fold-Rush is definitely more comfortable than the hard tail Gold-Rush.

**PERFORMANCE**: As with most recumbents, the fastest points of speed are the flats and descents. With the stiff aluminum frame, 700c rear wheel, big gears and fairing, the Gold-Rush is in a league by itself. Add the body stocking and the performance makes the bike beyond compare. I haven't tested any bike faster than a Gold-Rush with a body stocking. I'm certain that a lowracer or highracer can be faster for some, and certainly lighter; but the Gold-Rush's performance is user-friendly and nearly anybody can handle one.

In contrast, the Fold-Rush is a bit slower, perhaps more similar in performance to a Tour Easy. It's a bit heavier than the hard tail Gold-Rush. On the flats it may be slightly slower due to the weight. On anything resembling a descent, the Fold-Rush is as fast as any Easy Racers bike I've ridden.

**CLIMBING**: On climbs the Fold-Rush was definitely slower than the hard tail Gold-Rush, but certainly no slouch. My theory is that it's the additional weight, suspension and that the frame is just less torsionally stiff than the hard-tail Gold-Rush. More of a concern to me was the crank/front fender interference.

A Gold-Rush can be a very fast climbing LWB if set up properly. For me, this would mean less crank/fender interference (shorter crank arms and a 406mm front wheel) and a smaller middle chainring. The reason for this is so you can stay in the middle chainring longer before dumping into the granny 19" low gear and losing all of your speed.

FRAME: Fold-Rush frames are built in up to nine sizes at Easy Racers by Roberto Villanova who has been welding Easy Racers frames since 1993. The Fold-Rush frame is, by far, the most complicated of the Easy Racers frames. The frame integrates a simple suspension system and swing arm for easier transportability, but the seat mounting is much more complicated than a hard tail. The frame is quite something to behold. I was amazed to see how they could support the seat back so well without coming into contact with the swing arm.

Easy Racers fabrication quality has always been top notch, and the Fold-Rush is no exception. Despite the high quality of the build, the



The folded Fold-Rush — Easy Racers



The swing arm and elastomer Photo courtesy of Easy Racers

finish details are not as good as they could be. While the frame seemed perfect dimensionally, the weld beads were not as machine-like and even as they could be. (This is purely an aesthetic detail: robotic welds can be more perfect, or you need a perfectionist welder with an artistic flair and one who wants his weld beads to look perfect.) The black powdercoat looks fine, but the natural aluminum polished frame option (\$100) is gorgeous! The black frame will be more difficult to keep clean on a per-ride basis. The natural aluminum will require polishing. When I had mine, I polished it about once per season. I have never cared for the head tube sticker. A bike this fine deserves a real head badge. (Angletech models have them.)

Most aluminum uprights and recumbents have a bolt-on rear derailleur hanger. This is in case the hanger gets bent or broken off. The Gold Rush and Fold Rush have a fixed derailleur hangers that is part of the rear dropout. Easy Racers' Ron Bobb said that only four have broken in the history of Easy Racers and that if broken off, they can weld a new one on under warranty.

The threaded Spinner fork is the best looking fork in the recumbent biz. Spinner has made Easy Racers forks as long as I have been writing about Easy Racers bikes. The downside of this fork on the SS model is that the ugly V-brake studs are still there and capped off (the benefit of this is that you can use either a 406mm or 451mm front wheel and either type of brake

without changing forks).

HANDLEBAR/STEM: The Easy Racers bars are narrower than the Sun handlebars and certainly narrower than the RANS chopper bars. The benefit is that they are more aerodynamic and work well with the optional fairing. We have seen a photo of and Easy Racers with RANS chopper bars (Angletech). The Fold-Rush stem is a very basic quill style aluminum riser stem. Easy Racers is not using a threadless system because they lack an easy vertical stem adjustment.

**WEIGHT:** Easy Racers can definitely handle larger riders. Easy Racers says the bike will handle a 300 lb. rider and they will build bikes for heavier riders. SS models are ¾-lb. lighter than EX models, and a Fold-Rush is 1-¼ – 1-¾ lbs. heavier than a Gold-Rush. Our size large test bike weighed 33-½ pounds with fenders and pedals but no fairing; 35.2 lbs. with pedals, kickstand and fairing; and 36-½ pounds when we added a TerraCycle Tailsock and light kit.

COMPONENTS: The components on the Fold-Rush are everything they should be. The Ultegra/XT/XTR derailleur is excellent. SRAM twist shifters are standard, but Shimano barends or Rapidfires are available (\$25). While you all know of my disdain for twist shifters, they do work best on this bike. The size large Fold-Rush comes with 175mm cranks, which are too long for me; 170mm cranks are available. According to Easy Racers' Ron Bobb, Easy Racers is studying shortened crank arms and may offer them in the future (see RCN 091 for more info).

**GEARING**: The Fold-Rush comes with a 24/42/52 Ultegra crankset. The gear-inch range is 19.3-129.4 (based on a 27-3/8" rear wheel diameter). This is a fast bike that can use this gearing. If anything, perhaps I'd change the middle 42-tooth to a 39-tooth. With a body stocking, you can use the high gear, perhaps even higher. With the more complicated frame, we had some chain slap in the 34-tooth cassette cog (in the middle or inside chainrings).

CHAIN MANAGEMENT: Like all Easy Racers models, this bike has a spring-loaded mid-frame mounted chain idler. The chain idler has the appearance of a rear derailleur cage. The spring-loaded idler allows for very wide-range gearing and takes in more chain slack than any other idler system. The Fold-Rush drivetrain is slightly noisier than the standard Gold-Rush. This is because the idler is more forward on the frame.

**BRAKES**: Our Fold Gold SS came outfitted with a Shimano 105 dual-pivot front brake and a SRAM 9.0 rear V-brake. I would have preferred dual pivots on both ends (I love these brakes), but that isn't an option on the Fold-Rush. One downside to the bike is that if you order a side-pull front brake (an option on the SS), the unsightly V-brake stud is left intact. If you choose the rear disc option (\$150), the rear

V-studs are left intact. No front disc brake option is planned.

WHEELS: The Fold-Rush wheels are hand-built at the Easy Racers factory. The stock wheels are 32°. The front wheel is radially laced. I'm usually not a fan of radial lacing, but having ridden thousands of miles on Easy Racers bikes with no front wheel problems, it's a fine choice for most riders. Very heavy riders or loaded tourists may want to pass on the radial spokes.

I was initially concerned about the rear 32-spoke 700c wheel (I usually need a 36-spoke rear wheel), but I had no problems. The hubs are Shimano Deore XT, one of my favorite hubs, and provide a perfect mix of performance and value.

An optional heavy duty 40° rear wheel is available (\$90) as are Velocity Uriel paired-spoke wheels (\$60). Easy Racers' Ron Bobb rides with the Uriels and has 5,000 miles on them with minimal problems. Ron says these are for riders under 200 lbs. and they are not for touring.

**TIRES**: The SS stock tires are IRC Roadwinner 700c x 28 and a Roadline 451mm 20". The EX tires are 700c x 37 and 20" x 1.5 Kenda Kwests. Our bike had the optional Schwalbe Marathon 700c x 35 and a 20" 451mm Stelvio front (\$24). In retrospect, the 35mm rear tire seemed a bit too wide (tight clearance).

UPGRADES/ACCESSORIES: I chose the Sun seat bag (\$45) only because it was the only non-rack option for hauling light cargo. This is a fine bag, but I miss having an outside zipper pocket. HostelShoppe makes an Easy Racers seat bag (\$85) that carries 800 cubic inches of stuff and has an outside zipper pocket. The HostelShoppe catalog also shows a handlebar bag (\$20) as well as other bags that may fit Easy Racers bikes. The Angletech Aerotrunk (\$185) holds an amazing 2850 cubic inches of junk and is also a performance add-on (and it looks great).

Don't buy an Easy Racers bicycle without a fairing. The Super Zzipper (\$279) was designed FOR the bike. The downside is that fairings are tender and scratch easily. I stopped at my favorite coffee shop on Christmas Eve and it was blustery. I turned my head for a minute or two to pour a cup of coffee, and the bike was blown over onto the ground. This dimpled and scratched the fairing over a 4"-square area. Ouch!

The quality of Zzip Designs Super Zzipper fairing was better than our previous fairing that had glue oozing out of the edging in a few spots. Edging is the trick with these fairings. It's difficult to put on, and even harder to keep it on. It comes off easily if you try to pull it off. (Don't try; you'll be sorry.) Despite the excellent job Zzip does of packing, ours had one small rough spot on the lexan (about ¼" x ¼").

We also ordered the Easy Racers carbon-fiber fenders (\$128). They are super light and look great. The mounting hardware appears delicate; they are expensive; and the clearances are tight. They are also best suited for skinnier tires; in my opinion, up to 32mm rear, maybe 35mm in some cases. The front fender also is a very tight fit over the tire and the stock 175mm crank arms would touch the front fender over the 451mm front wheel. During my test rides I had a few instances where I could detect interference: the first was an easy 90° turn, and the second was on a steep climb where I was slaloming to keep my balance. The best way to solve this is to opt for the 170mm or shorter cranks and the 406mm front wheel.

VALUE/RESALE: Resale is difficult on such expensive bikes. With the 2006 price increase, resale will suffer further. Typically, Easy Racers bikes hold their value better than most.

**FOLDABILITY:** For me, the folding feature on the bike is really secondary to the rear suspension. Owners will enjoy the suspension on every ride, but the folding feature is best suited for those who travel with their bikes by car or plane. Perhaps the swing arm will allow the bike to fit into a smaller car for travel, but it will still require a fair amount of fussing to regularly fold this bike. It's still a big bulky package and there is no factory bag or travel box for the bike.

If you want to use this as a real travel bike, the Angletech Transit Case is a MUST (\$400). Your Fold-Rush can fold into a bag that is 45" x 33" x 12". We've also been told a Fold-Rush will fit into a Crateworks box (www.crateworks.com).

**COMPARABLES**: There are no other folding LWB recumbents; however, you can order a RANS with S&S couplers. Bike Friday offers the newly redesigned and much more compact Sat'RDay Mk II SWB that fits into a suitcase. Greenspeed offers the GT- and X-series folding trike. ICE just introduced three new folding trikes as well. As for rear suspension, Burley offers the Spider (see RCN 091) and Nasoke which offer a much longer travel suspension, but isn't in the same galaxy performance-wise. As for aluminum LWB performance machines, RANS offers the V2 Formula and Formula 26 (the new dual-26" model).

**RECOMMENDATION**: What I love best about the Easy Racers bikes is the care with which they build them. It takes forever to unpack the bike, but it goes together so smoothly.

Our Fold-Rush SS size large came with a 175mm crankset and a 451mm 20" front wheel. Had I known about the crank/fender clearance issue, I would have ordered the EX model (406mm 20" front wheel and V-brake) and a 170mm crank (or shorter if it becomes an option).

The Easy Racers models are ideal bikes for shorter riders because of the 63" wheelbase size small frame. I guess it's a great bike for anyone, as there are up to nine frame sizes per model, making Easy Racers the best-fitting recumbents available.

Testing the Fold-Rush reaffirmed my admiration for the Easy Racers Gold-Rush — a very special bike that would be on my list of the five best recumbents made. Testing the Fold-Rush made me want to start saving my nickels for another Gold-Rush. I haven't been into performance riding in some time, but this bike would change that. I kept thinking about blowing away all of those snooty local roadies who don't seem to like recumbents. The Gold-Rush is "a magic bike," and if you need or want a rear suspension, or a frame that packs up smaller — you now have that option.

**FOR**: Renowned Easy Racers handling; excellent component specs; high-quality seat; and sweet ride.

**AGAINST**: Added weight & complexity and slightly reduced performance (compared to hard tail model); V-brake studs are still there when not in use; hose clamp seat mounts; lack of a bolt-on derailleur hanger; and it's very expensive.

**NUMBERS**: Wheelbase: 69" (size L). Seat height: 22". Bottom bracket height: 13". Weight: 31-32 lbs. (factory weight/no options).

**FIT**: 6' rider, size large (43.5" x-seam, shoes off; I was just forward of the center of the adjustment range). There are several sizes fitting a wide range of riders, more so than any other LWB made. More sizing info: www.easyracers.com/X\_Seam.gif.

**FRAME & SEAT DETAILS**: Frame: TIG-welded 6061 heat treated aluminum. Fork: Threaded Spinner chrome-plated ChroMoly with V-brake studs (and sidepull brake bridge). Chain idler: Easy Racers. Seat Back: Aluminum frame with mesh. Seat Base: Foam with lycra-type cover. (Cobra fiberglass seat is optional.) Handlebar: Easy Racers. Stem: Kalloy Hi-Rise quill type. Color: Black or polished aluminum (+\$100).

**COMPONENTS**: Rear derailleur: Shimano XTR. Front derailleur: Shimano Ultegra. Shifters: Shimano 5.0 twist. Crank: Shimano Ultegra 24/42/52 triple. Bottom bracket: Shimano Hollowtech sealed. Cassette: 11-34 nine-speed. Chain: SRAM PC 58/59. Brakes: Tektro alloy linear. Brake levers: Tektro; Hubs: Shimano Deore XT. Rear rim: Mavic Open Pro 32°. Front Rim: Sun 28°. Spokes: Wheelsmith stainless steel. Wheel build: Easy Racers. Rear tire: IRC Roadwinner 700c x 28. Front tire: Roadline 451mm 20". Pedals: Wellgo platform. ◆

Caption opposite page: The TerraCycles Tailsock frame and light kit. Note that the Firefly light is pointed into the seat back area. This causes the entire neon Tailsock to be illuminated at night. The light mount will also hold a rear facing flasher.



TERRACYCLES TAILSOCK

By Bob Bryant

f you want to make your Easy Racers Fold-Rush extra-cool looking and perhaps a bit faster, check out the TerraCycles TailSock kit .(\$179). Pat Franz sent us one to play with. I had it on the bike in 45 minutes. Ours was bright neon yellow (I love it!) with the optional Firefly light kit (\$18). This kit can hold both a tail light as well as a light inside the Tailsock which makes the sock glow — very cool. The feather-light aluminum frame (280 grams total weight) fastens to your seat/frame with four mounts. The frame is totally adjustable via parallel tubes that extend with a hex bolt clamp. TerraCycles reports performance gains of 4-10% increase in speed, 2-4 mph at 40 mph or 10-20% less effort from their testing on several bikes. The Tailsock seemed to increase my speed on the flats and downhills (at faster speeds), but I didn't do any scientific testing over this wet and blustery December testing week. Your experience may vary (some are arguing the performance benefits).

Installation on the Fold-Rush has to be one of the more difficult ones, but it was a total breeze. The Tailsock fits on Easy Racers, Sun, Bacchetta, Burley, Volae, Lightning, Sun and Cycle Genius mesh back seats and some shell seats.

TerraCycles makes some of the best aftermarket recumbent parts available anywhere. The only downside is that it makes cargo hauling more difficult. On the Fold-Rush, a handlebar bag and frame bag will be best for incidentals. TerraCycles makes an underseat rack for Easy Racers bikes (they strongly believe the cargo weight should be kept low). You can mount a rear rack and place a rack-top bag under the Tailsock. This would require removal of the sock to get at the bag, which takes 15 seconds.

What I liked best about the Tailsock was the excellent improved visibility of the illuminated neon material. This was the most fun aftermarket accessory I've tried in years, it's high quality, has a cool look, and is easy to install. For more information, check out: www.terracycle.com.



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# **High Racer Blues**

By Mike Stern

recumbent odyssey. Like many, I have been intrigued by the mystique of the High Racer with its promised rewards of higher speeds, better climbing, lighter wheels and a road bike feel. I studied the excellent photo montage of Volae's Rolf Garthaus on the evolution of man on a bike, ending with the High Racer aero tuck position. I finally made the plunge, securing the new aluminum Bacchetta Corsa, outfitting it with more user-friendly begging hamster bars (the same bar/stem setup RANS uses on the Screamer: B-26 handlebar, B-27 riser).

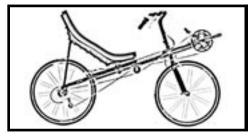
It was a close choice between the Corsa and the comparable steel-framed Volae but the Corsa won my vote because it was slightly lighter, slightly lower, slightly quieter, and slightly mysterious with its all-black design — and because my local shop had the medium frame bike in stock. Outfitted with an M5 Euro shell seat, I was ready for the road.

True to its reputation, the bike climbed exceptionally well, comparable (in my experience) to the Lightning P-38. It also was very fast, particularly considering the engine. Once at speed, I could cruise all day in the high teens with little effort. The hamster bars made starting and stopping a breeze, and while the riding position wasn't as natural as on my other bikes, it didn't present a significant problem once I became accustomed to it. The first two weeks were a honeymoon.

However, reality began to set in after the honeymoon. While starting and stopping wasn't a problem, and while I could get a foot down flat on the pavement (a pretty good accomplishment for someone 5'7" tall), keeping the other foot clipped in made for an "extreme" resting position, like a modified split: one foot down, one foot way up. I was also leaning forward in the seat when coming to a stop in order to carefully put my foot on the ground, and because the high handlebars obstructed part of my view of the road in front of me, I had to be very careful about when and where I stopped. (I experienced this with the stock "tweener" handlebars as well.) I often found I was discovering hazards too late and had to go through them rather than swerve to avoid them.

Because of my higher center of gravity I didn't feel as "connected" to the bike. My reactions on the High Racer were not as intuitive because I was perched higher, and had to correct more for conditions at a slower speed.

Most important (perhaps because at my height, I'm at the low end of the recommended size scale), my weight distribution was off and the rear end of the bike seemed twitchy, less solid and more apt to swing out on me. Most of the weight of the Corsa is in the front end,





so having the rider sitting back is critical to keeping that rear wheel solidly planted during turns. But because of my height (and even after shortening the cranks slightly), I was too far forward on the frame to provide enough stability. The result was that my overall ride experience was not as solid as with my other, more conventional, recumbent set-ups. I haven't fallen in 7,800 miles on my 26/20 Barcroft Virginia; on the Corsa, I fell in a patch of gravel at a very slow speed within the first 100 miles. And more than once on a roadway that was damp, but not wet, the rear wheel slid out, requiring me to make a quick correction to avoid another spill.

The goal of moving to the High Racer was increased performance. But if the price of increased performance is diminished stability and the risk of falling, I'm not sure it's much of a bargain. It's great to be screaming up hills but it's not much fun to feather the brakes and ride very carefully on the downhills in order to compensate for any change in road conditions. In the final analysis, the main benefit of the High Racer came with too many negatives for me.

This is not a condemnation of High Racers generally or the Corsa in particular. The Corsa's stiffer aluminum frame and M5 seat, while not cushy, were certainly comfortable. The bike performed well under controlled circumstances. The steel-framed Volaes did the same thing when I test-rode them. Both bikes are backed by solid, responsive companies. But my experience suggests that the low-end height limit for these bikes needs to be raised to make sure that the bikes have enough rearward weight bias to keep the rear wheel solidly planted. Perhaps someone of my height who weighs much more (I weigh 175 pounds) wouldn't have the same problem. Perhaps I am an anomaly (although my x-seam of 40 inches seems to be about average for my height). But looking back on what I encountered, I would recommend those under 5' 10" make sure the bike fits appropriately before buying.

If you buy a Volae you buy it from one source, the manufacturer. You provide them your measurements and they set up the bike accordingly, based upon their own criteria on how the bike should be set up. Theoretically therefore, the same people are applying the same criteria in the same place so the chances of a uniform result are high. By comparison, Bacchetta relies on a large number of geographically diverse dealers and there is a greater chance of having different set-up criteria, or having those criteria applied in a different way. All bikes will be set up the same way by a particular dealer, but one dealer may set the bike up differently than another dealer. For example, Bacchetta had to issue a notice to its owners and dealers explaining that some bikes had the chain path reversed on the idler, with the drive side chain being routed to the outside channel rather than the inside channel. That wouldn't happen with Volae since the all the bikes will be set up by the same people and, presumably, in the same way.

For those who own the High Racers and love them — more power to you. Nothing stirs my imagination as much as being passed by those elegant High Racers, riders pumping mightily to turn up the performance. To Volae and Bacchetta, keep on inventing, tweaking and being successful. But for this experienced recumbent rider (seven-plus years of riding, more than 20,000 recumbent miles), I have transitioned back to where I (and believe other similar small- to medium-sized riders) belong, to the more traditional smaller-wheeled set up. If I want larger wheels I can look at the P-38 and Easy Racers with 700c rear wheels, or the Stratus XP with its dual 559 set up, but with a longer wheel base and lower bottom bracket. But trying to fit me into the High Racer category seems to be the proverbial square peg in a round hole. I will leave it to those physically taller (and heavier ?) than me. And doing so seems to again demonstrate the true strength of recumbency: that in this bicycle segment there is something for everyone. •

Editor's Note: The views and experiences published here are those of the author. High Racers work well for many riders, especially taller roadie types who are interested in lightweight, aerodynamic, performance recumbents. We've heard nothing but good things about the Bacchetta Corsa, and the new Euro mesh seat is said to be very comfortable and an improve-

ICE 2006: ICE has redesigned their "budget" trike line for the new year. The new models are a "T" for touring, "Q" for quick, "Q NT" for narrow track, and "S" for speed. The new trikes have a steel mainframe mated to a heat treated aluminum boom and an aluminum swing arm — with an elastomer suspension. The suspension is very similar to the Birdy folding bike (www.r-m.de) using your choice of three different elastomers to tune the suspension.

As you can see the trike folds quite compactly, down to 46.5" long x 24.8" wide x 14.6" high.

The new trikes component group is Sturmey Archer drum brakes, a Deore rear derailleur, Micro front derailleur, Micro twist shifters, 27speeds, a Campy Veloce triple crank rolling on Kenda Kwest tires. The weight of the new trike is 36 pounds (no pedals or accessories), according to ICE.

The price on the new trikes is approximately \$2400 US, and the cool rack is an additional \$120. Many other options are available and listed on the ICE website at www.ice.hpv.co.uk.



The new ICE S



The ICE Q folded



ABOVE: The cool looking new rack is around \$120 US. Note the custom rear swing arm and elastomer suspension (elastomer doughnut is hidden).

LEFT: The new ICE Q

LOWER LEFT: The new ICE T

ment in overall ride quality. While I haven't ridden the aluminum Corsa, we did review the previous steel Corsa model in RCN 082, and

from both of your clipless pedals (at a stop) is recommended while you are learning to ride your new high-racer.



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had many good things to say about it. I also believe that shorter riders really need to test a High Racer to make sure they feel safe and in control at all times, and are able to easily place their feet flat on the ground at stops. Unclipping

Dynamik is very adaptable — just like a Swiss Army knife. My hat is off to Randy and the team at RANS.

John J. Shade

### **CF: ZENETIK & TOWNIE**

I purchased a RANS Zenetik and Electra Townie 21 last year. My prior bikes for the last five years were a Catrike Road, Tour Easy EX, RANS Tailwind and a BikeE CT. After the Catrike I felt I knew what I wanted in a bike: light weight, comfort, speed, better climbing and high end components. The Zenetik met those needs, I purchased the Townie for commuting since I could not trash an expensive bike commuting. My daily fun and fitness ride is a 6.5 mile loop around a lake on a smooth road with several grade changes. The two bikes were quite different for me. The Townie wasn't as comfortable as the Zenetik (once adjusted).

I commute in work clothes and my commute round trip is six miles on flat roads and the Townie works well for this. My previous commuter was a RANS Tailwind and I had wet back issues due to the seating on a bent. I've been looking for another form of transport and the Townie price was right. The Townie on it best day is not a performance bike, with the Zenetik you just don't want to stop the ride. Both are user friendly but the Zenetik is more so due the RANS seat and its adjustability. I can't wait until you do the Dynamik Duo Tandem, it's on my wish list. I hope you continue to cover these bikes in future issues — and continue publishing for another 15 years.

David (via email)

### NOT RELATED TO RECUMBENTS

I enjoyed reading RCN 091. I would like to say that I think it was a good idea that you brought this new type of bike to our attention — but I did not appreciate you spending a major portion of this issue on a bike that is not remotely related to a recumbent.

Wally Kiehler

### CF ISSUE SHOW STOPPER

My wife and I are in our early 60's and recently returned to biking as the only exercise we find enjoyable. We used inexpensive comfort and recumbent bikes last year and were planning on buying more expensive recumbents next season. We subscribed to RCN to learn more about recumbents and were considering a touring trike. However, your coverage on the CF Bikes was a show stopper! The articles were useful and thought provoking. Please continue reporting on this class as it applies to your enthusiast audience.

James Glatt

### CF DON'T LOOK RECUMBENT

I'm certainly glad you did the article(s) about Crank Forward bikes

because I never would have found out about the trend otherwise. And I'll continue to renew even if you run the occasional article about them, but I do not care to learn more than I did from this article. It sounded extreme to me when I heard another shopper at Mt. Airy Bicycles say it as I was looking around, but I cannot think of a reason that would make me buy anything but another recumbent. And the CF bikes don't look recumbent to me.

The anecdotal evidence you all have for short cranks may indeed be truly valid. I was lucky enough to be a test subject for a crank length study back in the days when my bike was an upright. A group of Masters students in Physical Therapy measured our personal bicycles and us. I never realized before how crooked human legs are. Then we were instrumented and given a tube through which to breathe. Each of us rode an almost infinitely adjustable stationary bicycle that was configured just like our regular bicycle. They measured VO2, heart rate and a host of other metabolic indicators while we maintained a steady cadence. They gave us three crank lengths to see if we used less oxygen with any of them. The crank lengths were much closer than the 180 mm to 155 mm changes you all are suggesting. Their results were entirely inconclusive. They could find no correlation between any sets of variables that were worth reporting. I hope this is not too cranky — pun intended.

Iim Getaz

### **CF QUACKERY**

It don't quack and it don't look much like a duck, so it must not be a recumbent. I love your reviews on RECUMBENTS and my vote would be to stay with that.

Jim Aylor

### CF MAINSTREAM

RCN 091 was very informative. I enjoyed the CF 101 and Bicycle Miles per Gallon by Chet Rideout as well as your sidebar: Bike Transportation — very interesting. I always have thought the broad (theoretical practical) aspect of RCN as it's strength. And thus coverage of Crank Forward is right in the mainstreaming of what RCN is about: the attempt to make bicycling practical, comfortable and as such ubiquitous. I applaud your vision, I mean Fusion.

Rufus Hellendale

### RANS ZENETIK

I enjoyed RCN 091 on the RANS Fusion and other Crank Forward ("CF") bikes and I bought a Zenetik last year to ride in the frostbike circuit. Six miles out my butt started to complain. The RANS seat is fantastic — just not padded enough. Ronnie Hendershott at RANS suggested some closed cell foam, and I found a nice blue "picnic on the ground" seat pad at REI. Five minutes later, it was tied into the seat and my hindquarters thanked me.

The ride of a Zenetik ride is as close to a road bike as you can get. The



handling is so much better than my former Aero, Gold Rush, Vision and P-38. RANS geared the thing too high (sound familiar), so I switched out the cassette and installed a 24 tooth granny gear. Voila, it now climbed real hills!

I began to train on the Zenetik and I got all the way up to about 80 miles per day, and the Zenetik was doing great (as was I). I rode a metric century to train, and there were no problems. I also bought and tried a fairing for the bike. I never timed the bike with fairing on and off, but it didn't seem to make much of a difference in speed.

Overall impressions: The Zenetik is a great bike. It handles like a DF (diamond frame or upright bike), has the world's most comfortable seat (except for a true recumbent), and is flawless in fit and finish. I only wanted three things I didn't have:

I recently sold my 650C Zenetik and ordered a new 700c model (I plan to outfit it with drop bars). I also sold my Gold Rush. Soon I'll be down to one bike — a 700c Zenetik. I heartily recommend it to anyone who is now riding an upright (DF) bike with a sore back or sore rear end. You won't regret it.

Dick Lieberman

### SHIMANO BAR ENDS

I Love your publication, it's loaded with lots of great stuff! I have one question: I note that you love the bar-end shifters as you mention in many reviews. I've gone to three different mechanics and they all say the same thing — you can't use these with SRAM derailleurs. Can you help me understand this?

Steve Wark

Editor's Comment: Shimano bar-end shifters must be used with Shimano rear derailleurs. So when you change your shifter, you must change the derailleur as well. The SRAM shifters are nice because they shift fast, sometimes too fast. The downside, they can be weak. I broke a brand new SR4 SRAM shifter on the

test stand.

### **QUIETING THE VOLAE IDLER**

For those who would like to quiet their Volae drivetrains, I have placed two rubber plumbing O-rings on both sides of the idler cog in the (rear idler). The O-rings need to be about 2" in diameter and very thin. I've ridden about 500 miles with them in place. I'm sure they'll need replacing eventually, but the difference is remarkable.

Andrew J. Melnick

Editor's Comment: An O-ring might be a short term fix, but O-rings are easy to install and replace.

### **CF TOWNIE**

Thanks for the article by Miss Amy Bryant on the Electra Townie. I have a Townie 3 with about 550 miles on it and a Townie 21 with over 2,000 miles. These bikes are ridden in the beautiful Texas Hill Country, just across the river from where Lance Armstrong trains. After avoiding three very abrupt near collisions with my neighbors one morning, I parked my well-used mountain bike along the side the road and gave it to the first person who wanted it. I wanted to live to ride another day. My son spotted an ad in Bicycling Magazine for the Electra Townie. I tried one out and found that I had great visibility. Also the "flat foot technology" or crank-forward let me come to a complete stop without dismounting. The small town where I live has one stoplight, numerous stop signs, and many intersections, the Townie is safe to ride. One day a cat dashed out in front of me and I made a safe panic stop from 30 mph.

My conclusion about this "comfortable" type bicycle is that it is safe and fun to ride. I would expect that the RANS Fusion would be similar. Electra and RANS seem to be on the right track.

Roy Reinarz Jr. •

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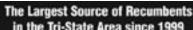
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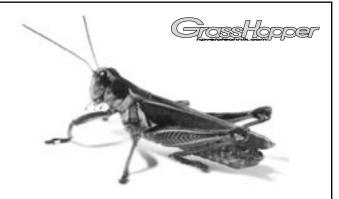
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