Audi magazine
drive: The transformation of the Audi A4 and A5 move: The next frontier in lighting inspire: Inventor Tony Fadell, and the Monterey car shows
edition 104

Audi

magazine/edition 104

drive

Sense and sensuality:
The refreshed 2013
Audi A4 and A5 are
stylishly smart.

move

Visually organic:
OLED lighting is a story
of illumination.

inspire

Nest:
Tony Fadell reinvents
the thermostat.

Audi d'elegance:
We cruise down 17-Mile
Drive for the famous
Monterey car shows.

Editorial

A commitment to sustainability.

Thanks to great products and a growing base of Audi enthusiasts in the United States, 2012 was a signature year for Audi. But we aren't resting. Instead we're challenging ourselves to be bolder in our ambitions, to talk to our owners more, to question the conventional thinking that prevails in our business and to redouble our resolve to be the top automotive brand in the world.

All of that is why Audi is determined to address the concerns about mobility and energy choices around the world today—and a generation from now. This Audi focus on sustainability is a leading topic for our brand in the years ahead and the centerpiece of this Audi magazine.

We open 2013 with a perfect example of our innovations on this vital frontier. The new A8 TDI® model instantly became the most efficient luxury flagship sedan in the market with an EPA rated 36 mpg in highway driving and 28 mpg combined.[1]

You can learn more about this stunning efficiency story, and about our expanded TDI® clean diesel lineup coming later this year, as part of our our commitment to deliver a deeper product lineup for the constantly growing ranks of potential Audi customers.

Sustainable innovations can be found throughout Audi models on the market now, or those soon to come.

This Audi spirit can be found in technologies, such as organic light-emitting diodes (OLED), a dynamic technology that promises to literally reshape where you can put lights on a vehicle—and what you might be able to do with them. OLED can also potentially operate with a fraction of the energy traditional lighting needs, which opens up possibilities far beyond the automotive market.

We also have an intriguing piece on Tony Fadell, an avowed Audi fan, and one of the geniuses behind the development of portable hardware by Apple®, which transformed media, the personal stereo and the mobile phone along the way.

Now, with Nest, he's attempting to transform another previously underappreciated device—the household thermostat—and drastically reduce the amount of energy you use every year.

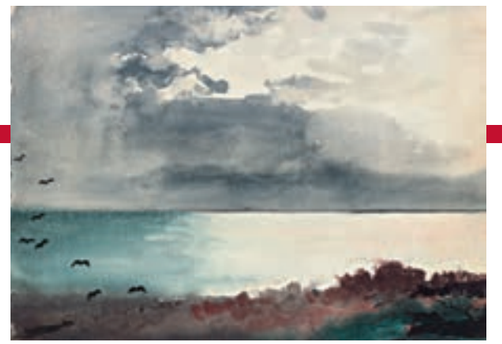
Speaking of energy conservation, sometimes we need to relax. That's when we retreat to places like The Carneros Inn, just up the road from our Audi sportscar experience at Sonoma Raceway. We take a look at this innovative Napa property, its commitment to sustainability, and its commitment to luxurious comfort.

As always, we love to hear from you, our readers and our customers, so please don't be shy. Tell us what you like and even what you don't. We're strong enough to handle praise and listen to critiques, so we can be even better and smarter going forward.

Scott Keogh
President
Audi of America, Inc.

Photos: Melissa Golden / Redux Pictures

1 See www.fueleconomy.gov for EPA estimates. Your mileage will vary.



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New models, new technology
and Audi news.

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Refreshing the 2014 Audi R8

It's difficult to improve on perfection, but that's the challenge our designers and engineers faced with the 2014 Audi R8 refresh. It's still the mid-engine supercar that driving aficionados have sought out since its debut in 2008, but we've added a potent, new transmission as well as bold, state-of-the-art exterior styling to keep the model's edge.

The first noticeable update is incorporating the new Audi LED headlights and taillights, each an iconic single continuous strip of light that, given our previous-generation LED design, you'll be seeing everywhere in the coming months. We've also added an Audi S tronic® seven-speed dual-clutch automatic transmission to the mix while giving consumers the option of a V10 Plus trim level, with its 550 hp, specially tuned springs and other styling upgrades. But whatever the engine and whatever the year, it's still every bit an Audi R8.

Audi Returns as the Official Automotive Sponsor of the U.S. Ski Team

Audi is known for dedication to performance. That's why we're proud of our continued partnership on the slopes with the U.S. Ski and Snowboard Association (USSA), the national governing body of Olympic skiing and snowboarding.

As a returning sponsor, we will continue to support the U.S. Ski Team's athletes for the next five years, while supplying Audi vehicle transportation in the United States and Europe for them.

"Audi and the U.S. Ski Team are committed to high performance, unparalleled technology, innovation and willpower," said Loren Angelo, General Manager of Brand Marketing for Audi of America. "Our sponsorship with the U.S. Ski Team has been a natural fit since 2007, and we're excited to continue our relationship for another five years."

We hope all Audi owners join us and root for the U.S. Ski Team to bring home the gold. The countdown to the 2014 Winter Games in Sochi, Russia, has begun!

Breathe rarified air in the new Audi RS 5 Cabriolet

With grand architecture and epoch-defining haute couture on runways and street corners throughout the city, it takes something truly notable to turn heads in Paris. Something like the all-new Audi RS 5 Cabriolet. One of the stars of the 2012 Paris Motor Show, the 2013 RS 5 is bringing its seductive droptop style, agile handling and high-revving 450 hp to the United States.

The four-seat RS 5 Cabriolet features a naturally aspirated 4.2-liter V8, quattro® all-wheel drive and an electronically limited top track speed of 174 mph.[1] Even at normal highway speeds, the adrenaline-fueled rush of power is perfectly complemented by the feel of the air going through your hair—and when you slow down, you can enjoy those heads turning.

Photos: USSA by Sarah Brunson

Coming attractions: Audi and "Marvel's Iron Man 3"

Come May 3, Audi will return to the big screen. Along with Iron Man. Among the stars will be the Audi R8 e-tron® and the A8, and there are rumors that maybe even an S7 will make an appearance. They will share the screen with a cast including Robert Downey, Jr., Gwyneth Paltrow, Don Cheadle and Guy Pearce.

"Marvel's Iron Man 3" will kick off the summer movie season with Robert Downey Jr.'s Tony Stark/Iron Man back, this time facing off against The Mandarin, played by Ben Kingsley. And, once again, Audi will play a prominent role. After all, they are more fuel-efficient[2] than Stark's other machine, the Iron Man armor, and more fun to drive.

1 Top track speed is electronically limited in the U.S. Obey all speed and traffic laws. 2 See www.fueleconomy.gov for EPA estimates. Your mileage will vary.

Team

This page: The patterns for the huge tools are made from an especially hard form of polystyrene.

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Audi magazine proudly employs an environmentally sustainable printer that is FSC-certified.

Photo: Encounter, The Audi Sustainability Magazine

drive

An even more dynamic duo

The 2013 Audi A4 & A5 have been redesigned to inspire the racing spirit in you.

By Steven Michail

The Audi A4 and A5 Coupe and Cabriolet are known as some of the most stylish vehicles on the road. While convention permeates most car manufacturers' design portfolios, Audi has continually pushed for an independent design language across our luxury lineup. This has resulted in beautifully designed vehicles that are bred on the philosophy that performance is contingent upon all factors—technology, weight-savings, aesthetics and displacement—working in concert. Never has this been truer than with the redesign of both the Audi A4 and A5 for the 2013 model year.

The Audi A5

The Audi A5 makeover is evident right from the start, and it is sure to reignite the passion of the automotive world with its indelible mark on the industry. The Audi Singleframe® grille boasts new, tapered upper corners, and bars that are finished in highly polished black. This sculptured design feature is standard across the board for all coupe, cabriolet and sedan models in the 2013 lineup. Flanked on either side by the slender trapezoidal shape of the available xenon plus headlights, the A5 shows off with an exceptionally bold stance. You'll immediately notice redesigned air inlets, again in highly polished black, that have a visibly sharper design, further enhancing the coupling of design and engineering in the A5. The three-dimensional >>

A5

A5 2013

Technology, weight-savings, aesthetics and displacement working in concert.

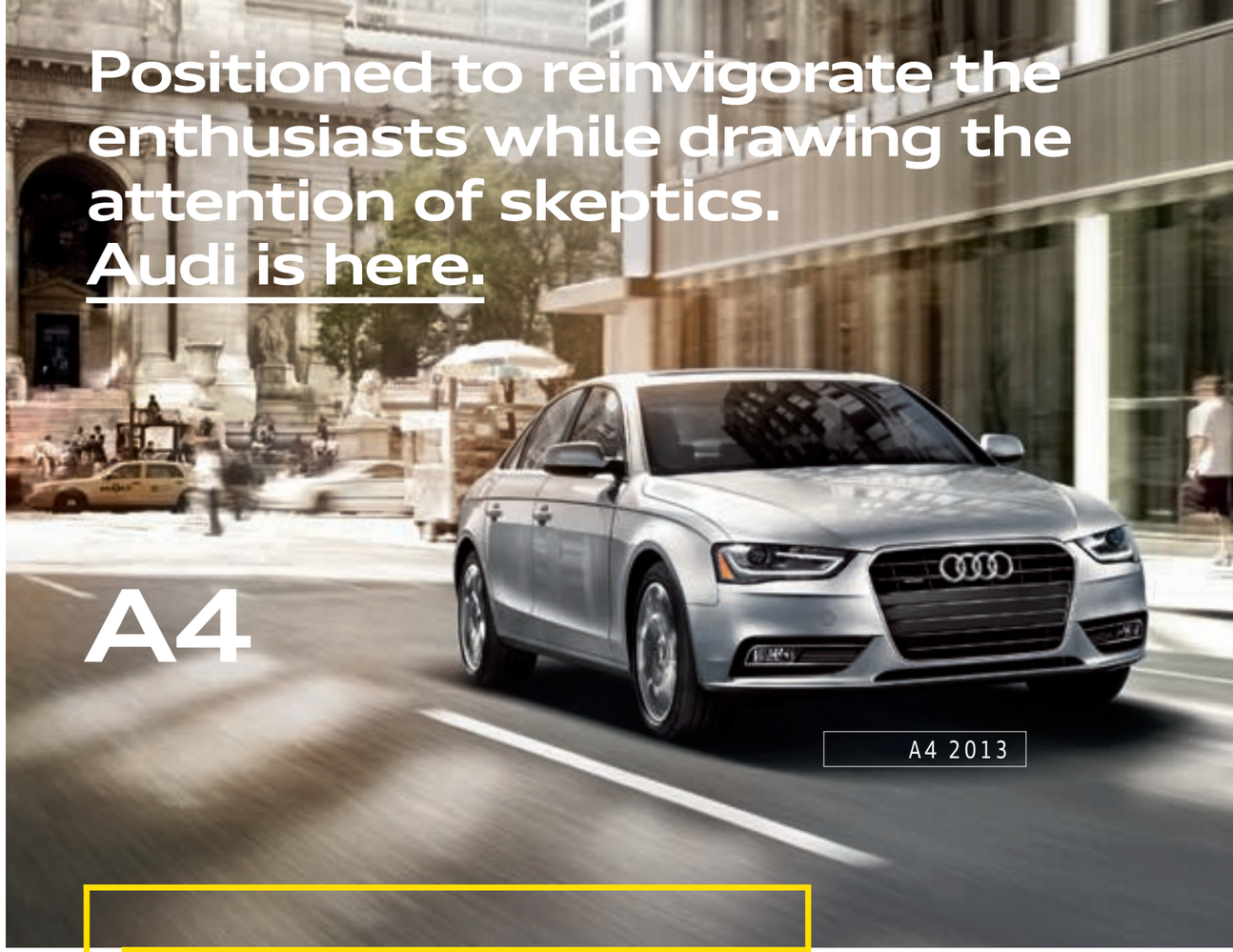
The Audi A5 is cut from the same Audi cloth,
but stitched together in an entirely new way.

1. Redesigned wheels 2. LED daytime running light technology 3. LED taillight technology 4. Redesigned Audi Singleframe grille

look of the newly designed hood harmoniously blends seamlessly with the overall redesign, and hints at the unseen power and nimble character of the vehicle. The once round front fog lights have been transformed into a more sculpted angular design that helps balance the width of the front end of the A5 and completes the themed redesign of the front end.

All that we've just described is basically just the first third of the A5, so you can believe that when Audi made this a redesign, they weren't kidding. When you stroll to the rear of the vehicle you'll immediately notice the newly designed bumper that continues the tradition of the forceful stance of the A5. With the new rear light graphic, the shoulder line runs over the rear lights through to the edge of the bumper, giving the vehicle's rear a solid new look and feel. A two-tone diffuser is also part of the redesign. While its top is painted to match the body of the vehicle, the bottom half shows a matte black finish, in contrast to the Audi Singleframe grille and front end air inlets. Rear LED taillight technology is available, and the license plate is also lit with LEDs, so you'll be saying goodbye to other drivers in style.

With three optional wheel packages that extend the sporty redesign of the Audi A5, you'll see that there is very little that hasn't been reconsidered for the 2013 model.



A perfect cocktail of elegance and sportiness, the A4 is one of the purer sedans on the road.

The Audi A4

The Audi A4 has long been a stand-up figure in the segment. In 2013, the A4 is going to become *the* breakout sport sedan, thanks to its brand-new product update. Building on the new redesign to the lineup, the A4 boasts the new Audi Singleframe® grille, and is positioned to reinvigorate the enthusiasts while drawing the attention of skeptics: Audi is here.

The A4 has always been the heart and soul of the Audi lineup. A perfect cocktail of elegance and sportiness, the A4 is one of the purer sedans on the road. From the available xenon headlights to the sleek, yet pronounced, rear bumper you'll notice that a lot of thought went into the 2013 redesign. The new, tapered Audi Singleframe grille hosts a bolder Audi rings logo and, like the grille on the A5, is complemented by the headlights, which have been uniquely designed for each model. The hood has been adapted to the grille, and lines on the hood stretch from the headlights to the windshield, giving a three-dimensional look that's found across the lineup. The new bumper allows for the redesigned air inlets with their unique grille pattern, which stretch toward the newly shaped fog lights that flank the lower grille. >>

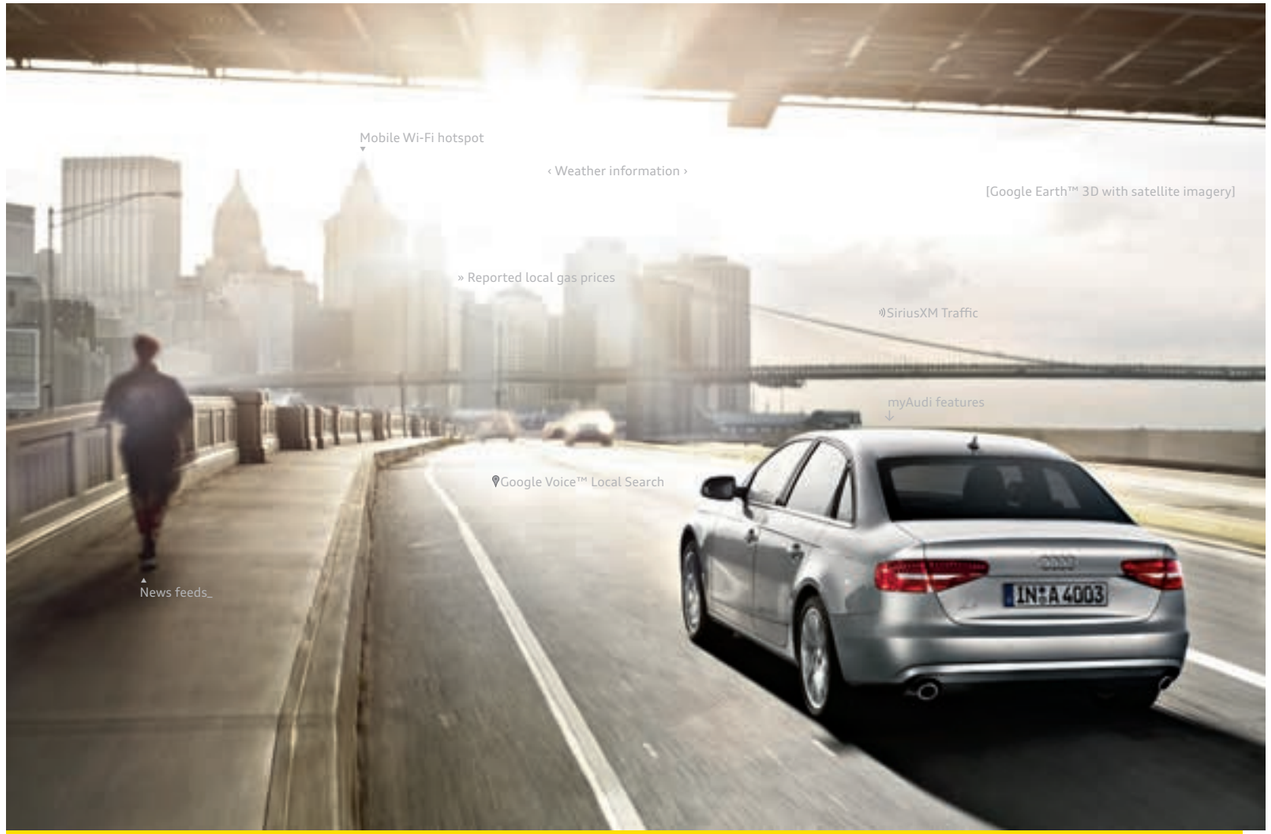
Along with your choice of beautiful wood trim and inlays or optional brushed aluminum, you will find unparalleled craftsmanship and attention to design throughout the interior. We use only the finest materials inside the cabin to accentuate luxury and sport.

Luxurious interiors feature details like the available leather-wrapped, multifunction steering wheel.

Let's take a look inside the two.

The enhancements of the Audi A4 and A5 interior mirror the stunning exterior redesign, and they're quite apparent upon climbing into the cockpit of either of these sport luxury vehicles. Once inside, you'll find available touches and technologies that rival the beautiful exteriors. High-gloss finishes throughout the cabin greet you, and systems have been simplified to work smarter. The leather-wrapped, multifunction steering wheel, available in a three-spoke sport design, is the first hint at a rich interior.

An available flat-bottomed steering wheel design is not only incredibly sporty, but, like all Audi steering wheels, puts most of the interior controls right at your fingertips while driving. From the steering wheel, you can easily access audio, optional Audi MMI® navigation, BLUETOOTH® phone pairing, voice controls and even the color driver information display in the dashboard, allowing you to toggle between different internal vehicle functions. The available Audi drive select is controlled by a center-console-mounted dial, just below the shift knob. MMI navigation plus combines most of the important media functions with a new, six-button design versus the previous eight-button system. Both cabins are peppered with beautifully appointed trim, ranging from fine wood to brushed aluminum finishes, which allows owners to build the vehicle as sporty or as elegant as they wish.



Of course, Audi is not just about pushing buttons. It's really about driving. Available Audi drive select puts you in control of the road ahead. Through the available Audi MMI system, you can switch drive modes from Comfort to Dynamic, to the more balanced Auto mode and customizable Individual mode. Choice has always been a priority for Audi, and we take it seriously. Both inside and out, the A4 and A5 will delight the senses. Once you drive one, you'll understand in a purer way the definition of "luxury sport car."

Both the redesigned A4 and A5 are continuing in the Audi tradition of progressive luxury, and, in doing so, are poised to add to the huge successes and momentum that Audi is experiencing. These new vehicles hit dealerships mid-summer, so be on the lookout because when you see a new Audi A4 or A5 on the road you're going to want to own one.[1] //

Photos: Audi AG

1 Always pay careful attention to the road, and do not drive while distracted. The features and technologies discussed above are optional, may require an additional subscription with separate terms and conditions, and should be used only when safe and appropriate. The Wi-Fi hotspot feature is intended for passenger use only.

89˚F

current temperature

From the *finish line* to the *driveway*

Nearly every Audi in the celebrated 24 Hours of Le Mans has featured a new form of technology—technology that often finds its way into our production vehicles.

Advanced aerodynamics

Carbon fiber and aluminum body panels

Full LED headlights

R18 e-tron quattro® //

The first TDI hybrid Le Mans (LMP1) racecar

Engine__
3.7-liter turbocharged 120-degree TDI® V6

Output__
510+ HP
626+ lb-ft of torque
Intake__
1- x 45.8-mm air restrictor

monocoque construction

Energy recovery

During braking, Audi's hybrid system recovers and stores energy to be retrieved under acceleration again at speeds above 75 mph.

Electrified drive and quattro® all-wheel drive

Maximum boost: 40.61 PSI
Hybrid system: 2 x 100-horsepower on the front axle
Fuel capacity: 15.32 gallons
Drive: All-wheel drive e-tron quattro® from 75 mph

At the 2012 Le Mans, Audi finished first, second, third and fifth. The R18 e-tron quattro® finished first and second, solidifying its place in the history books. With cutting-edge technology, it is no surprise that Audi dominated the podium once again.

By Kit Smith

Technology that has proved itself on the track is more than ready to prove itself to our customers.

Audi believes in the power of proven technology. That is to say, we think new technology should first be subjected to the most grueling conditions possible on the track before it makes its way down to the production line. This is no more apparent than when you consider the stellar record of Audi at the celebrated 24 Hours of Le Mans. Nearly every Audi vehicle entered into the race over the years has featured a new form of technology, and that technology, in many cases, has made its way into our production vehicles. This is not by accident. Audi knows that technology proven on the track is more than ready to prove itself to our customers. And that's why we continue challenging our engineers, year after year, to create ever more advanced technology to take to the track.

No Audi race vehicle embodies this strategy more than the 2012 winner of the 24 Hours of Le Mans, the Audi R18 e-tron® quattro®. At its core, the R18 e-tron combines the race-bred TDI® engine with a powerful electric motor to give this advanced prototype a clear edge out on the track.

Now, this may sound like a fairly simple concept, but in reality it is a highly complex engineering feat, particularly because this technology had never been tested in the motorsports arena, so there was no foundation on which to start the design process. This remarkable racecar made abundantly clear that its advanced powertrain was up to the challenge by dominating the grueling race with a spectacular one-two finish. Although this would not have been possible if it weren't for the impressive skills of the drivers, it also was achieved by employing technology never seen before.

Luckily, these are Audi engineers we are talking about, so they went to work devising the best possible arrangement for a hybrid-drive racecar. What they came up with is nothing short of a mechanical work of art: a 510-hp TDI® engine that would power the rear wheels, and two electric motors that distribute power to each front wheel. In addition to being a more efficient powertrain, the advanced hybrid drive also allowed for the implementation of the legendary Audi quattro® all-wheel drive system, giving the vehicle a clear competitive advantage on the unpredictable track conditions of Le Mans. This complex system worked flawlessly, as the race results proved, and you can bet that the lessons learned here will be seen in future Audi production models. While the Audi R18 e-tron quattro® was the star of the 24 Hours of Le Mans, it was by no means the only shining example of Audi ingenuity on the track that day.

At first glance, the Audi R18 ultra® looks similar in many ways to the Le Mans-winning R18 TDI® from 2011, but talk to one of the Audi Sport engineers, and they'll rattle off a long list of completely new features. This is especially true when it comes to the lightweight design of the R18 ultra. >>

R18 ultra //

With a brilliant design, drivetrain and aerodynamics, it is not surprising the R18 ultra® is one of the most-feared LMP1 cars.

Engine__
3.7-liter turbocharged 120-degree TDI® V6

Output__
510+ HP
626+ lb-ft of torque
Intake: 1- x 45.8-mm air restrictor

monocoque construction

Maximum boost: 40.61 PSI
Fuel capacity: 15.85 gallons
Drive: Rear-wheel drive

24 HOURS

The car

Power to weight

.25 bhp/lb

Length__	78.7
Width__	183.1
Height__	40.6

Gearbox housing constructed of carbon-fiber-composite with titanium inserts

Engineers worked tirelessly to make this the lightest Le Mans prototype ever built, and, by any measure, they succeeded. In fact, they dropped so much weight from the vehicle that they were below the minimum weight allowed by race regulations, and actually had to add ballast weight to bring it back up to the minimum threshold.

So how was it posssible for Audi engineers to drop so much weight? The simple answer is, carbon fiber and aluminum. But to leave it there would do a great disservice to the long hours every Audi Sport® engineer spent on this prototype, so let's get into the details. The most significant weight reduction came directly from the monocoque frame. Its carbon-fiber-composite and aluminum-honeycomb design was revolutionary, and not only made for an extremely lightweight frame, but proved to be remarkably stiff, which is exactly what one wants when tackling corners at Le Mans speeds. The R18 ultra also featured an innovative, new, carbon-fiber-composite casing for the gearbox, the first of its kind for an endurance event, and its use provided another significant weight-savings gain. While the R18 ultra was based on the idea of reducing weight, it also broke some technology barriers in other departments as well, namely, steering, with its electromechanical steering system that gave the driver an even better read on the track. As with the groundbreaking hybrid technology on the R18 e-tron®, you can expect to see advancements in the weight reduction of our production cars, which are directly attributed to the lessons learned in the R18 ultra.

The reason Audi tests new technology out at grueling endurance races like the 24 Hours of Le Mans is simple. If it can handle this kind of abuse and provide a performance advantage, then our customers deserve to enjoy its benefits in a production Audi. This basic philosophy is what has made the iconic four rings a symbol of performance and progression all over the world, and we plan on keeping it that way. //

Monocoque design with carbon-fiber-composite and aluminum-honeycomb core

With no unscheduled stops, it was the most reliable car at Le Mans.

Aerodynamics play a huge role in the success of the R18

Photos: Audi AG and Audi USA News

The buzz around the electric

A3 e-tron

Audi A3 e-tron® hits the grid.

By Kit Smith

The knowledge gained from this effort will undoubtedly serve to make future Audi e-tron models the most advanced and exciting-to-drive electric vehicles on the planet.

A3 e-tron definitely feels like a driver's car.

The battery doesn't take up any interior space because it's secured underneath the vehicle.

From the moment you settle into the driver's seat of the Audi A3 e-tron®, you feel like you're looking into a crystal ball. It reveals a future where stopping at a gas station is only necessary for bathroom breaks. Torque is plentiful and nearly instantaneous, driving is a peaceful experience and there's no doubt you're still behind the wheel of an Audi. But this is not some far-flung future vision where we are all living in the Matrix: it's in fact very near to being today's reality.

The A3 e-tron now buzzing around the streets of several U.S. states is still a working prototype, meaning it's not available to the public yet, but the knowledge gained from this effort will undoubtedly serve to make future Audi e-tron models the most advanced and exciting-to-drive electric vehicles on the planet.

Here are the hard numbers as they stand now: an 85-kW electric motor developing 114 hp and 199 lb-ft of torque provides the thrilling motive force. The electric motor's torque is transmitted through a single-speed transmission, where it seamlessly pushes the 3,800-lb car from zero to 60 in around ten seconds. Top speed is limited to 90 mph, and it can currently go approximately 90 miles on a battery full of electrons. Now that we have its vital stats out of the way, it's time to get into some of the more fascinating aspects of this vehicle.

Audi engineers did a remarkable job of fitting all the electric vehicle (EV) components into the existing A3 chassis, without compromising a significant amount of interior space. This in itself is a remarkable feat, considering that most electric vehicles to date have had to invade the interior space in some way or another to fit the bulky battery packs. The A3 e-tron does away with this nuisance by cleverly hiding the batteries in the center tunnel, a space normally reserved for

A 230-V standard charger will need six hours to recharge the car fully.

Audi engineers did a remarkable job of fitting all the electric vehicle (EV) components into the existing A3 chassis.

With clever battery-pack placement in the trunk, it still has an ample 26.5 cu ft of cargo space (with rear seat folded).

the exhaust and all-wheel-drive components. Not only does this benefit interior space, it also gives the vehicle an exceptionally low center of gravity, and that helps give the A3 e-tron its legendary Audi handling.

A potentially game-changing feature included on the latest prototype is the addition of regenerative braking controls. To be sure, many EVs have included some type of control for this feature, but, because we are Audi, we had to take it one step further, or, in this case, maybe a leap further. The paddle shifters on the steering wheel that control gear changes in a conventional A3 have been converted to manage the intensity of the regenerative braking. This gives the driver the unique sensation of being able to downshift in an electric vehicle. From early test-drive reactions, it appears that Audi engineers have hit one out of the park with this feature.

As you read this, the prototype A3 e-tron is still being put through its paces, and you can bet that numerous other breakthroughs will happen before it comes time to offer this technology to the public. But you can be sure that much of what is learned now will go into the expected introduction of a plug-in hybrid version of the all-new A3 in 2014. Until then, consider Audi magazine your personal crystal ball for all things e-tron. //

Photos: Jeffery Cross | Agency: PMKPNC and Audi USA News

1 34 mpg combined (2013 A3 TDI® with Audi S tronic® dual-clutch transmission and front-wheel drive). 24 mpg combined (2013 A3 2.0T with Audi S tronic® dual-clutch transmission and front-wheel drive). EPA estimates. Your mileage will vary.

Getting the dirt out of and on clean diesel technology.

By Steven Michail

Audi repudiates antiquated notions of diesel-powered engines with its TDI® clean diesel engines.

Q5 | For the first time, the 3.0-liter V6 TDI® clean diesel engine will be offered in the smaller of our luxury SUVs. TDI® clean diesel coupled with Audi quattro® all-wheel drive will take this SUV farther than you would expect.

A6 | As exciting as the redesign of the beautiful Audi A6 Sport Sedan is this year's inclusion of it into the TDI® clean diesel family. A welcome addition to make this car as efficient as it is exciting.[1]

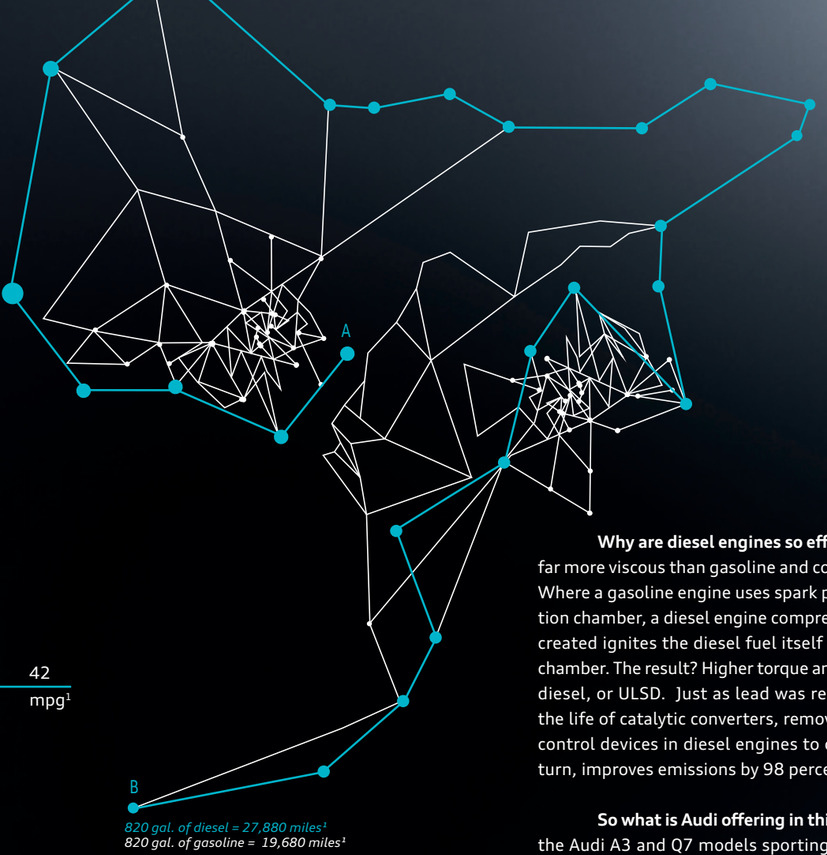
Q7 | The 3.0-liter TDI® clean diesel engine that powers the Q7 produces 240 horsepower and 406 lb-ft of torque to move all seven of the vehicle's occupants to places you'd never have dreamed of.

A7 | Finally you can have five-door coupe styling along with TDI® clean diesel efficiency with the Audi A7. Quite possibly the most exciting vehicle to hit the market in years—you've never seen a vehicle like the A7.

A8 | The Audi line of TDI® clean diesel vehicles makes up the largest diesel fleet offering of any luxury automaker. Another bold move that Audi has made to expand progressive luxury.

Diesel vehicles have been about as well-received in the United States as soccer, the metric system and portion-controlled meals. They're popular worldwide, but despite greater fuel mileage and lower CO_2 emissions, they just haven't taken off in the land of the old red, white and blue. Audi is on a mission to change diesel's dirty, loud, clunky persona into one of power, efficiency and longevity with our TDI® clean diesel engines.[1]

As a major player in the development of the TDI® clean diesel engines, some of the most advanced diesel engines available in commuter cars, Audi is leaps and bounds ahead of the competition. We developed the TDI® clean diesel engines to help improve longevity and decrease emissions from what is typically seen in gasoline-powered engines. Though Audi has been selling diesel-powered vehicles since 1978, the TDI® engine was launched in European markets in 1989, much to the chagrin of other luxury automotive manufacturers. With more than 4.5 million Audi vehicles being equipped with TDI® engines, Audi dealers are selling them faster than they can get them onto showroom floors. >>



Why are diesel engines so efficient? There are a few reasons. Diesel fuel is far more viscous than gasoline and contains a significantly higher energy content. Where a gasoline engine uses spark plugs to ignite gasoline vapor in the combustion chamber, a diesel engine compresses air in such a dramatic way that the heat created ignites the diesel fuel itself as it's directly injected into the combustion chamber. The result? Higher torque and lower emissions, thanks to ultra-low-sulfur diesel, or ULSD. Just as lead was removed from gasoline years ago to increase the life of catalytic converters, removing sulfur from diesel fuel allows emission-control devices in diesel engines to operate without becoming clogged. This, in turn, improves emissions by 98 percent, making clean and diesel synonymous.

So what is Audi offering in this clean diesel segment? Currently, you'll find the Audi A3 and Q7 models sporting the high-torque, high-efficiency and clean-diesel-burning TDI® engines. Perhaps most impressive, you'll be able to sport your eco-consciousness in style as never before, as the TDI® clean diesel engine is going to be available in the luxurious flagship Audi A8. Audi also plans to release Q5, A6 and A7 models with TDI® clean diesel engines.

Audi has also made a less-than-subtle impression on the racing world by introducing TDI® technology in their R10 and R18 Le Mans racecars. The vehicles not only gained the high-torque benefit the diesel engine produces, even at racing speeds, but the ultra-efficient combustion inside the TDI® reduced the number of times the racecars had to pit for refueling, leaving them on the track longer, thus helping them maintain their position. The R10 TDI® amassed nine consecutive victories on the Le Mans circuit in 2006. Soon after that, the R18 TDI® was able to capture ten victories in 13 years at the highly challenging 24 Hours of Le Mans endurance race, thanks to its lightweight construction and extremely dependable engineering, which ensured that it seldom needed to make an unscheduled pit stop. The two other Audi R18 racecars crashed, unfortunately, but neither driver was seriously injured. The outcome of the race was especially exciting because, by finishing the race, the remaining Audi Le Mans racer made it so all nine Le Mans drivers on the various Audi teams were able to take home a victory.

The bottom line is that the myth has been debunked. The noise, the smell, the sight of plumes leaving the exhaust—they're all a thing of the past. TDI® clean diesel engines from Audi are efficient, produce fewer CO_2 emissions than gasoline, and are fun to drive. The racing legacy, first of its kind, speaks for itself by pretty clearly proving nothing short of dominance on the Le Mans circuit. So is a TDI® clean-diesel-powered vehicle the right vehicle for you? There's only one way to find out. Go to your nearest Audi dealership, drive a TDI® clean-diesel-powered Audi, and ask whether the benefits of diesel will benefit you. //

The TDI® clean diesel engines feature either a variable geometry or variable nozzle turbo. These sorts of turbochargers have their own proprietary actuating mechanisms, meaning that there are vast differences in design from different manufacturers. A special exhaust housing allows change in the volumetric size of the turbine area through this actuating mechanism. It works by a moving set of vanes that open and contract to allow variables in the exhaust gas flow, which controls the boost pressure from the turbocharger. What does all this mean? Basically, you get the turbocharged power and thrust at low rpm while minimizing the typical "lag" you get in a traditional gasoline turbocharged engine. Another boon of the variable geometry turbocharger is that the vanes open up and spin faster, giving you that turbo boost even when traveling at highway speeds. Since turbocharged engines compress more fuel and air, you get more power on every stroke.

1 34 mpg combined (2013 A3 TDI® with Audi S tronic® dual-clutch transmission and front-wheel drive). 24 mpg combined (2013 A3 2.0T with Audi S tronic® dual-clutch transmission and front-wheel drive). EPA estimates. Your mileage will vary.

Photos: Audi AG

Audi generates a new approach to hybrid

The all-new Q5 hybrid hits a home run no matter which power source it's batting with.

By Kit Smith

Hybrid appearance

Setting the Audi Q5 hybrid apart from its siblings are subtle, stylized visual effects. Hybrid badges grace the rear tailgate, fenders and doorsills, while the signature Audi Singleframe® grille features a custom, high-gloss, black finish.

Sailing mode

The Q5 hybrid features a unique hydraulic clutch between the engine and electric motor that disengages the engine when you decelerate at highway cruising speeds. The electric motor then takes over to propel the vehicle until more acceleration is needed. Called "sailing," the benefit is a gain in highway fuel economy, a result not typically associated with hybrids.[1]

Hybrid-exclusive wheels

Q5 hybrid-exclusive 10-spoke-turbine design wheels are offered in 19" and 20" sizes, or 19" 5-arm off-road design wheels deliver stylized form and function.

Imagine taking to the road in a different kind of automobile. You're wrapped in typical Audi fashion, supple leather, finely crafted wood inlays, and unsurpassed ergonomics. Dynamic handling and thrilling performance is of course at your beck and call. Now imagine that, instead of burning fuel pulling away from every stoplight, you are effortlessly and silently gliding away under pure electric power.

This is the new reality created by the all-new Audi Q5 hybrid. It unites our years of engineering expertise in advanced combustion engine technology with our knowledge of electric powertrains. Put these two engineering feats together, and you get the best possible combination of Audi performance and earthly efficiency.[1]

At the heart of the Q5 hybrid is a powerful yet efficient 191-hp 2.0-liter TFSI® engine. It provides the majority of the motive force, but when called upon, as when pulling away silently from a stop, a 54-hp electric motor is more than happy to flex its electron-fueled muscle. Its instantaneous torque packs quite a punch while giving this vehicle some serious efficiency stats. The electric motor can propel the vehicle for nearly two miles without any assistance from its gasoline-fueled partner, and it can do this at up to 62 mph, so long as the battery has a sufficient charge. With both motors acting in concert, >>

1 24 city/30 highway mpg (2013 Q5 hybrid with eight-speed Tiptronic® automatic transmission and Audi quattro® all-wheel drive). EPA estimates. Your mileage will vary.

Seamless on every count.

Whether you're driving in pure electric mode, hybrid mode or recharging the batteries during braking, the Audi Q5 hybrid works its technological magic without you ever having to think about it.

1

Electric driving

EV mode ~ up to 62 mph

~ 0 emissions

2

Hybrid driving

Combustion — Electric battery

hybrid

3

Recuperation | Stopped

System recuperates

Recovered kinetic energy recharges the battery

4

Acceleration | Boosting

Combustion — Electric battery

S mode

Full system output

the Q5 hybrid puts out an impressive 245 hp and 354 pound-feet of torque, remarkable numbers for such a fuel-sipping luxury SUV. And with a respectable zero-to-60 time of 6.8 seconds, this vehicle doesn't make any excuses when it comes to off-the-line performance.[1]

With a choice of three different driving modes—EV, Normal, and Sport—the Q5 hybrid leaves its performance level up to your intentions. Choose EV mode, and you'll effortlessly move along in utter silence, without using a drop of gasoline. Normal hybrid mode lets you take advantage of both the gasoline engine and electric motor, for an ideal combination of power and efficiency. Move the shifter into Sport mode, and you'll know why this is called a performance hybrid. With the gasoline engine and electric motor both providing maximum power levels, this vehicle will quickly dispel any notion that hybrids are not fun to drive.

The Audi Q5 hybrid represents a new age of powertrain cooperation, where gasoline and electrons work in concert to bring you the exceptional efficiency you want, without sacrificing an ounce of the legendary Audi performance you've come to expect. And if the glowing reviews are any indication, the Q5 hybrid has ushered in this new age in typical Audi style. //

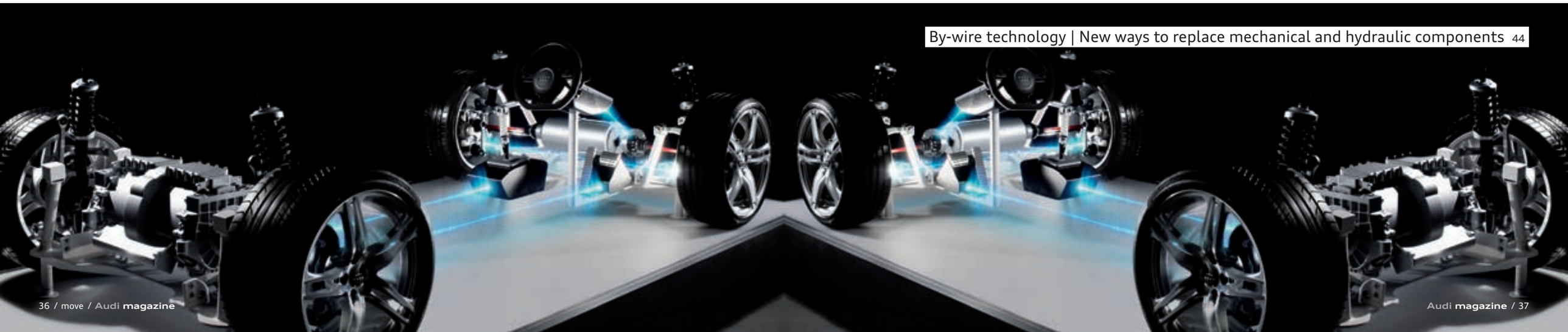
1 Obey all speed and traffic laws.

Photos: Audi AG

OLED | Lighting a path toward the future 54

move

Multimaterial space frame | Minimal material for the best performance 38



By-wire technology | New ways to replace mechanical and hydraulic components 44

Some Light Reading

New body shells using mixed materials. For Audi, lightweight design means the minimum material in the right place for the best performance. It is under this premise that engineers are working on the new Multimaterial Space Frame.

By Johannes Köbler

40

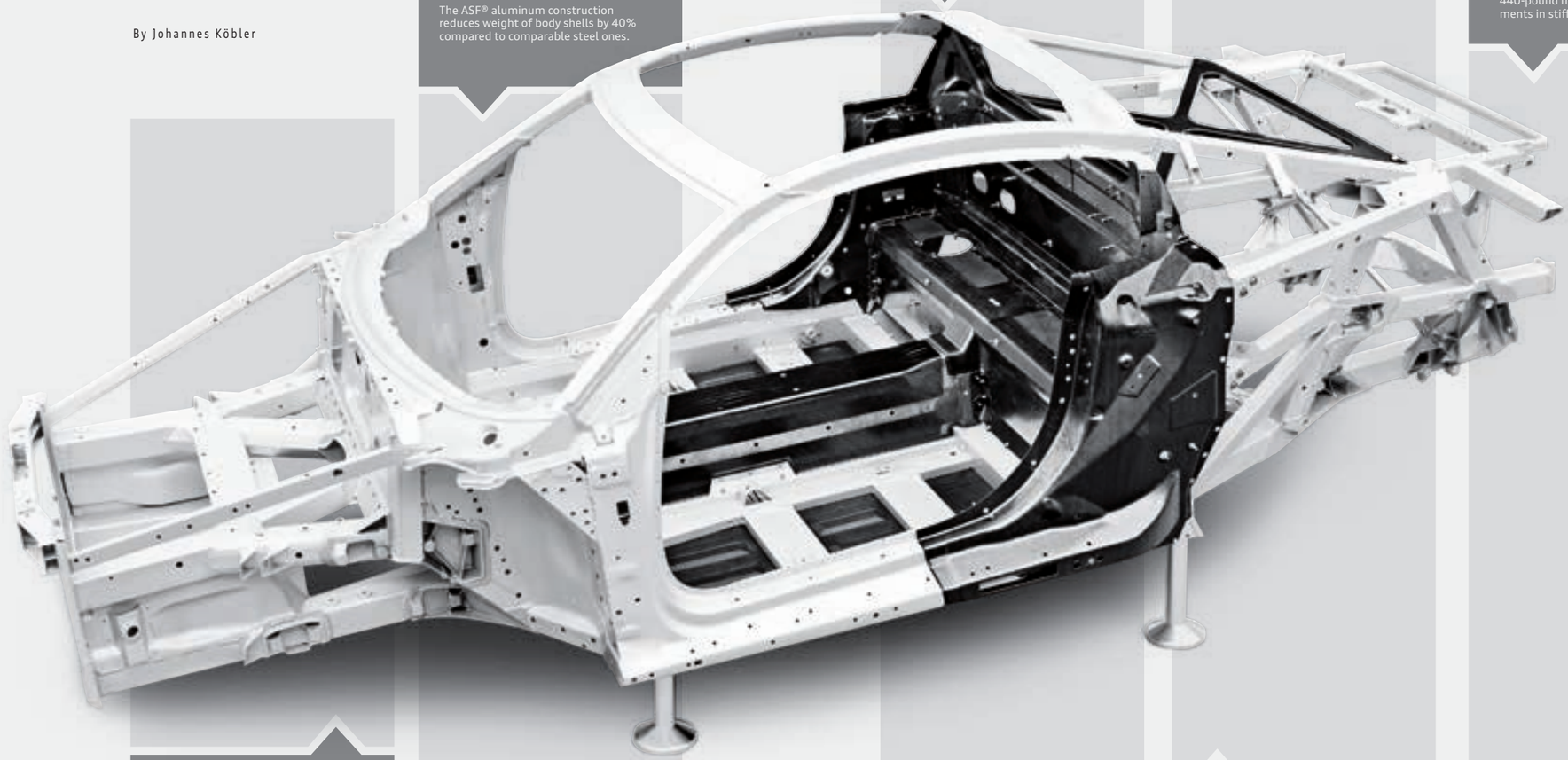
The ASF® aluminum construction reduces weight of body shells by 40% compared to comparable steel ones.

17

Lightweight components make up 17% of the R8, including the rear bulkhead, which helps offer excellent protection in the event of a side impact.

463

The total weight of the R8 body shell is 463 pounds. It's anticipated that the next generation will be below the 440-pound mark, even with improvements in stiffness and safety.



83

The R8 remains 83% aluminum, making aluminum the dominant material in the experimental body shell of the R8.

14

There are 14 carbon-fiber-reinforced polymer components in the body shell, replacing approximately 60 aluminum parts.

ASF®

aluminum construction

The Audi A8 is the first North American car with an aluminum body built according to the ASF® aluminum construction. ASF is a high-strength aluminum frame structure into which the panels are integrated so that they also perform a load-bearing function.

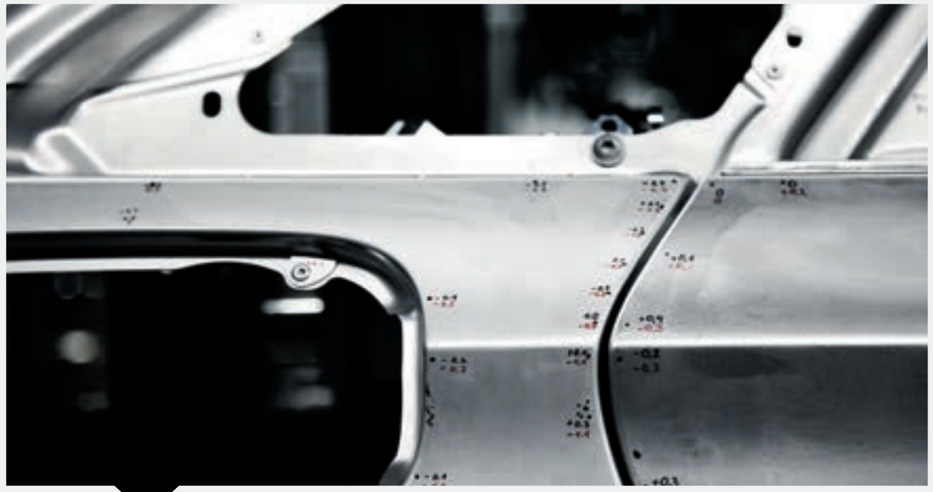
Aluminum

Characterized by exceptional stiffness and above-average crash protection, high-strength aluminum also reduces the weight of a car's body shell by up to 40%. The use of aluminum results in increased performance, improved handling and lower fuel consumption.

CFRP

Carbon-fiber-reinforced Polymer

CFRP composites are fiber-reinforced composite materials that use carbon fiber as the primarily structural component. Lighter and stronger than traditional FRP (Fiber Reinforced Polymer) composites, CFPR is already playing a major role in experimental models like the Audi R8.



At the Audi Lightweight Design Center in Neckarsulm, Germany, some 180 specialists get together every day to research the answers to several of the world's most perplexing questions:

How should metal and CFRP be combined in order to obtain optimal properties as vehicle components?

At which points do the reinforcements have their maximum effect?

What do practical tests tell us about the components' crash performance or resistance to corrosion?

For Audi, lightweight vehicle construction is nothing new. In fact, the brand became a leader in the industry nearly 20 years ago with the ASF® aluminum construction technique. The ASF principle reduced the weight of the Audi A8, Audi R8 and Audi TT bodies by as much as 40 percent, compared with conventional steel structures.

The team is now launching the next stage in the process: the Multimaterial Space Frame, which combines aluminum, steel and fiber-reinforced components. At Audi, lightweight design does not mean a rigid fixation on any one material, but rather the intelligent, flexible application of a diverse range of materials. The idea is to use the least amount of material in the ideal location, in order to achieve the best performance. Since engineers are not forced to work with a single material, the new Multimaterial Space Frame can take very different forms. In the Audi A6, for instance, the steel body shells contain a high proportion of aluminum and a series of design solutions from ASF technology. The high-performance sports cars, however, feature CFRP.

According to Peter Fromm, the Head of Vehicle Body Development for Audi, the new technologies are being demonstrated on an ASF body shell from the current R8. The front end of the R8 is built, as before, using aluminum. But the inside of the passenger cabin is dominated by dark gray—as parts of the floor and sills, the center tunnel, the rear bulkhead, the B-pillars and the X-shaped strut in the engine compartment are all made from CFRP. The new material makes up 17 percent of the body shell. A mere 14 CFRP components replace four times as many aluminum parts. Self-tapping stainless steel screws join the aluminum and CFRP components together, with adhesive and fine-seam sealant protecting the contact points from corrosion.

"It is a wonderful technology showcase," enthuses Fromm. "At 463 pounds, the current R8 is already a benchmark for the competition. The next generation will be below the 440-pound mark, despite improvements in stiffness and crash safety. We use the CFRP parts where they make the most sense. The rear bulkhead, for example, offers excellent protection in the event of a side impact because its fibers have been laid exactly in the direction of load."

The engineers have gathered a broad range of expertise in all the technical fields, resulting in a constant stream of new innovations. Examples include ultralight, suspension-strut domes made from pressure-cast magnesium, high-strength aluminum alloys and parts from thin-wall, pressure-cast aluminum with a wall thickness measuring just 0.78 inches. On the A-pillars in the A8 luxury sedan, for instance, this aluminum reduces the weight by 3.3 to 5.5 pounds.

Alongside the leading development know-how at Audi is a wide-ranging expertise in manufacturing. "We work closely together as a team and are involved in an ongoing exchange of ideas," explains Fromm. "We discuss process technology, tooling technology and bonding technology, like new welding solutions. And we will soon begin to cast aluminum parts ourselves at a new plant near Ingolstadt."

Sound processes and lean production are fundamental requirements at Audi, and this applies to CFRP as well. In the Neckarsulm Lightweight Design Center stands a press with a press force of up to 1,100 tons. Its raw material takes the form of several layers of a precisely cut CFRP woven mat. Epoxy resin is injected into the heated tool at a pressure of up to 1,450 psi. This matrix cures under heat and pressure, and eight minutes later a B-pillar is finished.

"Eight minutes is too long for series production," says Fromm. "We can get that down to four minutes if we optimize the flow characteristics of the resin in the tool. We are working on that ourselves, supported by our partner Voith. We are striving to achieve a better ratio of CFRP fiber to resin without compromising the performance of the part. The current ratio is around 50:50; we want to get to 60:40."

Audi reversed the weight spiral years ago by systematically applying lightweight design: from that point on, every new model would be *lighter* than its predecessor, sometimes much lighter. Yes, thanks to these 180 engineers in Neckarsulm, some of the world's most complex problems now have answers. //

1. At 83 percent, aluminum remains the dominant material in the experimental bodyshell of the R8.

2. CFRP components have a 17-percent share. They give the occupant cell a high degree of safety and stiffness.

3. The 14 parts made from carbon-fiber-reinforced polymer replace more than 50 aluminum components.

FRP

Fiber-reinforced Polymer

FRP composites are fiber-reinforced composite materials that use glass-fibers and resin. Slightly heavier and less expensive than CFRP (Carbon-fiber-reinforced Polymer), this composite is ideal for non-structural supporting parts.

RTM

Resin Transfer Molding

A process whereby resin is injected into an enclosed mold in which fiber reinforcement has been placed.

Photos: Encounter and Audi AG

Start saving fuel. Stop senseless idling.

Select Audi models are equipped with a start-stop efficiency system that seamlessly shuts off and restarts the engine while you are stopped at a traffic signal or during stop-and-go driving.[1] This helps save fuel and lower emissions.[2]

By Kit Smith

When it comes to innovations in driving, we are at the leading edge of immeasurable possibility. In the last few years alone, Audi has expanded its effort on this front by advancing engineering technologies such as direct injection, turbochargers, superchargers, eight-speed and automatic transmissions. Each of these technologies provides a small, but important, bump in efficiency on their own, but, taken as a whole, they can add up to significant gains in fuel economy. Now another important piece to the efficiency puzzle is making its way into our vehicles, the intelligent start-stop efficiency system.

The start-stop efficiency system is a highly effective engine management program that helps save fuel as well as lower CO_2 emissions by shutting off the engine when it's not needed—while waiting at a traffic light, for instance, or during certain stop-and-go driving, and restarting it nearly instantaneously as soon as you release the brake pedal. Its operation is nearly imperceptible, and allows you to drive just as you would normally. But perhaps its most noticeable feature is its ability to create a tranquil atmosphere each time you pull up to a stoplight. Here's how it works.

When you come to a complete stop at a traffic signal, the control unit automatically shuts off the engine, provided certain vehicle and driving conditions are met. As long as you keep the brake pedal depressed, the engine will stay off, but as soon as you release it, the robust starter motor quickly and seamlessly restarts the engine. The vast majority of the time, the only way you'll know when the engine shuts down is by the start-stop indicator light on the dash. Even the stereo, navigation and climate control system will continue to operate normally when the engine is off. And that's the way we think it should be.

The start-stop efficiency system will become inactive when important vehicle systems require power or are warming up, or if the vehicle has not been driven faster than 2.5 mph since its last stop.

By introducing start-stop technology to the Audi lineup, we continue to advance our goal of saving fuel and lowering carbon emissions. And while there will be many more advancements toward this goal in the coming years, we can assure you it will never take away from the pure joy and thrill of driving one of our vehicles. This is, after all, still Audi. //

Helpful tips:

- The engine automatically shuts off while you are stopped with the brake pedal depressed.
- The engine automatically restarts once you begin to release the brake pedal.
- This system can be deactivated by a control in the center stack just below the Audi multimedia panel (a yellow light indicates that the system is off).
- Drive as you normally would.

1 The start-stop efficiency system is standard on Audi A6 3.0T, A7, A8 3.0T and 4.0T, and Q5 3.0T models. 2 See www.fueleconomy.gov for EPA estimates. Your mileage will vary.

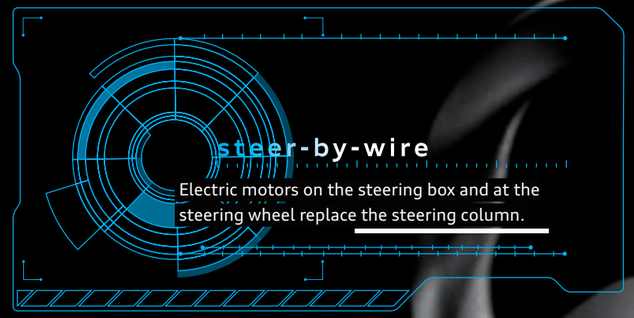
Wired for action

By-wire technology

While steering, braking and shifting are done via mechanical linkages, Audi is researching drive-by-wire technology.

By Johannes Köbler

Technology model: the chassis of the Audi R8 e-tron® minus steering column and with electromechanical brakes.



Its looks are captivating. Aluminum wishbones and electric motors front and rear, bundled high-tech in 1:1 scale.

But the most interesting aspect of this prototype's chassis is what's nowhere to be found, namely, the steering column, brakes on the rear wheels, the braking hydraulics and the shifting mechanism.

Welcome to the world of by-wire.

Replacing mechanical and hydraulic components with electrical and mechatronic parts, by-wire technology separates the force and signal paths from one another.

Peter Kunsch, Head of Advanced Chassis Development at Audi and the leader on the project, explains, "When we only have to transmit signals, by wire, if you will, a whole host of opportunities are opened up to us."

The A2 concept, the show car unveiled at the 2011 Frankfurt Auto Show, was equipped with this futuristic technology. And in this latest project—the technology model based on a prototype R8 e-tron®—the steering, brakes and gear selection function electrically.

So how does it work?

Essentially, a sensor on the steering wheel recognizes the turning movement while an electric motor on the steering box generates the necessary force and sends it to the track rods. At the steering wheel, a small electric motor generates the feedback familiar to the driver.

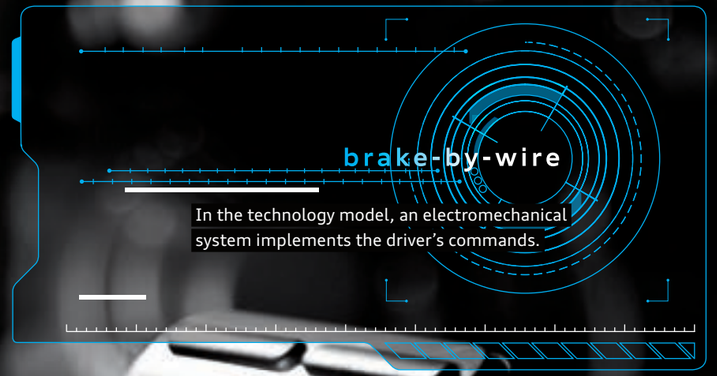
At the push of a button, the driver can select from a variety of steering ratios and setups, such as "comfortable" or "sporty." Networked with other systems, steer-by-wire can carry out a great many correction and assistance functions, many of which are brand-new.

"The sensitive Audi steering feel remains the same or is even better—just the unwanted vibrations from the drive and road surface are eliminated," says specialist Tilo Koch.

Steer-by-wire opens up a host of new packaging options. It's possible to place the steering box in front of a transversely mounted engine or retract the steering wheel into the cockpit, easing vehicle entry and exit and improving safety in the event of a front-end collision.

The elimination of the steering column also delivers more space for components like air conditioning and gives designers greater freedom when it comes to interior design.

According to Koch, European legislation presents no fundamental hurdles to steer-by-wire. At its core, it requires only self-centering and the assurance that certain steering maneuvers remain possible



in the event of a system failure—how the manufacturer achieves that result is left to them.

As an Audi expert in brake-by-wire technology, Christian Balnus deals with an entirely different set of conceptual models.

One example is electromechanical wheel brakes, or spindle brakes, located on the front axle of the technology model. The brakes engage when electrically actuated ball screws push the friction pads at high speed onto the carbon-fiber ceramic brake discs. Wheel brakes are not required at the rear axle. "The two large electric motors at the rear function as generators under deceleration," explains Balnus. "At the rear axle, which receives relatively little braking force in any car, this is more than sufficient."

Electromechanical brakes ease component packaging at the front of the vehicle because bulky and heavy hydraulic parts become superfluous. Inside the car, the stiff brake pedal could give way to a small lever or a sensor surface beneath the carpet on which forces are simulated. Both solutions have a positive effect in the event of a collision.

For the customer, the new technology means rapid feedback and precise control—in fact, the interaction between the chassis and assistance system helps to ensure a safer driving experience.

In electric vehicles like the R8 e-tron, an electromechanical system also enables perfect cross-fade between energy recovery and mechanical braking. European legislation is not a problem here either—cars with electromechanical wheel brakes are road-legal as long as the power supply is set up with system redundancy.

Shift-by-wire, as explained by specialist Thomas Guttenberger, is also heavily featured in this prototype. The electrically driven high-performance sports car requires only single-speed transmissions. The shift lever is there purely for the selection of driving modes R, N and D.

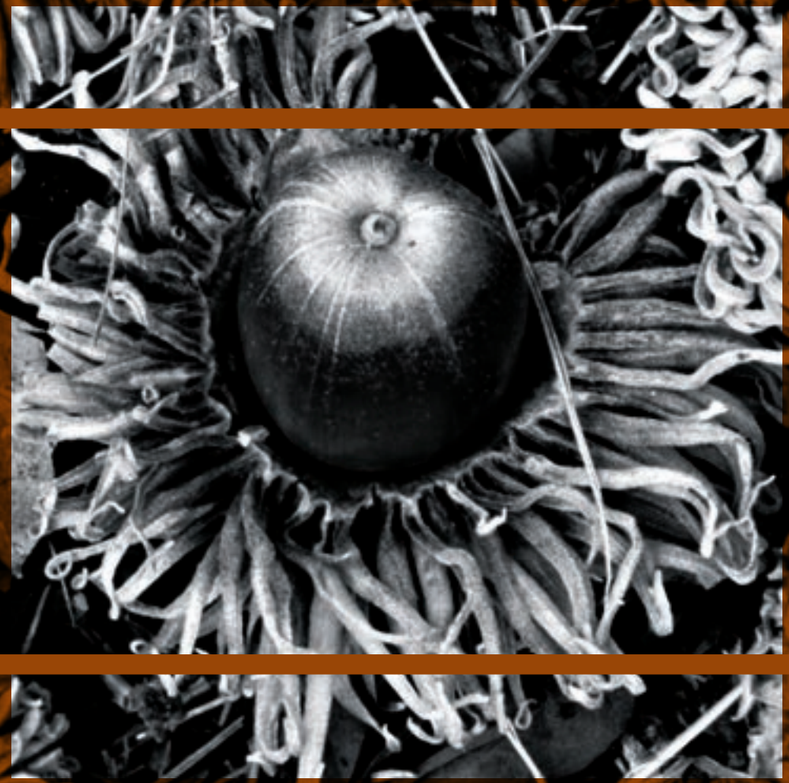
Audi first ventured into shift-by-wire back in 2001, when the A2 1.2 TDI® used an automated manual transmission, with its hydraulic unit taking its commands from electrical signals.

A similar principle applies to the R tronic® in the Audi R8 and to the eight-speed Tiptronic® in the flagship A8. Shift-by-wire provides an excellent basis for possible future technologies like automated parking and piloted driving, and foretells of an age when by-wire becomes commonplace. //

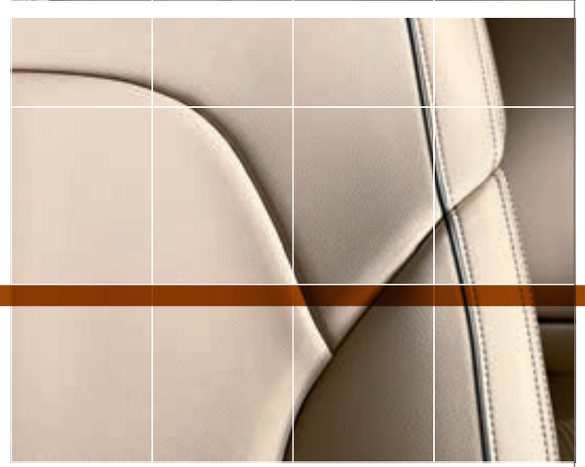
Photos: Myzik und Jarisch

Hide and seek

For Audi, the quest for the perfect feel of leather can start with a lonely oak in Greece and end in a more sustainable way to achieve it.

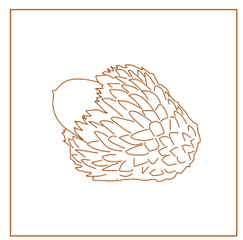


By Jay Brida



A8

The lack of chemicals gives vehicles with Valcona leather a distinctive, natural smell, and the hint of acorns gives the driver a scent of nature.



Acorns from the rare valonia oak found in wild pockets across the Mediterranean.

Audi leather experts make sure the interior design is worthy of their esteemed customers by elevating the fit and finish with the highest-grade hide.

Audi Exclusive Valcona Leather

There seems to be a kind alchemy involved with leather. A mysterious, complex process that enables artisans to transform ordinary cowhide into something supple and luxurious. To the uninitiated, tanning leather might seem to involve incantations and proprietary potions. But the reality is that most tanning involves products and some chemical treatments that one really doesn't want to consider. That is, it can. But it doesn't have to. To create the premium luxury and elegant grain of Audi Exclusive Valcona leather, we don't settle for the easy way. In fact, our way is a natural method in which we use the shavings of acorns to make an endlessly tactile surface for Audi seats and interiors.

And it starts with a particular type of oak found in wild pockets strewn across the Mediterranean. *Quercus macrolepis*, the valonia oak. This oak, with distinctive, elongated acorns, is able to transform the tough into the pliable. Those who live near them and know them—a number smaller than you might think—prize the ripe acorns for eating (raw or boiled), but these acorns, called *camata* in their unripe state, are used in an ancient, and sustainable, way to tan and dye.

It starts with an idea

For Audi, the process starts with the idea for best delivering progressive comfort to our customers. The person in charge of that idea is Audi leather expert Barbara Krömeke. It's her job as a designer to source and select the highest-grade hide to elevate the fit and finish of interior design, to make it right for the Audi customer. It's her commitment to perfection without compromise that initially led to the exclusive introduction of Valcona leather into the interior of an Audi Exclusive vehicle.

But before that selection happens, Krömeke and her team have to study social trends, visit furniture and textile fairs, study the fashion and design industry and take inspiration from nature and architecture—even art, film and everything and anything else that might stir their imaginations. To achieve their goals, Krömeke and her colleagues have to know which colors, fabrics, patterns and materials are going to be popular with customers in four to six years' time—and throughout a vehicle's entire life cycle.

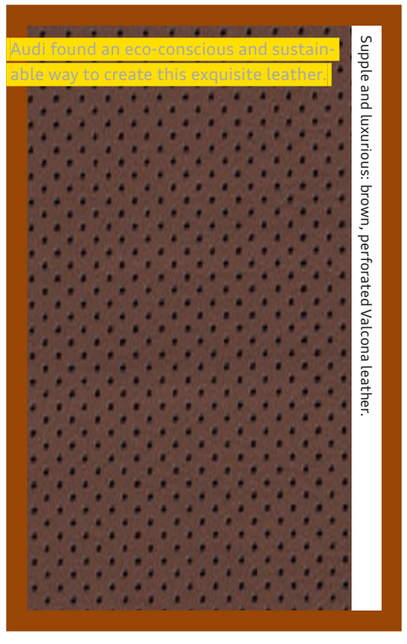
"It's not like with fashion where you buy yourself a new blouse, dress or jacket, and then hang them up at the back of the wardrobe after a year because they're no longer fashionable. A car is too expensive and too durable for that," Krömeke said.

It's that kind of commitment to craftsmanship and quality materials that led Krömeke and the company to search out the valonia oak process to begin with. Looking for an eco-conscious and sustainable way to create a sumptuous yet durable leather, they learned of the oak's ancient connection to tanning.

You can feel it in the leather, but more than that, you can sense it in other ways too. The lack of chemicals gives vehicles with valcona leather a distinctive, natural smell, and the hint of acorns gives the driver a scent of nature. The grain benefits from the acorn treatment too, lending the material a soft touch, and making it a stylish addition to Audi Exclusive.

Available in a variety of colors, Valcona leather is every bit an example of our commitment to the driver's comfort, while creating an atmosphere that stays true to the performance and luxury that is our calling card.

But it's not only the stylish sophistication of Valcona leather that Audi designers identify with. It's the timeless, almost otherworldly way in which it is crafted. One that demands the kind of vision and respect for the environment that we are proud to exhibit. It is the story, the quest to find a fabled oak that results in a perfect fit that makes the obsessions of our designers obvious to our customers and somehow makes the end result even more satisfying. //



Audi found an eco-conscious and sustainable way to create this exquisite leather.

Supple and luxurious: brown, perforated Valcona leather.

Life, illuminated

A deeper look at OLED technology

reveals that looks aren't everything.

By Herman J. Müller

When Stephan Berlitz gets a new idea, you can't help but wonder if a lightbulb literally goes on in his head.

That's because Audi's Head of Innovation for Light Technology and Light Electronics eats, sleeps and breathes automotive lighting technology. Berlitz and his team at Audi are the consistent leaders in the industry and have no intention on dialing back the innovation anytime soon.

The team's latest brainchild, OLED lighting for Audi vehicles, is still in the experimental phase, but is lighting a path toward the future—to a time when LED lights could be obsolete.

OLED, short for "organic light-emitting diode," technology consists of organic material comprising molecules that glow when stimulated by electricity. LEDs, on the other hand, consist of semiconductor crystals that emit light when electrified.

So what's the difference?

"LED is physics, OLED is chemistry," explains Berlitz.

The two systems also diverge in the way that they display light. While LEDs produce single points of light, OLED molecules can be applied in a paste to a flat surface to provide large-area illumination. >>

This impressive look owes its radiance to OLED technology, allowing a completely new arrangement of light sources.

The flexible films of light can illuminate a host of different bodyshell areas.

When the driver approaches the rear of the vehicle, the light “flows” to the trunk opening.

If the person continues onward to the driver’s door, the light follows him to the door handle.

Naturally, we have to consider where and when we want to have lights flashing. We don’t want to overload people.

Since the paste can be applied in a thickness of only a few microns, the right application surface is key. The coating tears easily on rough surfaces, so plaster, plastic and even commercial glass is out. Only highly polished display glass will fit the bill.

According to Berlitz, “Things only start getting interesting when [our designers] can present light in three dimensions.”

And so, his team used substrate panels, stacked and transparent, to highlight the three-dimensional potential of OLED. Then they turned their attention to the fourth dimension: They wanted the light to move and be perceived as a plus in beauty and convenience.

A system like this can recognize when someone is approaching the vehicle. Should the driver move toward the trunk, light will “flow” to this area and form an outline around the rear opening. If the driver continues round to the door, the light follows him and flows around the driver’s door opening. He climbs in, and the light follows him into the interior, tracing its way around certain interior contours like the steering wheel. The inside of the doors can also be accented with OLED lighting to emit a soft glow.

But as impressive as this may appear, Berlitz said, “This is not about show. It’s about developing potential safety features that are also aesthetically appealing.”

For example, take a car with sensors on the body shell that can detect objects on its periphery. If a cyclist pedals past on the right of a car, the lighting in this area can change to a signal color, attracting the attention of the driver.

For the lighting developers, the effect is similar to that of the flashing light signals used at highway construction sites: As 90 percent of our sensory perception is via the eye, they guide the driver intuitively in a certain direction.

“This means that designers are no longer restricted to creating light on a vehicle in points or lines,” said Andre Georgi, who is >>

responsible for headlight design at Audi. “The way is now open to surfaces.” In contrast to other vehicle makers, the designers sit right alongside Berlitz’s development team. “Not only are we geographically close, we also always find a way to bring technology and design together perfectly.”

For now, OLED technology is still in the future—unlike various other innovative projects currently coming to maturity in the Light and Visibility department.

One accessory that’s as spectacular as it’s compellingly aesthetic is currently undergoing concrete trials: The laser fog light constantly emits a fan-shaped beam of red light onto the road from the rear of the vehicle. In good visibility, it appears as a line on the road surface, subtly reminding following motorists to keep their distance. In fog or mist, the laser beams collide with the fine water droplets in the air and become visible, like a laser show. The result: A conspicuous virtual warning triangle builds up ahead of the following vehicle.

It’s visionary technology like this that keeps Audi light years ahead of other carmakers. And according to Stephan Berlitz, his team is just getting started. //

Photos: Thomas de Monaco c/o Shotview Photographers and Audi AG

We've made it a point to be thorough.

With 300+ checkpoints, the Audi Certified pre-owned inspection process is one of the most comprehensive in the industry.

By Kit Smith

It starts with a careful inspection of the exterior surface to confirm that there are no significant imperfections. Then it moves to the interior, where every button, dial and handle is checked for smooth operation. After that, the hood is lifted and 39 components, both large and small, are thoroughly examined for premier performance.

You have just read a brief account of the Certified pre-owned inspection process happening at Audi dealerships across the nation, designed to ensure that every customer receives a vehicle worthy of the legendary four rings.

With 300+ checkpoints, no other luxury brand can lay claim to a more thorough inspection process, but Audi knows it's not just about having a higher number of checkpoints, it's also about providing the best possible Certified pre-owned vehicles. That's why every checkpoint in the process is specifically designed to achieve this goal. Here's how it works:

The rigorous inspection process is conducted by our dealers' trained technicians, and includes a wide range of points, from engine components like the timing belt and fuel injectors to exterior features like headlamp washers and door-lock cylinders to interior features such as the Audi MMI® system. Each vehicle is also put through a series of engine performance tests, vehicle ride-quality tests and brake performance tests. If there's anything that does not meet our strict standards, it will either be repaired to like-new condition or denied Audi Certified pre-owned status.

There's no question, the 300+ point checklist is a solid reason to purchase an Audi Certified pre-owned vehicle, but it's by no means the only one, which is why we've put together a list of the top ten reasons to own one. These reasons range from the confidence-inspiring six-year or 100,000-mile limited warranty to the way our vehicles are designed to stand the test of time to the many benefits of being an Audi owner. Each reason is impactful on its own, but, taken as a whole, they make for a truly compelling case.[1]

For a more in-depth look at the top ten reasons to own listed below, please visit your local Audi dealer and request our Audi Certified pre-owned brochure. //

1 If there is remaining coverage from the Audi Limited New Vehicle Warranty at the time of Certified pre-owned purchase, the Audi New Vehicle Limited Warranty provides coverage on the Certified pre-owned vehicle until its expiration, either four years from the original in-service date or at 50,000 miles, whichever occurs first. When the Audi Limited New Vehicle Warranty expires, the Audi Certified pre-owned Limited Warranty becomes effective and provides coverage for a period of two years or up to 50,000 miles, whichever occurs first, but not to exceed 100,000 total vehicle miles.

Photos: Audi AG

Top ten reasons to choose an Audi Certified pre-owned vehicle

Reason 1
A comprehensive 300+ point inspection performed by an Audi Dealership.

Reason 2
Up to six years or 100,000 total vehicle miles of limited warranty coverage.[1]

Reason 3
The Audi Certified pre-owned program offers exceptional benefits.

Reason 4
Using aluminum and zinc, our vehicles are built to last.

Reason 5
The design of an Audi is timeless.

Reason 6
We engineer with the driver top of mind.

Reason 7
Purchase the Audi you've always dreamed about.

Reason 8
Every Audi goes through rigorous testing during development.

Reason 9
Extended vehicle service contracts available for long-lasting confidence.

Reason 10
We are committed to making you a lifelong Audi fan.

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Photos: Ashley Watson, Crystal Gilbert, Jason Smith, Mark Lugenbuehl, Douglas Clark, Anashe Abramian

The many hues of green.

Since the theme of this issue is sustainability, we decided to practice what we preach and printed select pages of this issue on environment® Premium Recycled Papers. environment® Papers are about the concept of everything being recycled, specifically paper fibers. The fibers are harvested from several sources, and remade into writing, text and cover papers. The entire line of paper is manufactured Carbon Neutral Plus with 100 percent renewable green electricity and is Green Seal™ certified.

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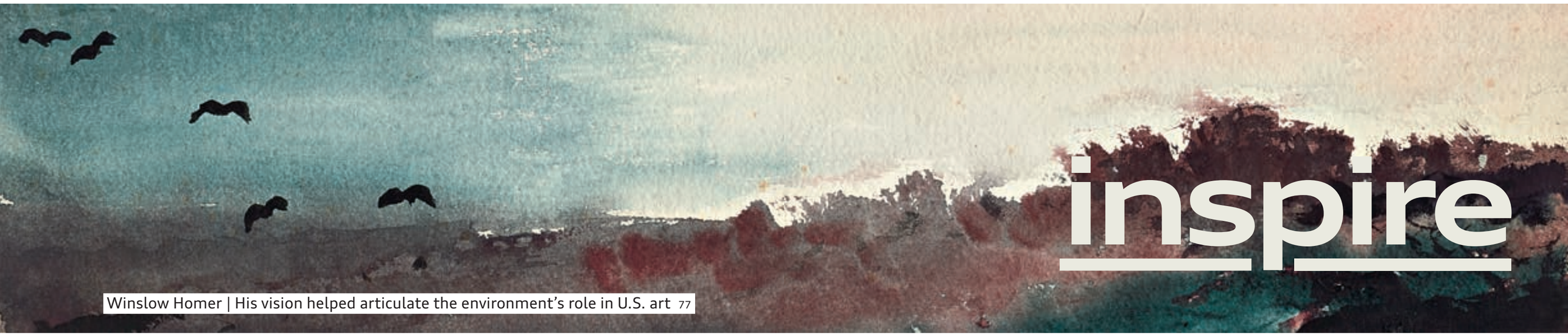

inspire

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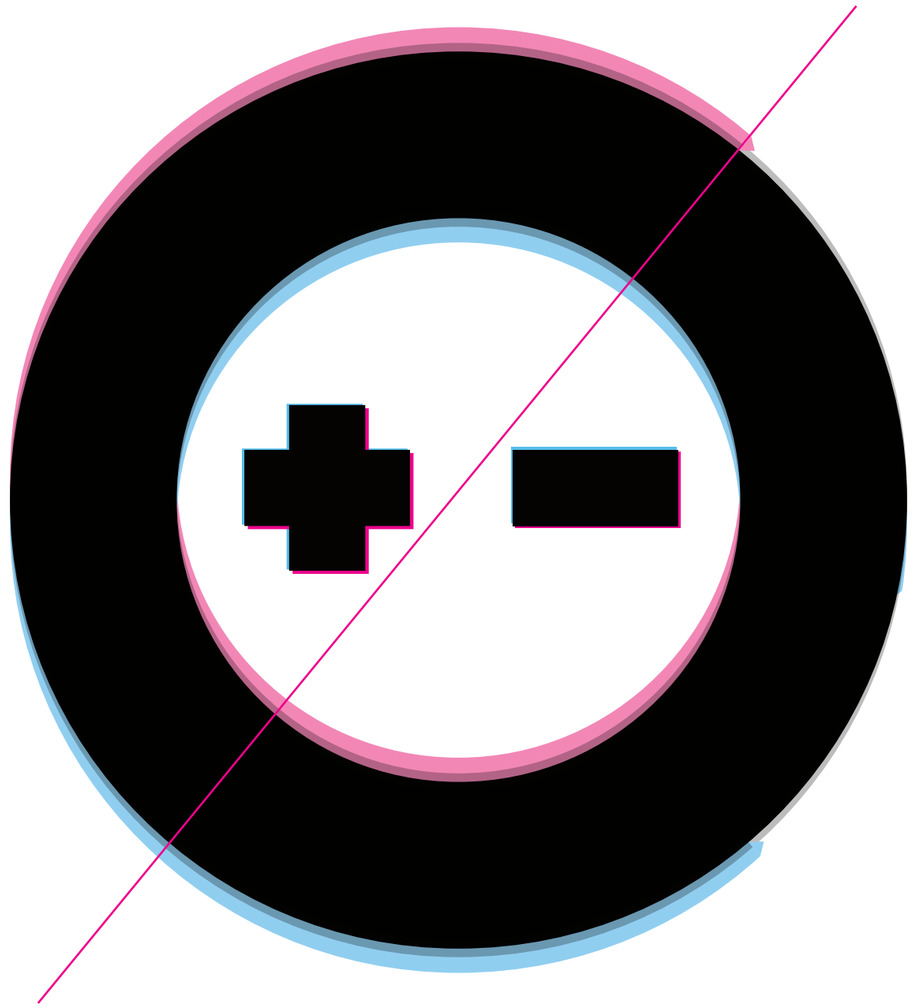


The thermostat just got cool.

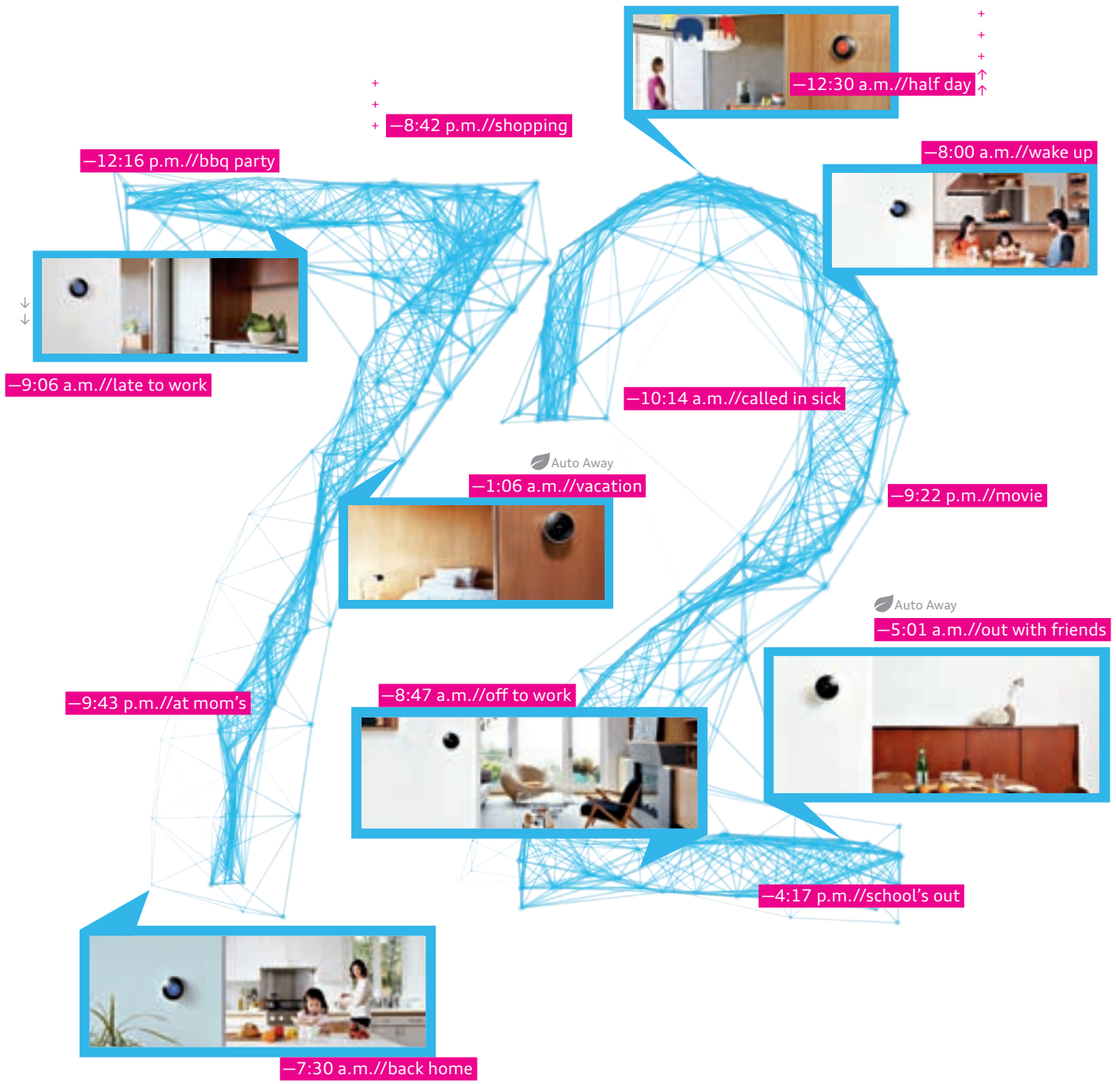
How one of the people behind your iEverything electronics is bringing innovation in-house with Nest.

By Jay Brida

The Nest uses motion sensors that analyze the ambient temperature of the room, and adjusts the temperature automatically.

"You worry about the art you put on your wall, so why put something so ugly in the middle of it?"

A better thermostat could save you up to 20 percent a year on your cooling and heating expenses.



Photos: Courtesy of Nest

Tony Fadell, the founder and CEO of Nest Labs, isn't a man of half-measures. He is a man of enthusiasms. So when he notices something and sees room for improvement, optimization becomes an obsession. For instance, when he saw the needlessly complex and tiny portable MP3 players available, he designed something that would eventually be refined into the iPod®. And when he saw the uninspired look and limited use of mobile phones, he and his team set out and created the iPhone®. When he bought his first Audi, an allroad®, he liked it so much, he added an A3 TDI® clean diesel, an A7 and an R8 in the years after. So it stands to reason that, three years ago, while building a custom, green, connected house from the ground up in the Lake Tahoe area, he noticed something he found uninspiring. Plastic thermostats.

"Such a nothing thing, you barely notice them, until you notice them," Fadell said from a conference room at their headquarters in Palo Alto, Calif. "I thought, 'Why are they ugly? Why can't they be better?' You worry about the art you put on your wall, so why put something so ugly in the middle of it?"

With his rich background in design and product development, he knew that he could bring artfulness to what would remain a basic home-heating control panel. But as he began researching the product and figuring out how to do it better, he came to an important conclusion: Making a handsome thermostat was only part of the real story.

"There are ten million of them sold every year. They control, less efficiently than they could, about 50 percent of your cooling and heating bill. I started looking at it, the complexity of it, and did some quick calculations—a better thermostat could pay you back 20 percent a year."

It was the combination of aesthetics and conservation that made Fadell realize the untapped potential of building a better, more intuitive tool that can conserve—in revolutionary style. One which could command a $250 price tag, with an audience that would understand it as an investment.

"[I want the buyer to say] That's exciting! This is a smartphone!" Fadell said.

You notice it at once. The Nest thermostat is a sleek, stainless steel knob with the ambient temperature displayed in perfectly legible LED numbers looking right back at you. But Fadell wasn't sold on just the design of the product—he took an approach that Audi owners might think sounds familiar.

"We want to reinforce our style at every single 'touchpoint.' Yes, the Nest is looking good, but we thought the box should too: the custom screws, the custom screwdriver. It's not just a little plastic thing on your wall. It's our brand. It inspires confidence."

While he wouldn't give total numbers yet, he does estimate that of the number of people who have bought a Nest thermostat, 90 percent have installed their own, using those custom screws and screwdrivers, after watching a video Nest produced. And, more importantly, 99 percent are programmed through the intuitive interface on each thermostat. If they aren't manually programmed, the Nest was built to "learn": by using motion sensors that detect people in the room, and analyzing the ambient temperature, it adjusts the temperature automatically. It's even programmable through an app you can download.

"Up to 30 percent run time is saved on the AC by using high-efficiency fans to keep the compressor cold," he explained. "Simple things. Like thinking that the fastest return on investment to your house comes first by lowering consumption. It's the fastest thing you can fix. What if your whole house were powered by a finite battery? You'd change your consumption."

Fadell realizes that the idea isn't all that sexy at first, but that's what people used to think about mobile phones too.

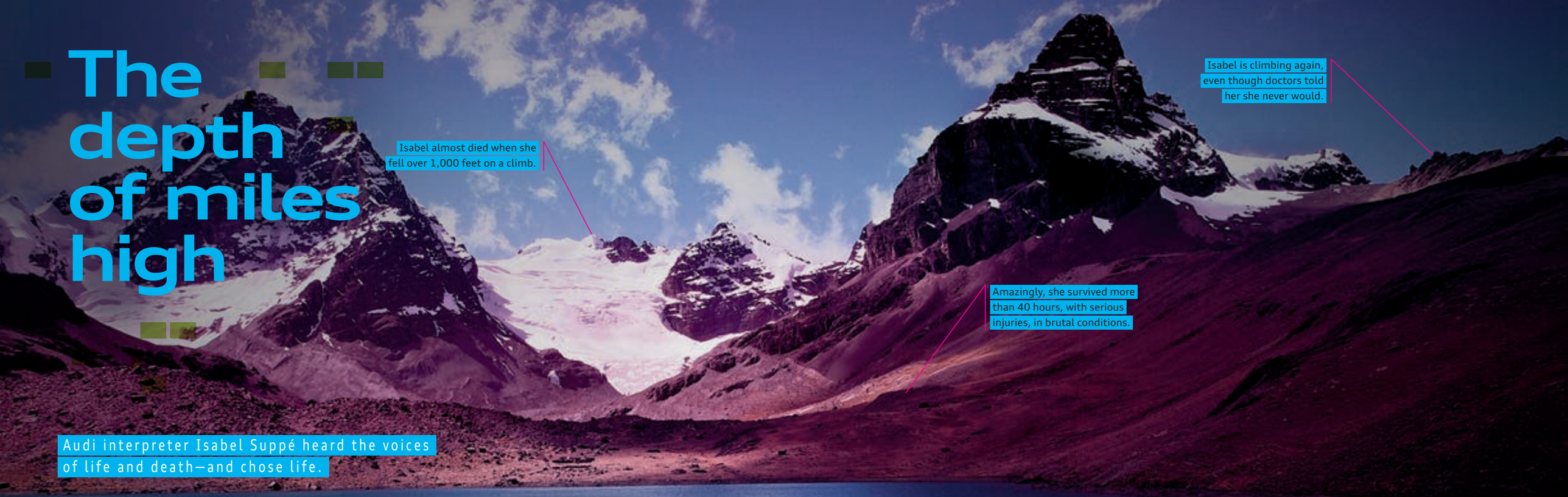
"The trick is to make the mundane magical," Fadell said. "To take something unloved and make it engaging and fun."

With an estimated 250 million thermostats in the United States, it's easy to see why Fadell thinks Nest has legs. The week of this interview, he was working with his team to put the final touches on the launch of Nest 2.0, a typical second-generation upgrade to the first. They've worked out a few of the bugs and have made it even easier to use and simpler to integrate with home heating and cooling systems. By removing the complexity, a precept Fadell has brought to all of his obsessions, he wants everyone to feel more empowered about their energy consumption.

"It's a win-win-win: for the family, the house and the community," Fadell said.

You never forget for a minute that he believes this about an ordinary household item, one you've probably never thought about much, until now. But that's the thing about obsessions. As part of the team behind the creation of the iPod®, iPhone® and iPad®, he's made a career out of obsessing about the ordinary—music, mobile and media consumption—and turning the conventional into equal parts art and irresistible consumer items. Enthusiasm can go a long way. //

The depth of miles high



Isabel almost died when she fell over 1,000 feet on a climb.

Isabel is climbing again, even though doctors told her she never would.

Amazingly, she survived more than 40 hours, with serious injuries, in brutal conditions.

Audi interpreter Isabel Suppé heard the voices of life and death—and chose life.

By Jennifer Casey

High-altitude climbing is in Isabel Suppé's blood. The 33-year-old, former Audi interpreter, is the grandchild of a legendary figure in East Germany's climbing world and his wife who met while climbing a mountain.

Ever since Isabel started climbing with them when she was 6 years old she's been addicted to the "magic of the mountains."

Her passion for climbing almost killed her on a Bolivian mountain on July 29, 2010. Suppé was within reach of the summit ridge of Ala Izquierda del Condoriri's 17,761-foot peak, when her climbing partner slipped on a patch of ice. This blew out their anchor points and, since they were tied together, they both plummeted more than 1,000 feet.

"With a screech, the rope tears me from the face, and I know that it is tearing me apart from life," Suppé said in her book, "Starry Night."

"The world has been turned off. I fall through darkness. I try to hit my axe into ice I cannot see, even though I know death is unavoidable."

Remarkably, they survived the fall, even though they both suffered serious injuries. Suppé's partner was not able to move because he broke his leg and took several hard blows to his head. Suppé broke her right ankle, and her tibia and fibula were protruding through her skin, causing blood to pour out of her boot every time she lifted her foot.

Even though several people had been told where Suppé and her partner were climbing, they thought the climbers were just running late when they didn't arrive at base camp on time. No rescue team was sent.

Suppé stayed with her partner through a hellish night. The temperature was five degrees Fahrenheit and Suppé's clothes, which were drenched from the fall, kept sticking to the ice.

By the following morning, rescue patrol was called, but it took a while to organize the rescue, and time was running out. Suppé's partner was no longer lucid, so she lifted herself, inch by inch, over the barbed ice, in an effort to get close enough to base camp to send a light signal.

Suppé survived more than 40 hours before a rescue team, including climbers who gave up their own summit attempts to help with the search, found her. It took another 18 hours to get her down the mountain and to the nearest hospital. How did Suppé survive when all the odds were against her?

"It was not hard to choose life when the only other option was death," Suppé said. "I heard the voice of death and the voice of life. I thought it would be absurd to die after surviving such an incredible fall."

Suppé also said it was important to her for people to know that she fought to survive if she died.

Tragically, by the time the rescuers reached her climbing partner, he had died from hypothermia.

Doctors told Suppé that they might have to amputate her foot, and even if they were able to save it, she would never be able to climb again. They were wrong.

Suppé had the first of the 13 surgeries she has had so far to save her foot in Bolivia. Within a month of the accident, she climbed a rock wall with her right leg hanging behind her in a cast. And incredibly, Suppé strapped her crutches on her bicycle and rode it from Germany to Spain in order to get surgery. Currently, the free-spirited Suppé lives in a tent when she is not put up in hotels for speaking engagements or staying with friends.

Suppé said the fall did not change her outlook on life, but reaffirmed it. She said she would rather have a "short, fulfilling life than a long, empty one." Additionally, she sees climbing as a metaphor for taking other important chances in life, she said.

"Fear is an important part of life, and there is nothing bad about being afraid," she said. "Taking a chance wouldn't mean a thing if not dealing with fear."

What drives Suppé to keep climbing after such a horrific tragedy?

"That's my life," she said. "That's what makes me happy. There is no place that makes me happier."

Suppé is raising money for the additional surgeries and rehabilitation she needs to repair her foot. If you would like to learn more about her story or donate money, you can go to www.isabelsuppe.com. //

Photo: Getty Images

Green among the reds

The Carneros Inn and CADE Estate Winery are two jewels from the PlumpJack Group that shine an emerald eco-green in Napa, famous for its deep reds.

By Jay Brida

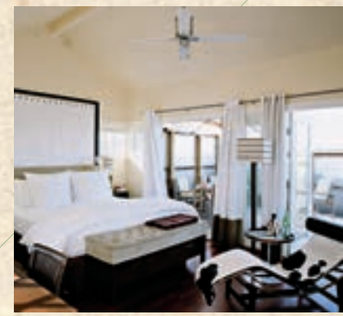
The Shangri-La of legend is a hidden paradise, remote and difficult to find, where life's troubles are unknown and days are filled with beauty, peace and happiness. An imaginary place? Well, about 14 miles up Highway 121 from the Sonoma Raceway and the Audi sportscar experience, you might just drive by a very real Shangri-La, mistaking it for nothing more than a renovated barn.

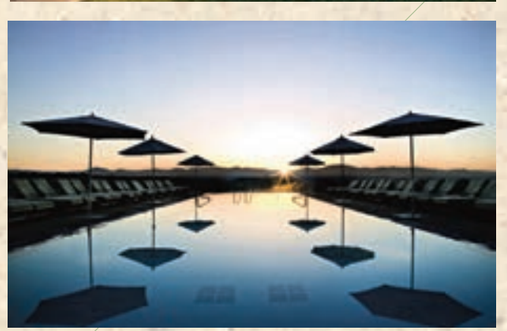
But once you find your way to the hilltop, pass the gates and wind through small neighborhoods of impeccable Craftsman-style cottages, you realize that this quest you're on is almost embarrassingly easy. And what you find when you check in is that The Carneros Inn, in almost every way a modern Shangri-La, was designed for a kind of enlightenment—of the self-interested kind.

And although it embraces the humility of sustainability, it delivers it in such a gorgeous, smart and sumptuous way, you soon realize how easy it is to be green.

From that hilltop check-in, the panorama of the Napa Valley reveals itself. Walk to the back, next to the adults-only pool (the family pool is just down the hill) and the state-of-the-art spa, and the vista is almost achingly romantic. The green-brown hills of the wine country in summer spread out from the fields and vineyards, the river glitters fleetingly below, and somehow the highway you just arrived by shrinks and disappears.

One also feels the agricultural heritage of this area. I noticed it almost immediately when a stray, solitary cow wandered by on just the other side of a low-slung fence, as the property's Executive Chef, Steven Tevere, showed me around the organic garden that serves as the leafy pantry for the Inn's signature restaurant, FARM. The garden practically begs for a vinaigrette, bursting as it does in early August with mustard greens, chard, soon-to-be prize heirloom tomatoes, peppers, carrots and earthy, deep ruby beets. The garden >>





Don't mistake this hidden paradise for a renovated barn. The Carneros Inn and CADE Estate Winery are just 14 miles up Highway 21 from the Sonoma Raceway and the Audi sportscar experience.

provides some of the produce and herbs for the also-excellent Boone Fly Cafe, which specializes in slightly more casual, but no less fresh, delicious and memorable fare—including the best fried chicken I've had this side of Savannah, Georgia.

Of course, this being Napa, the food—like a perfectly prepared, humanely sourced organic steak, roasted beet salad and flash-sautéed snap peas at FARM—begs for a proper pairing. Luckily for The Carneros Inn, there is a perfect offering, the delicious CADE Cuvée-Napa Valley Cabernet from their sister property, CADE Estate Winery, which is perched on Howell Mountain in St. Helena, a not-too-distant drive to the northeast.

In addition to having a climate that encourages deep reds like Cabernet Savignon and Merlot, CADE is unsparingly committed to green. Through the use of convection air cooling—derived, by design, through the convex roof at their winery in addition to the natural wind current that predictably rolls down the mountain—solar power, recycled blue jean insulation and organic growing, CADE treads lightly, but delivers powerfully rendered wines.

Christian Oggenfuss, the estate's Director of Marketing, walked me around the property before generously providing me a private tasting. He explained the philosophy of the parent company PlumpJack (partly owned by California's Lt. Governor, Gavin Newsom), and walked me through the naturally cooled caves (designed, like the rest of the property, by Juan Carlos Fernandez to stylishly suggest the eco-sensibility and innovation of the place) where the wine ages in French oak barrels before bottling, past the electric-car plug-in station (powered by the solar panels which usually pump electricity back to the grid) and into the modern tasting room, where a party from Texas was learning the finer points of the Whites and Reds produced there.

We stopped at a tree. It was vibrant, an appropriate shade of wine-red, with paper-like bark. It was gnarled, ancient and stunning. It was also the inspiration for the winery logo. It was a manzanita tree. Out of place in Napa, like the dotting of cork trees that Oggenfuss explained they use as kind of a rebuke—CADE was one of the first to offer a $100 bottle with a screw off cap—the magnificent tree invited exploration and simple amazement.

Eventually, I was able to walk past that and into Oggenfuss' office, where he produced a Cab, a Savignon Blanc and the CADE Cuvée-Napa Valley Cabernet blend for me to sample. The flavors burst through. I remember the crispness of the white fondly, but it was the deep crimson that stuck with me. The CADE Cuvée-Napa Valley Cabernet in particular was notable, giving me chocolate, spice and some gorgeous cherry. I sipped in the enlightened self-interest of enjoying Napa reds, produced as greenly as possible.

Back at The Carneros Inn, Diane Wesley, the Director of Sales and Marketing at the property, was giving me more context for their environmental vision, pointing out a veritable cornucopia of fruit trees (fig, quince, apple), a larger adjacent organic garden for FARM and how they used recycled water to keep the trees and plants thriving. She pointed out the design of the grounds, how it was organized into neighborhoods for a sense of intimacy, and how The Orchard, their private residence club that is part of the Timbers Collection, shares space with The Inn. By the time I got back to the top of the hill, I was even more enchanted.

Later, as I was feet-up in the outdoor soaking tub on the very private patio of my impeccably appointed and quite inviting guest cabin, staring at the massive sky and endless number of stars, sipping a CADE red, I was deep into a moment of enlightenment. And I wished that every bit of my time there would be as endlessly sustainable as The Carneros Inn was. //

Photos: The Carneros Inn FARM: courtesy of Paul Dyer Photography; Outdoor lounge and Barrel cave: courtesy of CADE Winery, Michelle Walker; all other photography courtesy of The Carneros Inn.

HOMER, NATURALLY

The sustainable allure of nature on canvas.

By Jessica Turner

"West Point, Prouts Neck," (detail) 1900
Oil on canvas | 30 1/16 x 48 1/8 inches
Sterling and Francine Clark Art Institute, Williamstown, Massachusetts, U.S.A.

Winslow Homer's studio on Prouts Neck, Maine, was a place this artistic genius could escape distractions and focus on his work.

Homer's presence can be felt in his refurbished studio, which was recently opened to the public after a $2.8 million restoration.

"Snakes, Snakes, Mice!" reads a sign that Winslow Homer placed on his lawn to scare off uninvited fans. Today one can see this sign above the fireplace in Winslow Homer's studio on Prouts Neck, Maine, just south of Portland, Maine.

Homer enjoyed perpetuating the myth that he was a hermit by curmudgeonly tactics like the "Snakes!" sign. Despite the steady stream of admirers, his studio was a place where he could work in (relative) solitude, far away from New York City distractions. The move was a turning point in his career, one that would bring Homer in close contact with the elements. A place where he could feel the majestic seascape and temperamental Maine weather that would become the subject of some of his finest work. The impact of this would-be hermit and artistic genius cannot be understated; his legacy informs the work of artists such as N.C. Wyeth; Wyeth's grandson, Jamie Wyeth; Robert Henri; George Bellows; Rockwell Kent; Marsden Hartley and Alex Katz. His vision helped articulate the environment and its role in American art.

Below, left: Homer's mantel, fire bucket, moose antlers, "Snakes, Snakes, Mice" sign, and Homer's pipe. Below, right: The piazza. Photos: Trent Bell Photography

"Homer's paintings of Prouts Neck helped to establish an iconic vision of the New England coast in the national imagination as a place where one could find an authentic and rugged experience of nature," said Karen Sherry, curator at the Portland Museum of Art (PMA).

Winslow Homer with "The Gulf Stream" in his studio at Prouts Neck, Maine, circa 1900. Bowdoin College Museum of Art, Brunswick, Maine, Gift of the Homer Family.

His work came out of what's now the refurbished Homer studio, recently opened to the public by the PMA after a $2.8 million restoration. It is a remarkable place that's notable not just for its heritage but also for its modernity. Once the Homer family's carriage house, Homer had it moved 100 feet east of the family homestead and remodeled by Portland-based architect John Calvin Stevens, one of the founders of shingle-style architecture. The PMA's difficult restoration shored up the studio's foundation, remedied extensive water damage, fixed a collapsing chimney and secured its roof. The restoration was sustainable, with every inch of wood inside and out refinished. It connects inspiration and nature, as confirmed when one stands on the grandly named "piazza" on the studio's second floor, with the same panoramic views of crashing surf, seagulls and rocky outcroppings that Homer saw—and captured expertly with a few brushstrokes.

Homer's presence is strongly felt inside the studio. The original windows are still etched with "Winslow," the walls retain his penciled quotes, and the room still includes his cane and bamboo daybed and his beloved fishing pole. Here is where he lived, painted and died. During the two-and-a-half decades he spent on Prouts Neck, Homer created a series of paintings that are national treasures, including *The Fog Warning* (1885, Museum of Fine Arts, Boston), *Lost on the Grand Banks* (1886, collection of Bill and Melinda Gates), *Undertow* (1886, Sterling and Francine Clark Art Institute), *Fox Hunt* (1893, Pennsylvania Academy of Fine Arts), *Weatherbeaten* (1894, Portland Museum of Art), *The Artist's Studio in an Afternoon Fog* (1894, Memorial Art Gallery of the University of Rochester), *The Gulf Stream* (1899, The Metropolitan Museum of Art) and *Right and Left* (1909, National Gallery of Art).

Whether standing at the Homer studio piazza or viewing his Maine seascapes in a museum, one can almost hear the echoes of Homer's contemporary and fellow Maine resident, Henry Wadsworth Longfellow:

Ah! what pleasant visions haunt me
As I gaze upon the sea!
All the old romantic legends,
All my dreams, come back to me.
Sails of silk and ropes of sandal,
Such as gleam in ancient lore;
And the singing of the sailors,
And the answer from the shore!

—The Secret of the Sea, 1850 //

Homer's living room with daybed and photos of his family, 2012. Photo: Trent Bell Photography

The majestic seascape and temperamental Maine weather inspired some of Homer's best work.

Audi quattro Cup

In 2012 alone, more than 80,000 golfers from 54 countries competed in over 800 tournaments for their place at the world final.

You try to focus, head down, knees bent, choked down, clubface open—no, way open.

By Andrew O'Brian

This year, America's biggest amateur tournament ended at fabled Pebble Beach.

The breathtaking Pebble Beach Golf Links and the Golf Links at Spanish Bay made the perfect setting for the Audi quattro Cup U.S. final.

A showcase of performance

First-place winners:
John Cartledge and Ronald Thomson

August 23–26, 2012 | Pebble Beach®

Over the years, Audi quattro® all-wheel drive as a core technology has become synonymous with *performance*. From its inception in 1980, it has increased the performance of drivers and racers around the globe. Having quattro® was deemed an unfair advantage at some racing events, but it was, and still is, a technological solution to help increase your *performance*. Hence, it was an apt theme for an athletic competition.

Then again, the benefits of a vehicle technology were probably not what you were thinking about while you anchored your now less-than-new golf shoes into the fluffy white sand of the bunker on the seventh hole at the Pebble Beach Golf Links, seawater crashing into the eroded shore below. You try to focus, head down, knees bent, choked down, clubface open—no, way open. But, then again, you were participating in the country's largest amateur golf tournament, the Audi quattro Cup, at what could easily be the most beautiful golf course on the planet. As its name suggests, the Audi quattro Cup is a tournament meant to challenge amateur golfers to showcase one thing: *performance*.

From its humble beginnings in 1991 to its continued success this year, the Audi quattro Cup has played host to nearly 1.4 million amateur golfers worldwide. In 2012 alone, more than 80,000 golfers from 54 countries competed in over 800 tournaments for their place at the world final. But don't be intimidated by the numbers. After all, these numbers do not represent your last scorecard. Or do they?

The Audi quattro Cup remains an amateur golf tournament open to golfers with a USGA handicap and, unlike traditional stroke play, uses the Greensome Stableford scoring format. Teammates each tee off, then choose the best shot, alternating shots until the ball is holed out. Unfortunately for most of us, "gimmies" or "mulligans" are not allowed. So, for the duffers out there, some advice: when you and your teammate register at the local Audi dealer for the 2013 quattro Cup events, be sure that your teammate is much better than you are.

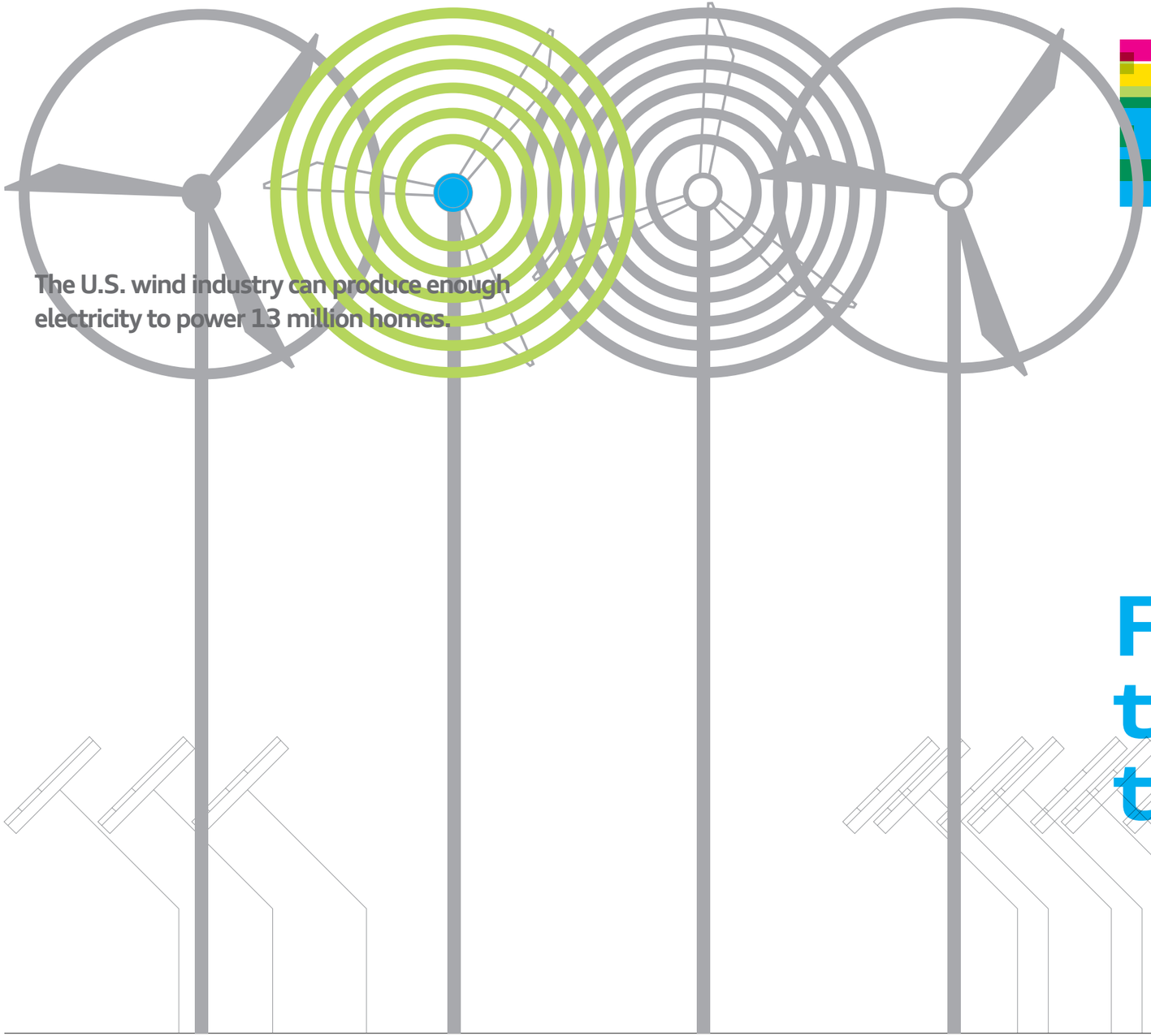
Starting on August 24, this year's Audi quattro Cup U.S. final was held at the fabled Pebble Beach Golf Links and the Golf Links at Spanish Bay. In a true celebration of both athletic performance and the launch of an all-new performance vehicle lineup, golfers and guests alike were treated to stunning rides along Highway 1 and one of the most picturesque drives in the world, Pebble Beach's famous 17-Mile Drive, in the new Audi S8, S7 and S6. Once the landscape's beauty and vehicle's performance had been fully appreciated, it was time for the golfers to tune their performance. With the game in mind, Audi had partnered with TaylorMade Performance Lab to help each of the golfers find their stroke.

Seventy-four teams of amateur golfers took to these glorious links, walking in the legendary footsteps of golfing greats while overlooking the rocky shores of the Pacific Ocean, and all vying for the right to represent the United States and their Audi dealers at the Audi quattro Cup world final at Arabella Golf Club in Western Cape, South Africa, from November 24 to 27. And by the end of tournament play, two teams sat atop the leaderboard. First-place winners John Cartledge and Ronald Thomson and second-place finishers Jon Davis and J. Carter Gray had earned that right.

Congratulations to the winners and all of the participants. Great brand, greats cars, great competition, great scenery and just a flat-out great golf tournament—the 2012 Audi quattro Cup U.S. final.

See you at the 19th hole. //

If you'd like to learn more about the Audi quattro Cup U.S. final and see the action, take a moment and visit www.audiquattrocup.us, where you can view and download photos as well as get information on how to register for the 2013 event.



The U.S. wind industry can produce enough electricity to power 13 million homes.

Five ideas that can save the world

A NYC-based sustainability expert, Alex Matthiessen, works with individuals, companies and governments to turn the improbable into the inevitable.

You wouldn't think hearing about smarter sewage treatment would make for an inspirational breakfast, but sitting with Alex Matthiessen has a way of making the improbable seem inevitable. After breakfast, the thought was to find smart, achievable ways that we can start cleaning up what needs cleaning. Here are five ideas inspired by an odd discussion over breakfast.

1 Wind Power

Wind power is the transformation of wind energy into a useful form of energy, such as using wind turbines to make electricity. As a substitute for fossil fuels, wind power is abundant, renewable, clean, doesn't use much land and produces no greenhouse gas emissions during operation.

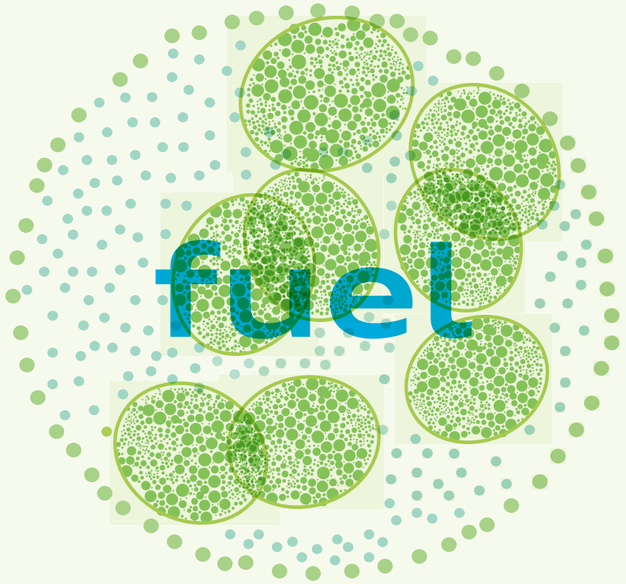
The U.S. wind industry surpassed 50,000 megawatts (MW) of total installed electrical generation capacity—enough to power 13 million homes, according to the American Wind Energy Association.

More than 40,000 wind turbines across the United States can now produce enough electricity to power the equivalent of all the homes in Michigan, Ohio, Iowa, Colorado and Nevada combined.

2 Greenscaping

Americans spend a lot of time and money caring for their lawns and gardens. Landscaping can produce vast amounts of waste in the form of grass clippings, leaves, branches, and fertilizer and pesticide containers. Pesticides and fertilizers can also wash from lawns and gardens into waterways, estuaries and oceans, which can contaminate them. >>

By Jay Brida and Jennifer Casey



Researchers hope algae fuel will be sustainable in the future.

Millions of tons of waste materials are hauled away, buried or burned each day from landscaping and groundskeeping operations—trees, shrubs, brush, lumber, asphalt and concrete. Additionally, millions of gallons of excess water, pesticides, fuels and oils are in use each and every day. If you decrease your landscape's consumption, you will be helping prevent greenhouse gases, save landfill space and preserve natural resources.

The Environmental Protection Agency encourages a type of landscaping called "greenscaping" that helps reduce these environmental risks while still preserving the beauty and health of the outdoors. It's good for the environment, and it also saves money.

Green landscaping means buying fewer products and switching from the purchase of disposable ones to those that are long-lasting and reusable.

Choosing to compost instead of disposing your yard waste will save you money on disposal costs. In addition, compost adds disease-suppressing properties to soils, reducing your need for pesticides. You can also try to reduce your water use by maintaining an efficient irrigation system, and changing the time of day that you water can save money.

One of the best long-term changes you can make is using native plants for your landscapes. Vegetation that is native to your area will be naturally stronger and more tolerant to your weather conditions. Also, because these plants are from your region, they don't have to be shipped to the store, and the prices for them should be lower. You should have lower water, fertilizer and pesticide bills by planting native vegetation.

Algae Fuel

Even though they are not sustainable now, with more research and development biofuels made from algae and cyanobacteria could be an alternative to petroleum-based fuels, according to a report from the National Research Council. This would help the United States meet its energy security needs and reduce greenhouse gas emissions, like those from carbon dioxide.

The ability of algae to grow on non-croplands in cultivation ponds of freshwater, salt water or wastewater is one of the potential advantages algal biofuels have over biofuels made from land plants.

The National Research Council said that concerns related to large-scale algal biofuel development differ, depending on the ways used to produce the fuels. Producing fuels from algae could be done several ways, including cultivating freshwater or saltwater algae, growing algae in closed photobioreactors or open-pond systems, processing the oils produced by microalgae, or refining all parts of macroalgae.

Some of the concerns for large-scale development of algal biofuel include the relatively large quantity of water required for algae cultivation; magnitude of nutrients such as nitrogen phosphorus and CO_2 needed for cultivation; amount of land area necessary to contain the ponds that grow the algae; and uncertainties in greenhouse gas emissions over the production life cycle.

In addition, the algal biofuel energy return on investment needs to be high, meaning more energy would have to be produced from the biofuels than what is required to cultivate algae and convert them to fuels. However, recycling nutrients or utilizing wastewater from agricultural or municipal sources could reduce nutrient and energy use.

The crucial aspects to sustainable development are positioning algal growth ponds close to water and nutrient resources, and recycling essential resources, the committee that wrote the report said. With proper management and good engineering designs, such as those that release harvest water in other bodies of water and those that create algal blooms, other environmental effects could be avoided, according to the committee.

Green Houses

"People want to live green," explained Kimberly White Erlinger, a co-founder of e3 Properties real estate agency, based in Austin, Texas. "We want to make it easier."

Erlinger explained that, since Austin had the largest and oldest green building rating system in the country, the Texas capital, with its affluent tech sector and progressive vibe, was a perfect place to start e3 (the name represents "the triple bottom line of sustainability: ecology, equity and economy").

"Many buyers in Austin are looking for efficient homes. The climate demands it, and the city and culture are very supportive of green building as a whole. It's refreshing and heartening to be around so many educated and savvy consumers. It's a very big deal here in Austin."

But the key, she said, was to think of it not strictly as a cause, but as a real, viable business.

"Sure, it should be good for the Earth, but it should be good for people, and for making money too, for lack of a better phrase," Erlinger said.

To choose the houses they represent, they usually have to be rated by the stringent Austin Energy's Green Building Program, but if they aren't, they usually have eco-friendly upgrades or are distinguished by thoughtful design that emphasizes efficiency. To ensure they get the "greenest" houses, e3 asks their agents to obtain an EcoBroker designation and to really help the potential buyer understand what it truly means to be green.

"Some people might think that bamboo floors make for a green home, but that is a tiny piece. Where was the bamboo sourced? What type of adhesive is used? Was the carpet tossed into a landfill? What about passive solar? Double-paned windows? Deep overhangs? Shade trees? We look at each house as a whole entity and market it by really emphasizing the green features."

The demand is there, but it's not just about real estate to her and her team. It's also about being a good neighbor.

"We are getting our brand out there and also doing good for our community. It's never an either/or for us: it's a both/and. We want to be prosperous, and that shouldn't be mutually exclusive to encouraging a higher level of green building knowledge within the real estate community and buyers and sellers."

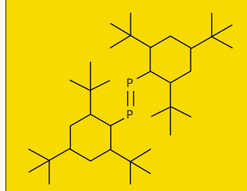
15

P

Phosphorus

30.973761[2]

[Ne] 3s2 3p3



Name	*phosphorus*
Pronunciation	*/ˈfɒsfərəs/ fos-fər-əs*
Symbol	*P*
Number	*15*
Element category	*nonmetal*
Group, period, block	*15, 3, p*
Standard atomic weight	*30.973762(2)*
Electron configuration	*[Ne] 3s2 3p3*
Electrons per shell	*2, 8, 5*

Experts are looking for a sustainable solution to a looming phosphorus shortage.

Sustainable Phosphorus

The relaxed, affable Matthiessen works with nonprofits, foundations, companies and governments to make better things happen. He is an advocate, but not an inflexible one. After working with an organization dedicated to cleaning up the Hudson River, he went on his own, to consult on public-private sustainability initiatives, which is how he found himself working with a start-up based in Vancouver, British Columbia, that had developed a technology that turns sewage waste into an environmentally friendly and highly effective phosphorous fertilizer product.

"Talking sewage and fertilizers was new territory for me," he said. "But I am a true believer in the technology. It solves about five problems and is amazingly green."

Matthiessen was there to consult on what was basically a sustainable solution to a looming phosphorus shortage: deriving the important element from human waste. Phosphorus, a necessary ingredient for fertilization, is energy-intensive to produce conventionally, and rock phosphate is becoming scarce. But it is readily available in human waste. The first year of the program through the Durham Advanced Wastewater Treatment Plant yielded around 500,000 pounds of phosphorus. A private company works with the wastewater plant to strip out the phosphorus and other nutrients, then produces a fertilizer that, unlike conventional commercial fertilizers, is "slow-release," meaning that 80 percent-plus of the phosphorus goes into the plant roots rather than into local waterways as a major life-killing pollutant.

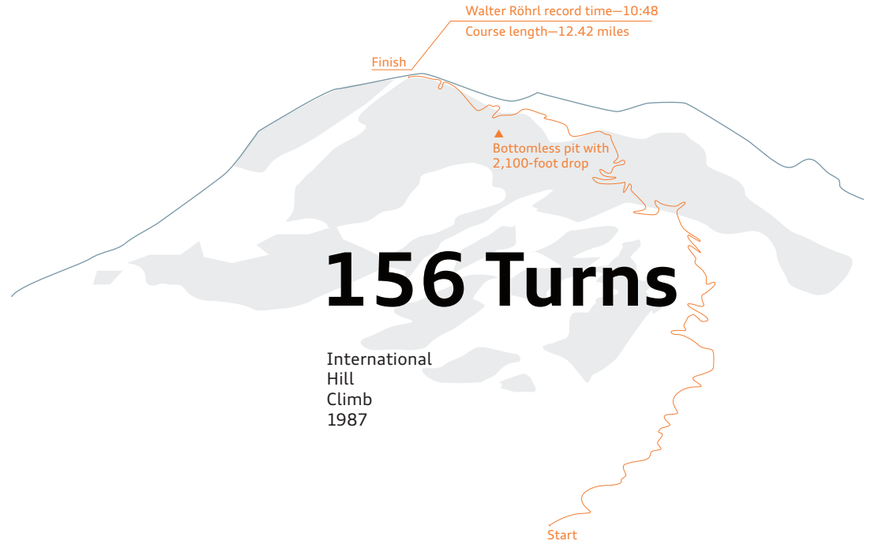
"Crystal Green, as it's called, not only reclaims a vitally important and finite mineral for food production and plant life, it also reduces the polluting effects of wastewater in watersheds. Like I said, a true wonder product." //

Master of the rally car

This was the first rally car where they tried to get more grip from the wings. And it was great—absolutely marvelous.

Going over the edge is as easy as falling off a table, especially in a car with more than 591 horsepower on tap.

Going up a gravel road at 136 mph.



156 Turns

International Hill Climb 1987

Walter Röhrl was the first to climb Pikes Peak in under eleven minutes. He was very moved after the stunning accomplishment and said it was “the maximum someone could do with a rally car.”

After winning the Pikes Peak Challenge, Walter Röhrl and Audi retired from rallying.

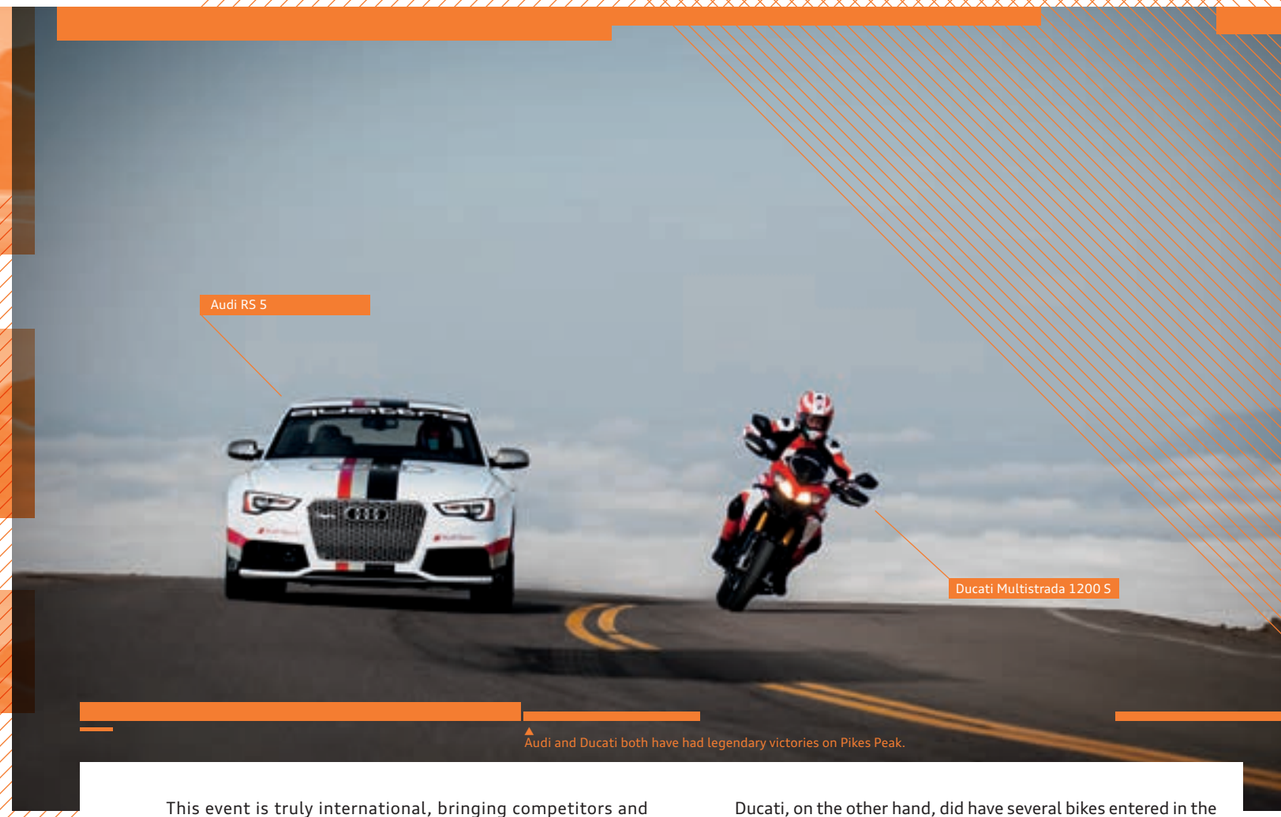
> I have never been interested in winning by one second. Some people might say it was a really hard fight, I won by one second. I want to win by ten minutes.
>
> —Walter Röhrl

By Kit Smith

14,110 ft

finish line

▶ Audi became the brand to beat back in the '80s by shattering course records year after year, culminating with a legendary win at the 1987 event.



▲ Audi and Ducati both have had legendary victories on Pikes Peak.

Lt. Zebulon Pike first set eyes upon the towering mountain that now bears his name from far out on the plains of eastern Colorado. The year was 1806, and he had been on an expedition commissioned by then president Thomas Jefferson to explore the Great Plains. It's said that upon spotting the magnificent monolith he immediately declared that the 14,110-foot summit would never be conquered by man. What he couldn't have possibly imagined that day was that not only would man conquer the mountain, but with the help of machine, he would one day do it within minutes.

The Pikes Peak International Hill Climb was first held in August of 1916. Designed to bring attention to the rapidly growing town of Colorado Springs, it would quickly become an international sensation. Appropriately dubbed "The Race to the Clouds" due to the mountain's notoriety for rapid weather changes, competitors would often start the race in plentiful sunshine, fight their way through a severe thunderstorm halfway up, and then cross the finish line in a blinding snowstorm.

But no history lesson on the Pikes Peak International Hill Climb would be complete without mentioning two of the most celebrated brands to tackle its infamous 12.42 miles, relentless 156 turns, and oxygen-depriving 4,720-feet of vertical: Audi and Ducati. The purchase of Ducati by Audi, and the subsequent joining of forces between these two iconic brands, makes even more sense when you consider their legendary victories on this mountain.

Audi became the brand to beat back in the 80s by shattering course records year after year, culminating with a legendary win at the 1987 event. Walter Röhrl drove his Audi Sport quattro® to a then record-breaking time of ten minutes, 48 seconds, toppling the previous record by nearly 22 seconds. The vehicle's quattro® all-wheel drive system, 591-plus horsepower engine and agile handling allowed the vehicle to roar up Pikes Peak highway with ferocious speed and impressive precision.

Ducati, on the other hand, has enjoyed a more recent run of race domination with back-to-back wins in the past two years' events. This left them in the position of being the team to beat at the 2012 event, and having won the last two races handily on the all-terrain Ducati 1200 Multistrada, they decided to go with a proven champion. This turned out be a good call.

Photos: Reinheld McKlein

This event is truly international, bringing competitors and spectators together from every corner of the world. The cacophony of languages and lack of hotel rooms in town made that abundantly clear. The evening before the start of the race, an event known as Fan Fest took place in downtown Colorado Springs. It brought the competitors and their high-powered machines together with fans, and provided the perfect recipe to generate excitement for the following day's event. Audi and Ducati had a particularly impressive display at this pre-race event — showing off new models, legendary race vehicles and offering up plenty of information to throngs of eager onlookers.

The 2012 Pikes Peak International Hill Climb marked the 90th running of the race, making it the second-oldest automotive race in America. For the first time in its history, the course was paved all the way to the lofty summit. This proved to be a significant change as top speeds increased and records disintegrated all day.

Walter Röhrl had been scheduled to make a commemorative run up the mountain, but, because of the tragic wildfires in Colorado Springs, the race had to be scheduled for a later date, and Röhrl was unable to attend. Although Audi did not have its legendary driver at the race, the brand was front and center with a specially prepared and modified S5 provided by Phil Long Audi of Colorado Springs serving as the official pace car of the event. General Manager Vince Cimino kicked off the race in spectacular style, roaring up the mountain in twelve minutes, 29 seconds and setting a new course record for a pace car. "It was an exhilarating run that we practiced in the time leading up to the Hill Climb," said Cimino. "The car drove like it was on rails thanks to proven Audi engineering," he said. "I'm thankful to have had the opportunity to be part of this legendary race and to have set the record in an Audi."

Ducati, on the other hand, did have several bikes entered in the race, and gauging by their success in the past two Pikes Peak events, this year was theirs to win. Motorcycles had been at a disadvantage in the past because the dirt section required slower speeds, but with a fresh layer of asphalt on the upper section now, there would be no need to go easy on the throttle. And Ducati riders proved that point in stunning fashion. Last year's winner, Carlin Dunne, blazed his way to the top in nine minutes, 52 seconds to take the win as well as set a new course record. His Ducati teammate and six-time winner Greg Tracy came in a close second, just six seconds behind. "Today was an emotional day," said Dunne. "The year of work the Spider Grips Ducati team put into preparing for Pikes Peak got us across the finish line in under ten minutes, an achievement we're very proud of. When we heard that we won and broke the record for the second time, I was speechless. The one-two finish proves the Ducati Multistrada 1200 S is the ultimate bike to conquer Pikes Peak." With a dominating performance in their division, the Ducati bikes certainly lived up to the hype.

The legendary Pikes Peak International Hill Climb is one of those events that truly can't be appreciated until you experience it in person. Not only because of the astonishing speeds that are attained mere feet from you, but even more so because the passion for this race that you sense from all the competitors and fans is infectious. And if the hoards of people surrounding every Audi vehicle and Ducati bike throughout the event are any indication, our two iconic brands are an even better match for each other than anyone could have hoped for. //

MONTEREY POPS

A writer's silver anniversary at America's most prestigious car event, Monterey Car Week, celebrated in style behind the wheel of an R8 Spyder.

2012

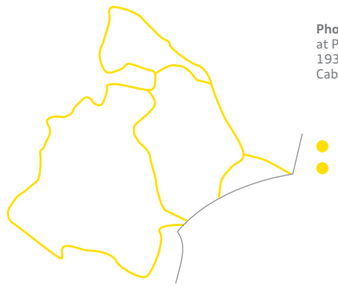
By Ben Eisenbise

Someone once wrote, "I know this: a man's got to do what a man's got to do." What I, apparently, have got to do is obsess about cars. Every moment of my free time is spent either driving or dreaming about cars. This is my 25th consecutive year here at Monterey Car Week in Monterey, Calif., and every year offers something different. But one thing remains the same: relationships are forged through a common bond, an unadulterated passion for the automobile. I am validated here each year that I am not alone in my obsession. Whether it's a Pebble Beach Best of Show winner eliciting my opinion of a particular Delahaye at auction or a Fremont Street homeless man fondly remembering his former Hemi 'Cuda, there is always someone to talk to here who gets you. Whoever you are. We are all equal here in our love of cars. And we are not alone. And this year I felt particularly lucky doing what I "got to do": I was going to drive a great Audi.

This really hit home as I sprinted past the famed Lone Cypress Tree on 17-Mile Drive in Pebble Beach, Calif., behind the wheel of a Suzuka Gray Audi R8 V10 Spyder. "It won't downshift if it doesn't want to," said my co-pilot, Kevin Washburn, sales and car specialist from Rector Audi in Burlingame. But I think, "It's good to be here." Quickly, I snap back to the moment and realize that it's a good thing that the six-speed Audi R tronic® automated paddle shift transmission "wants to," because I need to drop down a few gears pronto as the hairpin ahead is approaching at an alarming rate. I love cars. And I especially love this car.

Kevin loves cars too. We become quick friends talking about all the cars we've ever owned or lusted after as I speed back up through the gears, the V10 wailing behind me, and then—blat, blat, blat—down again, another tree-lined curve racing my way. I know my time in this car is short, and I should probably hunker down because the roads are tight and some slower traffic is emerging through the marine layer in this most majestic of settings. "We don't have to go back now," my new friend Kevin says. "We can keep driving." And so we do.

I spend the next 20 minutes making some of my most memorable Monterey moments. As we blast through the back roads of Pebble Beach, the wind barely mussing the top of my hair, I feel at once engulfed in my natural surroundings and cocooned in the comfy Spyder. But I didn't come here for "comfy." So Kevin reaches down and switches the Comfort mode to Dynamic mode, firming up the suspension and somehow making the steering, shifting and throttle even more responsive. I've died and gone to heaven in this civilized hellion. I've driven supercars before, but never one so well-mannered and tractable. Just as it is sanguine around town, happy when sitting in traffic or swinging by the market for a Pinot, the 525-horsepower R8 feels controlled and secure even as it propels into corner after corner on a closed, empty road nearby.[1] Indeed, the qualifications of the quattro® have never been in question. We eventually bring the R8 back to the palatial private residence on 17-Mile Drive where Audi is hosting their second annual Ride and Drive event, a chance for customers and potential customers to drive the current crop of Audi offerings. >>



Photo, top: Parading by the grandstand at Pebble Beach. **Photo, bottom:** A 1937 Horch 853 Voll & Ruhrbeck Sport Cabriolet in Silver.

Audi lover Tom Williams has opened his home for a few dozen lucky people to sample these fine cars in a calming atmosphere of luxury and refinement. "It's about relationships," Tom said, summarizing my thoughts on the Monterey experience. "What Audi does, is it creates relationships with you. Tell us what you need, and over time we'll work together to give you success. It's like a financial planner. It's just car planning.... When you create the kind of atmosphere where the customer feels satisfied and you're focusing on the relationship, you'll have a customer for a long time.... It's a relationship with the staff, it's a relationship with the car, and it's a relationship with my environment. So, I look at relationships in three different ways now.... Give me those relationships and I'll be buying a lot of cars."

My relationship with Tom began the day before at the prestigious and exclusive event, The Quail, A Motorsports Gathering. It didn't take long to find the new Audi S8, the 560-horsepower R8 GT and the venerable R8 LMS racecar announcing themselves amid the other finery at this top-notch event. The Audi lounge was teeming with activity when I arrived. As some ogled the cars, others waited patiently to talk to the charming Alan Cruciani, Audi West Coast Marketing Manager. As a crowd gathered around him, I asked Alan what the cause is for his apparent celebrity. He told me, humbly, "I've developed a personal relationship with a lot of our customers and partners. It's worked out very well for us." There's that word again. *Relationship*.

I think of my relationship with this place and this time: this one week every August when the Monterey Peninsula is transformed into an automobile wonderland. The car is celebrated in so many ways that even the most impassioned and tireless car buff will find himself overwhelmed by the exhaustive pace required to see and do it all. Nowhere in the world can a gearhead cram this much excitement into one week all within a 20-mile radius. A preponderance of two things, however, will be required: stamina and money. Formerly Monterey Weekend, Monterey Car Week once centered around the Monterey Historic Automobile Races and the Pebble Beach Concours d'Elegance. It has expanded over the years to include a host of other events—rallies, auctions, and various types of car shows—all designed to spike the heart rate of either the participant or the casual observer.

Three Audi vehicles on display at the Pebble Beach Concours d'Elegance.

A lifetime of car shows can be absorbed during the week if you're well-rested and comfortably dressed. Tuesday is the Carmel-by-the-Sea Concours on the Avenue. Wednesday, the Little Car Show in downtown Pacific Grove and the Motorworks Revival at the Monterey Jet Center. Friday will find you dividing your time, depending on the hardness of your core, between The Quail, A Motorsports Gathering; Legends of the Autobahn; and Concorso Italiano. And of course, Sunday features the world-renowned Pebble Beach Concours d'Elegance. There are a lot of cars to see, folks, so rest up.

The crown jewel of the week is, unquestionably, the Pebble Beach Concours d'Elegance. Held almost every year since 1950, this event is the grande dame of all car shows. By invitation only, owners of magnificent and historically significant automobiles bring their cars to the 18th green at The Lodge at Pebble Beach (formerly the Del Monte Lodge) where they are carefully scrutinized by a group of specialists in the field. The list of judges reads like a who's who of automotive greats. There are many different classes in which to compete, and the winners of each class are then eligible for the highly coveted Best of Show award. Any award from Pebble Beach can add significant value to a collector car, to say nothing of the subsequent bragging rights at the country club.

Whatever your degree of obsession, Monterey Car Week has something for you. You owe it to yourself to go at least once in your lifetime. I, for one, absolutely must go every year because it's just that important to me. It's important for me to know that I'm not alone in this world. It is here in Monterey each year that I form or rekindle relationships with my own kind. Here I find people who, the rest of the year, are all too oft misunderstood. People who simply need to talk to somebody about something that really matters to them. People who, above all, love cars. People like me. I got to do what I got to do. //

Photos: Getty Images, Kimball Studios

1 Obey all speed and traffic laws.

Owners' spotlight

From German autobahn to U.S. highways, the Torres family's automotive choice has always been clear.

By Steven Michail

Retired U.S. Air Force officer A.J. Torres is no stranger to Audi. He and his wife, Nora, have owned seven Audi vehicles since they bought their very first Audi 5000S, brand new, in 1985. In 1987, the couple moved up into an Audi 5000S with Audi quattro®, which they shipped to Germany, where A.J. was stationed. "We drove it flat-out at Autobahn speeds for three years and, given enough room, it would get up to 125 mph, not bad for a 110-hp engine.[2] We brought it back to the United States and drove it until it had 170,000 miles." It still had the original clutch in it when they finally sold it in 1998, an impressive eleven years after buying it. After the 5000S with quattro®, they were hooked. "Since our first quattro®, every Audi we've bought has had quattro® and Tiptronic® shifting."

A.J. Torres

Clearly quattro® was more than just a necessary feature in the snow and inclement weather of Germany and the winters in Fairfax, Virginia, but they also got to enjoy the performance enhancements Audi quattro® delivered in the dry summer months. And their obsession continued. They next found themselves in a 1998 2.8-liter V6 Audi A4, and summed up that experience simply by calling it "a great car." And the more they drove their Audi, the more they wanted to keep climbing the Audi hierarchy. So it makes perfect sense that their next A4 was the larger 3.0-liter V6 that they acquired in 2002. But it didn't stop with the A4. They continued to move into larger vehicles in the coming years.

The trend continued into 2006, when they traded up from the "great" A4 to the larger and more luxurious 3.2-liter Audi A6. But history definitely repeated itself as they then found their way into a supercharged 2009 A6. And although they were very happy with this car, they kept their eyes open for the next big move. They currently have an Audi A7, which, like their past several Audi vehicles, had to be a quattro®. "We love the technology, the style and the surefootedness of quattro®, and hope to always have at least one Audi with quattro® in the garage." I don't think there is any doubt they will. Audi has a real knack at making fans for life, and the Torres' family is a perfect example of this. Ever since they acquired their very first Audi more than 25 years ago, they've been loyal to the brand, thanks to the ever-evolving design and technological progress that's found in every Audi. If their story doesn't convince you, we recommend that you visit an Audi dealer for a test drive and to see how Audi may change your perspective about German engineering.

If you're already an enthusiast, we'd love to hear from you. Send us your Audi story, or simply your impressions of the brand, to shareyourstory@auditruth.com. You may be selected to be featured in Audi magazine's Owners' Spotlight!

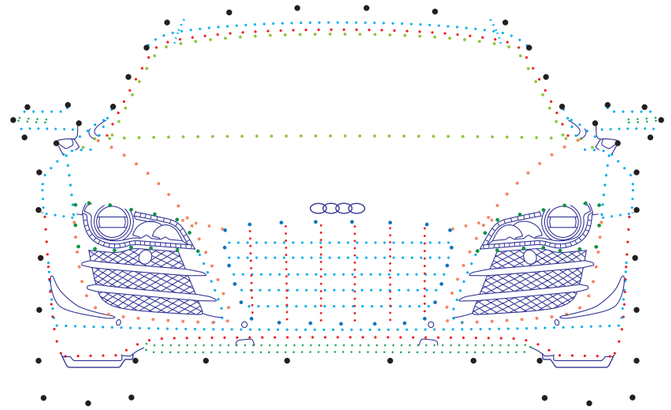
2 Top track speed is electronically limited in the U.S. Obey all speed and traffic laws.

Kids' space

Future Audi drivers will get their creative juices flowing with this game, puzzle and contest.

Connect the dots

Connect the dots that are the same color, and see what's headed your way.



Gue?s the w?rd ?

The following words contain the letters "AUDI" – how many can you name?

s

o

The spectators at a performance =

A trial performance, such as by a dancer, musician, or actor =

A large room where people assemble, such as in a school or theater =

Impossible to be heard =

A review of financial records to check accuracy =

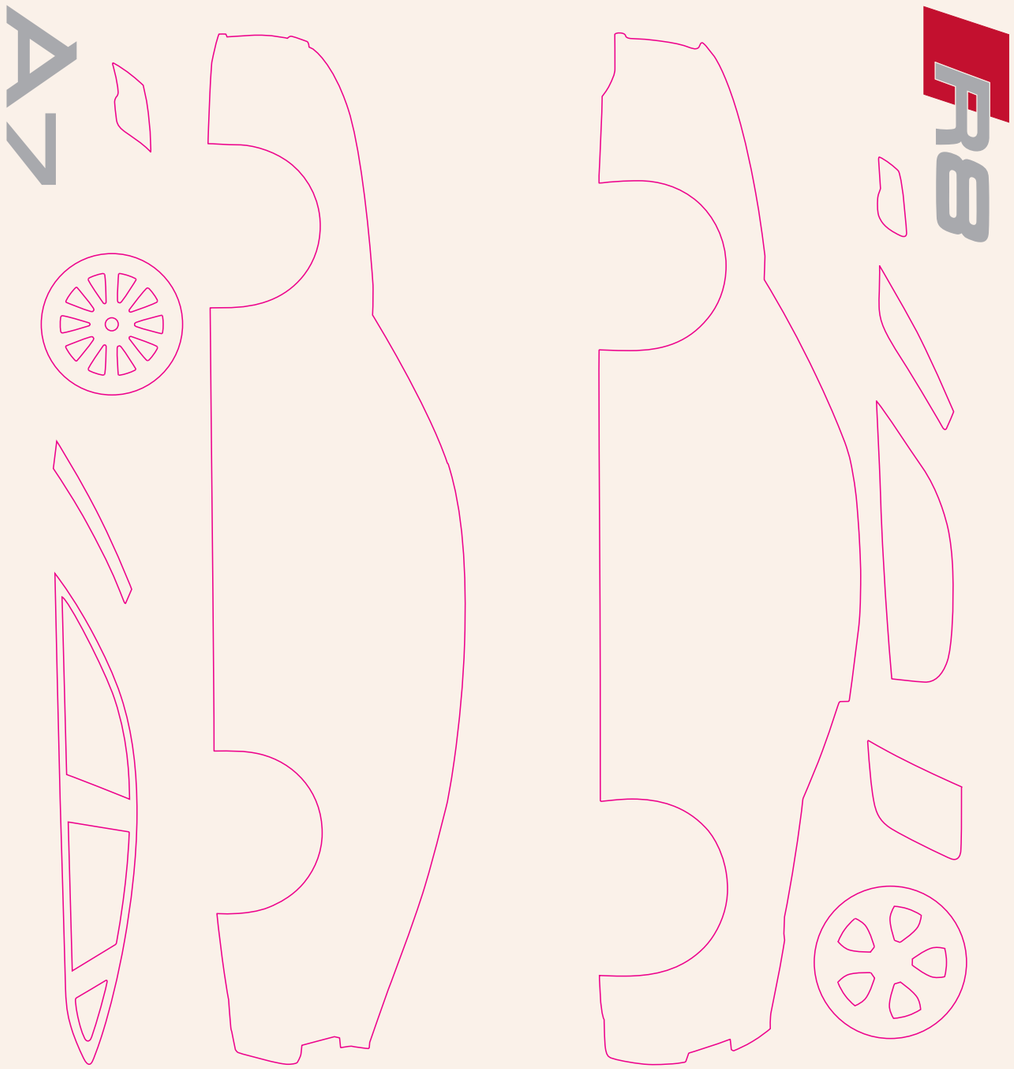
Answers: Audience, Audition, Auditorium, Inaudible, Audit.

Draw your Audi

It's time to get out your markers and crayons and draw your favorite Audi model! We'll feature some of the best entries in this space in upcoming issues. To enter, please e-mail audiart@designory.com for a submission form.

R8 / A7

You can use this stencil to help you draw the R8 and A7.



Cult objects

There's no need to sacrifice looks and luxury to be green.

Pulp Lamp
It's hard to believe that this collection of luminous lamps, designed by Enrique Romero De La Llana, are made completely of paper paste from recycled newspapers. Because they are created with inflatable molds, every lamp has a different shape, color and texture—making them truly unique.
price £390 *www.shopfolklore.com*

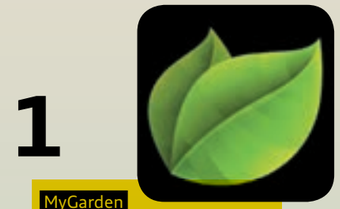
Organic Coil
Put your tennis bracelet back in your jewelry box. You'll turn more heads with this exotic design from the Gustav Reyes Studio in Chicago. Made from Forrest Stewardship Certified (FSC) wood, it's handmade using a cold bend process and finished with natural wax. Additionally, this elegant bracelet, which is from the Limited Collection, is signed and numbered, allowing you to walk around with a true piece of art on your wrist.
price $170 *www.gustavreyes.com*

EcoSmart Stix Outdoor Ethanol Fireplace
This stylish outdoor fireplace is a modern twist on the traditional campfire. Designed by renowned, Barcelona-based designer Hiroshi Tsunoda, this visually striking and practical piece consists of varying-sized tubular stainless steel "sticks" securely mounted around an efficient burner. It's fueled by clean-burning, eco-concious bio-ethanol, so there's no smoke, soot or ash.
price $1,995 *www.ecosmartfire.com*

Radiolarian Sofa
Structural forms in nature, including a wasp nest and the crystalline bone structure of microscopic sea organisms known as Radiolaria, inspired the design process for this extraordinary piece of furniture. Computer design techniques generated the form of the sofa using triangular columns. Then flat layouts were printed to create templates for transferring more than 2,000 hand-cut components together. Magnificent.
price £13,000 *lazerian.co.uk/prod-radiolarian.php*

Simone Shoe
Need a great conversation starter? Just slip on a pair of these distinctive, earthy wedges by Martha Davis. The wedge is composed of black acacia with golden details and a brass plate. And the natural, vegetable-tanned leather straps are ideal for day and night. But it's the "live edges" that run along the back of these shoes that make them a must-have statement piece.
price $300 *www.theworkshopresidence.com*

Photos: Erin Beckman, Martha Davis for The Workshop Residence in San Francisco



Cult apps

1 MyGarden
Love gardening? Share your passion with other gardeners; review the specs, photos and videos of more than 6,000 plants; and keep track of the plants you'd like to add to your garden. Download the MyGarden app, which is the mobile version of the MyGarden.org website, and then go sink your teeth into that delicious tomato you just grew.

2 PaperKarma
Finally! There's an easy way to get rid of junk mail. With the PaperKarma app all you have to do is take a picture of the tree-killing mail and tap "unsubscribe." PaperKarma will find the source of the annoying mail, and remove your name/address from its mailing list.

3 GoodGuide
Find safe, healthy, green and ethical products by using GoodGuide's bar code scanning system for science-based ratings on more than 170,000 items.

4 Green Genie
One of the most acclaimed green apps around, the Green Genie app is a complete guide to a sustainable lifestyle. It has more than 100 projects and tips. Even the most basic ones can add up to hundreds of dollars in savings.

5 Avego Driver
Save money, time and the environment with the Avego Driver app, which takes carpooling to a whole new level. Automated security features, real-time passenger information and electronic micro-payments make it convenient for drivers and riders to share the cost of their excursions.

6 Rumgr
Rummaging garage sales can be pretty competitive. Get a leg up on your opposition with the Rumgr app. It makes buying, selling and trading used items with people near you a snap.

7 Green Outlet
Wasting electricity is not only bad for the environment, but it can be rough on your wallet too. The Green Outlet app helps you figure out which of your household appliances are costing you the most to run. It also estimates your monthly energy bill, and even calculates your household carbon footprint.

Always pay careful attention to the road, and do not drive while distracted. Message and data rates may apply when using these apps.