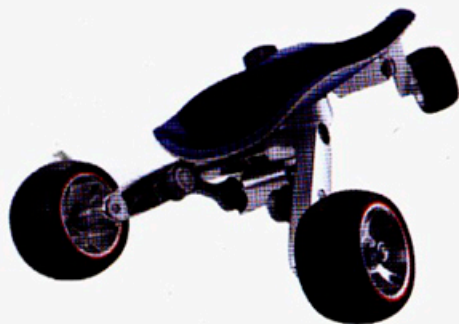


BMW StreetCarver

It's extreme. Anyone **bold enough** to take a ride on the **BMW StreetCarver** will experience the **sensation** of snowboarding and surfing on the **street**.



⊕ The unique appearance of the StreetCarver caught on among its target market of anyone over 10 years old. It is aesthetically pleasing and functional, too. For instance, the wings protect fingers on sharp curves.

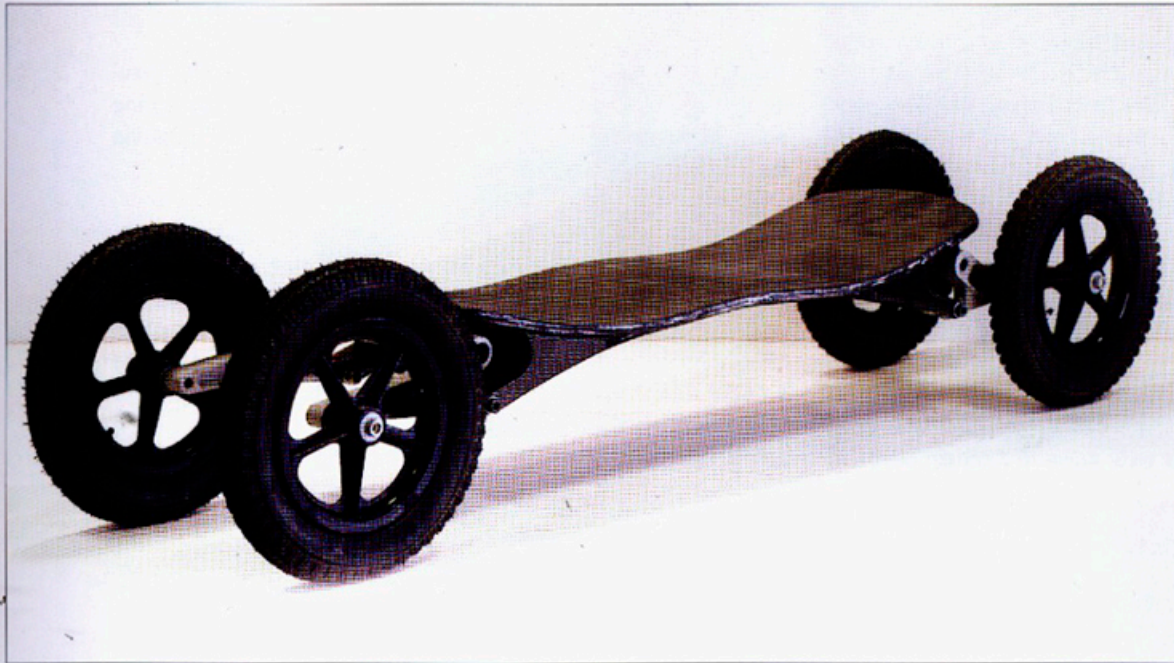
Until now, snowboarders and surfers who wanted a thrill required either snow or water. The experience was possible only in the right season and the right location.

BMW has succeeded in capturing this ride feel and offers all fans of the so-called gliding or soul sports the new BMW StreetCarver—the chance to transfer this passion directly to the road. The idea for the StreetCarver was born more than a decade ago, when a sports accident grounded Rudi Müller, a snowboarding enthusiast and head of chassis construction at BMW, for a week due to a broken rib. “Outside it was still snowing, but for me, the winter was over. So I started thinking that I needed something for the summer, so that I could speed down the mountain meadows.” Müller built the first prototypes in his garage. Among his priorities were wheels that could compensate for uneven surfaces and potholes as well as tilt into bends. He decided on single-wheel suspension and a composite steering axle using foam rubber cushions that distort, bringing about a steering movement. In 1994, he registered the patent.

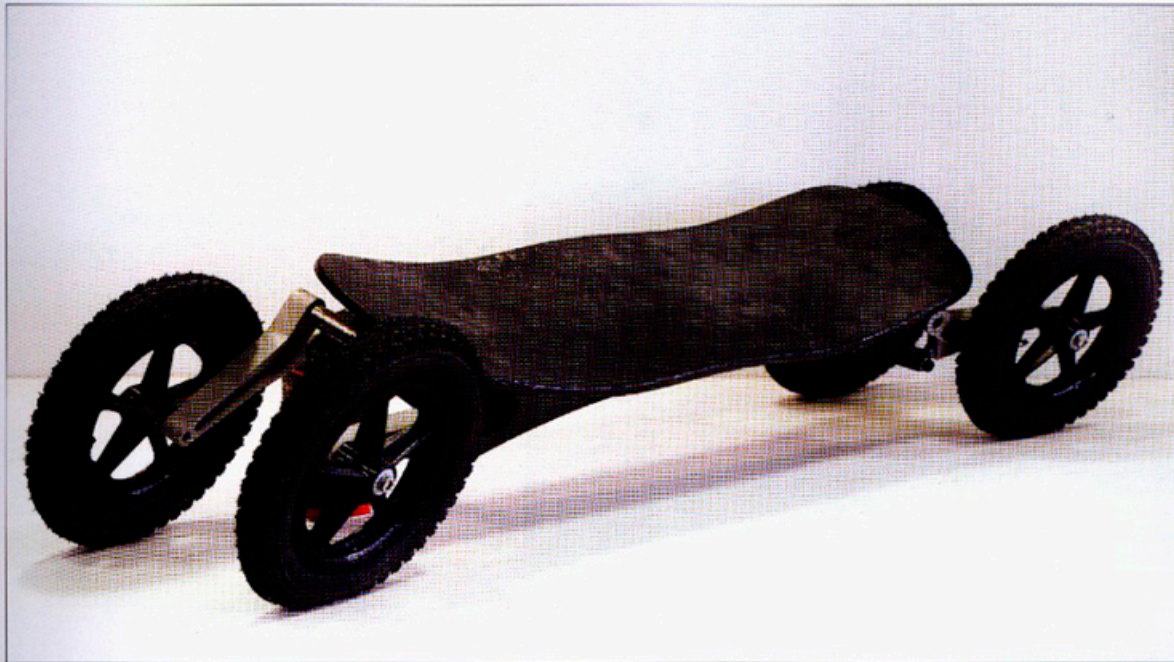
Meanwhile, Stephan Augustin, a design student, was experimenting with scooters, mounting from two to fourteen wheels on their decks. In 1997, he joined BMW. By then, the StreetCarver was out of Müller's garage and past the “U-Boot” stage—BMW's name for products designed without an official development commission. Augustin was teamed with Müller. With no fixed launch date for the product, they worked on it at a leisurely pace with BMW's support. Four years later, the scooter was ready to go into serial production. However, it didn't handle the way the designers wanted it to. Models produced in the mid-1990s were huge by today's standards, weighing 22 pounds (10 kg) and measuring 5 feet (1.5 m) long. They had large rubber tires to allow them to negotiate bumpy mountain meadows without too many falls and correspondingly large turning circles.

Designers didn't like the steering either. It was imprecise, with too much play. They wanted their scooter to be more compact and easier to handle. Augustin experimented with different steering components using his Fisher technical construction kit. That's when he hit on the solution: ball-and-socket joints that function like a hip joint.

Müller took a serial part from the rear axle of the BMW 5 Series chassis, where it acted as a stabilizer for wheel control. Then, he replaced the previous model's foam rubber cushion with four pendular supports. With that, he and Augustin got the result they were after.



⊗ The 1995 model was too big. It had 12.5-inch (32 cm) wheels, weighed 22 pounds (10 kg), and measured more than 5 feet (1.5 m) long.



⊗ The wooden successor was only 3.25 feet (1 m) long. The wide wheels and loops for the feet were intended to provide safety on tough terrain.



⊗ The steering geometry was perfected for this model. The ball-bearing polyurethane wheels stem from the running sections of escalators.

With its progressive steering response, the rider can precisely change the direction of the StreetCarver by merely shifting his or her weight, or "carving." This makes possible spectacular, rapid steering maneuvers that heighten the excitement of the ride. When traveling at high speeds, the StreetCarver stabilizes itself using the rider's weight. This provides a calm and controlled ride feel even when taking extreme corners.

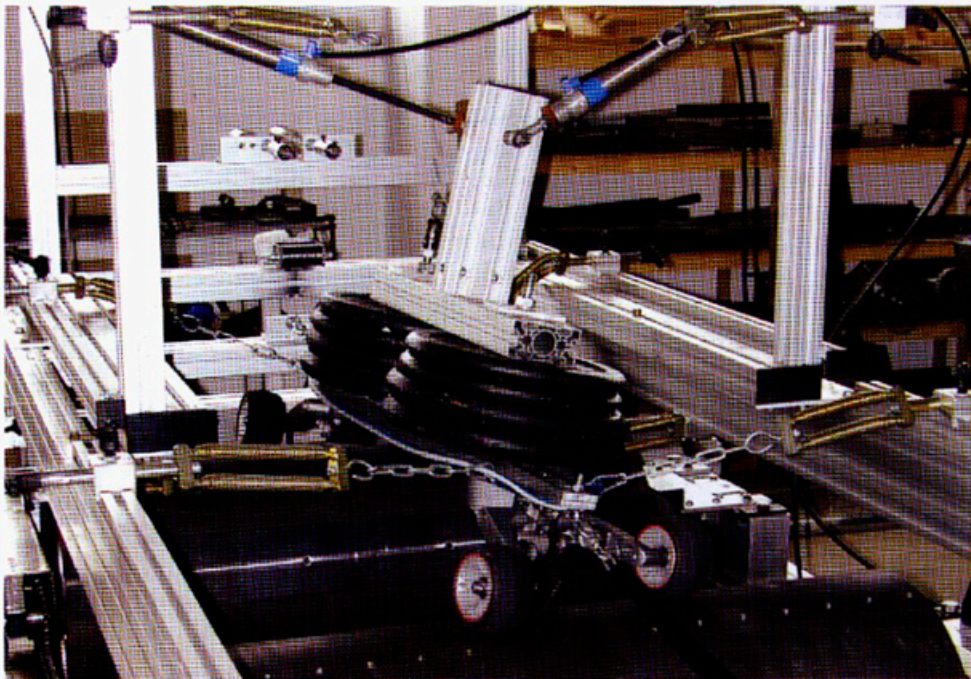
The symmetrical deck or standing surface is manufactured exclusively for BMW. The ride is cushioned thanks to a sophisticated combination of wood and fiberglass inserts, while nonslip rubber Grip-Tapes offer the rider stability. After all, "if you're going fast, you need a firm surface under your feet," says the product literature.

The tires are actually low-profile rollers made of polyurethane. When the running surfaces of the rollers wear down to a certain depth, in-

dicators become visible. At this stage, the dual-section aluminum rim can be dismantled and the running surface replaced.

The StreetCarver, offering a high-speed thrill ride that defies gravity without fuel consumption, debuted on the market in spring 2001. By September of that year, BMW had sold 3000 units via their website and won numerous design prizes.

"To work on an exotic project like this with the professional background support of BMW was unique and exciting, and I learned that BMW is not only a car company—it has also a great design culture in combination with perfect engineering," says Augustin. "Skateboards and long boards existed, but nobody expected a board from BMW, so the product was a first."



⊙ Prior to market launch, a testing agency ran the StreetCarver across asphalt rollers for more than 37 miles (60 km) bearing a load of 220 pounds (100 kg). An uneven bounce simulated peak loads that a rider would encounter when riding over curbs.

⊙ In 1997, the developers discovered an alternative to foam rubber—a pendular support like that on the BMW 5 Series automobile, only smaller. Integrated with the aluminum chassis of the StreetCarver, the supports provide the wheel suspension and enhance the ride response.

