

# AND NOW, EVEN FASTER

THESE THREE RACE BIKES DITCH TRADITIONAL FRAME STANDARDS AND REPLACE THEM WITH A "BIGGER IS BETTER" PHILOSOPHY.



## Giant TCR Advanced SL Team

PRO-TEAM BIKE SPONSORS HEAR ONE REFRAIN MORE THAN ANY OTHER FROM racers: "Make the frame stiffer." That's fine when you're a professional athlete with staff *soigneurs* ready to rub the knots out of your back each night, but what of us pack-fill amateurs with nothing but a Thera Cane and some Icy Hot? The answer may be Giant's newest edition of the decade-old TCR line; compared with its predecessors, its frame is not only stiffer but also more forgiving.

Central to achieving apparently contradictory objectives—comfort and stiffness—is the

"module" approach, which for Giant means integrating the frame, fork, seatmast and even crankset interface into a single cohesive unit, rather than treating the frame as a chassis onto which parts are bolted.

Setting aside marketing jargon such as PowerCore and OverDrive (technologies used in the bottom bracket and fork), what's essential to understand is that each component of the module was designed in concert with the others to produce the best overall result. The SL Team, says Giant, is not necessarily the stiffest or the lightest (although our medium-size test model weighed just 14.37 pounds), but the best-riding bike it could make.

"Each tube has its own individual shaping for its intended purpose," says Erik Klemm, the industrial designer who created the new TCR Advanced SL. The tricky part, he adds,

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was sculpting the tube transitions so that they both look good and meet Giant's goals for stiffness, ride quality and aerodynamics. The massive, boxy down tube, for example, doesn't seem sleek, yet the fork blades have been redesigned to direct airflow around it, preserving the frame's slipperiness.

Giant also incorporated two new integration features beyond its seatmast. First is a bottom-bracket design called BB86, developed two years ago by Shimano in conjunction with Scott. The oversize bottom-bracket bearings fit directly into the 86.5mm-wide bottom-bracket shell, which Giant's road product manager, Pierre-Henri Medas, says provides 26 percent more drivetrain stiffness compared with last year's TCR, which used a standard 68mm shell. Giant went with the BB86 standard, Medas

says, because although the competing BB30 setup offers better weight savings, it doesn't stiffen the drivetrain as much as BB86, which also fits all current cranks from Shimano, SRAM, FSA and Campagnolo.

Finally, the head tube and conical fork steerer utilize a 1 1/4-inch lower headset bearing, not the 1 1/2-inch bearing used by some makers. "Many people think 'bigger is better' in regard to the lower bearing," says Klemm. And purely in terms of steering stiffness, this is true, he concedes. "But they're not thinking of the bike as a whole." The larger-diameter bearing, contends Giant, transmits too much road vibration to the rider. In extensive testing, Giant found the 1 1/4 standard had the best results, adding necessary steering stiffness without sacrificing too much rider comfort.

While the TCR Advanced SL is built for ProTour-level performance, what surprised me was how comfortable it is. The geometry is pure stage-race, with twin 73-degree seat and head angles, a 55.5cm virtual top tube and a moderate 98cm wheelbase. As to Giant's stated goal of building the best-riding bike, it has hit remarkably close to that target. On a favorite short, hard ride with three steep climbs, one of them dirt, the Advanced SL displayed the kind of zippy acceleration that

we've found on only a few bikes. Off the paved road, the frame was forgiving, even gentle, which is due in part to the Shimano C24-CL wheels, which combine the best attributes of carbon and aluminum. Descents on tight switchbacks were a joy as the oversize front end kept the bike from pushing outward off its line, and even when cornering hard on rough pavement the frame showed zero chatter. A single spec question mark: After a few hundred miles of testing, the Schwalbe Ultrero tires, which corner and ride extremely well, showed lots of wear.

The TCR Advanced SL is no charity-ride cruiser, to be sure. Rather it's one of few bikes responsive, stiff and light enough to satisfy the demands of top pro racers—and forgiving enough for those of us who don't earn a paycheck in the peloton.—*Joe Lindsey*

**From top: The 1 1/4-inch headset adds stiffness without sacrificing rider comfort; the boxy down tube and BB86 bottom-bracket combo give instant power transfer.**

**\$8,000**

<b>WEIGHT</b>	14.37 lb. (M)
<b>SIZES</b>	XS, S, M (tested), M/L, L, XL
<b>FRAME</b>	Giant Advanced SL composite w/ integrated seatmast
<b>FORK</b>	Advanced SL composite w/ OverDrive steerer
<b>COMPONENT HIGHLIGHTS</b>	Shimano Dura-Ace 7900 group w/ 12-25 cassette, 53/39 crankset, Dura-Ace WH-7850 C24-CL wheelset; Pro PLT composite stem and Vibes OS composite handlebar; Schwalbe Ultrero 700x23c tires; Selle Italia SLR-XP seat
<b>INFO</b>	<a href="http://giant-bicycle.com">giant-bicycle.com</a>

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