

15 AFFORDABLE WAYS TO RIDE FASTER

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MORE SPEED FOR LESS GREEN

15 ways to ride faster for less than \$100

BY AARON HERSH / PHOTOGRAPHS BY JOHN DAVID BECKER

There are many ways to make your bike faster for the cash you have in your wallet right now. Add up a few of these affordable upgrades, and the benefit can easily outshine a sparkly new bike frame.

RACE TIRES

Continental GP4000S II

Tires affect both aerodynamic drag and rolling resistance, two of the biggest factors in triathlon cycling performance, and the Continental GP4000S II has proven to be a standout in both. Aero testing conducted by Flo Cycling and published on the wheel maker's blog (Flocycling.blogspot.com) found this particular tire to perform exceptionally well on the Flo 30 aero wheel. Other manufacturers, including Zipp, have found similar results when comparing tires—although much of that data remains unpublished.

Cycling super-geek and mechanical engineer Tom Anhalt lab tested the rolling resistance of 21 tires, and the original GP4000S excelled again. For a rider holding just under 25 mph, Anhalt calculates this Continental to be within 2 watts of the fastest rolling tire in his test (full results at Bikeblather.blogspot.com). Not only is the Continental GP4000S II fast, the tires also feel solid and reliable when cornering, and provide sturdy flat resistance.



Cost: \$75
Benefit: Less
aero drag and
rolling resistance

TIRE SEALANT

Geax PitStop

Riding the bike leg without interruption is the simplest thing you can do to achieve a faster bike split. But if something does go wrong, PitStop can help keep the dead time to a minimum. It combines tire sealant and CO₂ in a single canister that can simultaneously repair and reinflate a flat tire. It works quite well for tubular tires but has a lower success rate with clinchers. After unloading a can into a 23c tire, expect a little less than 100 psi in the tire—plenty to make it back to transition.



Cost: \$14
Benefit: Quicker flat repair

Cost: \$6
Benefit: Reduced rolling resistance for tubular tires



STIFF TUBULAR CEMENT

Mastik One cement

Partway into a four-year tire rolling resistance experiment, retired engineer turned cycling researcher Al Morrison found that rolling resistance of a tubular tire changes significantly based on the type of cement and the number of coats used to adhere the tire to the rim. He asserts that creating a “100 percent bond to the base tape” keeps friction to a minimum. Morrison found that “three coats of Mastik One [cement] on the rim and two coats on the tire” reduced rolling resistance compared to tires adhered with two coats of Continental tubular cement on the rim and none on the tire. The more robust method using Vittoria Mastik One requires approximately two tubes of glue per wheel.

AERO FRAME BOTTLE

Profile Design RZ2 System

In addition to being the leading tri bike manufacturer, Cervélo also conducts some of the most reliable aerodynamic research on position and bike setup. Damon Rinard, the company’s senior advanced research and design engineer, says they learned that while all bottles come with a drag penalty on a modern aero frame, not all create the same amount of drag.

“Aero bottles are preferable to round bottles in every case,” says Rinard. “On most frames—and it varies a bit—when you add a round bottle to almost any aero bike, it adds about 50 grams of drag. An aero bottle creates about 25 grams of drag.” That difference equals a savings of about 10 seconds over the bike leg of an Olympic-distance triathlon.



Cost: \$40
Benefit: Save approximately 10 seconds in an Olympic-distance triathlon