

INSIDER'S GUIDE TO THE AUTOBAHN

It is all you hoped for—and more. But it's not a playground for aggressive daredevils, witless tourists in overladen rental cars, and pseudoracers lacking that all-important sixth sense. With thirty-six years of autobahn experience, **GEORG KACHER** has plenty of stories to tell about the world's last remaining unlimited-speed road network. **PHOTOGRAPHS BY CHARLIE MAGEE**

A95

MUNICH-GARMISCH

• The best stretch for driving flat out is the last twelve miles of this superbahn, where traffic is usually light, visibility is good, and the tarmac sweeps through the countryside in moderate radii. We're in a 480-hp Porsche 911 Turbo cabrio, pedal to the metal in fifth—make that sixth—gear. At this speed, you need four eyes: one for the road directly in front of the car, one to scan the horizon for slower vehicles, one for the mirrors, and one for the instruments. The speedo shows 297 kph ... 301 ... 306 ... 311 ... 314 ... 314 ... 314. That's 195 mph. On the return run, we'll briefly hit 200 mph on the short downhill section near Murnau. This is white-knuckle, eye-wateringly fast. Even though your concentration is sharply focused, a clear picture stabilizes for only fractions of a second. The Porsche's front end feels suspiciously light, almost floaty. Pressed down hard by that fat tail spoiler, the nineteen-inch rear wheels squat down and try to keep a straight line, but the grooves in the road are too far apart even for these ultrawide Michelins, so it's in and out rhythmically over the transverse expansion joints. They look like nothing, and yet they can seriously deflect your trajectory.

10

AUTOBAHN STRETCHES FOR GOING REALLY FAST

A31 Essen—Erdem. And parallel to it—but not quite as relaxed—is the A1 from Osnabrück to Oldenburg.
A24/A19 Berlin—Rostock. Great stuff, with the exception of a few random speed limits.

A38 Göttingen—Leipzig. What the Nürburgring would be if it were reborn as the autobahn.
A3 Frankfurt—Bonn. Very busy during the day but tempting at night. Three lanes all the way!

A62 Landstuhl—Nonnweiler. Classic case for a 200-kph (124-mph) speed limit. Quick and challenging.
A5 Karlsruhe—Basel. Almost no corners but a lot of traffic. Ideal for beginners and Sunday morning.

A92 Munich—Deggendorf. Hard-core, flat-out, engine-killing stretch through a boring landscape.
A96 Landsberg—Bregenz. Bits and pieces are still missing, but what's there rates a ten out of ten.

A81 Weinsberg—Würzburg. Where Porsche and AMG do most of their high-speed testing.
A9 Nürnberg—Ingolstadt. About as dramatic as an empty airfield but very fast and three lanes wide.





THE AUTOBAHN IS A MYTH surrounded by half-truths, anecdotes, and fables. The most popular legend, which has entwined itself around Germany's long-distance road network for several decades, concerns the Nazis and their alleged role as the country's master builders. It's a common belief that Adolf Hitler, the worst warlord of the western world, was instrumental in establishing the autobahn and thereby securing mass employment. Like many achievements claimed by the Third Reich, this one was blown out of proportion by the propaganda machinery. The man in charge of the ministry in question, a certain general inspector Fritz Todt, promised the public 6900 kilometers of intercity highway, for which he planned to hire 600,000 workers. But that turned out to be wishful thinking; before the war that ended Hitler's regime began, only 3860 kilometers were completed, and only 250,000 people were given temporary jobs. Even more to the point, the idea to build a fast and safe road network wasn't the brainchild of the insane moustached dictator. The concept had, in fact, been established in the early 1920s by various privately owned construction companies, led by the Hafraba consortium that, for its first project, planned to link *Hamburg, Frankfurt, and Basel*. When the Nazis marched in, they appropriated the Hafraba program, complete with detailed plans for routing, structural engineering, and low-cost surface technology based on large, prefabricated slabs of concrete.

A96

LANDSBERG-MITTE

• We talk to Michael Kemény, whose towing company serves a busy thirty-mile stretch of the autobahn. When the master of four tow trucks spots our red Porsche, he switches on his

computer and pulls up the Porsche 911 GT3 RS photos. The incident happened last spring. The road was still wet in places from a heavy shower, but the guy in the almost-new, white 911 was going all out. On the approach to an overpass, he hit a puddle of standing water. The car spun around and hit the guardrail while traveling backward at an estimated speed of 125 mph. Between two guardrail sections, the impact virtually gutted the Porsche and mashed its occupant. The pictures are not a pretty sight. But according to Kemény, high-speed fatal accidents like this are the exception to the rule. "People who drive fast typically pay a lot more attention to their driving than does a businessman who is busy lighting a cigarette, talking on the phone, and keeping one eye on the navigation system. In nine out of ten cases, the really big crashes aren't caused by excessive speed but by carelessness. Classic mistakes include not checking the mirrors, not using the turn signals, and not keeping enough distance from the vehicle ahead. The result is often a chain reaction: truck hits van, van spins, van gets hit by another truck. From there, all it takes to become a really big mess is a single burst fuel tank."

A31

ESSEN-EMDEN

• Flat as a pan and straight as an arrow, the stretch of highway between Essen and Emden boasts an innovative, porous, pale-gray surface that is designed for optimum drainage, grip, and visibility. This is truly a high-tech stretch of autobahn, as wide as they come, with solid, triple-steel barriers on both sides and a shoulder generous enough to harbor a semitruck or a bus. Trouble is, the A31 is only a two-lane affair. That's OK at five a.m., but



Opposite: This is it—the total freedom of speed, going flat out from horizon to horizon in fast cars. In this case, it's three red barons: a Porsche 911 Turbo, a BMW M3, and an Audi R8. But it's not always like that. Just talk to Michael Kemény, who has pulled countless dead bodies out of wrecked cars. Kemény has nothing against fast drivers—like author Kacher (near left)—but he detests those who drink, take drugs, or fall asleep at the wheel. More and more often, speed limits are posted via overhead signs. Don't ignore the signs—some of them double as radar traps.

TRIP TIPS

- The best months are May/June and September/October. Why? Lighter traffic and decent weather. For obvious reasons, the best times for putting the hammer down are mid-week or early mornings on Saturday and Sunday.

- Germany is rental-car paradise. Almost all companies offer premium (read: 150-plus-mph) models from Audi, BMW, and Mercedes. By booking ahead, you can specify favorites such as the new Audi A5, the Mercedes-Benz SL500, or a choice of Porsche 911s. The rates for sports cars are relatively high, but it's possible to spend even more by borrowing a supercar such as a Ferrari F430 or a Lamborghini Gallardo.

- All rental contracts specifically exclude racetracks, so forget about that trip to the Nürburgring. Although it is officially listed as a public road, driving at competition speeds will void your insurance.

it calls for extra attention on a Friday afternoon. We're heading for the Papenburg proving ground in a bright red Audi R8, headlights on, turn signal flashing (a common left-lane tactic to get the attention of other drivers). On this piece of blacktop, 300 kph (186 mph) almost feels like limp-home mode. Sure, you can hear the engine shrieking at full song, you can feel the wind trying to play tag with the coupe's chiseled contours, and you can sense the quadrasonic drum from the hard-working tires. But there's no tugging at the steering wheel, no kickback from the front axle, no g-force attacking the rear suspension. The sole confirmation that we are moving at such a high rate of speed is provided by the huge differential between our velocity and that of the traffic around us. Our speed of 300 kph is 50 kph (31 mph) more than what a governed BMW or Mercedes-Benz can do, it's a third quicker than all those flat-out mid-size diesels, it's more than twice as fast as the average speed on German autobahns (less than 120 kph, or 75 mph), and it eclipses any given bus or truck by at least 200 kph. To detect a vehicle approaching from behind at 300 kph, the slow-lane user would have to check his mirrors every seven seconds or so. Fat chance.

A92

LANDSHUT-DEGGENDORF

- Welcome to another dream location for devoted lead-foot artists. On this stretch, BMW and Audi do a fair bit of high-speed testing—mostly at night, which makes for its own rules. Peter Neuburger, from Audi's R&D department, explains: "After dark, traffic is relatively light. But you can't see precisely what's ahead, because from a distance, all red taillights look the same. In addition, the number of trucks increases dramatically. There

are other vagaries, too, such as insects impairing visibility, deer and wild boar crossing the road, and weather conditions like fog or black ice. Not to mention the fact that everybody is half asleep, so lane discipline is a big issue." On such ultrafast autobahn segments, it's essential to read the road and the movements of your fellow users. After all, at 200 mph, even small surface alterations can have a huge effect, the mildest bend can feel tug-o-war wild, and the most casual transition from moist to wet can make a significant difference in adhesion. And a clear flight path can never be taken for granted. A vehicle that is moving ever so slowly toward the dotted white line is liable to pull out at random, a seemingly compact convoy can break up at any time, or a bigger car might—when looked at from behind—conceal a smaller one that it's about to pass. Imponderables galore: that's what the autobahn is all about.

A96

INNING EXIT

- The autobahn maintenance area looks like a miniature Jurassic Park full of offbeat machinery. Behind a motorized gate sits a fleet of orange special-purpose vehicles: idle snowplows, flatbed gravel trucks, tar dispensers, multifunctional mowers, street sweepers, signpost cleaners equipped with hydraulic brushes, Unimogs saddled with glycol tanks, steamrollers, the works. Summer is a relatively quiet time for the resident fix-it crew of ten. Their main task is maintenance and repair work, such as replacing flattened guardrails, cleaning the lights in the two nearby tunnels, or keeping the lush vegetation at bay. In winter, however, the orange fleet is on standby around the clock. The maintenance depot can accom-

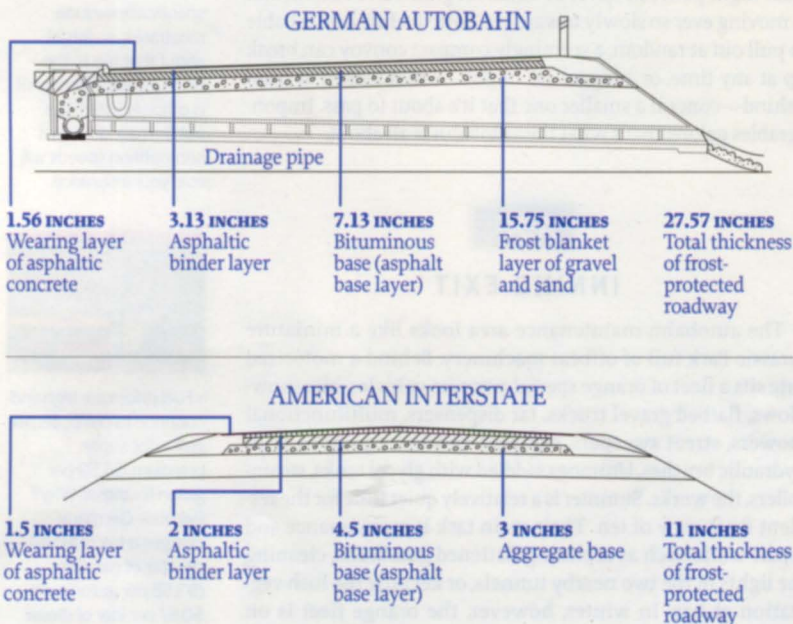


- Fuel prices are high and continue to climb: \$8 per gallon for super premium, \$6.50 per gallon for diesel. Why? Because Germany charges a tax of \$0.94 per liter of gasoline (\$3.56 per gallon) and \$0.67 per liter of diesel (\$2.54 per gallon).



YOU CALL THAT A HIGHWAY?

Pop quiz: What's more than two feet thick and has an expected life span of forty years? No, it's not your chain-smoking, Mad Dog-swalling Aunt Edna—it's a chunk of German highway. The autobahn might not look all that glamorous, but its outer plainness belies an inner sophistication. Compared with its German cousin, our interstate system possesses less than half the substrate depth and lasts, on average, only two-thirds as long. It also lacks plumbed-in subterranean drainage.



moderate enough salt for three weeks of nonstop snow, and it's also well-stocked with road signs, movable chevrons, temporary traffic signals, and more traffic cones than a parking lot autocross. If the autobahn has to be closed because of an accident, these guys roll out their full artillery of blinking detour arrows and dot-matrix speed-limit signs. One would think that the larger-than-life devices would be impossible to ignore, but on average, one of them is hit and demolished every year, and the workers have experienced more close shaves than they care to talk about. It's a dangerous life, even if you're clad in reflective gear and are always on guard.

ON AUGUST 6, 1932, KONRAD ADENAUER—who would be chancellor of the virginal republic in 1949—laid the foundations of Germany's first autobahn. The term autobahn, however, wasn't coined until a few years later. The brand-new black ribbon of asphalt that linked the cities of Cologne and Bonn was instead clumsily called *Nurautomobilstrasse*, or "only automobiles road," thereby explicitly banning bicycles and horse-drawn carriages. A mere twenty kilometers (12.4 miles) long, it already featured the key characteristics of the later autobahns that followed: two lanes in each direction; a wide, hard shoulder for stranded cars and trucks; fast corners good for 120 kph (75 mph) and more; a center divider; and guardrails on both sides. The main mission of this type of road was not to increase the average speed but to reduce the number of traffic fatalities nationwide, which had soared to 5867 in 1929. By 2006, the death toll had dropped to a record low of 5094. Also last year, Germany claimed 3.1 fatalities per one billion kilometers against 5.0 in the United States. In Germany, about one-third of all extraurban traffic is absorbed by the autobahn. In America, the interstate contribution is a slightly less impressive one-quarter share.



In the summer, holiday traffic converts the world's fastest road network into a giant parking lot. To keep the gridlock going, a traffic-message service linked to navigation systems helps guide you along alternate routes. Even on an empty autobahn, 314 kph (195 mph) is the exception to the rule. The ADAC roadside recovery squad doesn't normally deal with exotic cars. Instead, older models and vehicles registered on the other side of the former Iron Curtain are prime candidates for on-the-spot repairs.

- Another popular offense is tailgating, but because of heavy traffic, the cops are unlikely to pull you over. When you do get caught in close-up action, the fine varies from €100 to €250 (about \$140 to \$350). The penalty that really hurts is the one- to three-month driving ban.



- Speeding fines are relatively moderate. Since foreign driver's licenses are theoretically immune to the German points system, anything up to 40 kph (25 mph) over the posted 100-kph (62-mph) or 120-kph (75-mph) speed limit should cost no more than €75 (\$105). Where lower limits apply—like in many construction zones—stiffer penalties will be imposed. If you exceed the limit by 50 kph (31 mph) or more, there is a good chance that your license will be taken on the spot and kept for between one and three months. Expect to be charged between €100 and €375 (\$140 and \$535).

- The penalty for using a cell phone without a hands-free set costs €40 (\$55). It's a popular moneymaker for unmarked cops in stop-and-go traffic.

A8

AUGSBURG-STUTTGART

• Stop-and-go, then stop-and-no-go. Welcome to any given Saturday in August on any of Germany's major cross-country thoroughfares. It's holiday season: the Dutch and the Danes are on their way home, the Belgians and the Swedes are heading for the sun. Although there's a truck ban during summer weekends on all A roads, we're stuck in bumper-to-bumper traffic. The outside temperature gauge in the BMW M3 we're driving reads 93 degrees Fahrenheit—only the fittest engines will survive. The first vehicle that grinds to a steaming halt is an ancient camper van from Düsseldorf. The driver makes it to an orange emergency phone, from which he calls ADAC, the German automobile club. Half an hour later, a yellow angel arrives in an Opel Zafira stuffed to the roof with frequently required spare parts and tools. Christian Kraus has been a professional roadside assistant for seventeen years. "There are 1700 of us in Germany. I'm a mechanic by trade, and I can deal with about eight casualties per shift. The most frequent problems are glitches in the electrical system, troubles with the ignition, overheating, and flat tires. Last year, we got 3.9 million stranded motorists going again, most of them on the autobahn."

A8

ROSENHEIM EXIT,
AUTOBAHNPOLIZEI HEADQUARTERS

• It's another holiday weekend, and by mid-morning, north-bound traffic has slowed to a walking pace where the A93 and

A8 motorways meet. *Rien ne va plus*, switch off the engine, get out of the car, and wait. The overhead sign tells the sad story: Stau (congestion), 40-kph max (even that speed is wishful thinking), green arrow (inviting motorists to use all four lanes). According to the twelve o'clock news, the traffic jam is twenty-one miles long and still growing. Somewhere a lot closer to Munich, a five-car pileup has reportedly turned the left two lanes into a mess. The police are doing a sterling job: directing traffic, cleaning the oil, sweeping away broken glass, organizing tow trucks, marking vehicle positions, and taking relevant photos. It's routine. Nobody is injured, and forty minutes later, it's back to business as usual. "Knock on wood, but this year, we haven't had a single fatality on the autobahn," says Peter Böttinger, who is in charge of the Rosenheim hub police station. "Don't ask why—it's an unpredictable mix of prudence and luck, foresight and fate."

The back buildings of the vast police facility are crammed with equipment that every speed junkie should fear. For instance, parked in a garage, we find two unmarked police cars that boast concealed front and rear cameras along with an in-dash video monitor so that the culprit can watch the replay on the spot, complete with digital speed and distance insets. Even more maneuverable than his colleagues who drive blue Volkswagen Passats or silver Audi A6s is Thomas Gar on his BMW motorcycle. "I net between four and five big fish a day," claims the wiry cop, who has just returned from a six-hour stint. "When I hit the record button, the license of the person in question will almost certainly be suspended. Minor offenses aren't my cup of tea. I'm chasing the real baddies—people who drive 50 kph over the speed limit and drive recklessly or those who consume alcohol or drugs. Although I'm always on my own, so far no offender has managed to escape, and nobody has successfully challenged the taped evidence, either."



WILL SPEED LIMITS COME TO GERMANY?

PRO: DR. DORIS WAGNER, EMERGENCY PHYSICIAN

The Intal Triangle, together with the nearby historic (if now three-lane) Irschenberg climb, is a major accident hot-spot. When there's more than just bent metal to lament, a call is placed to the 19222 hotline, and Dr. Doris Wagner may pick up the receiver. The tall redhead works as an emergency doctor at the Rosenheim city clinic. Within fifteen minutes, she can get to just about any point on the autobahn beat that she oversees. Her chariot of choice is a white Audi A4 Avant 1.8T Quattro with red stripes, a wailing siren, and flashing blue lights. If required, an ambulance, a fire truck, or even a helicopter will be dispatched to the scene. "There is no such thing as a classic autobahn accident," says Wagner. "Weather can be an issue, especially in the winter. Attention deficit is a major problem, as in tailgating, falling asleep at the wheel, or being distracted by kids. The so-called 'ghost drivers' who enter the autobahn going the wrong way are also a regular phenomenon. Nationwide, about five such incidents per day are registered. But the biggest culprit is excessive speed. If the government is serious about reducing fatalities on the autobahn, it needs to implement a 100-kph [62-mph] limit. That's the only way to narrow the extreme spectrum of different velocities, which an increasing number of motorists find difficult to cope with—truck and bus drivers, older people, foreigners, you name them. As a welcome side effect, such a measure would greatly support environmental protection efforts."

CON: GUENTHER KLUSMEYER, BMW DEVELOPMENT ENGINEER

Most of the cars that enter and leave the nondescript BMW Product Validation Center on the outskirts of Munich are partly camouflaged development and preproduction vehicles. The man in charge of this fleet—and of the final sign-off process—is Guenther Klusmeyer. A certified engineer and a dyed-in-the-wool BMW disciple, the passionate bike rider knows full well that the autobahn speed issue is highly political. "Germany is a key market as far as global automotive development is concerned. Our cars drive the way they do because we can go as fast as we like. Impose a limit, and the situation would change. I see this as a threat to the competitive advantage of the German motor industry." Like the M3 parked outside, most BMWs were developed for uncompromised active safety at speeds of between 156 mph and 175 mph. Key measures include enhanced aerodynamic efficiency, additional engine and brake cooling, superior directional stability, and powerful fade-free deceleration. "Even in markets like the United States, where 85 mph is considered quick, customers appreciate the high-speed safety margin that is built into our products. The good thing is, you don't have to go very fast to feel the benefit."

Piece by piece, Böttinger shows us his selection of optical and radar-based measuring equipment. There is mobile radar, which fires its flash out of a car casually parked on the hard shoulder. There is fixed radar, which snaps the vehicle from behind and photographs the driver's face from another position up above. There are laser devices, which operate from behind bridge posts, using invisible light beams. And there are handheld laser guns, followed by roadside checkpoints. In addition to excessive speed, insufficient distance between vehicles is a popular moneymaker. To convict the offender, the officer lowers the first camera on a median-mounted support. A second camera installed higher up provides a panoramic overview. Via a remote control monitor, the policeman supervises the scene and, at the push of a button, captures tailgaters on film. Both speed and distance can be checked from a moving car equipped with a new type of proportional digital meter. Explains Böttinger: "People who go 20 kph too fast are small fry. We go primarily after those five percent who can only be described as speed demons. If you ask me, I would support a general speed limit of 130 kph (81 mph). It would take the pressure off the hectic manner of driving that has become the norm on the autobahn. But for the moment, that's wishful thinking. All I can ask right now is for drivers to be sensible and to adjust their speed to the conditions."

AFTER WORLD WAR II, it took the crushed nation until 1952 before construction was resumed on the autobahns. The basic road layout didn't change much compared with the proposal mapped out by the Hafraba. Single even digits, such as A8, indicate major east/west arteries; single odd numbers, like A9, stand for key north/south connections. Double-digit designations are typically chosen for shorter city-to-city links. Triple-digit sections denote ring roads that circle major urban areas.



Never, ever underestimate the omnipresence of the police. You may not see them, but they're always there, somewhere, with equipment ranging from simple speed cameras to complicated distance-measuring gear to in-cab video recorders. Officers such as Peter Böttinger are polite but determined to enforce the highway code. "We may let petty offenders go, but we are determined to catch the real hooligans." In cases of reckless or dangerous driving, the law can take away your license on the spot and impound your vehicle.

• On the autobahn, never reverse, never turn around, and never go against the flow of traffic. Every new "ghost driver" is one too many. If the law catches you, they lock you in jail and throw away the keys. Quite rightly, too.



• Absolutely no passing on the right.

• Book a car with a navigation system or rent a mobile unit. Dynamic route guidance is in place nationwide, so only fools keep getting stuck in monster traffic jams.

• Driver training courses are available online through the premium manufacturers and via the German ADAC auto club, but no special autobahn instruction is available. You'll need to learn by doing, using mirrors and turn signals and stepping up the speed in small increments. Stick to your comfort zone! Don't be afraid to brake hard when required—you'll have to! Slow down in the rain, through fog, and when it snows.

That's why that very first "only automobiles road" between Cologne and Bonn is now labeled A555. This modern, three-lane feeder system accommodates 100,000 vehicles per day. Even so, the A555 is not as busy as Berlin's A100 inner ring road, which can cope with up to 170,000 daily users. In view of the traffic density and of the fact that Germany is Europe's busiest transit country, it isn't surprising that the autobahn system "collapses" about 1000 times each year. A "collapse" is considered to be a congested area ten kilometers or longer. With all this traffic, the relatively low death toll is impressive. Last year, 645 motorists lost their lives in 20,434 accidents—which makes the autobahn by far the safest type of tar-mac you can use when visiting the fatherland.

A9

GREDING-HILPOLTSTEIN

• German radio is perfectly geared for autobahn users. Every fifteen minutes, the traffic channel sums up the news, delays, and detour recommendations. Some stations even report the location of radar traps and random police checks. For many years, the speed limit postulated by the Social Democrats, the Green party, and the leftists was primarily an issue for politicians and environmentalists. But as a result of climbing oil prices and the increasingly prominent CO₂ discussion, this issue is now seen differently. According to a recent survey, two out of three Germans are in favor of a 130- or 140-kph speed limit. This change of attitude is also reflected by an increasingly negative response to high-speed overtaking. Slower drivers have started to reprimand motorists by flashing their headlights angrily, and fast-lane Rambos are being penalized in accident cases. Having

said that, the chances that Germany will cave to European Union pressure are quite slim, even though in late October the Social Democrat party voted—by a narrow margin—to impose a blanket 130-kph speed limit. Chancellor Angela Merkel's conservative Christian Democrats—a leading political force in the country—remain opposed to the idea, so a speed limit is highly unlikely to be approved by the coalition government.

Even those autobahn sections that date back to the Third Reich have either been resurfaced or completely rebuilt. Original two-lane stretches with no hard shoulder, ultrashort on- and off-ramps, and no service stations are a rarity, but they still exist, like the A8 between Rosenheim and Salzburg. Since they offer very little margin for error, going flat out over these ancient byways is a special experience. Generally speaking, however, the stories that wax lyrical about hour-long, flat-out, maximum-velocity stints across Germany are balderdash. After all, roughly half of the autobahn network is monitored by traffic-flow meters that impose a speed limit when a particular section gets busy or when the weather turns bad. Some stretches, such as the notorious Aichelberg section near Stuttgart, are automatically heated and/or sprayed with a salt-and-alcohol cocktail in winter. Up to now, the use of the autobahn has been free of charge for passenger cars, but that privilege won't last forever. The first toll section is already under construction and others are bound to follow, so you'd better hurry up before the legendary fast track suffers another blow.

How fast should you go? It all depends on your ability and confidence, on the vehicle you're driving and its potential, and on the specific environment you are about to zoom into. Whatever happens, don't let the naysayers, the eco-weenies, and the professional pessimists put you off. Speed does not kill. But the abuse of it does. ■