



**GETAWAY CAR**  
Converted to 100 percent electric power by Zelectric Motors, this 1959 VW Beetle has more than double the horsepower of the original.

NEXT IN TECH

## GREEN VIBRATIONS

Zelectric Motors CEO David Benardo is converting vintage mid-century Volkswagen Beetles to electric power, resulting in classic cars that are also eco-friendly—and as fun as ever to drive.

BY CHRISTOPHER ROSS PHOTOGRAPHY BY MARK MAHANEY

**A**T FIRST GLANCE, even a seasoned gearhead might not notice what's so special about David Benardo's lovingly restored vintage Volkswagen Beetles. The car's iconic hump shape, elegantly sloped wings, foregrounded windshield and throwback dashboard are all there. But turn the key in the ignition: In place of the noisy snap, crackle and pop of the old air-cooled, flat-four engine, what do you hear? Silence. Or more precisely, the near-imperceptible thrum of the electric motor that Benardo has discreetly installed, making this 78-year-old automotive classic as eco-friendly and energy efficient as a Toyota Prius or Chevy Volt.

A self-described "retrofuturist," Benardo, 52, is the CEO of San Diego's Zelectric Motors, which creates and sells limited-edition electric-converted VW Beetles. He mostly purchases models made between 1958 and 1966—their weight and construction make them ideal for the transformation—and over the course of a few months converts their engines to run on zero-emission, 100 percent electric power. Benardo relies on parts from EV West, a shop that specializes in selling components for high-performance electric racing cars. He installs two lithium-ion battery packs, one under the front and another behind the backseats, and replaces the gasoline engine with a Zelectric drivetrain.

From the driver's seat, the only visual clue as to what's inside is a chrome-ringed battery gauge. The conversion leaves the original vehicles largely intact—there's no welding or cut metal—to the extent that each one could be returned to gasoline power if so desired. "We respect the vintage," says Benardo. But thanks to his under-the-hood renovations, the Bugs boast top speeds of over 100 mph—more than double the horsepower of the original stock and with a charge range of between 80 and 100 miles. "It's a real good-vibes car," says Benardo, citing the car's West Coast legacy as the vehicle of choice for '60s hippies, college kids and surfers. "Driving around, I get thumbs up from police officers. Kids look at it and point. It just has universal appeal."

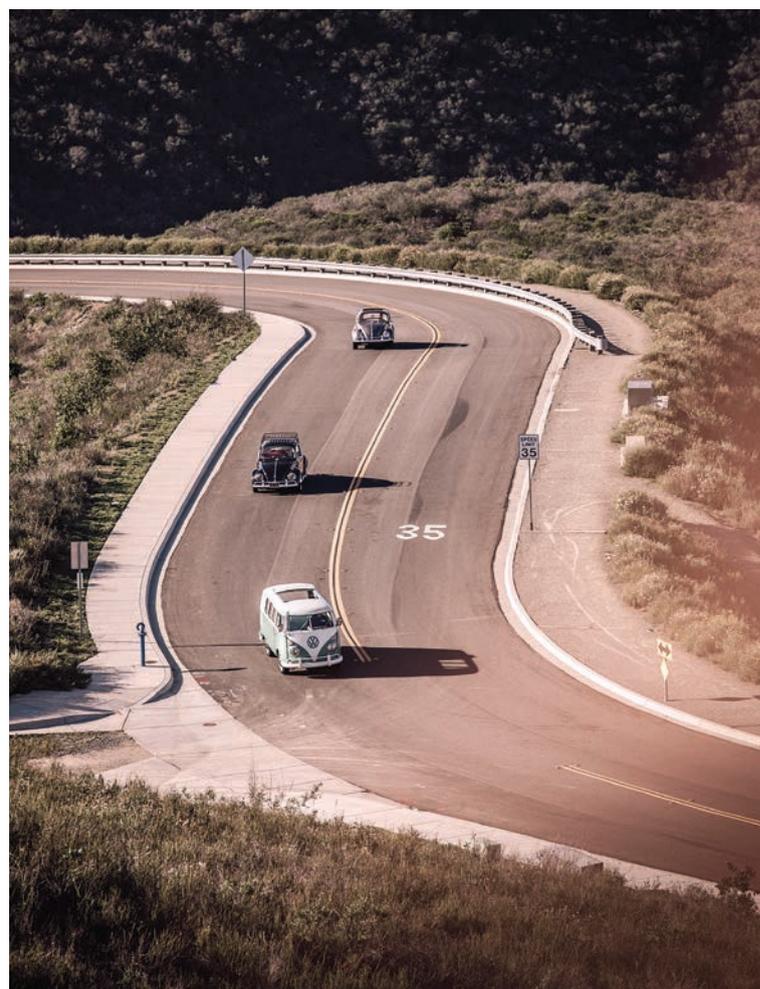
Though he's been a Beetle fanatic for years and owned a number of variations—including a Volkswagen Karmann Ghia and a much sought-after 1965 Microbus—Benardo's background isn't in cars. A California native, he spent the majority of his career as a designer and creative director working with Silicon Valley tech firms like Adobe, Hewlett-Packard and Electronic Arts. After stumbling across a story about a pilot project in Palo Alto in which engineers were installing an electric drive system into a VW camper van, it occurred to him that such an enterprise might be a fun one to take on. He kept that thought on the back burner until he moved to San Diego and noticed how many Bugs were still to be found on the streets.

Benardo officially founded the company in 2012 with his wife, Bonnie Rodgers. His first prototype

was a flame-red 1963 Beetle, which he toured around classic car shows to drum up interest. In 2014, his black 1966 Beetle won first in its class as a modified foreign coupe at the La Jolla Concours D'Elegance Motor Car Classic. Next was a black 1966 VW Beetle sedan. Within hours of putting a short video featuring the car on Zelectric's website, he had a call from an interested buyer in San Francisco who wanted to fly down and give it a test drive (the car ultimately went to a couple in Palm Springs, California). The third model, a silver 1959 VW Beetle ragtop, is headed to a collector in Germany, and Benardo and his team are also at work on a green 1974 VW Thing, which they're custom-building for an anonymous celebrity client. But Benardo is perhaps most excited about their acquisition of a rare teal and white 1964 VW Microbus that has a sunroof and sliding door and instantly evokes a bygone era of breezy, freewheeling youth.

At a starting price of around \$60,000, Zelectric Bugs aren't cheap. They lack some amenities and safety features common in modern cars, and call for a mechanic who knows VWs. But in addition to converting the cars to electric, which means they require less overall maintenance, Benardo adds customizations like ceramic heaters, LED lights, whitewall tires and disc brakes.

Perhaps the cars' most compelling feature is just how fun they are to drive. They're the only electric cars that retain four-speed transmissions, with lower gears allowing for more torque. Press the accelerator, and they zip along with surprising power. As much as Benardo cares about lessening the carbon footprint, for him it's all about the original thrill of the experience and the Beetle's iconic design, which he believes is imprinted in the collective American imagination. "Usually after somebody drives it, they just have a huge smile on their face," he says, adding a little sheepishly, "I wish I could tell you we're doing this to be more green, but really we're doing this to go faster and have fun."



#### SHOW ON THE ROAD

From top: The dashboard of a converted 1959 Beetle; three of the company's vehicles—including a rare 1964 VW Microbus—cruising the highway in San Diego; one of two battery packs installed in each Zelectric Bug.

