OVER KILL

Some guys just don't know how much is too much. A German businessman wanted the most brutal 911 Turbo street car imaginable, and the Kremer Brothers of Cologne delivered. IAN KUAH sampled this 962C-powered car at the old Nurburgring Circuit on a Group C test day. When he risked life and limb by lapping the Nordschleife circuit with Kremer test pilot Bernd Schneider at the wheel, Mr. Kuah found faith and comfort in a greater power. Photography by the author.

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RACING DRIVERS ARE very fit. Their lives depend on total concentration and razor-sharp reflexes. Even after an arduous day of testing the 750 bhp Kremer Porsche 962 on the Nurburgring Grand Prix Circuit, Kremer WSPC driver Bernd Schneider came bouncing back as fresh as a new rose to take me round the Nordschleife of the old Nurburgring Grand Prix circuit in another Kremer Porsche.

Group C Porsche 956 racers used to need just over six and a half minutes to negotiate the 20 km-long (13.02-mile) circuit with its 157 treacherous corners. And that was at an average speed of 120 mph. On a hot July evening, with the track about to close for the day, we took just under a minute longer. But we were in a road car.

A world class racing driver like 26-year-old Schneider can assess the handling of a car very quickly and push it right to its limits shortly after settling into the hot seat. Perhaps I hadn't quite realized that as the 650 bhp Porsche 962 engine in the highly modified 911 Turbo flatnose kicked us down the left-hander from the pit area into the series of ess bends that make up the Hutsenbach.

The old Nurburgring is no longer used for racing. It was deemed too dangerous for the latest crop of Grand Prix and Group C cars. Since the new Grand Prix Circuit was opened in 1984, it has been used only for testing and is also open to the public. For DM13, you can take your road car or motorcycle round and scare yourself silly or have the time of your life, depending on your skill. The ticket collector at the pits apparently is a great fan of Bernd Schneider and he waved us through for free.

"We barrelled into another corner at what I thought and felt was rather too fast. It obviously was as Schneider's next comment was, 'And ze brakes are not too good.' 'Then you don't have to go that fast,' I shouted back, white knuckles gripping the roll cage over my head"

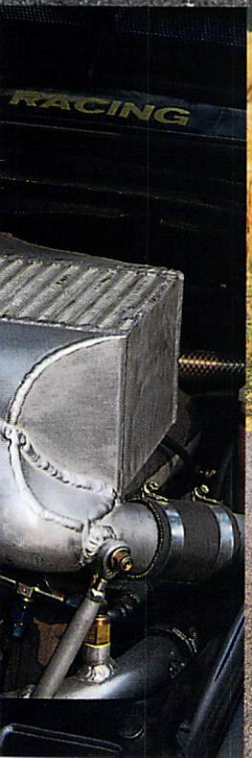
DANCING

Left, right, 130 mph in third gear, on throttle, off throttle, dab on the brakes. The next section looms. One of the reasons the circuit was declared dangerous is simply the sheer performance of the crop of single seaters and sports cars that appeared in the early eighties. The Nordschleife has many blind brows with corners, kinks, or fast straights beyond. After the first long straight, on which a 956 would reach 170 mph and we touched 150, there is just such a blind brow named the *Flugplatz* (flying place), after which is a double right-hander. The exit from here helps your speed into a part of the circuit as fast as the main straight. Even here you can hit 190 mph in a 956.

Down into a 180-degree right-hander taken in third. "Zis car needs a lot of verk to drive," Schneider shouted in heavily accented English over the scream of the motor. "Ze handling is not too good compared to a proper racing car," he added, correcting a slide as we barrelled into another corner at what I thought and felt was rather too fast. It obviously was as Schneider's next comment was, "And ze brakes are not too good."

"Then you don't have to go that fast," I shouted back, white knuckles gripping the roll cage over my head.

"But ze power is good," he answered as we powered out of Adenau Forest in second gear, the twin KKK turbos breathing harder and harder into the six cylinders as the engine revs shot round to the 8,000 rpm mark. Third gear and the power kept coming. I glanced at the speedo and saw the needle moving round almost as fast as the



rev counter.

The first 20 minutes or so on the circuit -- which many have driven on but few have really mastered -- were taken with the car sliding on the limit of adhesion and this writer hanging on for dear life. I had underestimated Bernd Schneider. In those first two minutes of stark terror when the Armco barrier loomed alternately on either side of the car, I became quite religious. But each time the slide stopped just short of the grass or the curbs, the wail of the flat six picked up sharply, and the shattering roar of the twin three-inch diameter tailpipes rose again as a giant fist punched the flatnosed 911 down the straight bits of tarmac. And my faith in the skill of the young man beside me grew. I was glad of that. The last five and a half minutes of our lap of the Nordschleife were thus pure entertainment of the kind that most people only dream of. Just like the first time I found myself dangling on the end of an open parachute and consciously beyond the point of no return, I simply relaxed and enjoyed the view.

Relax and Enjoy

As we worked our way down to the famous Adenau Bridge, I glanced past Schneider to the left and saw a view of the valley that you don't take in when you have the responsibility of driving. A little bit bumpy over the Bridge, then two kilometers of uphill left-hand bends where you make up time. You can lose a bit coming downhill if you haven't the stones to go flat out, but here you must redeem those precious seconds. The vibrations and the bumps are telling and you really have to work at keeping the car steady. With no ground effects to keep the chassis tied down, the Kremer Turbo is visibly a handful.

The world famous Carousel approaches. Third gear and we drop into second gear for this 180-degree left-hander. Ouch, it is bumpy. Out the other side, snatch third, and we are off into a fast downhill sequence of corners that's a heartstopper at this pace.

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This car is no racer, yet the g-forces are phenomenal. Even on Bridgestone RE71 road tires, the Kremer Porsche is capable of generating over 1.0g lateral acceleration. I am being pummelled by the acceleration and braking and cornering and crests and dips. At least in a roller coaster, you can see the rail in front of you. Here I am at the mercy of an undoubtedly skilled driver, praying that the car holds together. The Armco barrier looks gray and cold.

Schneider seems unconcerned as he flings the car around a circuit that he knows like the back of his hand. He has only his left hand on the wheel much of the time and is correcting the car's deviations off line with wrist movements. Both hands on the wheel now. I feel the car understeering more in the slower corners and Schneider is sawing at the wheel slightly, searching for grip.

Then suddenly, the torrent of corners is over. The long back straight stretches into the distance and we cruise at a mere 150 mph, just three-quarters of the car's top speed. We turn into the pits and I have a big grin on my face. I have managed to survive.

ROAD AND TRACK

Road cars and race cars are inhabitants of two very different worlds. When Bernd Schneider said that the handling and brakes of the Turbo were not very good, he really meant that with a LeMans-spec 650 bhp 962C engine powering the car flat out around the world's most difficult race circuit, they were not quite up to it. But this machine was never intended to be anything but the ultimate road-going Porsche, a car that can suck the doors off an F40 or any other supercar that dared to challenge its supremacy.

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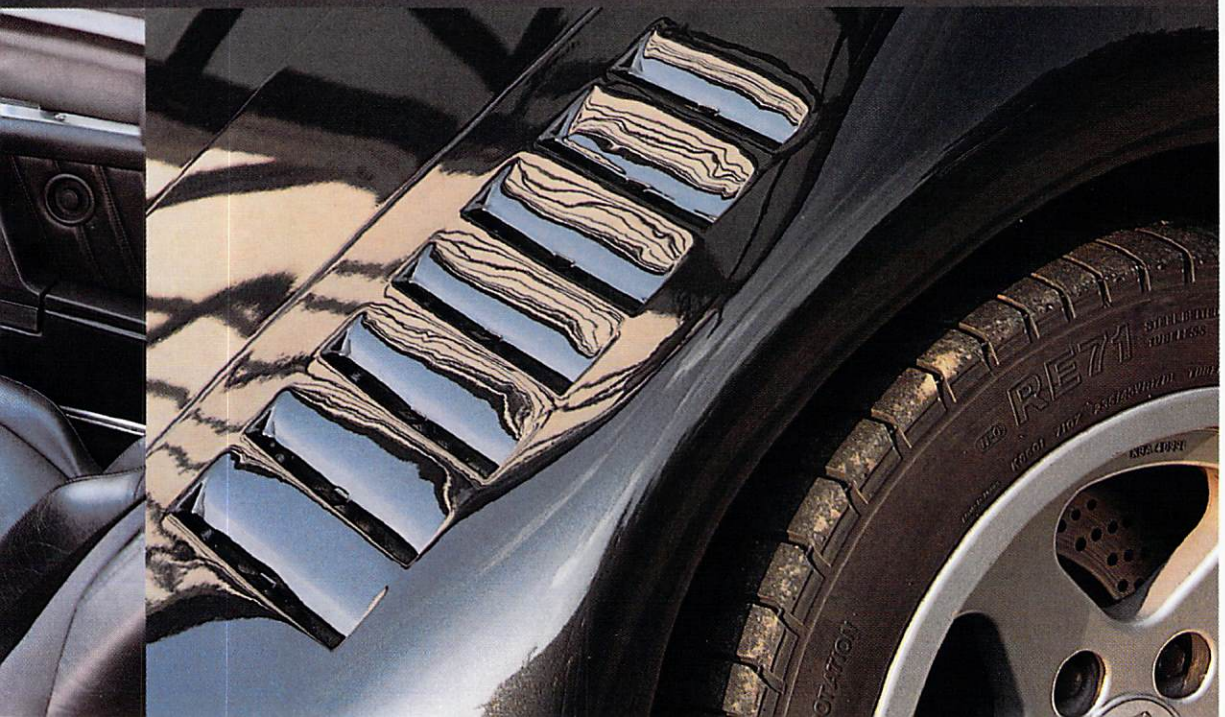
The property of a very wealthy entrepreneur whose business interests extend to property and publishing, this car started life as a 1985 911 Turbo. When the owner took delivery, he immediately had Kremer modify the bodyshell by adding the flat nose and the wider rear arch flares. These extend the already wide rear arches a further four inches per side and permit the use of 13-inch wide wheels. RUF 9 x 17 and 10 x 17 inch wheels were used with 235/45ZR-17 and 245/40ZR-17 Bridgestone RE71 rubber slipped over them.

A stock Euro-spec 911 Turbo from that year would have come from Stuttgart with 300 horses in its corral. The owner was evidently feeling the drag of the wider bodywork and tires and ordered Kremer's 375 bhp conversion, which involves swapping the K26 turbo for a larger K27, fitting a larger intercooler and larger rear engine cover section under the spoiler, new pistons and barrels, and Group B camshafts. You soon get used to power and the car's owner came back for more within a year of the original modifications. This time he had titanium connecting rods fitted, the cylinder heads gas-flowed, and a twin-plug ignition system installed. A four-pipe exhaust was bolted to the factory manifolds and the car was now good for 400 bhp. As 1987 drew to a close, the German magazine *Rallye Racing* did a track test on a LeMans-spec Porsche 962C racing car. Their tester enthused over the flexibility of the engine and its smooth, wide powerband. He didn't qualify his statement with the words "for a racing car." The owner of this Turbo



became enthusiastic about the idea of having a LeMans-spec 962C engine in his car. So he began his crusade of persuasion with Kremer to modify his car to accept such an engine.

Crusade

And a crusade it was. As Manfred Kremer, who was eventually to oversee the project explained, "We were not very keen to undertake a project on this scale. Not for technical reasons, but because we only have limited staff here who would have to be pulled off their normal work to build a one-off car. When you do something the first time, it can get very complicated and thus very expensive." The costing of such a project has to take into account time lost in normal work as well as protracted development, yet one cannot charge silly sums of money.

"The owner wanted this car so badly," Manfred went on, "he practically gave us an open check book. But even so, we are professionals and approached it the way we would with a racing prototype. This means that every decision taken had to be reasonable and well considered. We would discuss our proposals with the customer and get his approval before spending the money. Like in a race car, our aim was high efficiency and low cost. The principle of trial and error eats up too much time and money."

Kremer's General Manager, Achim Stroth, took the story further. "We modified the wheels, tires, brakes, and suspension first," he explained, "as this is the way we like to do things. The wheels are from RUF and the suspension was replaced with a coil spring system based on our experience with the 935 race cars. This is more or less the stock 935 set-up with adjustable spring pans to alter the ride height. The coils come from Eibach and the shocks from Bilstein."

For road use, you cannot use full racing brakes because the pads quickly glaze over and destroy themselves. Thus 962 discs are clamped by Brembo calipers from a stock Porsche 928S2 carrying

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Brembo pads. All the brake lines were replaced with Aeroquip braided hoses, as were all the oil and hydraulic lines in the car. "It was basically built up like a race car," said Stroth.

BIG HEART

The heart of the car, the 962 engine, cost DM155,00, or roughly US $96,000. When the initial talks were going on in the summer of 1987, the choice of the powerplant was hovering between the water-cooled 956/962 engine or an older-style air-cooled 935. "The older engine produced just as much power," explained Achim Stroth, "but its mechanical fuel injection and old-fashioned engine management systems meant it had lousy manners. No idle and no power below 5,000 rpm is not what you want in a road car. With Bosch Motronic 1.2 electronic engine management, four valves per cylinder, and a fairly smooth idle with LeMans-spec cams, the newer 962 engine was really the only choice."

This 2.8 liter engine was current up till early 1988, whereupon Group C regulations changed and the capacity was upped to 3.0 liters just before LeMans in that year. The engine in 2.8 liter form as installed in the 911/930 Turbo will make 650 bhp at 8,200 rpm on 1.1 bar boost (15.95 psi). If it was turned up for qualifying, the boost pressure would be raised to 1.5 bar (21.75 psi) to make 720 bhp at the same revs. On low boost, the torque is still a massive 480 lbs. ft. at 4,800 revs per minute.

"The Motronic 1.2 is very sensitive to fuel," Achim Stroth explained. "There are many different E-PROMs for different fuels and you have to be careful to use the right one in racing, especially with the high 9.0:1 compression ratio this engine has."

Porsche water-cooled the heads of its LeMans racing engines more than a decade ago because they produce far too much heat. The water pumps that service the heads had to be modified to fit into the Turbo's engine bay. The huge radiator that sits low in the nose of the car also had to be altered to fit and now, after all the fabrication work that has been done to reduce the physical bulk of the ancillaries around the engine, you could quite easily fit the powerplant into a stock 911 Turbo engine bay.

Open the trunk lid in front and you will see a 29.0 gallon (stock is 22.4 gallon) fuel cell from the English racing fuel cell maker Marston & Palmer. The oil tank is up front, too, and a sturdy strut brace anchors the shock towers securely.

Inside, the car is equipped with a full cage and racing harnesses in addition to the street seat belts. The speedo reads out to 300 km/h -- a mere 187.5 mph -- although the car will go over 200 mph with the right gearing. The tach pegs at 10,000 rpm in line with maximum power being developed at 8,200 rpm. It is hard to imagine ever needing all of this power on the road.

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BRIEF DRIVE

I had a brief drive of the car on the road before the descending summer sun had me scurrying for my cameras. The clutch is hardly heavier than a stock Turbo's and to a 911 owner, everything around is more or less familiar.

Surprisingly, the ride quality is not as bad as one might expect from a car so close to being a racer for the road. It is taut, but not as

bone-jarring as some production sedan racers I have come across over the years.

The engine may be tractable by racing car standards, but it is not as docile as a stock Turbo or even the RUF CTR. You let in the smooth clutch and the car moves off the line nicely, thanks to the high compression ratio. But just when you are expecting plenty of steam to come, you run into a large hiccup of turbo lag. Getting the best out of this car requires open road. There, its performance is shattering, its horizon-pulling thrust unequalled by any supercar on the face of God's green earth.

Bernd Schneider is the only man so far who has seen the dark side of this Kremer creation. As Kremer's top test driver and an ex-Zakspeed F1 pilot who has won races at international level, he is well qualified to handle this beast. And tame it he did, on the most difficult and demanding race circuit in the world.

The Kremer Brothers' involvement with racing Porsches began 22 years ago when they campaigned a short-wheelbase 911 2.0 liter car in the European Touring Car Championship and emerged overall winners. Ever since then, Kremer-prepared Porsches -- from 911s to 962Cs -- have appeared in the winning circles of serious motorsports events like the German Sportscar Championship, LeMans 24-hour, and IMSA.

The firm, originally founded in 1963 by brothers Erwin and Manfred Kremer, specialized in the repair and tuning of Porsche cars. Those were the days of the 356 four cylinder cars and a year before the birth of the 911 model, on which the company's fortunes were destined to ride.

Both Master Engineers, a very prestigious title in Germany, the brothers took on different roles in the company. The adventurous Erwin Kremer took to the tracks at the wheel of Kremer-prepared 911s, while Manfred looked after the general running of the firm and oversaw road car development projects.

With the company growing fast through both commercial and racing successes, new premises had to be found to expand the business. A decade after they started, the Kremers moved into new premises on an industrial park in North Cologne. This was enlarged in 1983 to take in a showroom and office complex as the company continued to grow through its servicing, tuning, and motorsport activities.

All this work with Porsche paid dividends in 1984 when E & M Kremer, as the company is called, was given a tremendous accolade by Porsche. To gain a Porsche franchised dealership in Germany, a company must first prove itself as a VW-Audi dealer. From the original 210 Porsche dealers in Germany, a rationalization program in the late eighties pruned this dealer network to just 80. In 1984, in recognition of the effort and success that Kremer has had promoting the Porsche marque in motorsport, the big powers in Stuttgart awarded a Porsche franchise to the firm, bypassing the VW-Audi clause. Kremer is the only German dealer devoted purely to sales and service of Porsches.

Loyalty is a strong point among Kremer staff. More than half of the current 25 highly trained employees have been with the company for more than 10 years and most of their race mechanics were trained by Porsche.

Erwin Kremer retired from the racing scene in the early seventies after a successful career and many wins to his name. Since then, he has concentrated on running Kremer Porsche Racing, the motorsport division of E & M Kremer. An outright victory at the LeMans 24-hour in 1979 is the team's greatest success to date. Famous names who have driven for Kremer in the past read like a bible of motorsport personalities: Mario Andretti, Bob Wollek, Keke Rosberg, and Alan Jones, to name but a few. It's likely that many other rising drivers will make their way through the Kremer racing stable in the nineties. **SCI**