

# Tech Briefs

## Rotor Makes Lightweight Mountain Bike Stem

COLORADO SPRINGS, CO—Rotor's unique crankset and Q-rings put the Spanish company on the map. Now its SL 25.4 mountain bike stem, one of the lightest stems on the market, will win the brand attention in another component area. Though the stem's two-bolt faceplate and restriction to 25.4-millimeter diameter seems a little old fashioned, its 83-gram weight is cutting edge. The SL 25.4 stem is made from CNC'd 7075 aluminum like many of its competitors. So, how does the company make a product that weighs half as much as other lightweight stems? One reason is the smaller diameter 25.4 standard is substantially lighter than oversize systems. But steel bolts are heavy, so cutting the faceplate bolts to two makes a big difference. Getting rid of all the bolt heads also helps. Rotor uses dual threaded bolts the company calls DTT. "A conventional bolt head pushes against the face of the stem causing surface stress. This stress created by the bolt head means excess material is added to the stem," said Curro Nieto, Rotor's marketing manager. Not only are the headless SL 25.4 bolts lighter, but Rotor was able to reduce the amount of aluminum where the bolts are because their dual thread design spreads the stress through the stem material.



## Retrofit Folding Bars Make Bike Storage Easy

LONDON, England—Joe Wentworth recently received a second place prize in Design 21's competition for his Retrofit Folding Handlebars. The Design 21 competition series challenges designers of all disciplines to find solutions to social and global issues. Wentworth's handlebars were selected from entries to the Power to the Pedal competition, which looks for ways to enhance the biking experience with designs for accessories or add-ons to existing bikes. "Two major problems with urban cycling are bike storage and security, both of which are addressed by my retrofit folding handlebar design," Wentworth said. His flat bar fits normal stems but includes two quick-release pivots just outside the clamping area that allow the bars to be folded back. The inclusion of a U-Lock-like locking mechanism in the handlebar ends enables the bars to be locked



together under the top tube, locking down steering. "The bars are extremely simple to use. A single lever operates two quick-release bolts, allowing the handlebars to be folded or unfolded in a couple of seconds. To ensure fail-safe operation, the hinges have been designed in such a way that if the quick release were to disengage accidentally, the bike can still be safely controlled," he added. Wentworth said the slender storage profile of his bars encourages bike owners to store their bikes just inside the front door, promoting bicycle use since it's more easily accessible.

## Rans Headset Clamp Allows for Adjustments

HAYES, KS—Rans makes a variety of one-piece gooseneck riser stems for its line of bikes that don't have openings to access star-nuts for headset adjustments. Since threaded forks are almost non-existent, the company had to come up with a solution. "We basically make the fork believe it has a threaded section," said Randy Schlitter, Rans' president. Rans' headset adjuster clamp consists of one steerer-tube clamp and a short, threaded tube with two nuts. Backing the nuts away from the clamp allows the headset tension to be set. "It probably would be a good headset for carbon steerers since the clamp compresses the steerer, but we developed it for our line of stems," he added. The headset clamp retails for \$21 and works with most threadless, 1-inch and 1 1/8-inch headsets using the included one-inch shim.