

It's again time for *europaean car's* editors to honor the spirit—and resulting products—of innovative thinking in the automotive aftermarket. Our "Select Gear" awards, now in their third year, were initiated to credit those parts, accessories and services which make the world of vehicle personalization so rewarding, both for us as observers of this most vital scene and for our readers as avid users of those products.

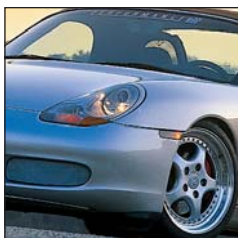
This year's recipients of the Select Gear awards begin with a new high-performance tire from one of Europe's most respected manufacturers. We're also recognizing an electronic diagnostic device that lets the driveway mechanic read codes and plan repairs just like the dealer technicians.

Kudos are extended as well to a company whose suspension systems are all high-tech custom jobs for the discriminating racer and street enthusiast. Our prime tool user, Dan Barnes, convinced us we should honor a portable air-power system that lets him take his shop on the road, and also receiving a nod from the editors is a newly designed way for auxiliary safety harnesses to be easily installed and used.

One of our favorite projects led us to another winner, a one-stop shop for quality Porsche performance and appearance componentry. And a new way to keep your alloys looking like they just came out of the showroom receives our recognition.

We also honor a firm whose lighting kits have brought top-of-the-line technology to the aftermarket, and, finally, for the first time we send out an award to a racing series, whose participants are also developers and users of high-performance products for the street.

Congratulations to all these deserving winners that enrich the automotive aftermarket.



SELECT GEAR 2002

by ec staff



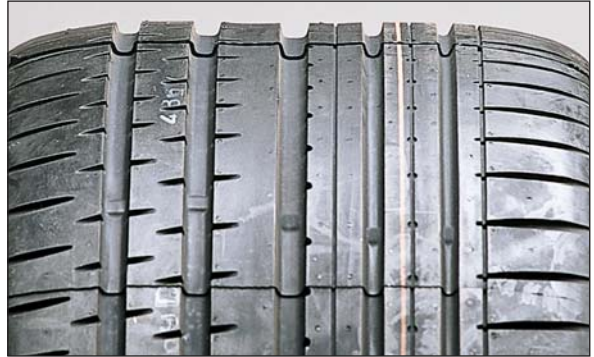


Continental ContiSportContact 2

Continental is an interesting brand. Though the company isn't involved in racing, its performance tires are regarded by peers as worthy competition, even cited by competitors' engineers as examples of excellence in certain characteristics. The ContiSportContact has been original equipment on many vehicles seeking to combine excellent performance with luxury-brand ride, noise and weather-handling characteristics. These have included several all-time *European car* favorites, such as the BMW 330i, while being affordable enough to be seen on the *Sport Compact Car* side of the garage on bargain burners such as the Ford Focus SVT and Nissan Sentra SE-R Spec-V. For an all-around tire, the ContiSportContact has been tough to beat.

Now Continental has raised the ante with the ContiSportContact 2, intended to gradually replace the original. The ContiSportContact 2 offers greater dry and wet performance with less regard paid to winter capability. It was designed and built in Europe for European customers, who generally mount true winter tires during the snowy parts of the year.

When we drove them at Continental's proving grounds in Uvalde, Texas, the ContiSportContact 2s provided dry grip at least commensurate with the capabilities of the stock chassis they were mounted on. They were predictable and inspired confidence when set in a turn, with the responsiveness and quick turn-in one would expect of a maximum-performance tire. In an autocross set up on a flooded skidpad, the ContiSportContact 2



was truly astounding. Even in the deep water, one could turn off traction control in the Boxster provided and drive at a level that would be about seven-tenths in the dry. When the tires did begin to slide, breakaway was smooth and easy to recover from. We were most surprised by the ContiSportContact 2's wet braking ability, the longitudinal grooves evacuating the deep water and allowing us to brake later and harder than we had yet experienced in wet conditions.

We were impressed enough by our initial experience that we chose the ContiSportContact 2 for a plus-one upgrade to our long-term Audi A4 3.0 CVT test car, which must combine comfort and quietness with handling and take the abuse and varied opinions of rotating drivers.

Continental Tire North America Inc. • (704) 588-5895 • www.continentaltire.com

VAG-COM

Ross-Tech's VAG-COM is a powerful tool, consisting of a software package and any of several connectors that transform a PC into a full-featured diagnostic tool and more for VWs and Audis—an electronic wrench. When *European car* chose the VAG-COM as "Tool of the Month" in November 2001, we called it a tremendous value and said it should be considered as essential as a torque wrench. Since then, PES has told us it considers VAG-COM an essential accessory for its super-charger and turbo upgrade kits, enabling remote diagnosis of installation mistakes from thousands of miles away with just one round of phone calls.

Uwe Ross, VAG-COM's creator, reverse-engineered the communication protocol between a VAG 1552 dealer tool and the car, and wrote a program that allows a PC to do everything a VAG-1552 can do and more. In addition to showing fault codes and monitoring operating parameters, VAG-COM allows an enthusiast to make "adjustments," such as reprogramming the locks or the stereo, re-aligning the immobilizer after swapping ECUs, and resetting service reminder indicators. VAG-COM can read any trouble codes in the vehicle, enabling one to diagnose a problem with the ABS, airbags or automatic transmission, and it can communicate with pre-



1996 (non-OBD-II-compliant) cars. An OBD-II scan tool generally costs more than VAG-COM, but can't do most of these things.

In the last year, Uwe Ross has been busy developing upgrades to the VAG-COM system. Software has, of course, been updated to support the newest vehicles (such as the 2002 Audi A4 and A6), and the range of connectors that interface the PC to the vehicle has been expanded from the simple, works-for-most-people ISO-COM we tried originally. Now FAST-COM, BI-COM and TWIN-COM are available to provide a wider range of capabilities and meet any user's requirements. Ross-Tech's website is very helpful in determining what's needed.

Uwe Ross reported that in addition to adding generic OBD-II capability (basic scanning functions for any car), he's in the earliest stages of developing a similarly full-featured system for BMWs. However, if you call and ask him about it before he announces it, you'll just be keeping him from working on it.

Technology makes cars better, but as cars become more sophisticated, those who work on them must grow in sophistication as well. VAG-COM makes that sophistication a lot more attainable for VW and Audi enthusiasts.

Ross-Tech • (215) 361-8942 • www.ross-tech.com



Advance Design Suspension

Advance Design states, simply and elegantly, that its objective is to have the most customers with the fastest cars. It's safe to say that Project M3 is the fastest *European car* project ever, and its Advance Design suspension is one of its best features. Each Advance Design suspension is custom-built to meet the customer's needs. Project M3 was set up with a bias toward track driving, essentially a weekends-only car. Still, several of us find the ride daily-driver friendly on the surface streets and freeways near our office.

Advance Design, which grew out of Ground Control, wasn't started to move a lot of product but to help customers stand on podiums. The personal preferences of Advance Design's people are for production-based race cars, and they've built a business around them. In developing its coilover spring systems, for a long time Ground Control's engineers had no choice but to use other companies' dampers and kept running into limitations with those components. Problems could be eliminated with full-on racing dampers, but the cost was prohibitive for Ground Control's customers. Advance Design racing dampers were created to provide all the technology offered by a \$1,000 damper to the serious club racer, at a price that made sense in a club



racer's budget. While many dampers designed for the street can be rebuilt and revalved to get by in racing, the labor moves their price into a territory where Advance Design dampers can represent a better value to the serious club racer.

Advance Design uses a high-pressure gas monotube design. It moves more oil and is thus easier to have an effect on the valving through adjustments. It is also easier for most customers to understand what's happening in a monotube damper. Advance Design doesn't use external reservoirs nor an upside-down strut for reasons of lightness, simplicity and reliability. Damping is adjustable separately for compression and rebound, because the two functions perform different tasks. Only three positions are provided for each; the settings cover a wide enough range to be useful in adapting the car to different tracks and drivers, but don't extend into useless areas. Advance Design dampers are

rebuildable, but that should be necessary only to change the oil every couple of seasons when racing. Barring crash damage, they should last forever.

We chose Advance Design for Project M3 knowing that it is on several of the fastest 3 Series BMWs in ITS. For us, it has proven to be an excellent choice for both street and track, helping put Project M3's 400-plus whp to the ground.

Advance Design • (530) 677-8600 • www.advance-design.com

PES Audi V6 Supercharger

Assuming you want your wife driving the kids to hockey practice in a 295-hp Audi, Performance Engineered Systems' supercharger kit for 30-valve V6s is a great way to accomplish it. If you want the power, but she wants the niceness, you'll both be happy. PES' first objective in engineering this supercharger system was to preserve the integrity of the vehicle: A customer has already paid a premium for an Audi and expects perfection. If the goal was the quickest quarter mile for the least amount of money spent, the customer would have bought a Camaro.



PES's supercharger kit is based on the Eaton M62 Roots-type blower, which is highly efficient at moderate pressure ratios and has proven its reliability as original equipment on Mercedes-Benz, Jaguar and Aston Martin. An Audi must idle and drive perfectly, and PES' demonstrator A4 does just that. It also made a ton of power, with excellent throttle response and no lag. Around town, it was quiet. The supercharger was audible only with the throttle open, at which point people will know there's something under

the hood anyway. And even then, it didn't howl the way some installations do. Ultimately, this system asks questions a chipped S4 may have a hard time answering.

Perfect driveability is achieved by keeping the factory engine management happy, not by tricking it. PES adds larger injectors to go with a remapped ECU. Take everything you've heard about the difficulty of tuning Audi's turbo cars, and multiply it a few times to put boost on a non-boosted car. More than 1,000 hours of tuning and road testing were required, but PES got it dialed in. Internal fuel and timing trim corrections are held to a few percent.

Another element of a seamless experience is a truly bolt-on installation, with no guesswork and everything in the box. The manifold and inlet pipe are shipped assembled to the supercharger so it's ready to mount. The PES system will work with factory or aftermarket intake and exhaust systems, though improvements are recommended for maximum power, and the factory plastic spark coils and valve covers remain in place. PES provides the installation manual on CD. PES' own technician can install the kit in 6 hours, but a first-timer is better off reserving 12. No stock parts are modified with the installation, so a car can be completely returned to original condition.

With naturally aspirated engines, the 2.8L A4 and A6 are the "luxury" versions of their platforms—meaning not intended for high performance. If that pains you, PES has a cure for your ailments. You won't be driving just another chipped 1.8T.

Performance Engineered Systems • (877) 697-1688 • (267) 288-0161 • www.pes-tuning.com



Power Tank

The Power Tank, from Advanced Air Systems, was our "Tool of the Month" in March 2001. Since that time, it has gone everywhere with us. Dave Coleman was able to repair his rally car after crashing and go on to win the second day of the event not once, but twice, because of the speed Power Tank provided. When Dan Barnes helped sister magazine *Sport Compact Car* strip a Nissan Sentra from 2,762 lb to 1,674 lb in a day at the drag strip, Power Tank was there. When the power and speed of an impact wrench are needed at the Pick-A-Part, Power Tank comes along. It is one of the best tools we have in our arsenal.

Power Tank is a compressed CO₂ tank, with a regulator, hose and fittings, that makes the power of an air compressor available virtually anywhere. Power Tank is available with 5-, 10- or 15-lb capacity tanks, weighing half as much as an equivalent steel tank or aluminum scuba tank. Because the CO₂ is stored in liquid form, a Power Tank packs three times the energy of the same size nitrogen tank, and the 10-lb Power Tank stores 20 times the energy of a 5-gal. air tank filled to 125 psi.



Advanced Air Systems sent us one each of the 10- and 15-lb tanks to try. We've found it convenient to refill the extra at our leisure, not to mention having a backup when the one we were using faded. The increase in capacity with 15-lb tanks versus 10-lb tanks is greater than the increase in size and weight.

Power Tank is better for intermittent use than for continuous uses such as running a grinder or sander. In cool or humid weather, continuous use of the Power Tank will result in condensation, or even frost, on the outside of the regulator.

Power Tank is safe if used carefully, but with that much energy stored and changing forms, definitely follow the instructions. The tanks themselves are probably the safest part, as they are rated to about three times the maximum pressure they are likely to see and have a safety valve to ensure they never approach the limit.

With the Power Shot, Advanced Air Systems has reduced the cost to obtain a working system for those who just want to air up their tires. It is

just like the Power Tank system but replaces the regulator with a non-adjustable unit set to 150 psi. That will shorten the life of most air tools but is excellent for adjusting tires.

Advanced Air Systems • (916) 691-6806 • (800) 641-3206 • www.powertank.com

Schroth Quick-Fit Harness Belts

Controlling any car precisely requires that hands, feet, arms and legs be used for directing the car, not just hanging on. There are more important things to do when balancing a chassis at the limit than keeping oneself from sliding into the center console. BMWs are better than most cars for performance driving in many ways, including their seats, but no standard three-point safety belt can come near the support provided by a good four-point shoulder harness. This is especially true when the forces developed by brakes, suspension and tires have been increased beyond factory levels.

For some track driving enthusiasts, the solution is to install competition seats and harnesses. That works great on the track, but climbing into a shell seat and putting on a four-point harness quickly becomes a nuisance in the car you drive every day. Installing most seats and harnesses in a street car without compromising its useability can be a challenge. Furthermore, while some people may be impressed by the look, Officer Bob sees it as evidence of premeditated intent, if not an outright equipment violation.

Schroth claims to make the only performance belts that are DOT-approved when installed in accordance with an application list and the instructions. This ensures the belt can be installed safely without the end user taking responsibility for engineering for which he is likely unqualified. Schroth street harnesses feature asm®, a mechanism to reduce the risk of submarining, or sliding underneath the lap belt, without the use of a crotch strap. As well, they are made from a polyester

material that Schroth states absorbs energy and resists UV light and chemicals better than nylon. Schroth street harnesses install at factory mounting points, preserving the originality of the vehicle.

Schroth has now taken its philosophy a step further, introducing Quick-Fit belts for BMW E36, E39 and E46 cars, and tells us it will have a MINI fitment available by the time you read this. The Quick-Fit belts are a custom fit, attaching to fac-



tory lap and rear-seat belt clips. They do require the one-time installation of an additional clip, but thereafter can be fitted or removed from the vehicle in just a few minutes. This allows a car to be used at the track or on the autocross course with Schroth belts, then driven home with just the factory restraints in the car, with no tools required.

Schroth USA/MDI Inc. • (888)536-8550 • (978) 532-1145 • www.schroth.com



Performance Products Porsche Boxster Performance Program

Massive, warehouse-size superstores are great, the kind of places you can find plasma screen TVs and goose-liver pate under the same roof. Until you have a question, that is. Then, you're pretty much on your own.

It was with trepidation then, when we embarked on Project Boxster R, an undertaking principally based on Performance Products and its massive color catalog, the goal to emulate the factory's Boxster S model. Sure, the Southern California-based company had the goods (pictures, anyway), but, as we have great regard for the stock Boxster, we had questions and concerns. Could it deliver? Would the car be enhanced or compromised by a plethora of aftermarket pieces?

Well, Performance Products not only allayed our fears but satisfied our wildest expectations, offering premium performance hardware with exceptional customer service. Project Boxster R was a raging success. From a performance standpoint, the Boxster R kicked butt—Performance Products had solutions for each system we addressed.

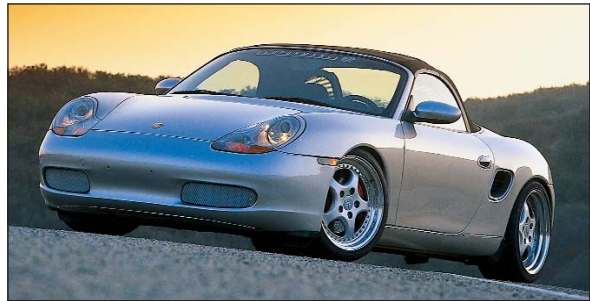
A review of the project must begin with the engine upgrade. Consisting of a PowerFlo Intake system, Dansk Sport exhaust and GIAC ECU, the result was nothing less than exhilarating, turning the rather blase base Boxster into a left-lane contender.

More speed meant more need for improved chassis control, and there we chose H&R's Coil Over suspension system, which firmed up the handling without ruining the Boxster's wonderful ride quality. Performance Products' front and rear upper strut

bars added a further measure of stiffness to the already stiff chassis.

The running gear consisted of RH two-piece alloys, through which could be spotted Performance Products' Boxster S Big Brake Kit. Great binders.

Better lighting came courtesy of the same Litronic headlamps found on the world's best cars, and Euro-spec side markers joined such other exterior revisions as a Performance Products' rear wing and Boomerang front lip protector.



The car's interior was tarted up with carbon-fiber door sills, a B&M short-shifter and a Performance Products' Boxster S gauge face package.

Performance Products richly deserves *European Car's* Select Gear award for its extensive line of Porsche hardware and exceptional customer service. It's a rare blend, indeed.

Performance Products (800) 789-1962 (orders) (800) 789-1963 (catalogs) www.performanceproducts.com

O.Z. Classe Wheels

It's a very ugly sound, the grawncing noise of an alloy wheel grinding along a concrete curb. It's downright tragic how quickly an expensive, gleamingly perfect wheel can be ruined by a few inches of misjudged steering input, and until recently there wasn't much to do about it except live with a tattered wheel or fork out big bucks to replace it.

O.Z., one of the world's most respected wheel manufacturers, had a better idea, debuting a solution to damaged wheel lips on its Classe line of wheels. This elegant, open-spoke design is especially distinctive because of O.Z.'s patented stainless-steel removable lip. This lip allows the owner to replace, in the field, a damaged one, making it remarkably simple to maintain that showroom new look. Available in a satin silver finish, the Classe comes in a range of applications for today's premium luxury cars, including Mercedes-Benz, Audi and Jaguar vehicles, initially in 18- and 19-in. diameters.



Pietro Zen, hence the O.Z. name. In 1972 O.Z. moved to Mottinello, Italy, into an old spinning mill, where alloy wheels with gravity technology were first cast in metal molds. By 1978, the company had grown into a new factory, and in 1984, O.Z. Racing was created. It soon was supplying wheels to Formula One teams, and in 1993 it introduced forged magnesium wheels to the sport, when it was on Alain Prost's championship Williams. An internal Design Center was set up in 1994 to further the company's brand identity and develop a wider range of street applications. The U.S. racing scene first saw O.Z. in 1996, and just a year later its wheels were on the CART, Indy 500 and IRL championship cars, a feat O.Z. repeated again the following two years.

European Car has used O.Z. wheels on several project cars, and we've always been impressed by their obvious quality of build and durability. With this new replaceable lip, O.Z. again has combined

O.Z. was established in 1971, in a small gas station in Rossano Veneto, Italy, by two partners, Silvano Oselladore and

technology with style to come up with a better idea. Who said you can't reinvent the wheel?

O.Z. Wheels (305)471-0042 (888) 697-2246 (dealer info) www.ozwheels.com



HIDS4LESS Lighting

One of our favorite nighttime activities is driving on favorite roads unhampered by daytime traffic. However, in some cars, the fun quickly turns to frustration when you're constantly outrunning weak headlamps. Fortunately, you don't have to shell out big bucks for a new car with advanced xenon headlamps just to get good lighting. Just contact HIDS4LESS for one of its wide selection of xenon retrofit kits, and with a couple of hand tools, basic mechanical skills and a minimum of time, bring your vehicle's lighting up to the latest standards (legality

varies from state to state, so double check the laws in your area).

All HIDS4LESS kits are comprised primarily of components sourced from the OEMs that supply such carmakers as BMW, Audi and Mercedes-Benz. All kits are assembled in the U.S., though the system's main components are from Germany.

HID stands for High Intensity Discharge, a technology that uses xenon gas as the lighting medium, which delivers a whiter, brighter light than standard halogen bulbs.

Each system consists of two xenon bulbs, two electronic ballasts (electronic control units), and two built-in igniters (inside the ballast). Two types of ballast are offered, an integrated unit with inverter and igniter as one, or a two-piece system that allows for greater mounting options.

The advantages of xenon lighting begin, of course, with increased output—three times greater than halogen. HID also approximates the color temperature of sunlight, so objects at night look more natural than with other lighting, and HIDs use one-third less power than standard headlamps.

HIDS4LESS also offers a Stage Two system, which outputs even more light, though with a more purplish light. It's the same lighting system found on European Le Mans race cars and run at 6,000K compared to the 4,250K of Stage 1.

Each HIDS4LESS comes with a 5-year warranty that covers ballasts and bulbs, and the firm also offers systems for off-road, construction and marine applications.

HIDS4LESS.COM • (866) 571-5538 • www.hids4less.com

Speed World Challenge

There's an old saying that racing improves the breed, and nowhere is that more evident than in production-car-based competition. One of our favorites is America's Speed World Challenge, co-sponsored by the SpeedTV network and SCCA. The concept has been around in one form or another for more than two decades, but now it's a mature, exciting venue that means a lot to the readers of *European Car*.

Many of the competitors are involved in aftermarket tuning, and the lessons they learn on the track are often translated into sophisticated gear for the street performance enthusiast.

Currently the series includes Grand Touring and Touring classes, based on their performance potential and market segments. Only cars built from 1996 on are accepted and vehicles must be normal production models, marketed and delivered to retail customers. However, there is provision, on a case by case basis, for acceptance of small-volume manufacturers and modification companies. Vehicle weights and tire sizes are adjusted during the season to achieve on-track equality, and each race is no longer than 50 minutes.



For Touring cars, the entrant must have a back seat in production form, can be either two- or four-wheel drive and must have a naturally aspirated engine no larger than 2.8 liters. GT cars are allowed forced induction with no displacement limit, and two-seaters are also allowed.

All World Challenge cars must have a rollcage, safety harness, fuel cell, driver's side window net, on-board Halon extinguisher and racing seat. Allowed modifications include removal of the back seat, front passenger seat and the a/c and radio. Fuel management is open, but all cars must run on the provided unleaded Elf racing fuel.

Underneath, suspension mounting points may be moved an inch, but the wheelbase and track must remain stock. The shocks can be replaced but must remain in stock location, and roll bars are allowed but must be bolted-in, not welded.

Brakes pads and shoes are open, and four-piston calipers are allowed, but GT cars are restricted to 14-in. rotors and Touring car to 12-in. rotors.

All entrants must run mufflers, and the standard wheels can be replaced with direct bolt-on aftermarket wheels. Maximum wheel diameter is 18 in. for GT and 17 in. for Touring. The Touring class allows spec rear wings and approved aftermarket body kits, but GT bodywork must be approved. The spec tires for the series is the Toyo Proxes T1-S, and they can be shaved. ❧

[Speed World Challenge](http://SpeedWorldChallenge.com) • (303) 694-7223 • www.speedvisionwc.com