

Zzipper[®]

Road Fairings



Streamline Your Dreams!

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Cost \$2.00

The Problem

To create a device to reduce the effective frontal area on a bike. At 30 mph 90% of the cyclist's energy is spent overcoming his own frontal area. An airfoil shape allows the air to flow smoothly over the riders body, and reduces the C_D (coefficient of drag). Such a product must include:

1. High clarity
2. Easy on and easy off
3. Help in head winds
4. Light weight
5. Withstand crashes
6. Adjusts vertically
7. Go faster!



Zipper...



Shown above: New flat-topped Presto-ZZ and mount system.



...Is the Answer

A clear, lightweight wind screen made of bullet-proof Lexan® (GE) Polycarbonate Plastic! Lexan® is the same material used in armored cars and drive-up tellers. The strong lightweight mounting system consists of 1.5 inch wide velcro straps with epoxy coated aluminum brackets. Easy to remove, the Zipper fairing actually rolls up for ease of transport.

Testing is an ongoing process, starting with a bike, fairing and a commuter, riding year round. Even though wind tunnel tests can provide valuable data, real asphalt roads, and strong winds (tacking around at all angles) give the designer a better feel of the more sensitive ground effects associated with low speed vehicles. Thus another new Zipper fairing is born.

FRONT COVER PHOTO: Bernard & Francoise Magnouleux at North Kapp, Norway with Ryan-ZZs through a blizzard.

Zipper ZZ-T



*Toured the U.S.A. west to east,
3,400 miles. Photo courtesy of
Harry Johnson.*

*Original Zipper Fairing Patent.
Design Patent No. 248,638.*

You can see from the original patent that the road bike fairing went down a lot lower in the front. This was streamlined in making the Zipper T in 1981. The old style Zipper is still available on request however it should be noted it is close to the brake levers! The standard ZZ-T comes in the .060" thickness Lexan® before thermo-forming. Weight is about 10 ozs. It is designed to flex in cross winds and reduce some of the side forces directly on the steering



axis. The thicker version of .080 Lexan® is much more rigid and quieter. It weighs 3.3 ozs. more. This is recommended for tandems, especially, since they usually have wider bars. Here are a few comments from a very satisfied customer:

“The mounting instructions are clear and easy to understand. It doesn't take a rocket scientist to set it up. It took less than 10 minutes.

The ZZ-T has increased my average speed and maximum speed. It has been great at keeping me warm this winter. I have experienced no handling problems and the noise, (what noise?), has been so minimal. Of course the fairing is engineered to provide you with the lasting quality and built-in durability of something you will enjoy and never regret purchasing, not to mention the increased visibility you have in traffic.

If you're serious about cycling, get a Zipper today and become **STREAMLINED!** Thanks for a great product Karl! ”

– Jeffrey S. Saas, Sevierville, TN

Weight	Dimen.	Taper	Mounts
.060 -14 oz.	22.5" wide	straight sides	epoxy coat
.080-17.3 oz.	15" top-bot	in at top	or T-bracket

Zipper Thriller



"Thriller" Fairing.

A larger alternative to the Zipper-T for road bikes and Hybrids. Basically a 40" super Zipper with longer wheel well cut out. Our tests show a 2+ mph speed increase at 25 mph. Other advantages are weather protection, high rider visibility (especially at night with a light) and shielding from most road debris.

Lower mount is a bent aluminum T-5, strong, road tested type mount with a neoprene/stainless clamp. Will not rust or damage the paint. Easily on/off with a 6 mm wrench for the top two clamps and wing nuts down below.



Zipper Thriller with body skin attachment.

“I've just been out on a cold November day on my old tourer fitted with Zipper Thriller. It was great! Almost as good as riding a recumbent! I was very impressed...”

—Patrick Shaw,
Future Cycles,
England

Weight	Dimen.	Taper	Mounts
2.75 #	40" long	18" at top 15" at bottom	10.5" T-bracket

S Zipper Super



"Fast" Freddie Markham riding World Champion "Tour Easy" by Easy Racer's Inc. with specially designed Super Zipper, (photo courtesy of Sharper Image).

The super Zipper was designed in conjunction with Gardner Martin, Easy Racer's Inc., back in 1984, as a larger alternative to the existing E-Z (smaller handlebar) fairing. At a full 44" horizontal length and 19.5" width at the handlebars, it offers greater weather protection and higher streamlining at under 2#. 10% speed increases are common compared to no fairing at all. Many aircraft enthusiasts comment on the high clarity of the bubble!

The standard Zipper Fairing and the full-length Super Zipper Fairing can be purchased directly from Easy Racers, (they can be contacted at (408) 722-9797), or from Zip Designs.

Other long wheelbase recumbents with upper handle-bars can accommodate the Super Zipper. Upper T-bracket set (T-6061 AL.) with 7/8" diameter steel clamps and lower aluminum tabs support longer fairing. This can fit the Linear (w/bars), Rans Recumbents or home built Tour Easys.



Shown on Rans Recumbent.

Weight	Dimen.	Taper	Mounts
1.75 #	top 19.5" wide	bottom 12"	8" T-brackets

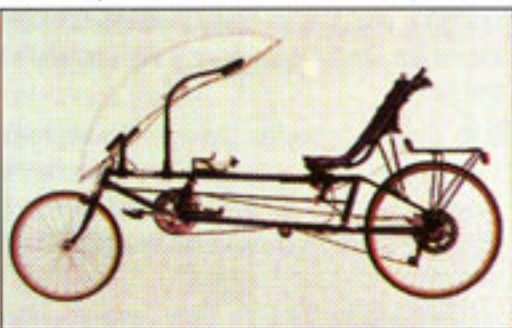


Zipper leading 70 riders through notoriously wind-swept Livermore-Fairfield section—San Francisco Bay "Go Green-Belt" ride. Danny Ray Burdick shown at the helm of "Sasquatch", his Zip-equipped Ryan Vanguard recumbent bike.

R Zipper Ryan

This fairing is made of the stouter thickness .080 as requested by Dick Ryan. Very quiet and with little flexing it has been thoroughly tested. The fairing adjusts vertically in the rear so the riders eyes are just over the top. The front can be adjusted as well to just clear a light.

The black anodized mount system is tooled for one 5 mm wrench to fit all bolt heads. The frame clamps have steel Heli-coils so the steel bolts won't strip out the aluminum. Except for two steel uprights, the whole mount system is made of the best, high grade aluminum, 6061 T-6, and weighs only 1.25#. This is pretty phenomenal for 2# handlebars to support a 44" long fairing.



“ I have one of your Zipper fairings on my Ryan Vanguard recumbent and have found an amazing difference from riding with my Zipper fairing as compared to riding without it. I find a big advantage at low speed when fighting strong head winds. My average speed on my favorite 23 mile course has increased from 12.1 mph to 13.6 mph. My riding season has increased from 8-9 months to 12 months a year. ”

—David E. Burges, Hokes Bluff, AL

Weight	Dimen.	Taper	Mounts
2.75 #	top 21" wide 44" long	19" at foot	1.25 #

Zipper Linear



The Linear was originally road tested by Mark Matarella and

survived a crash at 29 mph, after swerving to avoid an object thrown from a car. The fairing held the bike up and minimized the road rash. The aluminum mounts and fairing survived very well according to Mark.

The spec's for both Linear and Infinity are essentially about the same, please specify if a 45" linear frame.

Zipper Infinity



Tom Beuligman road testing the Infinity Zipper.

Lightweight, and with a shape similar to Ryan Zipper. Made of tough shatterproof Lexar® and is of the highest clarity. Has 2 steel

uprights with braze-ons for vertical adjustments. Clamps use stainless steel worm gear's with neoprene tubing to protect frame.

“Originally tested by Tom Beuligman of Bike Annex, Mt. Carmel, IN. Tom writes: “Can't tell you how much I enjoyed testing your Zipper for infinity recumbents. I did some rather crude downhill coasting tests and the results were positive, 5-10% average increased speed!”

David Greenbaum, High Springs, FL says: “Having ridden with your fairing for several months now I must say that my initial enthusiasm has increased. The thing is great! The diamond frame boys that used to slow down for my ‘Infinity’ now are hard pressed to stay in my draft. 20 mph rides, once a fantasy on my Infinity are now routine. Thanks again for the elegant, well designed and superbly crafted Zipper.”

Weight	Dimen.	Taper	Mounts
1.75 #	top 21" wide 44" long	19" wide @ bottom	1.25 #

Zipper Mountain ATB

“Eric Breitenberger says: “While the Iditabike went poorly for me this year the Mountain Zipper Fairing performed beautifully. It works well in cold weather, riding is noticeably warmer. My hands, in particular, stay much warmer. It is also quite durable. In the Iditabike, the fairing got whacked many times by branches across the trail, and it hit the ground several times when I crashed. None of this abuse caused any damage. I like it! Again, thanks for the fairing.”



Eric with two of the bikes.

Weight	Dimen.	Taper	Mounts
13 oz.	24" wide	18" top to bottom	8" T-Bracket

Experimenter Kits



The experimenter kits are basically just the bare bubble without flange. This is for HPV builders and experimenters. Instructions for drilling and trimming are included as well as a gluing kit to finish the fairing with the

edging and some nylon mount hardware. Shown, a round Top Vision-ZZ on ATP bike.



Tinted 0.125" super-mileage bubble of width 18" tapering to 17" at foot end. A 2" flange can be left on to give a full 48" length.

Congratulations to White Knuckle Racing Team, Dubai, United Arab Emirates for fastest time in recent international event & best innovative design trophy!

A Few Words From the Owner/Designer

All Zipper Fairings have been developed with you the customer in mind. Safety, effectiveness, durability, and ease of use guide us in all of our design considerations. Naturally any feedback you have that will help us improve our product is welcomed and encouraged. We have been improving, and adding to the Zipper line of fairings for over 15 years. We hope you enjoy it and encourage your friends to . . . Get Streamlined Today!

Karl F. Abbe
owner
**Zzip
Designs**



WARNING!

As a high-performance add-on, Zipper fairings are designed for experienced riders who are fully accustomed to the risks and rewards of their use. All fairings are designed to increase the efficiency and speed of cycling, and like any other racing component, may require a greater skill level to master. The installation and use of fairings should only be undertaken after fully reviewing the instructional material accompanying each fairing. The information contained in this brochure is not a substitute for carefully reading and following the instructional material.

General Safety Precautions

All fairings will change the handling characteristics of a bicycle so it is advised that the rider experiment in low wind conditions at first. The fairings height can be varied, depending on the riders physical parameters, so the eye level is just over the top of the fairing. When first riding with the Zipper adjust it for the lowest position and ride in calm wind conditions. Gradually ride in stronger winds as you become more and more comfortable and experienced.

The fairings are designed so they flex somewhat in strong crosswinds so as to reduce excessive side forces directly on the steering. If there is excessive movement or oscillations on the steering of the bicycle, it is recommended you take the fairing off. If you are dissatisfied for any reason, simply return it for a full refund within 30 days of purchase!

General Warranty Information

All fairings utilizing mount systems manufactured or sanctioned by Zzip Designs are warranted for a full year from date of purchase against cracking under normal operating conditions. Zzip Designs manufactured mount systems are warranted against breakage under normal operating conditions for 90 days. However, no other warranties, express or implied, are given.

Zipper Records

Pete Penseyres and Rob Templin
 San Francisco to Los Angeles
Tandem Record: April 1, 1984
 19 hrs., 52 min., 52 sec.
 using a Zipper T.



Fast Freddy Markham and Team showing the Gold Rush with teardrop bubble.
First vehicle to break 65 mph. This vehicle is on permanent display at the Museum of American History in the Smithsonian Institution in Washington, D.C.

Jim Woodhead
 San Francisco to Los Angeles
Solo Record; June 17, 1982
 21 hrs., 20 min., 41 sec.
 using a Zipper T with "Girdle".



New Products



Alan Glover with modified Easy Racer, Super Zipper. This is to accommodate front Panniers request EZR-SZ-AG.

New mount system for P-38 and F-40 Lightning, Cycle Dynamics Recumbents. Still in test stage at this printing.



New Opus IV Presto ZZ hinges forward for crank clearance and reattaches with quick release. Average 2 mph increase at 17 m.p.h. but still in test phase.

The New Presto ZZ with revolutionary 3 point mount system. Designed at the request of Angle Lake Cyclery & Angle Tech. This fairing adjusts for foot clearance, vertical height and angle of attack into the wind! All tooled for the 5 mm wrench with seven Heli-coils for added long term strength. Wt.:



Fairing 2.75# and mounts 2.1#. Test results are still coming in! The body skin of breathable spandex is minimized on the sides to reduce side force and will un-zip in warm weather.