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Ultimate Supercar

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Ultimate Supercar | Spring | 2019

Welcome

QUESTION TIME



What makes a car a supercar? Of course, you could simply apply logic to this question and say it's as simple as it being a car that is super but rational thinking shouldn't be a part of the thought process. Supercars are special. They evoke feelings and desires other automobiles are incapable of doing. They are completely illogical, while being simultaneously essential. Supercars are so much more than just really good cars.

Why this debate? Well, there's a few cars in this issue that some may argue are borderline supercars. For many, the Porsche 911 is the threshold between sports car and supercar. Often the debate will come down to specific models - some would say a 996 Carrera 2 is a sports car, but a GT3 RS is a supercar. Push the boundary further and the first generation Honda NSX will be thrown into the debate. But if you really want to upset the Ferrari Owners' Club, then roll up to a Supercar Sunday meet in a Nissan GT-R.

You'll find all three of the aforementioned cars in some capacity in this issue. We've featured a **Porsche 911** and **Nissan GT-R**, plus there's a Time to Buy guide on the **Honda NSX**.

I won't sit on the fence here. In my opinion, all Porsche 911s are supercars and the new NSX is undoubtedly one, but the first generation isn't. That's just my opinion. But what about the Nissan GT-R?

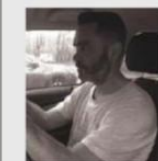
The GT-R is a fantastic car and has supercar performance. But it's a Nissan and a Nissan doesn't evoke the feelings and desires I've mentioned - it simply can't be a supercar. But - and it's a big but - a modified Nissan GT-R has to be considered for the prestigious supercar label. Especially the one in this issue, which produces almost twice the power of a LaFerrari. Forget supercars that's hypercar territory.

Welcome to issue five of *Ultimate Supercar*...

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MEETING THE TEAM



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The 458 is one of the all-time great naturally aspirated supercars. Not this one though! This one has two turbos bolted to the F136 engine.

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The original R8 has been with us for over a decade but with the help of TTS Performance it'll keep up with, if not surpass, the new kids on the supercar block.



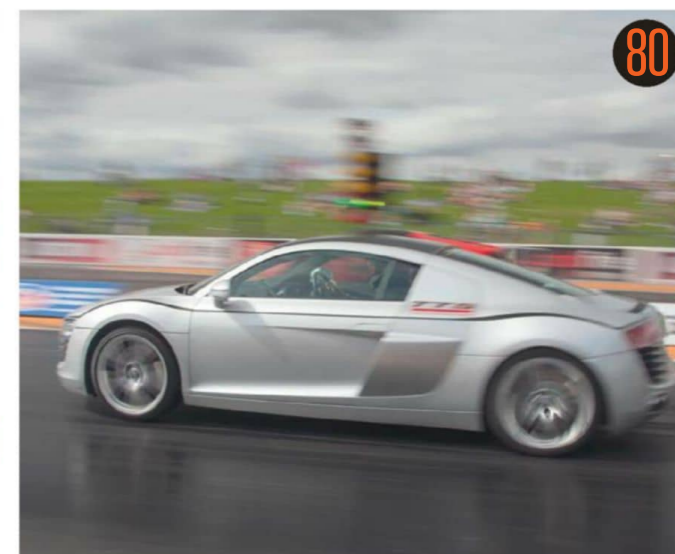
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LAUNCH MODE

REVISED LAMBORGHINI HURACÁN

The baby Lambo gets more power, tweaked aero and updated infotainment



A new Lambo is always cause for celebration and the face-lifted 2019 Huracán is packing a raft of updates designed to keep it fresh and appealing. It now has a sharper look, thanks to revised front and rear bumper, the latter with very cool looking twin exhausts, which are now mounted higher up either side of the number plate. The front splitter, rear diffuser and rear wing are all

updated, and there's a set of fresh 20in alloys. Inside, you get a new 8.4in infotainment system, with Apple CarPlay, sat nav and internet radio. The 5.2-litre V10 engine remains, but it now makes 630bhp and 600Nm (28bhp and 40Nm more than before), thanks to titanium intake valves and a new exhaust. A seven-speed gearbox transmits the power to all four wheels allowing the Huracán to reach 62mph in a claimed

2.9secs and go on to a top speed of 201mph. Chassis upgrades include new rear wheel steering and four-wheel torque vectoring, as well as the new 'Dinamica Veicolo Integrata' system which allows the driver to set their own chassis preferences. A range of custom options will also be available when the new Huracán goes on sale in the spring. Prices are expected to start at around £165,000 (plus taxes) and we are looking forward to having a go.



NEW MERCEDES-AMG GT

THE MERCEDES-AMG GT has carved out an enviable reputation as one of the most exciting AMGs available. To keep up with the competition, a raft of upgrades has been added to the 2019 models. The hand built 4.0-litre twin-turbo V8 is still the star of the show with the range topping GT C producing 522hp and 670Nm. 0-62mph takes 3.7secs and the top speed is 197mph. Power is transmitted via a 7-speed DTC Speedshift box. The styling has been updated with new LED headlights and exhaust tailpipes, as well as a raft of options including carbon pack. Choose from the GT, GT S and GT C, in coupe or roadster guise. Prices start at £115,730 for the GT Roadster with orders open now for deliveries in May.



ASTON MARTIN VALKYRIE — WORLD'S MOST POWERFUL NA ENGINE

As automotive projects go, the AM Valkyrie has to be one of the most exciting and ambitious yet. A unique V12 engine that produces 1000bhp – without forced induction – will power a joint partnership between Aston and Red Bull Racing. The all-new naturally aspirated 6.5-litre V12 revs to a heady 11,100rpm, yet weighs in at just 206kg. Developed in partnership with Cosworth, this technical masterpiece draws heavily on F1 knowledge and

materials. But there's more – the engine is a fully stressed element of the car, so rather than being fitted into it, this unit forms part of the actual structure – effectively holding the front and rear of the car together. This posed a huge challenge, not least due to keeping the NVH to a minimum. A KERS-style battery hybrid system will also feature in this stunning machine. The Valkyrie is likely to cost between £2m and £3m when it's finally released, with just 99 examples being produced.



NEW PORSCHE 911 REVEALED

The new Porsche 911 the 992 has been unveiled and looks set to be the most accomplished 911 to date. Based on an all-new platform with heavily updated engine and new gearbox, the 992 is set to once again shake up the supercar world. The exterior looks fresh and exciting with a nod to previous generations of 911 such as the bonnet crease. The wings now enclose the headlights and there's a deep air intake in the front bumper giving a purposeful look. A rear light bar stretches the full width of the car and there are lots of neat details such as the flush door handles that pop out when you blip the key fob. Overall it's a very slick design that manages to retain that 911 DNA, while also delivering a fresh new look.

Inside, the all-new cabin features two TFT screens either side of a traditional rev counter, plus another larger screen in the centre of the dash. It's all immaculately presented and very Porsche. Power comes from an evolution of the 3.0-litre twin-turbo flat-six, which now produces 444bhp and 406lb/ft, thanks to updates including new turbos and cast manifold. Performance is quoted as 0-62mph in 3.5secs and a top end of 191mph. Like the previous generation, tuning is sure to unlock the potential of this incredible car. Initially available in Carrera S and 4S guises, in both coupe and soft-top, the new 992 will be priced from £98,418 and is available to order now.





NOVITEC 812 SUPERFAST

The 812 Superfast sits right at the top of the current Ferrari range and represents the ultimate supercar for many. But should you wish to personalise your Fezza, then German tuning maestros, NOVITEC may have the solution.

Their range of subtle additions take what is already an incredible car and give it a little extra something – as these stunning images show. Manufactured from ultra lightweight, high-end carbon fibre, the exterior aero additions include a front lip for

the front bumper and surround for the air intakes, which leads into two flaps that extend over the side intakes. Great looking and also proven to reduce front axle lift. At the back, a rear spoiler lip has been fitted, along with a carbon upgrade for the rear panel. Two carbon outlets have been added to the bonnet, while the mirrors also get carbon covers to complete the look, which is especially effective on this yellow 812. To finish off this elite package, NOVITEC commissioned Vossen to design a set of super light forged wheels – 10x21in at the front and a monstrous 12.5x22in at the rear. The new alloys sit tucked up in the

arches thanks to a set of -35mm lowering springs, while the optional lift kit allows the nose to be raised by 40mm.

Performance upgrades for the 6.5-litre V12 are still in development, but NOVITEC can supply a performance exhaust system with active valves to fully exploit the scintillating sound of that V12 powerplant. The system features 110mm tailpipes, which are available in stainless steel or Inconel, which also saves up to 11kg in weight

Interiors can be specified in pretty much any combination of leather and Alcantara – allowing customers to create a fully bespoke cabin.



ROAD-GOING BRABHAM BT62

FAMOUS FOR THEIR legendary F1 cars of old, Brabham are back with their ultra-high end, BT62 track car. Such was the demand for this circuit-focused machine that Brabham have announced a road going version. The European road compliant version will be produced in the UK and cost an additional £150,000 on top of the £1.2million list price of a BT62. Changes include raising the ride height, increasing

steering lock, as well as adding air-con, door locks and additional interior bits. The aim throughout was to make the BT62 usable on the road without compromising its hardcore track focused nature. Although weight has increased, there's no reduction in power and owners will still get the full 700bhp – guaranteed to put a smile on their face. First deliveries are expected in the summer.



Boasting the most powerful V8 engine in Ferrari's history, the Pista produces a mighty 710bhp and 569lb/ft from its 3.9-litre twin-turbo V8



FERRARI 488 PISTA SPIDER

The Fezza 488 is a stunning machine in stock form, but the Pista Spider takes things to the next level. Boasting the most powerful V8 engine in Ferrari's history, the Pista produces a mighty 710bhp and 569lb/ft from its 3.9-litre twin-turbo V8. 0-62mph takes just 2.85secs and the top speed is 211mph. Options include a raft of lightweight upgrades, including a set of one-piece carbon wheels which are 20 percent lighter than forged items. It also boasts lashings of carbon fibre and of course that roof which can be lowered or raised in under 30secs. With the full list of lightweight options, the Spider is said to weigh no more than a stock Pista. If you're looking for the ultimate, ballistic wig-lifter, then the 488 Pista Spider is the one. Prices are yet to be announced, but expect to pay around £250,000.



MCLAREN 600LT SPIDER

THE LATEST AUTOMOTIVE delight to emerge from McLaren is this, the 600LT Spider. Based on the already thrilling hard top, the Spider unleashes the full force of that twin-turbo V8 for a truly visceral driving experience. It remains true to the Longtail ethos of increased power, track-focused dynamics, optimised aero, reduced weight and limited availability. Thanks to the structural rigidity of the 600LT, weight has increased by only 50kg – making this one of the lightest soft-top supercars available. With 600hp and 620Nm, acceleration is also on a par with the hardtop with 0-62mph taking 2.9secs, 0-124mph in 8.4secs and a top speed of 201mph. The McLaren 600LT is available to order now, from £201,500.



LEASE YOUR SUPERCAR — AND TUNE IT

IN A FIRST for the automotive industry, PERON has joined forces with XL Limited to offer a unique way to experience the thrilling sound of an Akrapovic exhaust. Thanks to an exclusive partnership, a selected range of XL Limited's short-term contract hire cars may now be ordered with an Akrapovic exhaust system already installed. These include the Lamborghini Huracán, the Porsche 911 Turbo S and the

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NOVITEC N-LARGO

Based on the already highly competent McLaren 720S, the NOVITEC N-Largo adds more power, and aggressive styling to the boosted British supercar. The 4.0-litre twin-turbo V8 has been recalibrated to produce 806hp and 878Nm, which equates to impressive performance gains. Acceleration from 0-62mph now takes just 2.7secs with a top speed of 215mph. An F1-inspired Inconel exhaust system is also available, which further adds to the aural drama – as well as saving significant weight.

As you'd expect from NOVITEC, the styling has been thoroughly re-worked, in this case with a dramatic wide-body package, which adds 60mm at the front and a huge 130mm of girth at the rear. The wide-body allows a set of 12x21in MC2 wheels to be fitted. The front and rear bumper, as well as the side intakes, have all been reworked, and there's even an air scoop on the roof to add even more theatre. If you're looking for the ultimate Macca, this side of Senna, then the NOVITEC-tuned 720S could be for you.



FERRARI SP3JC

WHEN MONEY IS no object, then a regular Ferrari may not be enough to satisfy the need for something unique. Which is why the Ferrari Styling Centre offers a full-bespoke service. The latest project is this SP3JC, created for a collector who wanted a "pure and uncompromising" roadster, but with the chassis and running gear of the F12 TDF. The result of two years' work, this one-off harks back to the V12 spiders of the 50s and 60s. The collector, who loves pop art, wanted to make this car really stand out from the crowd. Exterior tweaks include more muscular rear quarters, an intake at the front and rear end featuring horizontal slashes, to make it look wider. Split glass inserts have been added to the bonnet to show off the V12, while the brightly coloured interior features blue and white leather. Not one for the shy and retiring types.



REFRESHED AUDI R8

HOT ON THE heels of its sister, the Lamborghini Huracán, comes the 2019 R8. Like the new Huracán, the R8 is a mid-life refresh rather than an all-new model, but it still features some very cool updates and even more power. The stock R8 now gets 562bhp from its 5.2-litre V10, and the Performance (which replaces the Plus) boasts 612bhp, thanks to revised exhaust system. 0-62mph takes 3.1sec for the Performance

coupe, which is also the first R8 to crack 200mph, with a top end of 201mph. Styling wise, the new R8 gets a new front grille with 3D optics and no longer has the bar in the centre, while three slots have been added as a nod to the Ur-quattro. New front air intakes add more aggression and give the R8 a wider stance, while the headlights are darker with black surrounds. The air intakes at the sides have also been made larger and there's a larger honeycomb grille at the rear. In a nod to previous R8s, the tailpipes are now oval rather than rectangular. New 19 or 20in wheel designs are available and the suspension has also been tweaked. The interior remains unchanged, but to be fair Audi nailed it first time. The new Audi R8 and R8 Performance will be available to order by spring, with prices yet to be announced.

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YIANNIMIZE

UNLESS YOU'VE BEEN living in a cave for the last few years, we're sure you'll be well aware of Yianni – the owner of London-based wrapping firm Yiannimize and also a regular on both YouTube and TV. Showcasing his high-end work with his very own duo of Lambos – an Aventador and Urus – both of which have been wrapped in the most striking of electric green colours you could possibly imagine, his work represents the side of the modified car world where money is no object.



KREAM DEVELOPMENTS

ANOTHER LONDON-BASED car customiser that had a stand this year was Kream Developments – housing the likes of a flip-coloured Nissan GT-R and 911, wide-body M3 and even a lowered Ferrari F355. Reserved for those who want to take their project that little bit further than most, these guys are the go-to firm when you've got a crazy idea in your head that you'd like to turn into a reality.



AUTOSPORT INTERNATIONAL

With far more focus on aftermarket tuning and a big shake-up in layout, 2019's Autosport International was a big hit.

WORDS: SAM PRESTON PHOTOGRAPHY: SAM PRESTON, JULES TRUSS & AUTOSPORT

“P ack your bags and grab your camera, you're coming to a motor show with me,” the text read from Jules early one morning back in January. A motor show at the start of the year... could he finally be dragging me along to the infamous Tokyo Auto Salon? Well... not quite. You see, a few hours later, I found myself on a train not to Heathrow Airport, but instead to the glamorous NEC in sunny Birmingham for the annual Autosport International soiree. But with the much-loved event this year boasting a whole-new layout and plenty of fresh attractions, thankfully it was far from the anti-climax it could've been. Autosport runs from Thursday through to Sunday, acting as both a huge networking opportunity for the

European automotive industry as well as showcasing to the general public just what 2019 is set to bring to the wonderful world of cars. As such, not only will you find plenty of stunning brand-new road and race cars on display to ogle over, but also a sea of talented local engineering and manufacturing firms that keep the global automotive world spinning on a daily basis. If you ever need a reminder of just how much automotive talent our little island harnesses, Autosport is the place to come. This year, there was also displays housing the latest fleets of Formula 1, BTCC and WRC machinery, as well as a big pile of famous faces on-hand for photos and interviews. To top it all off, the Live Action Arena gave show-goers the chance to check out some of the aforementioned vehicles

in motion in the hands of famous drivers from throughout the ages. It seemed like organisers had made even more of an effort than usual to house as many modified machines as possible within the NEC's walls this time around, too, with the capacious Hall 3 largely filled with aftermarket road cars of varying severity. From the top-end wrapped hypercars of TV-star and tuner, Yiannimize, through to a handful of beauties on the nearby Kream Developments stand, it was nice to see the aftermarket world represented in such a positive light. It's encouraging to see Autosport International adapting to fit around the YouTube-inspired, modified-obsessed car world we live in and creating a thoroughly entertaining few days for us in the process. Roll on 2020's show.



PORSCHE 964

MATT GLASSUP'S Porsche 911 that was sitting pretty on the Tarox stand is a firm favourite of ours and acts as the perfect illustration that sometimes, less really is more. Boasting bright gold Etabeta split rims that offer a superb contrast to the simple green bodywork, the car also features the perfect drop to complement the late '80s/early '90s vibe this coupé oozes from every pore.



PORSCHE 935 (2019)

ONE OF THE BIGGEST attractions of the show was the new Porsche 935 that harks back to the legendary Porsche 935/78 'Moby Dick' racer of 1978. Only 77 cars will be made, they'll produce 690bhp from the 3.8-litre twin turbo (same as the current 911 GT2 RS) and will cost £750,000 – but you won't be able to buy one because they have already sold out.

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CRAZY EIGHTS

The Ferrari 458's F136 engine is one of the all-time great naturally aspirated V8s. So what happens when you bolt on a couple of turbos? Well, the results are pretty crazy...

WORDS: DANIEL BEVIS
PHOTOGRAPHY: LARRY CHEN



Turning a Ferrari 458's manettino to Race mode is like plunging through a wormhole in space, tumbling into a distorted mirror and slamming straight through the back of the celestial closet into whatever the petrolhead alternative to Narnia is. Even in friendlier Sport mode it's a pretty brutal proposition – a 562bhp V8 with a howling 9,000rpm redline, making a noise like a tortured choir of wronged angels, mated to a 7-speed dual-clutch Getrag 'box. This all runs hand-in-hand with smart E-Diff and F1-Trac systems, carbon-ceramic brakes with a 'pre-fill' function, drag-reducing deformable front winglets... and when you click that little switch to Race mode, all bets are off. Gear-shifts times are quickened, suspension stiffened, traction control loosened, and it'll let you bounce off the limiter for giggles rather than automatically shifting up for you. The thing just wants to play. But it's not a game for the faint of heart.

The breathtaking performance of this model reframed what we thought we new about road-going performance cars when it was launched in 2010. It was staggering, devastating, perhaps even tiptoeing up to the warning sign marked 'too much'.

But for some people, too much ain't enough. You'll notice that the animal nature of this 458 Spider has been ramped up exponentially by expanding the menagerie of creatures involved; whereas the factory 458 is liberally studded with equine motifs, in this instance the prancing horse is joined by sheep. Lots and lots of sheep.

Now, our woolly chums have never really been associated with sporting prowess, but there's a shadowy clique of gearheads out in southern California who are keen to challenge this viewpoint. Sheepey Race is a company run by enthusiasts, for enthusiasts. Otherwise known as Sheepey Built and renowned for their tuning expertise and innovation with Hondas, Mitsubishis and other fast-road Japanese fare, the team have recently been dipping a toe in the vibrant waters of supercars and motorsport – with, it has to be said, some startling results.

These are not people who do things by halves. What they've done is to extrapolate the very essence of the 458, figuratively flicked its existential being into Race, and stood back to watch the fireworks. There's a big name pulling the puppet strings which helps to explain the forthright nature of what's been achieved here, and that

Right The team has unlocked 700bhp at the wheels – and that's running at a very safe and conservative 5psi

Below Germany's Prior Design are the artisans of the PD458 aerodynamic bodykit

Right below The car sits markedly low thanks to its Novitec suspension springs



“Race mode is like plunging through a wormhole in space, tumbling into a distorted mirror and slamming through the back of the celestial closet”



name is SEMA. Presumably familiar to many of you, this is an annual trade show that draws the great and good from across the globe to Las Vegas, to share everything that's cutting-edge in the automotive aftermarket; a colossal extravaganza of awesomeness in which everyone shouts louder than everyone else. If you're building a car for SEMA, you pull out all the stops. Because although it's ostensibly a trade show, the world is watching. SEMA cars flash across the planet's social channels with lightning speed. This is a place where things are done properly.

Feeling Sheepey

With this in mind, Sheepey founder Alex Soto sent up the bat signal and pulled together a small but perfectly formed squad to craft something unique in the supercar sphere. Largely based in southern California (aside from bodykit artisans Prior Design, who hail from Germany), this is a crack team of experts comprising LTMW, Rotiform, CSF Radiators... big names in their respective fields, and the sort of people you can trust to get this stuff done right.

There are two key elements at play here, each significantly altering the 458's path of destiny: firstly, the guys were keen to fit an eye-catching bodykit to the car, because there's just something deliciously naughty about doing that sort of thing to a Ferrari. And secondly, Alex wanted to develop a twin-turbo kit for the car. As you do. No biggie.

This is a particularly alluring and engaging idea for Ferrari owners. You see, there's a certain amount of





“The flawlessly finished bodykit and absence of look-at-me aesthetics, means few will suspect the sheer ferocity of this malevolent Ferrari”



Bottom far left The Ferrari's stock-looking exhaust outlets are thoroughly deceiving

Below right A F136 4.5-litre V8 is mated to a Sheepee Race twin-turbo kit

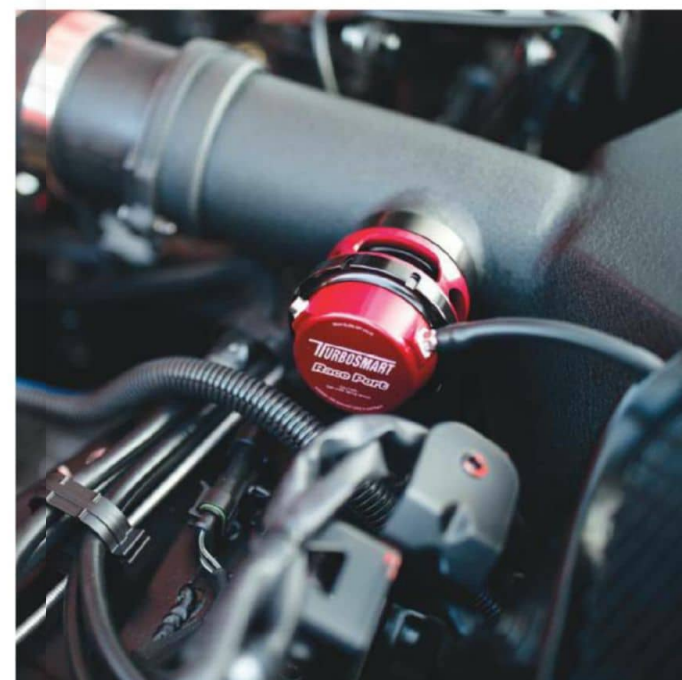
rivalry in such circles. While there are oodles of pan-marque collectors, it does tend to be the case that Ferrari fans are Ferrari fans alone, in the same way that Lamborghini acolytes wouldn't consider anything but the bull. A long-standing bone of contention has been that aftermarket twin-turbo kits for Lambos are readily available, whereas for Ferraris, not so much. So what Alex set out to achieve here wasn't just about breaking necks at SEMA, it was a public service. Now all those Ferrari guys who are lusting after forced induction have somewhere credible to turn.

The chosen car for this project is a 2013 458 Spider, although at first glance you might be forgiven for thinking a LaFerrari had just slipped into your field of vision, such is the aggressive nature of the Prior Design kit. Expertly applied by Long Tran at revered modifying superhero hangout LTMW, the kit's been perfectly colour-matched to the factory paint and it really beefs up the profile. The car now sits markedly lower thanks to its Novitec springs and the colossal wheels filling out those pumped-up arches, like a shot glass full of pure adrenaline cut with a dash of snake venom, are a custom set of rollers fabricated by the wheel-wizards at Rotiform. You're looking at 22 mighty inches of forged, three-piece splendour, and those slender spokes really showcase the car's carbon-ceramics beautifully.

So the 458's sitting pretty with a fresh new look – and just what have Sheepee Race been up to beneath that engine lid?

As you can probably imagine, it's a fairly comprehensive mechanical transformation. The Sheepee system centres around a brace of Precision 6062 Gen 2 .82A/R turbochargers, each one a work of art with a forged aluminium compressor wheel and air-cooled, dual ceramic ball-bearing centre housing rotating assembly. These work in conjunction with a pair of Turbosmart Hyper-Gate45 wastegates and Race-Port 50mm blow-off valves, and the pipework really is gorgeous – not just quality, but native quality.

It looks utterly fabulous and you can't argue with the results: the team's engineering prowess has unlocked 700bhp at the wheels, and that's running at a very safe and conservative 5psi. This means that while the system may be making seismic alterations to the powertrain's delivery, it's not causing undue component stress in doing so. If you feel that seven-hundred horses are insufficient, there's always plenty of potential for more, but this seemingly brutal setup is actually docile enough for day-to-day use.



FERRARI 458

STYLING: Prior Design PD458 aerodynamic body kit – installed and painted by LTMW; Scuderia wing shields.

TUNING: F136 4.5-litre V8; Sheehey Race twin-turbo kit – with twin Precision 60G2 Gen 2 .82A/R turbochargers; twin Hyper-Gate45 Turbosmart wastegates and Race-Port 50mm blow-off valves; twin CSF air-to-water intercoolers custom-fabricated by Sheehey Race, twin rear-mounted CSF heat exchangers; DEM ECU remapped in-house – 700bhp @ 5psi.

CHASSIS: 22in 3-piece forged Rotiform BUC wheels; Toyo R888R tyres; Novitec springs.

INTERIOR: Tan leather interior; Cavallino Rampante carpets.



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FERRARI - MASERATI - LAMBORGHINI



Hidden genius

A hidden element of genius within the system is thanks to CSF's mould-breaking technology, intelligently customised by Sheehey. You see that tank at the rear of the engine bay with the pair of embossed sheep? That contains a pair of CSF air-to-water intercoolers. As opposed to the usual air-to-air system you'd find in a traditional front-mount intercooler, these use a water reservoir for cooling. The filler cap at the top can be used to stuff it with ice water if the fancy takes you. Liquid-to-air coolers are technically more efficient in their operation, with a pair of custom CSF heat exchangers completing the cycle, and Sheehey's execution has packaged it all with panache.

What this revolutionary build represents is the fusion of expertise shared among a group of companies who know as much about teamwork as they do about technologically impeccable tuning. This means that despite the truncated deadlines of SEMA, coupled with the pressure of knowing that a judgemental global audience will be keenly watching, the masterminds behind this project have turned out a quality product. But more importantly, it represents the importance of restraint. There are tiers of ostentatiousness in the world of supercar tuning, as the base car for any given build will be quite outrageous by its very nature. And sitting low-slung over huge wheels, slathered in the logos of the firms involved, there's no missing the fact that this isn't your run-of-the-mill 458. But at the same time, the superbly chosen and flawlessly finished bodykit, combined with the stock-looking exhaust outlets and absence of look-at-me aesthetic alterations, means that few will suspect the sheer ferocity of this malevolent Ferrari. At least, until Alex blips the throttle, and the rapidly rising howl of that low-inertia V8 is joined by a crescendo of turbo whistles, followed by the sneezing and chattering of wastegates when he lifts off. Sure, the 458 comes with Race mode as standard, but these guys have taken that concept to a whole other level.



Top If seven hundred horses ever starts to feel insufficient, there's plenty of potential for more...

Left above That's the name – but it's not quite like the others

Left The tan leather interior is perfectly complemented by opulent Cavallino Rampante carpets

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Lose your mind

Ludicrously powerful, comically economical and insanely quick, the unconventional performance of the Porsche Panamera Turbo S E-Hybrid will jumble your brain cells – as it did with the already mentally fragile Steve Chalmers

WORDS: STEVE CHALMERS

was less than 48 hours into my Panamera Turbo S E-Hybrid road test when a second email from Dubai HQ pinged onto my phone. "You've got another one!" it said, with a copy of the fine and the instructions on how to pay it. To say I was mortified was an understatement.

In my entire 22 years of testing cars I've never had a fine. I pride myself on returning manufacturers' cars often in a better condition than I received them. I was recently told off by Rolls-Royce for spending six hours detailing a Phantom after I'd finished with it. Not because it needed it, but because I enjoyed it.

To get two consecutive parking tickets on the Porsche was shocking. Normally, I'm meticulous in looking after a loan car, especially one spec'd up to almost 200 grand. But, two days in a row I'd parked up the S E-Hybrid, locked the door and walked away. Why? Because the hybrid Porsche's performance is so mesmerising, it leaves your brain cells in a big, mushy mess.

The unexpected

The Panamera is like nothing I've driven before. It's a completely new driving experience and it's thoroughly addictive. Even in full electric mode. Sitting behind the Turbo S E-Hybrid's chunky leather-trimmed steering wheel, I turn the ignition 'key' to the right, the air con kicks in and we're ready to roll. The big, four-door Panamera has been plugged in overnight here at Porsche's HQ on the outskirts of Dubai, so the lithium-ion battery pack is filled to the brim and the indicator says if I behave, there's 55 kilometres of pure electric power to play with.

There is no noise. Nothing. Zilch. No mighty thrum of eight cylinders grumbling at 900 revs per minute. Just peace, quiet and an ambient air of complete calm.

While I wait for the air conditioning to bring the interior temps down, I play around with the Panamera's touchscreen mounted in the centre of the dashboard. It's an intuitive operating system far superior to any tablet and there's a lot of information to take in – too much, in fact.

Scrolling through one of the menus has brought up the Panamera's night vision/thermal imaging system. There are so many switches, displays and warning lights here. It's a sensory overload and it's fantastic. No i-Button/central command thing to fiddle about with, just plain old-fashioned buttons. From the LEDs at the base of the speedo telling me if I'm charging or draining the battery, to the G-force meter, the Turbo S lets you know how well it's performing. However, all I really need to fiddle

“When closed, it’s quiet and refined. But open it up and you get a quick, meaty V8 thrum, which barks when you let off the accelerator”





Left "There is no noise. Nothing. Zilch. No mighty thrum of eight cylinders grumbling at 900 revs per minute. Just peace, quiet and complete calm"

Below right A 4-door racecar that just so happens to have 14-way power seats. Oh, and a massage function

Below left The electric motor produces 100 kilowatts, equal to 136bhp. With 295 ft/lbs of torque

with is the drive selector dial on the steering wheel and the exhaust 'loud' switch on the centre screen – for this test, nothing else matters.

Electric performance

Mounted on the steering wheel at the 5 o'clock position is the drive selector – a simple rotary dial that enables you to engage the Turbo's four operating parameters: E, H, S and S+. With the dial set at E, I gently push down on the accelerator and we move forward. No noise, no fuss, just a gentle waft. The plan is to take it easy in electric mode and enjoy a bit of silent Porsche driving.

The accelerator has a tactile two-stage step, with the electric drive using up the first couple of inches of travel. It's a pleasant feeling as you accelerate in complete serenity; the Porsche just glides you around silently.

It's a big car, two metres wide, over five metres long and weighing in at 2.3 tonnes. This gives it a real road presence, especially as the Turbo's styling is unmistakably Porsche.

Performance wise, the electric motor produces 100 kilowatts, which is equal to 136bhp. That doesn't sound like much, but with 295 ft/lbs of torque available from the off, the Porsche's speedo climbs steadily and consistently all the way up to 85 mph.

Hybrid mode

Hybrid mode is at the 3 o'clock position on the selector. This is the most efficient mode and is recommended for everyday use, as it changes over from full electric to 'friendly' twin turbo V8 according to your driving. So what's the switch like? Does it go from whisper quiet to

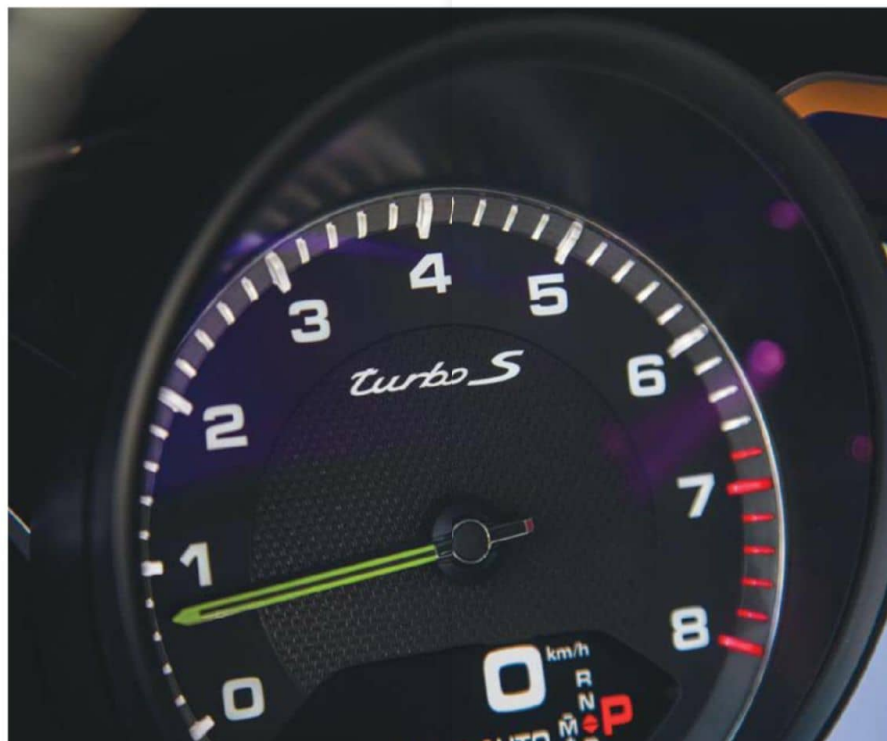
thundering, antisocial V8? Not in the slightest. There is no discernible difference between cruising in petrol and full electric. The big V8 is so refined and Porsche's NVH (noise, vibration and harshness) insulation so effective that you have to glance at the analogue rev counter to see if the engine's actually running or not.

Again, at traffic lights, if you ignore the dashboard readings, the only way you can tell if the V8's engaged is by feeling the tiny vibrations through the steering wheel. In electric mode, there's a light, flywheel type sensation; with a rhythmic, deep vibration coming through your fingertips when the V8's running.

Sports car

During the week-long test, I only drove the Panamera in Sport mode for about five percent of that time. Here, the twin turbo V8 is continuously running, but it keeps the battery-charge maintained at a minimum level to ensure that if you decided to go for it, there will be enough electric boost in reserve to keep you accelerating like an angry cheetah.

It's here though, that you can press the sport exhaust switch on the touchscreen to open up the valves and let the V8 really roar. Again, when closed, it's quiet and refined, but open it up and you get a quick, meaty V8 thrum, which barks when you let off the accelerator. It is by no means antisocial and still way under any noise limits, but it's a glorious sound and one we should make the most of while we still can in these days of noise limits and rules. Still, if you're going to go S, you may as well go S+...





Above "There's 680bhp combined with 626 ft/lbs of torque, so there's very few cars on the planet that can keep up with an angry Turbo S E-Hybrid, which is a very strange thing to write about a car that can whisk you silently to work, basically, for free."

S+ = Supercar

Located at the 9 o'clock position on the selector, engaging S+ drops the suspension, tells the 8-speed gearbox to skip down a cog or three and puts the electric motor and twin turbo V8 at your disposal in one juicy 680bhp package. That's lot of power and trying an emergency start for the first time out in the desert, Porsche's 0-60mph time of just 3.2 seconds is easily achievable without any fancy launch control.

Here, the all-wheel drive system transfers the Porsche's 626 ft/lbs of torque to the tarmac without a hint of losing grip: it just hunkers down on its colossal 275/35 and 325/30 ZR 21 tyres and thrusts you forward. On powerful cars you can feel the acceleration in your abs: with the Turbo S, you're trying to keep your neck stable. It's the only road car I've driven where a HANS device would come in handy. At full torques, the steering wheel isn't for steering, it's for holding on to.

Mean or green

The Porsche Panamera Turbo S E-Hybrid is a unique car. In electric mode, 97mpg is a possibility. That's a staggering number and the reason why, with the charging, I hardly used

any real petrol on the test. The electric drive also highlights the SE's silent refinement. When you have to check the Porsche's pulse through tiny vibrations in the steering wheel to make sure it's running, then you know you're not far off from Rolls-Royce territory.

And then there's the 680bhp combined with 626 ft/lb of torque. Working together, they transform the Panamera into a 4-door racecar – one that just so happens to have 14-way power seats and a massage function. There's very few cars on the planet that can keep up with an angry Turbo S E-Hybrid, which is a very strange thing to write about a car that can whisk you silently to work, basically, for free.

The big question is; is an electric Porsche still a Porsche? Does the hybrid 918 Spyder have all the qualities that has made Porsche the ultimate driver's car?

Most definitely. And the Panamera is no different. If hybrid is the future of performance cars, then sign me up now and if you've never tried a high performance turbo before, don't forget to take a little notepad with you; you know, to jot down stuff like 'lock car' and 'pay for parking' as your mind may well be in another place.



"The Panamera is like nothing I've driven before. It's a completely new driving experience and it's thoroughly addictive"

Viola Storm

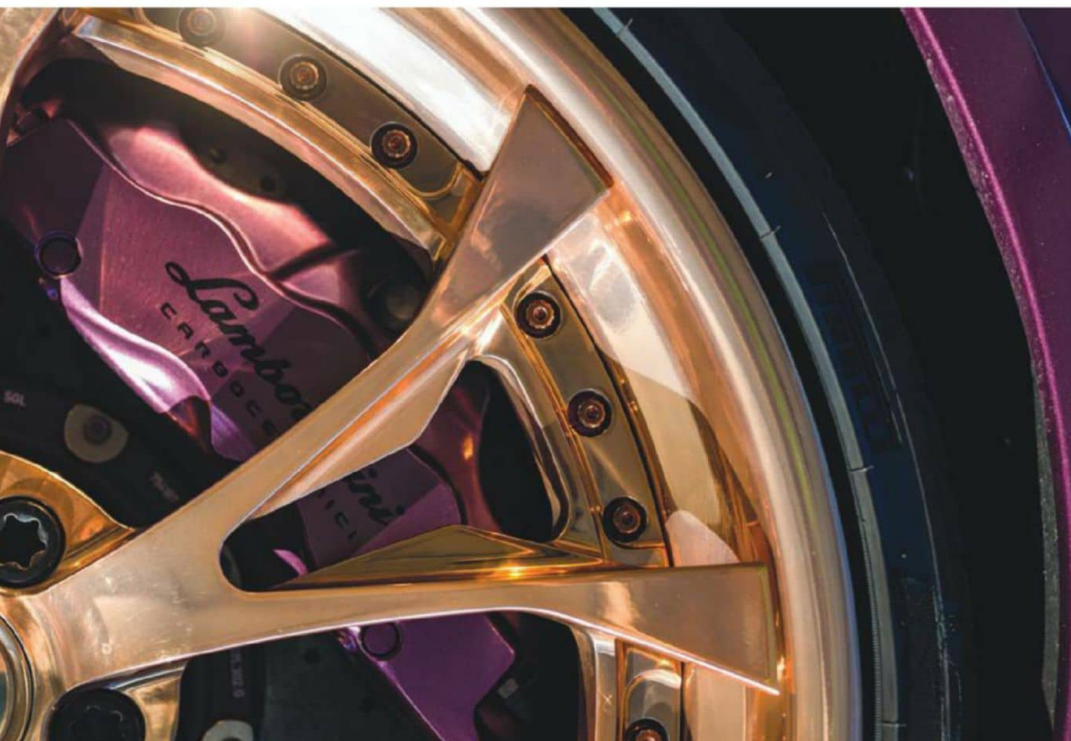
In the eye of the hurricane, Justin Tan's purple, drop-top Lambo is reaping the whirlwind...

WORDS: DANIEL BEVIS
PHOTOGRAPHY: LUCAS CROYDON





“The Huracán has a gorgeous little profile, but it’s designed to scythe through the air with balletic elegance”



Above Viola Purple is Justin’s tribute to the Diablo SE30

Far left PUR Wheels LX11 forged three-piece hoops in rose gold, 245/30 (f) and 305/30 (r)

Near left Liberty Walk have their hallowed signature all over the car

The 1990s were exciting times for impressionable young car fans. The supercar excess of the '80s had brought us the angular insanity of the QV and Anniversary versions of the Lamborghini Countach, as well as the Ferrari F40, ensuring that Athena’s poster sales were consistently strong to starry-eyed boys and girls.

But little did those kids know what was coming in the Britpop era: the McLaren F1, the Jaguar XJ220, the Ferrari F50, the Bugatti EB110, these were glory days for junior petrolheads, these monstrous machines fighting it out for wall-space in bedrooms across the globe. Arguably the most supercar-ish of all the supercars was the outrageous Lamborghini Diablo – excessively wide, aggressively low, hilariously impractical and more powerful than could ever be necessary.

A particular favourite among burgeoning fans was the special-edition Diablo SE30 – essentially a street-legal race car that was lighter and more powerful than the standard version, with magnesium manifolds and huge spoilers and all sorts of ostentatious lunacy. Just 150 were made, and they brought the genre one of its most stunning paint shades: Viola Purple.

Now, a lucky few who had these posters on their walls as kids get to live the dream when they grow up, and Justin Tan is one such person. “The SE30 was my childhood dream car,” he smiles. And interestingly, his



own back-catalogue is studded with cars that represent more than a few dreams around the Fast Car office: custom Mercedes C63 AMG, C-West Impreza WRX, Lamborghini Gallardo, Mansory Porsche Cayenne, Novitec Lamborghini Huracán coupé, all of them heavily modified... and when the Viola Purple paint shade became available through Lamborghini’s Ad Personam program, Justin could immediately see the bones of a plan beginning to assemble.

This time it’s Personam
What’s Ad Personam, you ask? Well, it’s something the company offers for people ordering a new Huracán or Aventador, allowing them to customise and personalise with an infinite range of possibilities; paint finishes, seat trim, stitching colours and patterns, embellished leathers,

“I went to Liberty Walk in Japan and was so impressed with the company’s craftsmanship and culture, I ordered the kit right away”

forged composites, it ensures a Rolls-Royce level of personalisation for customers who don’t just want to drive any old Lambo.

“This car is my second Huracán, but this time I wanted the convertible,” says Justin. “I saw the potential it had to become a car with real impact. So I ordered mine direct from the factory in Viola Purple, in tribute to the Diablo SE30 – I had to wait 12 months for it!”

Well worth the wait, of course, that goes without saying. So he had a shiny new Lambo on order, in the correct dream-weaving SE30 shade... that was the colour taken care of, but what about the road presence? The Huracán has a gorgeous little profile, but it’s designed to scythe through the air with balletic elegance, while the whole point of the Diablo was that it was, frankly, massive. So wide you could never get it in a regular parking bay, so impractical you had to half climb out and sit on the sill to



“I saw its potential to become a car with real impact. So I ordered it direct from the factory, in Viola Purple, a tribute to the Diablo SE30 – I had to wait 12 months for it!”



Above The super-plush interior includes Ad Personam carbon bucket seats

Above right Justin sourced a bespoke air-ride setup from AirREX for those mandatory levels of hard-parked lows and everyday driveability

Far right Fi Exhaust’s system cutting-edge intelligent ECU control valve means butterflies can be closed to pootle around town; but opened to unleash hell

reverse it. The Huracán, as bonkers as it is, is still a little too... sensible. So how to make it a bit madder, a bit wider? The answer is Liberty Walk.

“I was reluctant to cut the guards off a brand new Lamborghini,” Justin admits, totally understandably. “But when I went to Liberty Walk in Japan, I was so impressed with the company’s work and craftsmanship, and the culture they’ve created for car enthusiasts, I jumped into ordering the kit right away.

“The full widebody kit was supplied by Vogue Industries, who are also known as Liberty Walk Australia, which I then brought to Cameron’s Bodyworks in Brisbane to get it fitted and painted.”

Exhausting work

While the work was being carried out to that fresh and unsuspecting LP610-4 shell, Justin had a little bit of shopping to do in order to transform the Huracán into a more complete package. First on the list was a full valvetronic system from Fi Exhaust – because while that 602bhp 5.2-litre V10 is a howling beast, it really





TECH SPEC: Huracán

Styling: Ad Personam Viola SE30 paint; Liberty Walk full carbon fibre widebody comprising wings/arches, front lip, sideskirts, rear diffuser and rear wing; 1016 Industries carbon fibre bonnet.

Interior: Ad Personam carbon bucket seats.

Thanks: Kato and Toshi from Liberty Walk; Camerons Bodyworks for working on the car; Alan from Fi Exhaust; AirREX, PUR Wheels; Peter from 1016 Industries; Nick from Pomponazzi; Trakpro for the GPS Tracking, and all the staff of Vogue Industries for the whole build of the car; and last but not least is my family support for all my time spent on cars.

Tuning: 5.2-litre V10; Fi Exhaust valvetronic system, 7-speed dual-clutch transmission.

Chassis: 9.5x20-inch (front) and 12.5x20-inch (rear) PUR Wheels LX11 forged three-piece wheels in rose gold; 245/30 (f) and 305/30 (r); Pirelli P-Zero tyres; AirREX air suspension; 6-pot carbon brakes.


enough to fill out those colossal purple hips nicely. The rose gold finish offers a classy contrast too; it's not a blingy, yellowy gold, but something more mellow that works with the creamy, powdery, retro Viola of the SE30.

"The last piece of the puzzle was the 1016 Industries carbon fibre bonnet," he says. This is an aggressive piece of design, as it pinches styling cues from both the Huracán Super Trofeo road-racer and the über-unicorn Centenario, while also being lighter and stronger than the factory item.

With all of these premium pieces drawn together and expertly finished, the Huracán presents a striking profile, which is mirrored in the ear-splitting shrieks when Justin fires up that Sant'Agata V10. The finish of the car is so flawless, you'd be forgiven for thinking he'd put it together as a sort of high-net-worth showpiece, to keep in a heated garage and occasionally trailer to shows. But no. Justin's built this to be used, and used hard.

Keeping regular

"I take it everywhere," he assures us. "I love taking it out to meets that are thousands of kilometres away." And that's very reassuring, isn't it? It's so easy to sideline cars like this as trinkets and playboy showpieces, but Justin's keen to keep at front-of-mind that this is, first and foremost, a car. One that deserves to be used at any given opportunity.

He has plans, of course. People with this sort of vision always do. "I've now started building my third Liberty Walk car," he tells us. And given that he's already fulfilled the SE30 boyhood dream, we can't wait to see what the next one is... 

Above top 1016 Industries provided the shark-like carbon-fibre bonnet

Left above The Liberty Walk full carbon-fibre widebody kit included wings/arches, front lip, sideskirts, rear diffuser and rear wing

benefits from open pipes to help it truly find its voice. The Fi Exhaust system is clever because it features the company's cutting-edge intelligent ECU exhaust control valve. When the butterflies are closed, you can pootle around town without going deaf; click them open though and all hell breaks loose, unlocking maximum power and noise.

Another key consideration was how the car would sit. Extra width means a broader footprint is required, and the thing would look nuts at stock ride height with all this additional bodywork carried out. So to address this, Justin sourced a bespoke air-ride

setup from AirREX to provide the requisite levels of hard-parked lows and everyday driveability. When the car airs out and dumps itself in the weeds, that fat purple brute looks sensational, but Justin needn't be fearful of speedbumps either!

Just PUR-fect

In terms of broadening the contact patch, it was PUR Wheels who answered the call. Their LX11 design is a forged three-piece beauty in a deep-concave setup. Justin's opted for a 20-inch diameter here, with 9.5-inches of width up front and a mighty 12.5-inch at the rear - which is





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Top 10 Supercars Under £60k

Back in the 1980s and '90s a supercar was a rare and obscure thing. It would stop traffic and drop jaws – the sheer incongruity of seeing the alien automobile mixing it with everyday traffic. 2019 on the other hand is a golden age for the pre-loved everyday supercar. High-octane thrills have never been so accessible...



That effect still endures, of course. A shiny new Lamborghini or a boxfresh Pagani offers an undeniable magic that's just in another realm to the Golfs and Qashqais on your neighbours' driveways. But the technological developments of the 2000s and '10s saw these machines descending from the heavens and being reimaged as everyday-usable propositions.

Volkswagen's ownership of Lamborghini turned the Diablo from something frisky and a bit scary into a car that mixed design absurdity with day-to-day reliability. Fast forward a little and we find ourselves in an age when Bugatti can sell you a car with over a thousand horsepower that's as easy to drive as an Audi A4.

The natural consequence of all this is that the market is positively bristling with affordable supercars – bedroom-wall-

poster machines which you can buy without the fear of terrifying bills and unexpected maladies, for the price of a well-specced sports car.

A new Porsche Boxster S, for example, would be pushing £60k once you'd ticked all the right option boxes. But why have a sports car when you could have a supercar? Here are 10 good reasons why that 60 grand could be better spent on something properly magical...

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“Those electric blue accents, the pinching C-pillars, the fusion of copious angles and curves...”

01

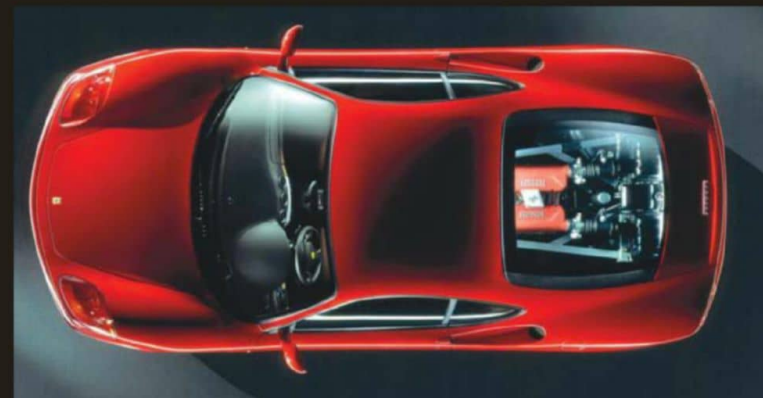
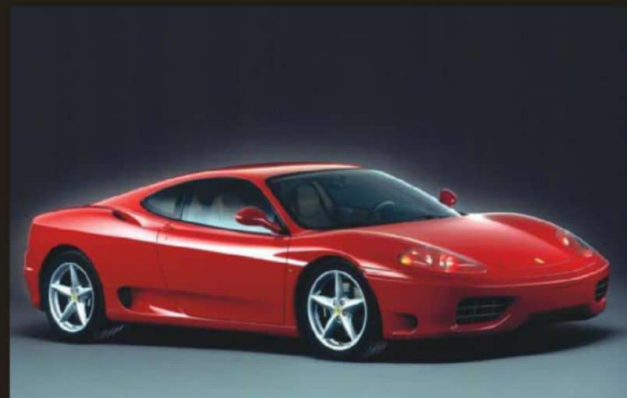
BMW i8

YOU CAN IMAGINE THE meeting in which the notion of the i8 was first presented to the BMW board. ‘So, you want to take on the Audi R8, a car that’s generally agreed to have refined and perfected the concept of the usable everyday supercar, with something that looks like a spaceship and has a 1.5-litre, three-cylinder Mini Cooper engine? Are you sure about this?’

It was probably even more eyebrow-raising than that, given that the initial 2009 concept was mooted as a turbo-diesel. But the production version that’s been with us since 2014 is a super-clever hybrid from the future. That dinky three-pot turbo kicks out 228bhp, somewhat incredibly, and is bolstered by a 129bhp electric motor to add up to a boisterous 357bhp and 420lb/ft – enough for 0-62mph in 4.4-seconds. What’s more, it’ll do 75mph in pure electric mode and, despite being stuffed full of batteries, the i8 only weighs 1,485kg.

Oh, and that thing about it looking like a spaceship? That’s a wonderful, wonderful thing. Those electric blue accents, the pinching C-pillars, the fusion of copious angles and curves, it’s a delectable feast for the eyes.

£60k will get you a 2016 model, possibly even a 2017 one, complete with those wonderful butterfly doors, head-up display, laser headlights and next-gen styling. A future icon, for sure.



02

LAMBORGHINI GALLARDO

IF THE R8 V10 tickles your fancy due to the Gallardo-derived chassis and engine, then the next logical consideration should probably be the Gallardo itself.

There are quite a few of these cars on the market, which is hardly surprising as it was Lamborghini’s best-selling car ever – in its 10-year production run 14,022 of them were sold. Values are predictably strong, given it shares many of the attributes that make the R8 so popular (proper build quality, everyday usability, plus of course scintillating performance). But in recent months the prices of early cars have been dipping to the £60,000 mark. Previously the preserve of LHD imports and high-milers, you can now get a really nice Gallardo at this price point.

E-gear paddle-shift is an option if you’re chasing lap times, or go for the gorgeous open-gate manual if you’re old-school. And while it may have conventional doors and relatively tame styling in Lambo terms, it’s still a Lambo. And that badge counts for a lot.



Ultimate Supercar TOP PICK

03

FERRARI 360

The thing about buying a Ferrari is that you’re not just buying a Ferrari. You’re taking responsibility for the perpetuation of generations of impossibly

passionate enthusiasts, and the product of one of the world’s most revered brands – not just in the motoring sphere, but anywhere.

We all grew up coveting these iconic cars. We had the posters on our walls, we all craned in just a little bit closer to hear the howl of a flat-plane-cranked vee-engine on the TV shows of yore. The idea that you can buy and enjoy a Ferrari without bankrupting yourself is really quite tantalising.

The 360 is the model that neatly slots into our budget bracket here. Yes, the older 355 is arguably a prettier design, but the 360 is a generation newer; a genuine daily-driver proposition that

also happens to be hellishly quick, with all the creature comforts you could wish for. You have a few layout options to decide upon – principally whether you want a coupé (Modena) or convertible (Spider), and whether you’d prefer the classic open-gated manual gearbox or the slick F1 paddle-shift auto.

Either way, you’re getting a 3.6-litre V8 offering a round 400bhp, mounted right behind your head so you can really hear it, with the urgency to catapult the 360 from 0-62mph in just 4.5-seconds. It boasts a top speed of 180mph. Who wouldn’t want that?

In a first for a production Ferrari road

car, the 360 featured a stiff, all-aluminium chassis and body, its lightness allowing the larger 360’s kerb weight to match the shorter, narrower 355 it replaced. If you look at the car from side-on, you’ll spot it has an incredibly long wheelbase, with almost no rear overhang at all – this is thanks to it being engineered for a smooth and cosseting ride, with the incidental benefit being a negative lift coefficient.

This was a taut and aggressive car, but at the same time one that could hold your hand and proffer a friendly smile. 5,000 hours in the wind tunnel made the 360 extremely slippery; it lost the pop-up lights of its

forebears and gained an F1-inspired smooth underbody with a sort of air tunnel running from the central front splitter cutout to the rear diffuser.

What’s really impressive about the 360’s slipperiness is the downforce. At 180mph it generates 180kg of shove, which is remarkable for a car with no spoilers.

At launch it was criticised for lacking in visual drama, but the design has mellowed gorgeously with age. And now you can pick one of these up for Boxster money, which is frankly a little insane. Now’s probably the time to strike, before the market catches on.



04

MASERATI
GRANTURISMO MC
STRADALE

THE MASERATI GRANTURISMO IS one of those cars that's always going to be recognised as a design classic. Other sports cars and supercars may shout about their performance with ostentatious wings and strakes, but the GranTurismo is classically styled in its sober suit.

The name itself suggests a long-legged and lazy performer – that, after all, is the very nature of any true GT car. But the architecture exists beneath that façade to turn the GranTurismo into a bit of a headcase.

The MC Stradale model is a case in point: launched in 2011, it junked the rear bench to become a strict two-seater, with a few engine tweaks elevating power to 444bhp. It was 110kg lighter than the full-fat model, with more slippery aerodynamics including a bold front splitter and rear diffuser. Carbon-ceramic brakes featured, as did the gearbox from the Ferrari 599 GTO; the seats were carbon fibre, the suspension was lower and stiffer, and the wheels were 20-inch flow-formed items. The MC Stradale was a limited run, but they can be found relatively easily. It's an incredible amount of car for the money.

06

NOBLE M400

DRIVING A NOBLE MARKS you out as a connoisseur, there's no denying that. Cynics may scoff at the M400's Ford Mondeo taillights, kit car styling and, er, Ford Mondeo engine. But you won't be able to hear them because you'll already be miles away. This is an insanely fast car.

Based around a steel frame, the GRP clamshells enclose a sturdy rollcage, and the humble roots of the V6 engine are entirely eclipsed by what Lee Noble chose to do to it; namely strap on a pair of mighty Garrett T28 turbos.

He also threw in forged pistons, high-lift cams, beefier fuelling and improved cooling. This gave it 425bhp which, in a car weighing just 1,060kg, meant a 0–62mph time of 3.4-seconds.

Only 80 of these extreme evolutions of the Noble M12 were built (so rare we couldn't find a picture of one in our archive, so we used this M12 image instead). But if you can find one, you should be able to bag it for comfortably under £60,000. There aren't many ways to go faster for the money.



05

PORSCHE 911
TURBO (997)

THE PORSCHE 911, IN all its various guises and generations, is bit of a genre chameleon. In base Carrera form, it's the archetypal sports car; the RS models are unparalleled track cars; the Turbo models – they're proper supercars.

For this money, you'll be looking at a 997 (the 2005–12 model) Turbo: this car had an engine based on that of the 911 GT1, and was the first production Porsche to wear twin turbos. The setup gave it 473bhp, and the optional Sport Chrono package added a 10-second overboost to make it even more insane. This is a very different animal to the humble Carrera – the 997 Turbo will do close to 200mph.

It's also worth considering the 996 GT3, which hovers around this price range. This is widely regarded as one of the sweetest 911s ever as a fast-road/track car. Plus it's guaranteed to appreciate in value!

“In base Carrera form, it's the archetypal sports car. The RS models are unparalleled track cars; the Turbo models are proper supercars”



07

BENTLEY
CONTINENTAL GT

THE BENTLEY CONTINENTAL GT is something of a modern marvel. It's a huge and quite heavy car that's also tremendously fast, which is an achievement in itself, but it's also managed to transcend the reputational brickbats of being labelled 'a footballer's car' and still retain its premium, aspirational credentials. Can it be credibly labelled a supercar, though? We'd argue it can. Because while it may be sumptuously appointed and crammed to the gills with luxurious trinkets, it's also ludicrously quick and surprisingly agile when it comes to the twisty stuff. Something with this much heft has no right to be as capable as it is. It's endlessly impressive.

£60k is an interesting figure in the Conti GT world, as the market right now has shifted thanks to the arrival of the third-gen car in 2018. This budget will now buy you an early example of the second-generation car, which was built from 2011–18. Both engine options are dipping into this bracket, so you've got the choice of the perky and eager twin-turbo 4.0 V8 (500bhp) or the thuggish and torquey twin-turbo 6.0 W12 (567bhp). There are few cars shy of a Rolls-Royce that will make you feel this special.





Ultimate
Supercar
TOP PICK

08

AUDI R8 V10

You could argue that the Audi R8 is a victim of its own success. It's so good at everything it does that these cars have become, well, not quite common,

but certainly familiar. Since its launch in 2006, we've got used to the idea of mid-engined supercars wearing Audi badges and looking at home in the supermarket car park, and it's important for us to remind ourselves it's just that: a supercar. A proper one.

It certainly enjoys all of the creds of a bona fide supercar: gorgeous design that's as much desktop wallpaper fodder as it is automobile; insane powerplant; stunning performance figures. But at the same time it's an Audi, which means it'll always start on cold mornings, it won't overheat in summer jams,

it'll be faultlessly reliable, the clutch won't catch fire if you drive it in inner-city stop-start traffic. It's got uniform panel gaps and decent interior plastics. The R8 genuinely is an everyday supercar.

The fun part is that they're not horribly expensive either – even the full-fat V10 ones. That's right, you can get the proper 5.2 FSI for under £60k, and the number of other production cars with V10 engines can be counted on your fingers. The platform of the car itself is phenomenal, with Audi Sport GmbH taking the Lamborghini Gallardo base and adding in Quattro all-wheel drive to

an aluminium monocoque cleverly built on spaceframe principles.

At launch, the R8 was offered with a V8 – an all-alloy 32-valve 4.2 which imbued it with a handy 414bhp. But it was 2009 that saw the model launch into the big leagues, with the arrival of the 5.2 FSI: this version was loaded with an odd-firing V10 based on the unit found in the Gallardo LP560-4 (which, confusingly, was itself based on an Audi engine, but never mind all that).

Available as a coupé or Spider, the R8 V10 has 525bhp and will do 0-62mph in 3.9-seconds – quick enough to get the back of your melon thoroughly acquainted

with the headrest. It's no one-trick pony either. There's an excellent set of seats in there, and a 465-watt Bang & Olufsen stereo, so you can leap across continents in a single bound, taking in every racetrack as you pass. And it'll still be happy to shuffle about as your daily driver in the city when you get back.

Best of all, decent V10s start around the £50k mark these days, leaving a little left over in your budget for tuning. Or, if you have your haggling hat on, £60k could snag you an R8 V10 Plus, which came with oodles of carbon fibre bits, a power hike to 542bhp, sportier suspension and ceramic brakes.

09

NISSAN GT-R

WE'RE A FEW YEARS PAST the point when people could scoff and say 'The Nissan GT-R? That's not a supercar'. The stats don't lie. Sure, it may have a humble badge from a mainstream manufacturer of hatchbacks. But the same was true of the Honda NSX and look what happened to that...

Somewhat unbelievably the R35 GT-R has been with us for 12 years now, over which time we've seen it evolve and transmogrify into strange and unexpected new forms. At launch, it billed itself as a cut-price weapon to bloody the noses of the great and good. Every 911 owner's worst nightmare, with a far, far lower price tag.

Over time, special editions and track-focused models have escalated until the GT-R became a six-figure car. But the combination of time and popularity means that £60k buys a lot of Nissan performance these days. You'll most likely be looking at a 2016 car; the 2011 facelift brought in more power (545bhp) along with bigger brakes and aero tweaks, and the spec evolved year-on-year.

If you're lucky you might even find a 2017 Recaro Edition which, as the name suggests, had some really nice seats!



"We've seen the R35 GT-R evolve and transmogrify into strange and unexpected forms"

10

DODGE CHALLENGER SRT HELLCAT

MUSCLE CARS, TRADITIONALLY SPEAKING, are about as far removed from supercars as it's possible to get. The whole point of a supercar is that it's aspirational, celestial, something only in the grasp of the fortunate few – with otherworldly performance, sylph-like styling and fabulously complex detailing. Muscle cars, by contrast, offer brutish blue collar performance; huge torquey V8s shoved into cheap and clumsy chassis by big sweaty men with hammers.

However, the 21st century is a weird place and, somewhat improbably, the muscle cars are coming for the supercar market. They're still bluntly styled and comparatively agricultural, but you can't argue with the performance. Dodge, in particular, have gone fully off the rails with the Challenger – the recent Demon variant offered 840bhp in a car specifically designed to pull wheelies. And the Hellcat it spawned from is now knocking about the £60k mark. Its supercharged 6.2-litre Hemi kicks out 707bhp, it'll run a 10-second quarter-mile, and you'll be welcomed into your local supercar meet with open arms. It's a thick slab of Detroit iron, but it's more than capable of credibly challenging the delicate and poised Italians.



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Super-car
AUDI R8 V10



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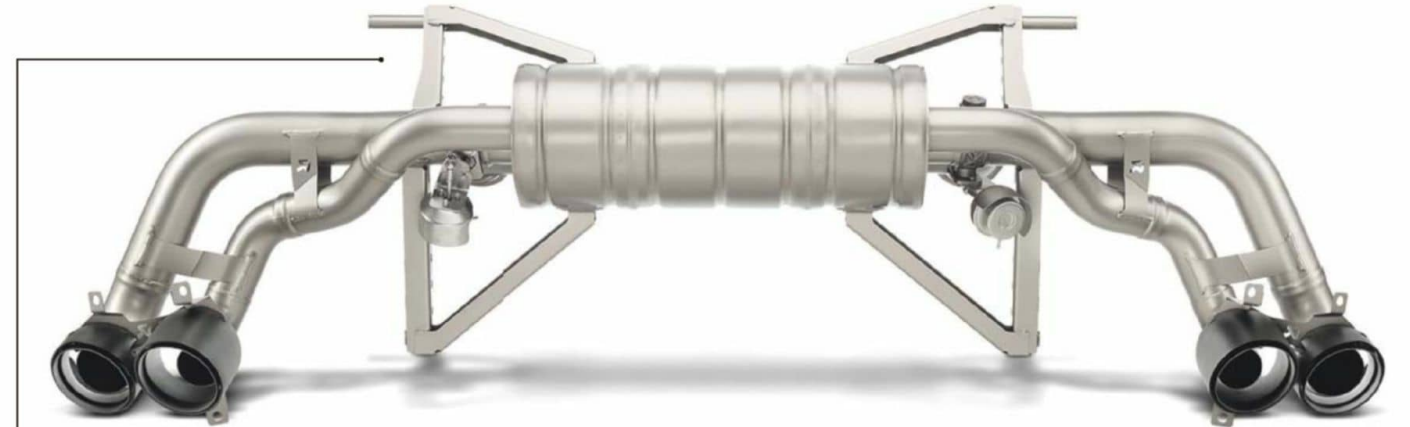
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> PRODUCTS

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Akrapovic Slip-On Line titanium exhaust for Lamborghini Huracán LP 580/610

Slovenian exhaust maestros Akrapovic have produced another exquisite system, this time for the Lamborghini Huracán. Manufactured from ultra-lightweight titanium, this freer flowing high-performance set-up has been extensively

developed to deliver proven performance gains of +19.5hp, +21.7Nm and -20.5kg - with even greater potential on a tuned vehicle. Like all Akrapovic products, the Huracán system has been subjected to 3D sound mapping to ensure that the 5.2-litre V10 delivers a truly thrilling sound, but without any unwanted drone or cabin

intrusion. Finished with carbon fibre tailpipes, the Akrapovic Slip-On Line is the perfect addition to any Huracán.

Price: £8,788
From: PERON
Contact: www.peron-automotive.co.uk



DMS Automotive ECU tune for Porsche 997 Turbo

The Porsche 997 Turbo is one of the most accomplished all-rounders available on the pre-owned market. It boasts sure-footed four wheels drive, a fantastically capable chassis and a rather potent twin-turbo flat-six engine. With prices starting from under £50k for a Gen 1 car, it's also a bit of a performance bargain. Better still, these turbo Porkers respond incredibly well to tuning, which is where DMS Automotive can help. The Southampton-based tuners were the first to offer an ECU tune for this VGT engine and their package has been tried and tested on hundreds of cars worldwide. The DMS tune takes power from 476bhp to 575bhp and torque from 501lb/ft to 560lb/ft, transforming the already quick Porsche into something truly ballistic - while retaining full drivability.

Price: From £1,650+VAT
From: DMS Automotive
Contact: www.dmsautomotive.com



LB Works 458 Silhouette Works

Liberty Walk's ability to reimagine some of the most desirable supercars that money can buy is unrivalled. They offer truly unique creations that cause a sensation wherever they go. This LB Works 458 Silhouette Works package for the Ferrari 458 GT has to be one of the best yet, boasting wide arches and

sideskirts, new front and rear bumpers, as well as a vented bonnet and aggressive rear diffuser and wing. Dropped on LB Works recommended AirREX digital air suspension, it gives the Ferrari a dramatic and aggressive new look. Liberty Walk Europe can offer a full drive in drive out service, including car collection, allowing owners to have their car transformed

without any hassle or inconvenience. The LB package is available in FRP, FRP and dry carbon and full carbon for those who demand the ultimate.

Price: £27,661 (FRP), £33,476 (FRP/carbon), £40,061 (carbon)
From: Liberty Walk Europe
Contact: www.libertywalk-eu.com



Velgen SL10 wheel

The SL10 is a great looking multi-piece, forged wheel from Velgen. It features a dished, polished rim with ten, thin spokes painted in gunmetal. Available to order in diameters ranging from 18 to 22-inches, and pretty much any width and offset, you can be sure to get the right fit for you supercar. Better still, with a 10x20in SL10 coming in at just 11.7kg – you can reduce some of that all-important rotational mass and get performance benefits as well as great looks. As these wheels are made to order, you can specify a custom finish for that ultimate bespoke look.

Price: TBA
From: Steeda UK
Contact: www.steeda.co.uk



TAROX two-piece discs for Ferrari F430

As part of their Bespoke range, these high performance two-piece Ferrari F430 discs are made to order in TAROX's Italian factory. Individually machined from a solid steel billet (not cast), these 380mm discs are then heat treated for optimum performance and longevity – reducing the potential for warping, cracking and fade. Each disc is available plain,

grooved, drilled or drilled and grooved, and finished by hand. The F430 discs come mounted to a CNC-machined alloy bell, hard anodised for extra protection. At £854 (plus VAT), they not only offer improved performance but also cost significantly less than OEM items.

Price: £854
From: TAROX
Contact: www.tarox.co.uk

VF800 supercharger for Lamborghini Huracán

Supercar specialists, Regal Autosport are making a big noise in the supercar world, thanks to their latest project – a Lamborghini Huracán LP610-4. The mighty V10 supercar already makes a rather potent 610hp, but Regal have taken theirs to the next level with the addition of a VF Engineering VF800 supercharger. This complete package includes the Eaton TVS2300 Twin Vortices Series roots supercharger, plus all supporting upgrades including fuelling,

cooling, pipework, brackets – everything needed for an installation. With an in-house dyno, Regal can install and set up the VF800 package, as a full drive in drive out conversion. Power is increased to 805hp with 610lb/f of torque and delivered in a very linear, lag-free manner, making this very usable and ideal for a daily driven car.

Price: £31,379 (plus installation)
From: Regal Autosport
Contact: www.regalautosport.com



KW Variant 4 for Mercedes-AMG GTS/GTC

The Mercedes-AMG GT combines muscular good looks with the might of a twin-turbo V8, making it a formidable machine. To further enhance the driving experience, KW has developed a set of high-performance coilovers. The three-way Variant 4 set-up features separate adjustment for bump and rebound, to allow drivers to fine-tune the ride for their own style, but comes pre-loaded with a set-up developed by a race

winner at the Nürburgring 24-hour. The vehicle may be lowered up to 45mm to give the big GT a more planted and sporty stance and they come in a high-quality "inox-line" finish. An optional Lift Kit is also available, to allow the front end to be raised up to 40mm, while driving, to clear speed humps and garage ramps.

Price: £5,377
From: KW Automotive
Contact: www.kwautomotive.co.uk

> LIFESTYLE

The latest fashion and gadgets to complement your supercar lifestyle



Porsche Design Spring/Summer

Technically it may still be winter but we are on the cusp of spring and that's good news for all you 911 Carrera S owners out there as the Porsche Design Spring/Summer collection has just dropped. This means you can still represent your favourite brand even when you're not driving it. To be fair to Porsche, their designers have done a great job on the latest collection with some very tasteful items being added to their already extensive range. Here are few of our favourite...

XLEXtralight Trainer, €295
Dust-dune Loafer, €275
Limited Edition Monobloc Actuator Flyback, €7,950
Bi-Colored Motorross Jacket, €1795
Hooded Hybrid Blazer, €790
www.porsche-design.com



LEGO Technic Bugatti Chiron £329.99

Coming in at two and half million quid, the Bugatti Chiron is out of reach for most of us mere mortals. But that doesn't mean you can't own one. Yup, the legends over at LEGO have teamed up with Bugatti and released this 1:8 scale model. Owning a hypercar has never been so affordable and better still you get to build it yourself.
www.shop.lego.com



1:8 Scale Lewis Hamilton Mercedes-AMG F1 W09 EQ POWER+ £5,995

Love him or loathe him, you can't deny Lewis Hamilton is one of the all-time F1 greats. Now, you're gonna have to really love him to buy one of these official Mercedes-AMG Petronas models, because they cost more than your average family run around. CAD data from the team has been used to ensure every detail of the W09 is perfectly recreated at scale. From the authenticity

of materials used in the model, to the same paint used on the F1 cars. What do you get for a smidge under six grand? You get an Amalgam Collection handcrafted (each model takes two weeks to make) model with the kind of attention to detail you'd expect from a multiple world-championship winning F1 team. Six grand might seem expensive, but the likelihood is they'll go up in value.
www.mementoexclusives.com



Lamborghini Travel Bags, from £1,168

The new range of Automobili and TecknoMonster soft bags, made in Italy, are on sale via e-stores and in the most prestigious flagship retailers around the world. The three soft bags come from the Collezione Automobili Lamborghini Ad Personam collection, and have been created to perfectly fit the trunks of Huracán, Aventador S and Urus. The bags are entirely customisable and made from the same materials as Lamborghini supercar interiors, including soft Carbon Skin and Alcantara, which highlights the excellent quality.
www.lamborghini.com



Rado HyperChrome Chronograph £4,190

Rado HyperChrome Chronograph Automatic is now available in a beautifully contrasting bronze and high-tech ceramic construction. Limited to 999 pieces, this exclusive timepiece joins two materials perfectly suited for use in watchmaking: Bronze, which marks the passage of time by developing a rich patina; and high-tech ceramic, which boasts lightness and superior scratch resistance. This is Rado's signature all-day, every-occasion timepiece for gents. In

this new model, the 45mm automatic chronograph retains its scratch resistant high-tech ceramic case but swaps out the ceramic bracelet for a supple, brown, vintage-look leather strap. Side inserts and chronograph pushers crafted in bronze add to this harmonious contrast. Rose gold-coloured hands and indexes echo the subtle metallic sheen of the bronze, while a bezel engraved with a tachometric scale provides additional functionality.
www.rado.com

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Wheels of Fortune

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WORDS: MIDGE BURR



We all know that the wheels you choose can make or break your car and that's why they're probably the most common modification out there. Thankfully though, nowadays there's more choice than ever. But what do you need to know to bag the perfect set of alloys for your supercar? Allow us to explain...

Why have alloys anyway?

Aside from looks, which let's face it is the top priority for many, alloy wheels are all about performance. Pressed steel wheels are still produced of course but the majority of the larger car manufacturers have phased-out their use purely for aesthetic reasons. Then again alloys have their roots in the racing world and that means they come with a few performance benefits. Perhaps the most important is that wheel manufacturers can match the strength of

steel but with much lower overall weight. This reduction in rotating mass is not only ideal for performance and handling (we all know that power to weight is everything), but it also helps with the longevity of the other chassis components. Greater efficiency in heat conduction is another key asset. The alloy material will dissipate heat more effectively during braking (and most of the designs will physically aid cooling) for a marked improvement in stopping power and reduction in fade.

Forged wheels are milled on a computer controlled CNC machine to get the final wheel design

CONSTRUCTION

Materials

The exact compositions of many alloys are closely guarded secrets, but the most common is a derivative of an aluminium alloy called LM9. This includes magnesium, copper, silicon, and titanium, amongst other elements. It's a very strong yet light alloy, which makes it perfect for both motorsport and fast road use. It's also possible to make carbon fibre wheels. While these are exceptionally light they typically come with quite the price tag, you certainly don't see many on the street!

Casting

Now and again you'll hear the odd old timer referring to alloys as 'Mag' wheels and that's because the very first were die-cast from magnesium. Initially conceived for racing these relatively lightweight items also became popular on road

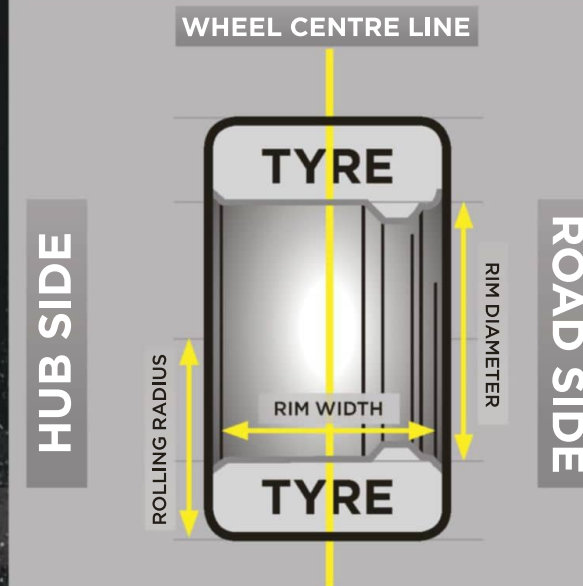
cars in the '60s, but the material itself came with a few problems. Magnesium rapidly breaks down when exposed to moisture and is susceptible to pitting, cracking and corrosion. This meant that mag wheels had to be polished and kept in tiptop condition at all times. And then there's the fact that if they're accidentally ignited through a burning tyre or friction from scraping on the road it's extremely hard to put them out, they even burn under water and CO2. For these reasons pure magnesium wheels are rarely produced and most wheels are die-cast from aluminium alloy. The advantage of casting is that it's cheap and pretty much the whole wheel (bar drilling the holes and a few other minor details) is created right there in the mould. There are two main casting methods used in alloy wheel production; gravity casting, and negative pressure

casting. Gravity casting is the easiest to understand, it basically involves pouring the molten alloy into a mould and letting it cool. Negative pressure casting works in a similar way, but rather than pour the molten alloy into the mould, it is drawn up using a high pressure vacuum. This helps eliminate the trapped gases that can sometimes occur as a result of the gravity casting process, and the result is a stronger wheel that is much less porous.

Flow forming

This is the newest technology to hit the wheel scene and each wheel manufacturer seems to have their own name for the process. Whatever they call it, the idea is the same though, the factory will take a short cast blank, and use a machine to draw out the barrels to the desired width under immense heat and pressure. When you watch it, this

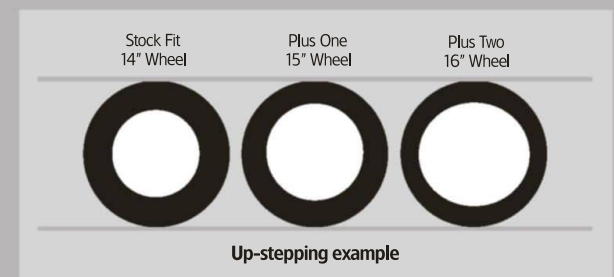
ALLOY WHEEL UPGRADES



Measurements

It may be different for our American chums but here in Europe the metric system rules. Still, while just about everything else is measured in millimetres, wheel diameters are still expressed in good old-fashioned

inches. There are two measurements you need to know about – the width and the diameter. Width is measured from inside the rim where the tyre seats (the bead seat) to the same on the opposite side. It's never measured from furthest point to



furthest point – if you measured a 10-inch wide wheel like this it could be anything up to 11-inches wide. It's the same story with the diameter, this isn't measured across the whole face of the wheel but the diameter of the barrel where the tyre fits.

Rim contours

You may hear people talking about a wheel being '7J' wide. There's a common misconception that the 'J' simply means inches – that's not the case. Although the first number is always in inches the 'J' is a designation of the shape of the bead profile/rim contour (where the edge of the wheels meets the tyre). It's a ridiculously complicated business and 'J' wheels are by far the most common but there's also JJ, K, B, P, JK and all sorts of other profiles out there.

Plus sizing

The most common reason for changing alloys is that you'll want something

bigger and for this it's important to keep the rolling radius of your new setup in mind. This is the diameter of the wheel and tyre together and on a standard car it's exactly what the speedo is calibrated to. Deviating too far from the stock rolling radius can cause the speedo to read incorrectly as well as the obvious physical clearance problems. On the plus side it's unlikely you'll be putting 22s on a car that originally comes with 17s. An inch or two shouldn't cause a big problem. To keep the rolling radius reasonably close is simple – as the diameter of the wheel goes up, the tyre profile (height of the sidewall) goes down. The benefits of bigger wheels are more than purely cosmetic too. The increased metal to rubber ratio promotes less flex helping to improve handling and promote a more direct steering feel. Wider wheels mean more rubber on the road for better grip and anything bigger always helps with clearance for future big-brake upgrades.

is a bit like clay being drawn up on a potters wheel. Ever seen Ghost? Well it's like that, only with robots. Kind of. Anyway, the important thing is that the heat and pressure not only gives the wheel its final width, but the process changes the grain structure of the alloy to make it stronger and lighter.

Forging

There's no getting away from it, forged wheels are not only exclusive, they're expensive. There's a good reason for that though, the process is what you might call a little involved. A forged wheel will start life as a solid block of cast metal referred to as a 'billet.' This will undergo extensive heat and pressure treatment making the metal less porous, improving strength, durability and resistance to corrosion and weathering.

Basically speaking, the original billet will have a grain structure created during the casting that's non-directional. The huge pressures of the forging process are used to push the material in the desired direction and line-up the grain structure to provide increased strength. It also means that the grain structure can be forced to run from the centre of the wheel outwards, along the

length of the spokes and not all in the same direction. This is part of the reason why a forged alloy wheel can be as much as 300 percent stronger than a regular cast alloy wheel. With this process the same structural integrity of a cast wheel can be achieved using a lot less material and this means they can be up to 30 percent lighter – an obvious performance advantage. After this treatment the billets are forged into different profiles, before being milled on a computer controlled CNC machine to get the final wheel design.

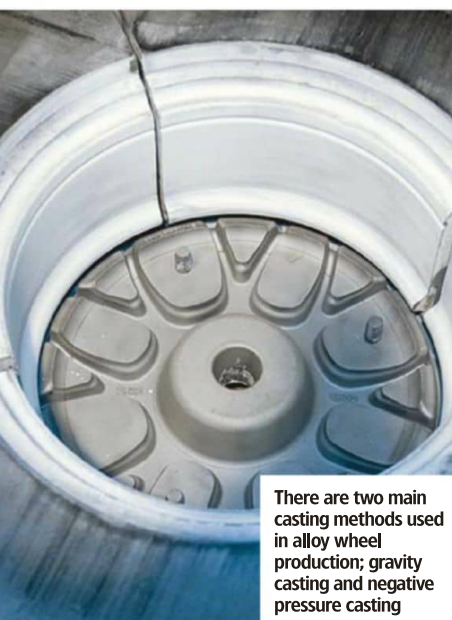
Multi-piece wheels

The inherent strength-giving goodness of the forging process means that super-light wheels can easily be produced in

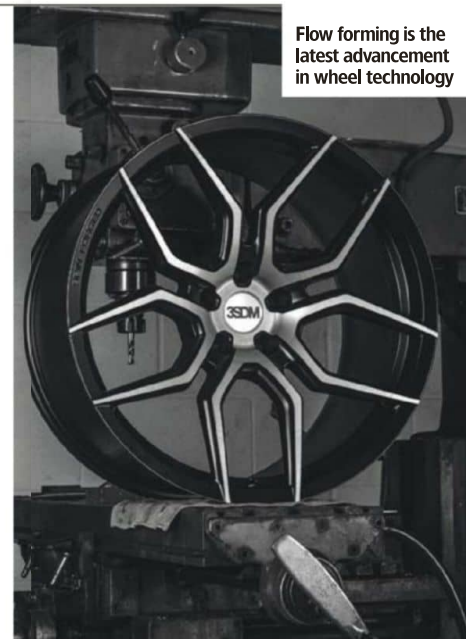
monoblock (one piece) form. To give manufacturers maximum flexibility with regards to width and offset though, the multi-piece wheel or split-rim is seen as the king of wheels. 3-piece wheels, comprising of a barrel (inner), centre and outer, can be built up to just about any width or offset enabling fitment to be absolutely spot on without the need for aftermarket spacers. 2-piece wheels are similar, but the centre and barrel will be CNC machined as a one-piece unit, with the outer lip being interchangeable. Handy if you can't keep away from those nasty curbs.

Finishes

Most alloys are painted or powder coated simply because they're made from metal that will need protection to withstand the upcoming years of abuse. These thick protective layers are important and even polished wheels will usually have a few coats of lacquer to keep the elements away from the metal surfaces. As for chrome wheels? Well most of the time they're produced with a simple chrome paint – actually putting wheels through a genuine chrome plating process is seriously expensive and pretty rare.



There are two main casting methods used in alloy wheel production; gravity casting and negative pressure casting



Flow forming is the latest advancement in wheel technology



Staggered wheels

To run staggered wheels usually means the rims on the front and rear axle will be different widths – most commonly wider on the rear. It can also mean bigger diameter wheels on one axle although this is much less common and usually the reserve of hot rods, dragsters and American muscle cars.

Manufacturers typically fit wider rear wheels to RWD cars to give better grip on the drive wheels and, to some extent, to promote understeer (which is easier for your average driver to deal with than oversteer).

Take particular care if your motor is of the AWD variety though because the rolling radius will have to stay the same on each axle. Essentially a larger wheel turns the driveshafts less over a given distance than a smaller wheel, on an all-wheel-drive system this can seriously mess up your differential.

PCD



PITCH CIRCLE DIAMETER (or BCD, Bolt Circle Diameter, in the USA) is the measurement of the spacing of the mounting holes in your alloys and the studs/bolt holes on the hubs of your car. For a wheel to fit properly onto a hub the PCDs have to match. These are expressed by showing first the number of studs/bolt holes and secondly the distance in millimetres that they are

spaced around an imaginary circle. Cars and trucks can have anything from 3 to 10 bolts per wheel depending on their size but, when it comes to supercars, the most common are 5 stud.

4-Stud hubs

The PCD measurement on a 4-stud hub is a straight line from the centre of one stud through the centre of the hub and onto the centre of the stud opposite. In other words a 4x100 PCD would be 4 bolt holes/studs evenly spaced around an imaginary 100mm diameter circle. Although the majority of supercars run 5-stud hubs...

5-Stud hubs

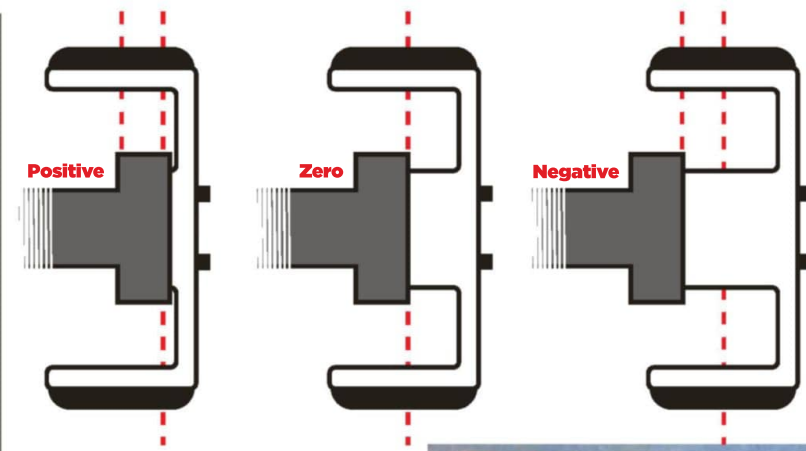
A 5x100 PCD is the same principle; five evenly spaced studs/holes around a 100mm circle. That said, it's trickier to measure because there's no stud or hole directly opposite the stud you're measuring from. Instead it's a line from the centre of the first stud through the centre of the hub and on to the edge of the imaginary circle between the near-opposite two studs.

Common supercar PCDs

- Audi R8 (V10)... 5x112
- Aston Martin DB11... 5x128
- Aston Martin V8 Vantage... 5x114.3
- Bentley Continental GT... 5x130
- BMW i8... 5x112
- Bugatti Veyron... 5x130
- Bugatti Chiron... 5x130
- Bugatti EB110... 5x120.65
- Ford GT... 5x114.3
- Ferrari F355... 5x108
- Ferrari 458 Italia... 5x114.3
- Ferrari 488 GTB... 5x114.3
- Ferrari F12 Berlinetta... 5x114.3
- Jaguar F-Type... 5x108
- Lamborghini Aventador... 5x112
- Lamborghini Gallardo... 5x112
- Lamborghini Huracán... 5x112
- Lamborghini Murcielago... 5x120.65
- Maserati GranTurismo... 5x114.3
- Mercedes-AMG GT... 5x112
- McLaren MP4-12C... 5x112
- McLaren P1... 5x112
- McLaren 720S... 5x112
- Porsche 911... 5x130
- Porsche 918... 5x130
- Tesla Model S... 5x120



The majority of RWD supercars will come with staggered rims. This is where the rear wheels are wider than the fronts



Offset

When it comes to getting that ultimate fitment offset is everything. This is the distance (in millimetres) between the mounting face and its true centre line. It's basically how much your wheels stick out in relation to the arches and is expressed as an ET number. This comes from the German word 'Einpresstiefe' meaning 'insertion depth'.

A zero offset (ETO) means the mounting surface is exactly on the centre line of the rim, positive offsets have the mounting surface towards the front of the wheel and negative offsets towards the rear.

Getting the correct offset is important not just for looks but to stop the wheels or tyres fouling the inner arches or suspension components (an instant MoT failure here in the UK). For most aftermarket wheels it's a compromise between increased wheel width and the space available under the arches. Generally speaking the lower the offset the more your wheels will poke out.

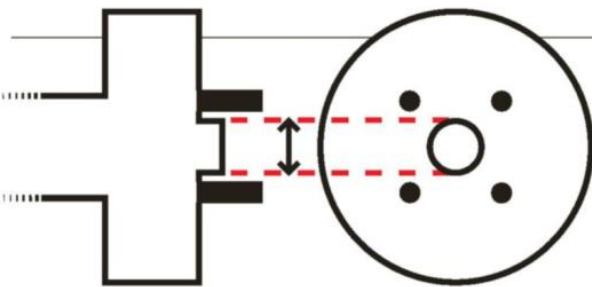


Nuts

All aftermarket alloys will need a set of either new bolts or lug nuts and normally these will be included as a dedicated fitting kit for your car.

It's important to never use the standard ones because in many cases these will be too hard or the wrong shape for the comparatively soft alloy and could cut into or damage the holes.

Nuts and bolts come with a profiled head that is usually flat, rounded or 60-degree tapered, these are designed to fit the mounting holes in standard wheels. It's vital to make sure you have the right nuts or bolts with any OEM+ or aftermarket wheel swap – you don't want them falling off do you?



Centre bore

The centre bore of a wheel is the diameter of the hole in the back that fits onto the flange of the hub. Most modern wheels are hub-centric which means the centre bore will fit tightly onto the hub

transferring the load onto that component. With this set up, vibration is massively reduced and the studs or nuts do nothing other than hold the wheels on.

The other type of wheel is the lug-centric version

where it's the studs or bolts that take the load of the vehicle because the centre bore doesn't always fit snugly onto the hub. These are much less common and require regular replacement of the studs or wheel bolts.

Centre-lock wheels

Many vintage, motorsport and even some road applications (like the Porsche 911 GT3 RS) use wheels that don't have a stud pattern at all, these are known as 'centre-lock' rims. These are held on with either a huge high-torque nut or a 'knock off' which needs to be

bashed on with a mallet or screwed on with a special tool. Factory cars using this setup will come with hubs designed specifically for the job (with one large threaded stud) but there's also a few aftermarket bolt-on adaptors available to convert standard hubs to accept different types of centre lock rim.

OPTIONS LIST Now you know the tech it's time to choose the wheels. Here are some of our favourites...



Vossen Monoblock Program, from £1315 (each)

These uber-desirable, single-piece wheels come in a number of different sized forgings (widths in half-inch increments from 8.5-13-inches and diameters from 20-24) along with a simply ridiculous amount of different face designs, almost too many to count... and even that pales into insignificance to the amount of finish options. There's also a choice of lip and cap finishes, a personalised engraving option and even colour-matched wheel weights (and no we're not joking!). Clearly these are all about creating your own unique set wheels. www.prestigewheelcentre.co.uk

Sizes: 8.5-13x20, 8.5-13x21, 8.5-12.5x22, 10, 11 and 12x23, 10x24
PCDs: Any 5-stud, custom centre-lock
Offset: Any
Finishes: Any gloss, satin, matte or textured powder coat, any polished, brushed and custom finish



BC Forged H053S, from £727 (each)

The finish options from BC are simply endless. You can rest assured that no one else will have the same set. Also available in smaller sizes, just in case you fancy matching up your daily driver too! www.bcforGEDwheels.co.uk

Sizes: 8-9.5x18, 8.5-12.5x19, 8.5-12.5x20, 8.5-12.5x21, 8.5-12.5x22
PCD: Any 5-stud
Offset: Any
Finishes: Any custom



Forgeline CF201, £90A

Seriously cool, and reassuringly expensive, these 2-piece, split 5-spoke rims feature genuine carbon-fibre barrels, forged centres and are some of the lightest wheels ever to hit the market. As for the actual price? Well, if you have to ask... www.forgeline.com

Sizes: Any 15-22
PCD: Any 5-stud
Offset: Any
Finishes: Any custom (centres)



Vossen CG 209T 3 Piece, from £1670 (each)

They're not what you call cheap of course, but these are perhaps the ultimate Vossen rims, and the ones you see on all those jaw-dropping show builds. Offering the widest range of sizes and offsets, these are manufactured to order specifically for your vehicle and can be had in any size, configuration and finish you can dream up. You also get a selection of lips, the option of exposed or hidden hardware, custom options for that very hardware, or the ability to choose no hardware at all – they can simply weld them together for your application. Phew! www.prestigewheelcentre.co.uk

Sizes: Any 6-14-inch width, Any 20-24-inch diameter
PCDs: Any 5-stud, custom centre-lock
Offset: Any
Finishes: Any gloss, satin, matte or textured powder coat, any polished, brushed and custom finish



Asanti ABL-24 Black Label Series, from £315 (each)

Massive wheels and the USA always go hand-in-hand, and the ABL-24 here is for serious arches only – they only actually make dubs and above. Still, even though they call this a 'triple 5-spoke' (and we have no idea what that's supposed to mean), we're loving the super-concave face design. Being from Asanti, you can't exactly argue with the quality either! www.asantiwheels.com

Sizes: 9 and 10.5x20, 9 and 10.5x22
PCD: all 5-stud
Finishes: Brushed silver or high-gloss black centres with polished lip



Rotiform CVT Custom Forged, From £TBA

Now, we all know that Rotiform do a classic design very well, but this '10-spoke' with a twist 'certainly isn't one of those. There's no doubt this crazy looking CVT will be a future classic, but it's clearly a design that's very much of this era. All-new, modern, almost challenging to the eye, it's exactly these sort of wheels that go down in history. These CVTs are bound to be popular but the genius part is that, what with all the options, there's no reason why any 2-sets have to be the same. The forged 1, 2 or 3-piece versions can be configured to fit almost any vehicle out there, with any size you can imagine from a weeinie 6x14-incher right up to a monster 16x24... along with everything in between. Oh, and all that's before you even start thinking about lip choices, hardware options, and directional faces. What's most important here though, is that Rotiform have done their bit on the crazy centres, but it's only the bounds of your own imagination that ultimately creates your finished set. All you have to do is let it run wild! www.rotiform.com

Sizes: 14-24-inch diameters, 6-16-inch widths
PCDs: Any
Offsets: Any
Finishes: The only limit is your imagination

ULTIMATE DAILY

With a mighty 900bhp pumping through its veins, this DMS-tuned 997 Turbo offers ballistic performance, but in an eminently usable package

WORDS AND PHOTOGRAPHY: **DAVY LEWIS**



**5 MINS WITH:
Rob Young from
DMS Automotive**

US: Tell us a little bit about DMS – including when you got started?

Rob: We started in 1997 and have calibrated many highly successful race cars and engines over 20-plus years. We hold a Guinness World Record for the fastest production diesel car and have tuned a Bugatti Veyron on our dyno. We have also bespoke-tuned, various high-speed military vehicles on large contracts.

US: If someone wanted DMS to tune a 997 Turbo to this level, what would it cost?

Rob: This level would be over £50k +VAT. But we do many different levels of upgrades, which really transform the 997 Turbo, starting from £1,650 +VAT.

US: What other supercars do you own and what's your current favourite?

Rob: Possibly my current favourite is the 997 GT2 with similar upgrades to the Turbo. I also own a Ferrari 599 and love the noise of the V12 Enzo engine. There's a Lamborghini LP670 SV – again, I love the noise and the looks – and it's still pretty fast for an old generation car. And there's the 997.2 GT3 RS – I love the handling and the noise from its full Akrapovic exhaust system. It still feels fast enough, although the power is circa half of the Turbo and GT2.



“The car looks menacing in the flesh. It sits hunkered down with a very purposeful stance. Next to a stock 997 Turbo it looks far angrier”

the potential of the 997. DMS's Rob Young explains: "I ordered it before the release of the 997 Turbo and did the factory collection when it came off the production line in Germany. It was my third 911 Turbo from new – I always planned to have one in my collection."

But the car was never going to remain stock. With variable geometry turbos and a plethora of other technological advances made by Porsche, it took DMS' engineers a significant amount of time to perfect an ECU tune. "The checksum encryption was one of the first ECUs to have the encryption keys in both the external memory and the internal processor memory, so the initial working with the ECU hardware was a challenge," says Rob.

But DMS persevered and were the first tuning specialists to 'crack' the 997s ECU. The tune was very well received and DMS has sold many hundreds of these upgrades around the world.

So how did this 997 come to be producing a rather insane sounding 900bhp? We'll get to that in a minute – suffice to say, DMS like to push the limits.

The car looks pretty menacing in the flesh. Finished in black, DMS have further enhanced the exterior by fitting a full complement of genuine GT2 RS parts. Next to a stock 997 Turbo, this thing looks far angrier – almost ready to race. It also sits hunkered down with a very purposeful stance thanks to 997.2 Turbo S dampers with H&R springs. This car gets used very hard on track,

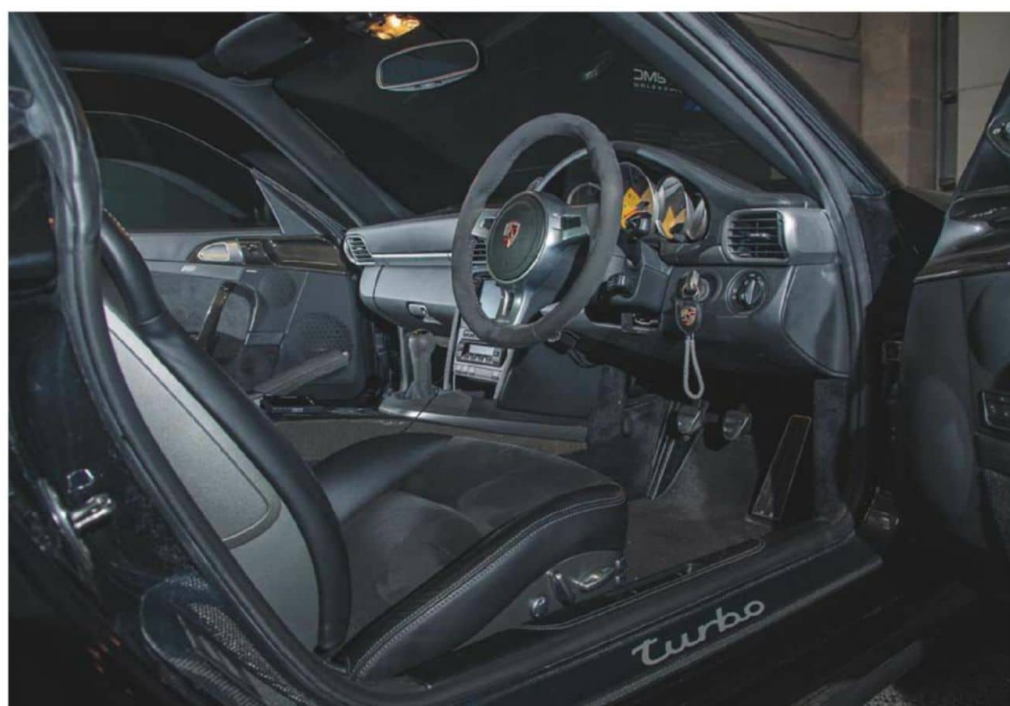
so it's all been set up for maximum grip and precise turn in. Talking of grip – the wheels are worthy of note as they're from a 997 GT2 RS. But they're not your usual setup as these have been converted to centre-locks – like the new generation cars – very cool indeed. The lightweight 19s look stunning tucked up in the fat arches and wrapped in Michelin's finest Pilot Super Sport rubber. They also offer prodigious grip on track.

Thunk again

Pull the chunky door handle and the driver's door swings open with a satisfying thunk. Inside, your eyes flick around the cabin taking everything in. From the tactile Alcantara-covered Gen2 steering wheel, to the swathes of carbon fibre covering the door sills, centre console and door trims, it all looks very exciting. The custom trimmed sports seats are some of the best you'll ever park your bum in – managing to combine comfort with the ability to hold you in place when things get lively (which they tend to in a 900bhp Porsche!).

One thing we noticed is the small box attached to the centre console. It's a boost controller, which allows Rob to adjust things from full-fat, balls-to-the-wall mode, to a more sedate level for day-to-day driving. Turn the key and the starter motor whirs briefly before that enlarged 3.8-litre flat-six bursts into life. It settles into a slightly lumpy idle that resonates around DMS's workshop.

Time to inspect the engine, then... Open the rear engine cover and the



As an everyday performance car, a Porsche 997.1 Turbo makes a very tempting proposition. Launched to critical acclaim in 2006, Stuttgart's first generation of 997 was a real game changer – especially in turbo guise. Here was a sports car that could hit 62mph from rest in 3.7secs, achieve 193mph flat out, yet felt refined and comfortable on the daily grind. It even had two seats in the back for the kids.

With four-wheel drive, the power could be properly harnessed and acceleration was brutal, thanks to the twin-turbos, which produced some 473bhp.

Today, you can pick up a nice example from around £50,000, which in our eyes makes the blown Porker a right little bargain – especially as it offers the driver huge tuning potential.

One company that knows these cars inside out is DMS Automotive. Based in Southampton, these high-end tuners were quick to spot



Above Finished in black, DMS have further enhanced the exterior by fitting a full complement of genuine GT2 RS parts

Left Re-trimmed interior with Alcantara/factory

leather and 997.2 Turbo steering wheel

Above right A pair of bespoke turbos has been bolted onto the 3.8-litre flat-six lump

Above The HKS EVC-R boost controller



large spoiler swings out of the way to reveal.... Well, not a lot really.

911s are renowned for their disappointing engine bays, a by-product of having everything slung over the rear axle. That said, in this case, the intake manifold clearly isn't stock and there's a wastegate which hints that this may be a little bit more than your average 997. It's only when you get underneath it or remove the bumper that things start to get interesting.

In this case, a pair of bespoke turbos has been bolted onto the now 3.8-litre flat-six lump. A full complement of forged internals has been added, together with upgraded intercoolers and fuel system. Ceramic-coated manifolds keep the heat where it should be and it's all wastegate-controlled rather than

Above It's a full GT2 RS conversion with all original parts, including carbon mirrors

Below left 19-inch wheels from a 997 GT2 RS with centre-lock conversions plus Michelin Pilot Super Sport tyres



Porsche's VGT set-up. All told, the upgrades deliver an eye-watering 900bhp and 665lb/ft of torque. Must be pretty quick then?

Shocking and relentless

"It's quite shocking and relentless – the sound is like a cross between a GT3 and a jet engine," explains Rob.

Being a proper six-speed manual, this 997 is never going to set PDK levels of acceleration, but even so, the proven 0-62mph of 3.2secs isn't exactly slow. The other figures are equally impressive with 0-100mph achieved in just 6.4secs and 0-150mph in 12 seconds dead; all of this from a fully trimmed car that can do the daily commute – with no fuss or drama.

"People love it, and they never expect that level of performance,"

smiles Rob. "It's compact and packs a punch. It feels like a true sports car while still being comfortable enough for daily use," he adds.

Unfortunately, on the day of the shoot, Southampton has been hit by a monsoon, so we're unable to take the car out for a full test. However, it does mean we get to spend a few hours inside DMS's HQ, which has a mouth-watering array of exotica on display, including, a 997 GT2 RS, a Lamborghini LP670 SV, a Ferrari 599 and even a Porsche Carrera GT. If you're into supercars and ever get the chance to visit DMS, we highly recommend it.

Of course, not everyone is going to want 900bhp from a 997 Turbo, which is why DMS are happy to offer a full range of less full-on tuning options, starting from an ECU re-map. As an official dealer for Akrapovic exhausts, they can also furnish your Porsche (and other selected models) with the finest titanium system available, which not only offers performance gains, but also further enhances that flat-six soundtrack.

As we wrap up the shoot, I ask Rob if he'd ever sell the car. "No way," he replies. Even though he has access to an incredible range of tuned supercars, it's telling that he still rates this one so highly.

The car does everything you could ever need: it offers easy daily driving, yet becomes a complete animal when you want it to be – a true ultimate daily.



TECH SPEC: DMS Porsche 997.1 Turbo

Engine 3.6-litre Mezger base engine upgraded to 3.8-litre with new pistons and liners, stronger conrods, bigger injectors, upgraded fuel system, upgraded intake manifold, upgraded intercoolers and piping; complete exhaust system with ceramic-coated manifolds; custom turbos with conventional wastegates (no longer VGT controlled); HKS EVC-R boost controller.

Power/torque 900bhp, 665lb/ft.

Transmission 6-speed manual with upgraded clutch and flywheel; limited-slip differential.

Brakes Factory 380mm ceramic brakes; upgraded fluid and Pagid RSC pads.

Suspension 997.2 Turbo S dampers with PASM reprogramming, H&R springs and anti-roll bars.

Wheels & tyres 19in 997 GT2 RS wheels with centre-lock conversion; Michelin Pilot Super Sport tyres.

Interior Factory carbon options and re-trimmed interior with Alcantara/factory leather; 997.2 Turbo steering wheel.

Exterior Full GT2 RS conversion – all original parts, including carbon mirrors, bonnet wrapped.

Contacts DMS Automotive 0800 0305555 www.dmsautomotive.com



THE ULTIMATE IN PERFORMANCE UPGRADES AT DMS AUTOMOTIVE WE'VE BEEN UNLEASHING AUTOMOTIVE PERFORMANCE FOR OVER 20 YEARS

- DMS F10 M5 (EVO DEC '15)** "730BHP, 200MPH+ TYRE-SHREDDING MONSTER"
- DMS MCLAREN 650S (EVO OCT '15)** "REAL MUSCULARITY AND THE STRENGTH OF THE MID-RANGE IS STAGGERING"
- DMS M2 (EVO SEPT '15)** "MORE POWER DOES MEAN MORE FUN"
- DMS 1M (EVO MARCH '12)** "THERE'S A REAL RIP TO THE WAY THE REVS PILE ON ABOVE 4000RPM"
- DMS 997 TURBO 3.8 PDK (EVO JUNE '11)** "DELIVERY IS ALMOST UNCOMFORTABLY FORCEFUL"
- DMS SL65 BLACK SERIES (EVO OCT '10)** "IT FEELS LIKE THE LOVE CHILD OF AN SL65 AND A PORSCHE GT2"
- DMS 135i (BMW CAR MAY '09)** THE STANDARD CAR IS GREAT BUT DMS HAVE SOMEHOW MANAGED TO TAKE IT TO THE NEXT LEVEL"
- DMS 997 TURBO 3.6 (EVO SEPT '08)** "IT'S EPIC, HILARIOUS AND ADDICTIVE IN EVERY GEAR, YET DOCILE WHEN CRUISING"

BELOW IS A SMALL SELECTION OF OUR MORE POPULAR UPGRADES:

AUDI

- RS6 4.0 T V8 » 700+BHP (+DE-LIMIT)
- RS6 V10 » 680+BHP (+DE-LIMIT)
- 2017 R8 V10 » 650BHP (+DE-LIMIT)
- R8 V10 » 592+BHP (+DE-LIMIT)
- RS4/RS5 » 488+ BHP (+DE-LIMIT)
- RS3/TTRS » 420+ BHP (+DE-LIMIT)
- RS3/TTRS (NEW) » 480+ BHP (+DE-LIMIT)
- S3 / GOLF R » 375+ BHP (+DE-LIMIT)
- 3.0TDI (ALL MODELS) » 315+ BHP
- 3.0 BI-TDI (ALL MODELS) » 380+ BHP
- Q7/A8 4.2 TDI » 400+ BHP

BMW

- M2 » 435BHP (+DE-LIMIT)
- M3/M4 » 540+BHP (+DE-LIMIT)
- M5/M6 » 730+BHP (+DE-LIMIT)
- X5M/X6M » 730+BHP (+DE-LIMIT)
- X5M50D/X6M50D » 450BHP
- M135i/M235i » 410+BHP
- i8 » 415BHP
- 120i/220i/320i/420i » 275+BHP
- 116D/216D/316D » 160BHP
- 118D/218D/318D » 225BHP
- 120D/220D/320D/420D » 240BHP
- 328i/428i » 295BHP
- 335i/435i » 410+BHP
- 330D/430D/530D/730D » 360BHP
- 335D/435D/535D » 395+BHP
- 550i/650i » 555+BHP (+DE-LIMIT)
- 640D/740D » 395BHP (+DE-LIMIT)
- X530D/X630D » 360BHP
- X540D/X640D » 395BHP

MERCEDES-BENZ

- A45/CLA45 AMG » 420+BHP
- AMG GT/GTS » 560BHP (+DE-LIMIT)
- C43/E43/GLC43 AMG » 455BHP
- C63/63S 4.0T AMG » 620+BHP
- C63 6.3 AMG » 530+BHP
- 500 4.7 BITURBO (ALL MODELS) » 498+BHP
- 63 AMG 5.5 BITURBO (ALL MODELS) » 700+BHP
- 55 AMG KOMPRESSOR » 600+BHP (+DE-LIMIT & SUSPENSION LOWERING)
- S65 » 780BHP (+DE-LIMIT)
- SL65 AMG » 690BHP (+DE-LIMIT)
- SL65 BLACK » 720BHP (+DE-LIMIT)
- SLK 55 AMG » 420BHP
- 200 CDI (ALL MODELS) » 173BHP
- 220 CDI (ALL MODELS) » 230BHP
- 250 CDI (ALL MODELS) » 260BHP
- C300 HYBRID » 285BHP
- C300E » 350BHP
- C400/E400 » 400BHP
- 350 CDI (ALL MODELS) » 315BHP
- 420/450 CDI (ALL MODELS) » 358BHP

ALL 2017 RANGE ROVERS AVAILABLE
 RR 50SC/SVO/SVR STAGE1 » 600+BHP
 RR 50SC/SVO/SVR STAGE2 » 650+BHP
 2.0/2.2 DIESEL (ALL MODELS) » 220+BHP
 RR 4.4 TDV8 » 395 BHP
 RR TDV6 3.0D » 305+ BHP
 RR SDV6 3.0D » 350+BHP
 DEFENDER 2.2 » 180BHP

PORSCHE

- 996 TURBO/GT2 » 600+ BHP
- 997 TURBO 3.6 » 625+ BHP
- 997 GT2 RS » 670+ BHP
- 997 TURBO/S 3.8 INC PDK » 611 BHP
- 997 GT3 RS » 480 BHP
- 991.2 GT2 RS » CALL
- 991 TURBO/S (ALL MODELS) » 750+BHP
- 991 GT3 3.8 (ALL MODELS) » 490+BHP
- 991 GT3 RS 4.0 (ALL MODELS) » 525+BHP
- 997 CARRERA S » 376+ BHP
- 997 CARRERA PDK » 368 BHP
- 997 CARRERA S PDK » 400+ BHP
- 997 CARRERA GTS » 435 BHP
- 991 CARRERA (ALL MODELS) » 500+BHP
- 991 CARRERA S (ALL MODELS) » 500+BHP
- 991 CARRERA GTS (ALL MODELS) » 540+BHP
- BOXSTER/CAYMAN 718 GTS » 420+BHP
- BOXSTER/CAYMAN 718 S » 420+BHP
- BOXSTER/CAYMAN 718 » 380+BHP
- BOXSTER/CAYMAN 981 GT4 » 430+BHP
- BOXSTER/CAYMAN 981 GTS » 375+BHP
- BOXSTER/CAYMAN 981 S » 345+BHP
- CAYENNE GTS » 450 BHP
- CAYENNE TURBO 4.5 » 565+ BHP
- CAYENNE TURBO 4.8 (ALL MODELS) » 650+ BHP
- CAYENNE TURBO S 4.8 (ALL MODELS) » 650+ BHP
- CAYENNE 4.2 DIESEL » 450+ BHP
- CAYENNE 3.0 DIESEL » 318+ BHP
- MACAN S » 420+BHP
- MACAN GTS » 440+BHP

MACAN TURBO (ALL MODELS) » 480+BHP
 MACAN S DIESEL » 318+BHP
 PANAMERA TURBO » 600+ BHP
 PANAMERA DIESEL » 305+ BHP

EXOTIC / MISC

- FERRARI CALI T » 660BHP
- FERRARI F12 » 780+BHP
- FERRARI 599 » 647 BHP
- FERRARI 488 » 750+BHP
- FERRARI 430 » 525 BHP
- MCLAREN MP4-12C » 700 BHP
- MCLAREN 650S » 720 BHP
- MCLAREN 675LT » 750BHP
- MCLAREN 570/S » 680+BHP
- AVENTADOR » 750+BHP
- HURACAN LP610 » 650BHP
- GALLARDO LP560 » 600+BHP
- BENTLEY 4.0 T V8 » 700BHP
- BENTLEY GT/F-SPUR » 680BHP
- GT SPEED / SUPERSPORT » 690+BHP
- BENTAYGA W12 » 700+BHP
- MASERATI GHIBLI 3.0S PETROL » 470 BHP
- MASERATI GHIBLI 3.0 PETROL » 400 BHP
- MASERATI GHIBLI 3.0 DIESEL » 312 BHP
- MASERATI GT/QPORT » 438 BHP
- MASERATI GT S / MC » 479+ BHP

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RACING CERTAINTY

A classic supercar with outstanding reliability, timeless looks plus stunning dynamics and handling: Ayrton Senna would surely have approved. Prices have been rising, so is it now Time To Buy an NSX?

WORDS: NIGEL FRYATT





Look for:

Aluminium is difficult (which can mean expensive) to repair, so check for filler and any badly repaired accident damage.

You have to trace the history of Honda's NSX supercar back some 35 years. A manufacturer that had built its entire reputation on reliable, well-built, if somewhat conservative, front engine/drive vehicles had an enterprising and forward-thinking R&D set-up, and the design engineers there wanted to build a sports car.

Honda had returned to Formula 1 Grand Prix racing in 1983 and so performance was inherent in the company's engineering philosophy, but the NSX was still a massive sea-change for the company.

The design developed in a very analytical way; perhaps more in-keeping with the Japanese philosophy than the more emotional European approach where style and branding are so dominant. The Honda engineers plotted data from rival models, comparing running performance (vehicle weight/engine output) against wheelbase-to-weight (stopping performance) with the aim to get the new sports car to – on paper at least – outperform its rivals, and be dynamically much closer to a F1 race car.

Weight, therefore, was a highly significant factor. The body and monocoque had to have the strength for the engine power. But it had to be light because this machine would have all the driver comfort extras of air conditioning, electric windows and traction control, which all add weight. Initially a mix of steel and aluminium was proposed, but this didn't meet these weight targets and so it was decided to build the entire monocoque in aluminium.

World debut

Now that is a pretty simple statement to write, but this was the world's first mass production car to offer an all aluminium monocoque body, and this was happening in the mid-1980s.

If the engineering was to be ground-breaking, the new NSX had to look good and the sleek profile is said to have been inspired by the F16 jet fighter. Prototypes were built and Honda decided to use one of its in-house contracted drivers to offer his opinion of the car at the Suzuka circuit.

The driver, a certain Ayrton Senna, was impressed but questioned the fragility of the car. Despite what the calculations said, Senna felt the original chassis wasn't stiff enough, which as you can imagine, sent the engineers into something of a spin, as they had believed their car was a match for anything that Porsche or Ferrari had to offer. Of course, Senna was Honda's F1 driver at the time and they sensibly took his views on board, tweaking the NSX chassis before further testing at Nürburgring, where the car's increased rigidity proved Senna was right.



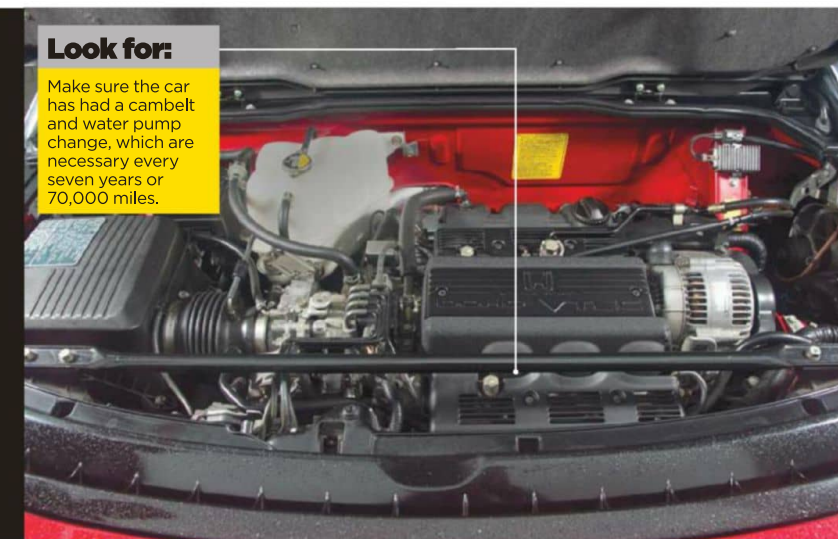
“The driver, a certain Ayrton Senna, was impressed but questioned the fragility of the car; despite what the calculations said, Senna felt the original chassis wasn't stiff enough”

Look for:

Make sure the car has had a cambelt and water pump change, which are necessary every seven years or 70,000 miles.

Above It's the world's first mass production car to offer an all aluminium monocoque body – back in the mid-1980s

Right The first models had Honda's all-alloy, quad-cam, 3.0-litre V6 VTEC



manual or four-speed automatic transmission. Mid-engined, power went to the rear wheels through a limited-slip differential. The overall look was one of sophistication, rather than 'look-at-me' stunning, but the rather conservative nature of the body design has aged well; an NSX still looks modern on today's roads.

The interior never set anyone's pulses racing, Honda dipping into their parts bin for the instrumentation and switchgear, but it is simple and unfussy. It's a proper supercar in that there's not much space inside the cabin for anything other than a driver and passenger. But the luggage space in the rear is good for a mid-engined design.

A removable roof was offered in 1995, as the NSX T. Two years later the sports car got a complete refresh and the more powerful 3.2-litre V6 was fitted, coupled with a new six-speed manual transmission (the automatic version remained with the 3.0-litre unit). It only added 20bhp, but has far better lowdown torque. In 2002, the pop-up headlights were dropped and the NSX got larger, 17-inch wheels.

Towards the end of the NSX production period, Honda made a limited edition series of models, the Type R. Dropping the air-conditioning, traction control and sound-deadening removed some 120kg from the overall weight. Stiffer suspension, thicker anti-roll bars and a higher rate limited-slip diff gave this model a sharper, more responsive edge. Less than 500 were produced, originally offered for the Japanese market. Type Rs have made their way to Europe to become the most desirable NSX model available.

What to look for

It should go without saying that you want to find an NSX with a good service history, preferably from a specialist. We discussed the options

with Graham Horgan of Plans Performance. With over 30 years of hands-on experience in circuit racing, including Historics, it was a customer asking Graham to build and run a racing NSX that originally got him started with this car some years ago.

We asked Graham, is it fair to claim that the NSX is a very reliable classic supercar? "Well, compared to other similar British or Italian sports cars from the same era, the NSX is amazingly reliable," he told us.

Well looked after

"You must remember that when talking about the very first models arriving in the UK, you are talking about cars 27 years old, so they need to have been looked after.

"It's especially important that the cambelt has been changed - this has to be done every seven years or 70,000 miles. A complete camshaft service and water pump change will cost you around £1,700/£2,000, so bear that in mind when looking to buy a car."

After that, the main problems tend to be electrical. "Remember that the NSX had some ground-breaking electronics at the time and these are getting a little old now. The NSX air-conditioning system was the first production climate control system and today may need some work. Same goes for the Bose hi-fi set-up; when launched it was top end, but there can be problems today - but they can be sorted.

More important is the ABS system. "Over time the valves can stick. Power steering is also electronic and can go wrong. However, a well-looked after car, regularly serviced, should be very reliable and you will then be looking at an annual service of around £200.

"It's also worth making sure the windows rise and fall since the electric motor and regulator are sold as one unit and they aren't cheap. As you would expect, if the car has been tracked and driven hard it may need work on bushes, ball-joints and bearings, but that's pretty standard."

How much?

Around 20,000 NSX models were produced, so they are reasonably rare and you are unlikely to park next to one in the UK. Excellent reliability and Honda's quality production process means earlier models may have covered significant mileage, but this shouldn't put you off.

It means you may find models as low as £30,000 for early automatic versions. Push that budget another £10,000 and you'll find the more preferable manual models in the 3.0-litre range. Up to £50,000 and you will now find lower mileage 3.0-litre options. Targa NSX T models often tend to be slightly cheaper, since some think higher mileage

"If you search well and get a car with a decent, authentic, service history then while you cannot guarantee reliability, you can certainly expect it"

open-topped models suffer from scuttle shake. But this gets short shrift from Graham Horgan: "There's a myth about Targa models. Don't forget there are some 60 differences made to the open-topped version's monocoque chassis to keep its strength and Honda still have a keen eye on keeping the weight down. It's an excellent option if you want an open-topped sports car."

Automatic versions are generally cheaper than manual models. The auto transmission is rather old-fashioned compared to modern

options, changes are quite slow, but if you are more interested in a cruising classic supercar, you could find this an undervalued option. "Back in the day when the NSX was launched," says Graham Horgan, "you couldn't buy an automatic Ferrari, now you can't buy a manual one. I still think that automatic NSX models are undervalued, they are different but it's still a very nice car."

If you are looking for the later 3.2-litre versions you will be looking at over £50,000 and mint, low mileage versions may nudge six



Look for:

The ABS system was ahead of its time when launched, but valves can stick if the car hasn't been serviced regularly.



Above Early models produced a modest 252bhp, but as it weighed under 1400kg, performance was impressive

Left The look of the car is subtle enough to have aged well; it's a supercar that's more smooth McLaren than aggressive Lamborghini

figures. Those rare Type R models now attract serious money, especially since there are only around half a dozen in the UK. If one comes up for sale, it's likely to be in top condition and could set you back £150,000/£175,000. The second generation Type R models, called NSX R are even rarer; Honda produced 82 of them and there are only a couple in the UK.

If you track NSX prices over the last five years you will see that demand is growing, which means prices have been rising and as you have read from our expert's view, running costs are not high, which means that while claiming the NSX is an 'affordable supercar' is perhaps somewhat patronising, the model shouldn't break the bank.

What to expect

If you are looking for a supercar that strikes fear in a driver as you slide behind the wheel, the Honda NSX is not for you. Calling it docile is perhaps too strong, but it is certainly light and easy to drive; urban traffic, supermarket car parks and those short trips to the local shop for that forgotten bottle of milk are all easily accomplished.

Take an NSX to a track day and it's not a case of flicking a switch to unleash some hidden beast - it will just perform at greater and greater speeds with equal aplomb. You will expect a firm ride and that is what you get, but it has a light feel which will allow you to fully appreciate the exceptional balance the car possesses. The V6 engine wants to rev, sounds great, and is responsive to your right foot exercising itself.

I can admit to having been a journalist at the time of the NSX launch and I enjoyed a driving day comparing the car with then contemporary rivals like the Porsche 911. My instructor that day was former F1 and sports car racing driver Jonathan Palmer. During one high speed lap, at around 130mph, I asked



Look for:

The electronics can be an issue; check out the air-conditioning, the Bose hi-fi system and that the windows rise and fall correctly





Look for:

There's little interior storage space, but the rear luggage compartment is a decent size for a supercar.

what the main difference there was between the NSX and the 911: "That's simple," he said, violently throwing the car sideways (we were at Bruntingthorpe, so thankfully there was a lot of space!). There was a lot of tyre squeal but very little drama and Palmer casually brought the car back inline. "Do that in the 911 when you drive it later and we'll be pulling bits of you out of the hedge," he said with a grin.

We finished the day with a fast cross country drive and it was noticeable how much more relaxing it was in the NSX when compared to the Porsche. You can argue all day which you might prefer, but dynamically the NSX has a sensational chassis that even all these years later will impress. It was so much quicker than many of its rivals when it launched and it did that without the need for outright power and brute force. Today it remains a very subtle, but hugely satisfying, supercar.

Modifying an NSX

Most of the modifying on the NSX happened in the US, and involved turbocharging. The V6 is a strong unit and can take the extra power, with the necessary upgrades. Projects producing around 500bhp on the Acura NSX have been popular and we found one conversion by American racers LoveFab that produced a customer road-legal 'street' NSX that competed in the famous Pikes Peak hillclimb with some 642bhp – and a claim that well over 700bhp was available.

That said however, very few UK NSX cars have been modified, especially since prices have begun to rise. "Why would you bother?" asks Graham Horgan. "The way prices are now, if you were to spend £10k

modifying one, you'd end up with a car worth £15k less than when you started, and that's on top of the original 10 grand. Plus you'd ruin it, in my view".

Wheel and tyre options have increased since the NSX was first launched, so there is some latitude to personalise your car. But please don't fit one of the hideous body kits that can be found on some US cars. Gluing on some nasty side sills will date the car and impress no-one. Trust us.

Time To Buy?

If you don't want to take our word for it, then remember that Ayrton Senna was most impressed with the Honda NSX. Indeed, he reputedly got stopped for speeding while driving one to Silverstone for the British Grand Prix!

The car embodies many of the design concepts later used in the McLaren F1, and Gordon Murray has spoken very positively about the NSX. The look of the car is subtle enough to have aged well; it's a supercar that is more smooth McLaren than aggressive Lamborghini (a fact that has continued with the latest version). It is an esoteric classic supercar, and that's a strong part of the appeal.

If you search well and get a car with a decent, authentic service history then, while you cannot guarantee reliability, you can certainly expect it.



Top It was so much quicker than many of its rivals when launched and it did that without the need for brute force. It remains a subtle but satisfying supercar

Above The NSX was a massive sea-change for Honda back in the 1980s

Prices can rise and fall (especially so at the moment, given the global economic uncertainty), but the graph for the NSX has been moving in a positive direction for a few years now. In the last six months or so there has been some hesitation in the classic car market and so prices have flattened. So while it's a bit much to claim an NSX could be a solid investment, experience suggests it's unlikely you'll scorch your wallet if you do decide to sell it on after a few years.

Manual cars are certainly at a premium, but maybe consider an auto, or even the sometimes maligned Targa model.

In the end, however, it's all about the driving experience and that's where the Honda NSX will certainly deliver – and we can thank a certain Mr Senna for that.



EXPERT ADVICE

Our thanks go to Graham Horgan of Plans Performance for his help and advice with this feature.

Plans Performance, The Granary, Chinthurst Farm, Chinthurst Lane, Bramley, Surrey, GU5 0DR; 01483 898888; www.plansperformance.com



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HARD CHARGER

With a brace of Rotrex superchargers producing over 750bhp, TTS Performance's R8 packs one hell of a punch...

WORDS AND PHOTOGRAPHY: **DAVY LEWIS**



There's an old adage that the proof of the pudding is in the eating, and nowhere is this truer than in the automotive tuning industry. Mouth watering spec lists and glowing testimonies from companies that develop cars and components are all well and good, but unless you can actually experience the performance, it's hard to really get a handle on it.

It's something Richard Albans, the director of TTS Performance, feels strongly about. "I can tell you how quick the R8 is. But you really need to drive it to see for yourself," he explains.

Now that sounds like an offer we can't refuse...

TTS Performance is one of the world's leading manufacturers of supercharger packages. Based near Silverstone Circuit, Northamptonshire, they offer installs for a wide range of cars and even motorbikes. But it's their Audi applications that have generated a real buzz of excitement.

Power play

Designed to boost the power and torque of the 4.2 V8 FSI, the TTS Performance setups are available for the B7 RS4, the B8 S5 and, of course, the Gen 1 R8 Coupe/Cabriolet.

Now, first things first: the R8 is a cracking machine as standard. It produces 414bhp (424bhp in later guise) and 317lb/ft and it will hit 60mph, from rest, in 4.8secs. And it'll go on to a top speed of 186mph. Not bad.

However, against the new breed of Audis with forced induction engines – the likes of the RS3, TT RS and RS6 – the naturally aspirated R8 is left wanting when it comes to sheer acceleration. Which is where TTS Performance comes in.

Their twin-Rotrex supercharger package unleashes the R8's inner beast and takes power to a

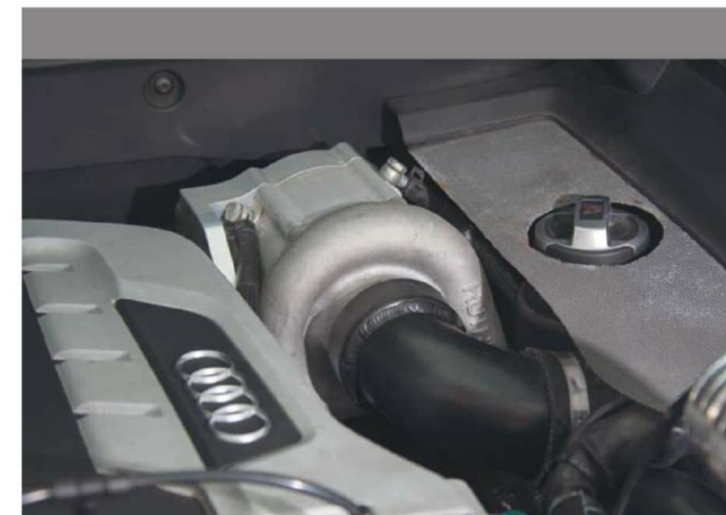


Above Tried and tested over five years, the supercharger package is a genuinely usable setup

Right The car has none of the compromises often associated with highly tuned aftermarket packages – it really is something you can drive every day



Above The brace of Rotrex C3861 superchargers takes power to a scintillating 750bhp while torque swells to 560lb/ft. To combat the power-sapping heat TTS has developed a highly efficient chargecooler Below Wheels (and brakes) are stock R8s, with 295/30 and 235/35x19 Pirelli P-Zeros



THE TTS PERFORMANCE R8 PACKAGE

THE R8 SUPERCHARGER package is based around a brace of Rotrex C3861 superchargers. Because there are two, they're relatively unstressed and can produce a combined 750bhp with ease.

Single 'charger setups are making over 600bhp on B7 RS4 applications, so it's clear there's a lot more potential for the twin setup, with some supporting upgrades.

To combat the power-sapping heat (which afflicts all supercharged engines), TTS has developed a highly efficient chargecooler, as well as a pre-rad to keep those temps in check. As a final

belt and braces measure, a water/methanol system is also included, which means no risk of engine damaging detonation, or loss of power if it gets hot. As with all TTS Performance products, consistency of performance is key.

The installation sits very neatly in the R8's engine bay, which is something that took a lot of hard work.

"It's all the little details that take the time, plus making it look neat and tidy," explains Richard. The kit includes everything needed to install it, with a recommended fitting time of 40 hours. Once the kit has been fitted,

it's time for a road test, followed by some data logging to ensure that everything is running correctly.

"We change all the solenoids for the fuel system and so on for new OEM parts, just to ensure there are no failures," says Richard. "Some of these cars are over 10 years old now, and we need to prepare for everything to run harder."

Although the package has been designed to use with the stock clutch, TTS Performance also offer an uprated unit, which is especially handy if the original is past its best.

scintillating 750bhp while torque swells to 560lb/ft.

At Bruntingthorpe Proving Ground, we decided to put this to the test and achieved 0-60mph in 3.3secs and a top speed of 196mph – with plenty more to come.

But that's only half the story.

This supercharger package has been developed as a genuinely usable setup. Tried and tested over the past five years, it delivers consistent performance, time after time, with proven reliability. The car behaves as you would expect, with none of the compromises often associated with highly tuned, after market packages – it really is something you can drive every day.

Time to deliver

However, when you want to drop the hammer and have some fun, then it delivers. Oh boy, it delivers.

Nail the throttle – in pretty much any gear – and the TTS Performance R8 produces devastating acceleration. In the first three gears, it's savage stuff that makes you giggle like a schoolgirl as the force pushes you back into your seat. It's so rapid that you have to be quick with the shifter as you click-clack through the open gate, but once you're tuned into this wonderful manual 'box, you can really begin to exploit the thrilling surge of torque that's available.

Part of the appeal with this setup is the instantaneous power delivery. The power builds and builds with a very linear response – it's almost like you're driving a car with a larger, naturally aspirated engine, rather than forced induction.



“With a brace of superchargers whirring away and a Milltek exhaust system, the 4.2 V8 produces a deep, bassy timbre that makes the hairs on your neck stand up”



Top The R8's interior is a very nice place to be

Above Suspension comes courtesy of KW Automotive height adjustable springs

Left A Milltek exhaust system helps deliver a beautiful soundtrack

Prod the throttle in second or third gear and it's laugh-out-loud stuff. Even in fifth, put your foot down and the rate at which it puts on speed is staggering. It's an addictive, relentless surge of torque that will have you coming back for more and more.

And then there's the sound.

The 4.2 V8 is a sonorous unit from the factory, but with a brace of superchargers whirring away and a Milltek exhaust system, it now produces a deep, bassy timbre that will make the hairs on the back of your neck stand up. But unlike some after market systems, the Milltek setup won't set off car alarms two streets away or see you black flagged on track.

Sweeping up

This package has been designed to be usable on the road or on a circuit and it simply delivers the goods. We spent two hours hammering around Bruntingthorpe, with its mix of high-speed straights and long sweeping turns and it took it all in its stride. Even repeated full-bore



PERFORMANCE FIGURES

On the day we achieved some respectable figures for the R8, but there's plenty more to come. The 0-60mph time of 3.3secs is certainly rapid, but some may expect a 750bhp car to do a little better. However, bear in mind this is a manual car without an S-tronic transmission to deliver lightning-fast shifts or launch control. A good 0-60mph is dependant on driver skill and the surface, and although Richard is a highly experienced drag racer, Bruntingthorpe is rather lacking in grip.

The stock clutch was also past its best and has since been swapped for an uprated unit, so we'll be back to test it again soon – under 3secs should be easily achievable.

Similarly with the top speed of 202mph on the clock (196mph on the Performance Box), the R8 was still pulling hard before we had to back off due to a reduced braking zone on the day. However, with a flying lap, carrying momentum from the turn at the start of the main straight, there's no doubt that the R8 will easily top 200mph.



“To all intents and purposes the car looks like a stock R8. Most people wouldn’t realise it has more power than a Ferrari Enzo”

launches failed to unsettle the R8, and at the end of the day, Richard drove back to Northampton in perfect comfort.

Part of the appeal is the fact that to all intents and purposes this looks like a stock R8. Most people wouldn't realise it has more power than a Ferrari Enzo. It's something that was dramatically illustrated at a recent Run What Ya Brung day at Santa Pod. Up against a bunch of Lamborghini Aventadors and Huracáns, Richard more than held his own. Several astounded supercar owners came over to ask, "What the hell is in that thing?" Before smiling when they were shown the brace of superchargers. Quarter-miles in the 10s are a given - as long as you can perfect your launches with that old-school manual transmission.

Such has been the interest shown in this 4.2 V8 package, that TTS Performance is looking to develop it for the 5.2 V10, which will include the Gallardo and Huracán. Exciting stuff.

The beauty of the TTS Performance supercharger package

is that you could pick up a used R8, and once the kit is installed, have something that'll be as fast, if not faster, than many of the latest, big money supercars. And if you already own an R8, then it's the perfect way to make a great car even more exciting.

The prospect of even more power is a real one too. With each supercharger capable of over 600bhp, a built engine and uprated transmission could produce some serious numbers.

Everyday supercar

The package represents a significant investment, but for that you get a tried and tested, highly developed setup that's been proven on many customer cars, as well as TTS Performance's own demo vehicle. It's a fantastic bit of kit and a sure-fire way to transform the R8 4.2 FSI into an extremely rapid, yet usable, everyday supercar.

To see it in action on track, head to TTS Performance's Facebook page.

Left above Part of the appeal of the setup is the instantaneous power delivery; it builds and builds with a very linear response

TECH SPEC: Audi R8 4.2 FSI

Engine 4.2 FSI V8; TTS Performance twin-supercharger package incorporating two Rotrex C3861 superchargers, custom chargecooler system; pre-rad, uprated fuel pump internals; uprated air filters; twin Tial blow-off valves; all brackets and pulleys included; Milltek resonated exhaust system; DevilsOwn water/methanol injection system, mapped by MRC Tuning.

Power 750bhp and 560lb/ft.

Transmission 6-speed manual; stock clutch (uprated, TTS clutch available).

Brakes Stock R8.

Suspension KW Automotive height adjustable springs.

Wheels Stock R8 wheels with Pirelli P-Zero 295/30 and 235/35x19.

Interior Stock R8 leather sports seats; Performance Box.

Exterior TTS Performance graphics package.

Contacts
TTS Performance - www.tts-performance.co.uk
MRC Tuning - www.mrctuning.com

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Ultimate Street Fighter

“I wanted to create the ultimate street GT-R. A car that is a full-on road car, but holds its own on the drag strip; that causes carnage on circuits, as well as being the ultimate show stopper...”

WORDS: MATT BELL PHOTOGRAPHY: MATT WORDS



It would seem that having a Nissan GT-R these days isn't merely enough to compete with the big boys. 1,000bhp GT-Rs are almost becoming the norm for those in the scene, with the number of big powered cars going from strength to strength. That being said, there are only a handful of cars that are pushing the boundaries as to what a road-going GT-R can do. And one of those stepping into the unknown is Rocky Bhattel.

The ultimate goal? To be the first GT-R to hit 8s over the quarter-mile on 20-inch road tyres. At what expense? Well, his most recent damage was a snapped Quaife diff and carbon drive shaft, causing around £12,000 worth of damage...

Let's put this into perspective. There's a decent number of GT-Rs across the world that have hit 8s over a quarter-mile. In fact there are a handful that have hit 7s and even 6s for that matter. The difference is the tyres; drag tyres are optimal for initial launch, providing the perfect amount of grip off the line and not wasting time sitting still. The problem with road tyres is that grooves in the rubber are in place to disperse water for added wet grip. On a drag strip this is eradicated. You have an optimal surface and slicks that are capable of withstanding more pressure, and crucially, more heat.

Don't be a drag

You may be sat there thinking, why? If you're chasing times, why not stick a set of Hoosiers on and get the times done? I wouldn't be surprised if a low 8 pass was hit off the block with a set of drags given the power this thing creates.

I asked Rocky why and he answer was simple: "Yes my car has the capability of doing much more than it is at the moment on drag tyres. But at the end of the day, I want to drive to the track, hit an 8 second pass and drive home again."

"First and foremost, this is a road car, I can't drive (legally anyway) on the road with drag tyres, so it defeats the purpose of what this is. I don't want it to be a drag car, I want it to be useable day-to-day." You can't really argue against that basis.

There's so much more to this GT-R than meets the eye. It's certainly no drag car.

Let's start with the power. We're talking just shy of 1,500bhp here and 1124lb/ft of torque. I'll let you ponder over that for a moment while I flick through the specs. The engine is race specification by Race Developments and now 4.1-litres in displacement thanks to a T1 racing stroker kit. Manley forged conrods and pistons are up to the job of withstanding the huge amount of torque, while Billet high lift camshafts control power. Boost Logic kicks about the engine

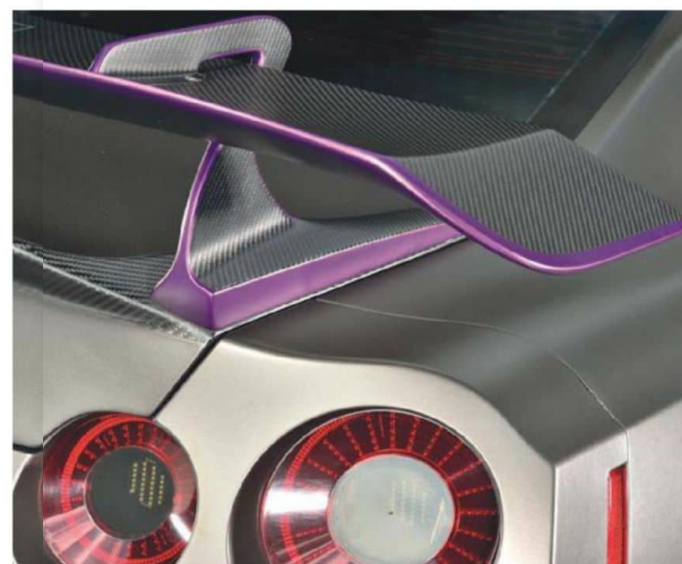


"My car could do much more on drag tyres. But I want to drive to the track, hit an 8-second pass, and drive home again"

Above The ultimate goal? To be the first GT-R to hit 8s over the quarter-mile on 20-inch road tyres

Right JRC carbon three-piece front splitter along with a load more JCR carbon goodness, plus Flyrde RGB custom headlights

Right middle Custom ZLed taillights and JCR carbon high rise swan neck wing





bay in the form of a 1300X turbo, V2 manifold, 3rd anodised purple fuel rail, oil breather system and 12injector hardware. An ETS race intercooler helps keep a lid on temperatures while an uprated fuel system helps deliver the goods when the going gets tough. The gasses are forced through a Linney Titan Street 102mm titanium exhaust with custom Linney carbon tips. It's monstrously loud.

A completely built gearbox is needed to handle over 1000lb/ft of torque and this is now a PPG V3 transmission which features a new 1-6 gearset, input and output shaft, AWD gear and drop gears. At the front is a Quaife LSD, at the rear a Wavetrac LSD, billet front diff casing and an Xtreme 20 plate complete clutch kit.

For the suspension, Ohlins TTX 4-way adjustable kit is custom tuned specifically for Rocky's driving with AP Racing's Radi Cal BBK providing the necessary stopping power. A MoTec C127 Digital Dash provides the backdrop behind the wheel and a Syvecs S6+ standalone ECU controls the lot. The seats are razer thin Tillet Carbon B2 race seats with custom Alcantara and purple stitching with the rear being treated to an Alcantara retrim. Again, Alcantara features on the custom flat-bottom steering wheel.

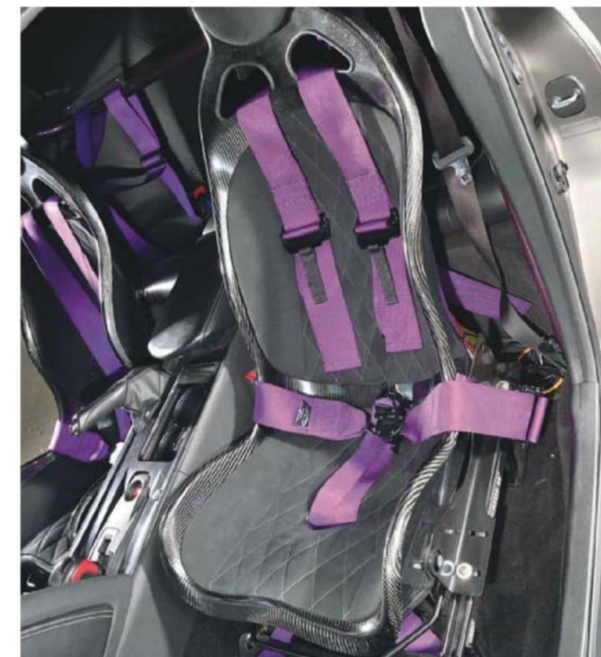
Complete show car

The other brilliant thing about this car is that when we say it's a complete show car, we mean it. As a man who likes his music, in the boot is a custom audio upgrade with twin subwoofers. All of the soundproofing is still in place to try and fight back against the outrageous noise from the exhaust.

Notice the GTR Cartel graphics? That'll be the car club Rocky and friends set up to bring together GT-R owners all with one passion, enjoying their pride and joys. It's the car club to be a part of if you're a GT-R owner.

So what's it actually like on the road? There's no denying the GT-R in regular format is a menacing thing, but triple the power output and it starts to shout about that Godzilla nickname. There's no other way of putting it: it's intimidating. Behind the wheel though it's a calm beast waiting to be let loose.

There are a couple of power modes. In regular driving we're limited to around the 800bhp mark, with the full beans being unleashed in a separate map mode. I don't want to down play what 800bhp feels like, but in comparison to the full beans it feels almost tame. When Rocky says it's as easy to drive around town as his M4 he's not lying. 800bhp never felt so useable as it does here. Don't forget that even at this stage its enough to see away most supercars without breaking too much sweat.



Far left top A 4.1-litre T1 racing stroked V6 brings power to just shy of 1,500bhp with 1124lb/ft of torque

Top Tillet Carbon B2 race seats with custom Alcantara and purple stitching. Alcantara also features on the custom steering wheel

Far left bottom Gasses go through a monstrously loud Linney Titan Street 102mm titanium exhaust with custom Linney carbon tips

Above The interior is blessed with a full R35 audio upgrade with twin subwoofers and complete sound deadening too





Keep the car in auto and changes are smooth. The car doesn't cough or splutter when you come to a standstill, you can use minimal throttle input to move away and you can sit in traffic or move at low speed without problem. It's remarkable how far modern gearboxes have come. Although in this instance we're focusing on a highly modified 'box, we can still marvel at the genius of these 'boxes to accept such abuse yet behave well doing the day-to-day stuff.

Ramp it up

Such is the way with how the car is setup that you could comfortably use 800bhp all day long and barely break traction. The Syvecs ECU always does a brilliant job of controlling the traction to provide upmost forward momentum. But when pressing on the Michelin Cup 2 tyres are up to the job of keeping things in a straight line. This all changes when you ramp up the power though.

Crank up the power, switch into manual mode and prod the throttle and you're hit with a force I simply can't explain.

All 1124lb/ft of torque is trying to rip through the wheels and onto the road. It's truly an absolute animal and one I'm not capable of fully taming. You have to have experienced power like this before, or gently build up to it to be able to ultimately drive it. Therefore, the keys are thrown back over to Rocky, who shows us what it can really do. When the owner is sat next to you in his £250,000+ build you put your priorities behind the fate of his car...

With Rocky behind the wheel I'm blown away by the performance. To call a GT-R easy to drive is truly mind-blowing, as Rocky snatches at the wheel to keep us pointing the right way. The Ohlins 4-way setup is beautiful in its approach, perfectly maintaining its stance through the corners and trying its best to eliminate any loss of traction.

This is by far the most exhilarating


car I've been in, there's no two ways about it. Perhaps the UGR Gallardo build from the last Ultimate Supercar Issue would see the GT-R away? But at this very moment, I can't picture it.

Have you ever been over a crest on a B road too quickly and your stomach does that weird falling feeling when the road levels out? That's what this feels like.

Street stopper

There's no rest for the weary though. Plans for cosmetic changes are well underway, with a full colour change and new bodykit on the way to help firmly establish itself as a truly one of a kind build.

"I wanted to create the ultimate street GT-R," says Rocky. "A car that is a full-on road car, but holds its own on the drag strip, causes carnage on circuits, as well as being an ultimate show stopper."

We think you've hit the nail on the head with that one. Now go and hit that 8-second pass. 

Left above 800bhp never felt so useable as it does here – yet it's enough to see away most supercars without breaking much sweat

TECH SPEC: 2014 Nissan GTR

Engine: Race Developments 4.1-litre T1 racing stroked V6; T1 Racing crank damper; Sonny Bryant billet superfinished crank; Manley conrods; Manley pistons; GSC billet high lift camshafts; Ferrea titanium valves; Ferrea valve guides; Ferrea springs; Boost Logic 1300X turbo kit; Boost Logic V2 manifold; Boost Logic 3rd fuel rail – anodised purple; Boost Logic oil breather system; Boost Logic 12 injector hardware; 6x Injector Dynamics 1300cc injectors; 6x Injector Dynamics 1700cc injectors;

SYVECS S6+ standalone ECU; FORE Innovations tripple pump fuel system; FORE Innovations uprated fuel lines; T1 Racing fuel filter setup; titanium custom intake pipes; K&N filters; TIAL blow off valves – anodised purple; ETS RACE intercooler – anodised purple; Linney Titan Street 102 titanium exhaust; Linney carbon exhaust tips.

Power: 1463bhp; 1124lb/ft.

Transmission: Fully built PPG V3 transmission; PPG V3 1-6 gearset; PPG input shaft; PPG output shaft; PPG AWD gear, PPG drop gears; Xtreme 20 plate complete clutch kit; Quaife

front differential; billet front diff casing; Wavetrack rear diff.

Suspension: Ohlins TTX 4-way complete suspension.

Brakes: AP Racing Radi-Cal BBK front and rear; 410mm grooved discs, 6 piston callipers (front); 400mm grooved discs, 6 piston callipers (rear); JCR race brake pads.

Wheels and tyres: Rays TE37 Ultras, 11Jx20in fronts, 12Jx20in rears; Michelin Cup 2 285/35x20 (front) 345/30x20 (rear) tyres.

Exterior: JCR carbon 3-piece front splitter; JCR carbon dive

planes; JCR carbon bootlid; JCR carbon bootlid gurney; JCR carbon high rise swan neck wing; Flyryde RGB custom headlights; custom ZLed taillights; Knight Racer Hybrid carbon sideskirts; Knight Racer Hybrid carbon rear diffuser; Knight Racer Hybrid carbon rear spats; custom dry carbon bonnet; Diffflow aluminium rear diffuser fins; JUN carbon front nosecone vent; Kream Developments carbon front wings/fenders; Kream Developments custom paintwork; RSV Graphics wrapped in matte grey metallic. **Interior:** MoTec C127 digital dash; JTI Innovations Toucan

display; full R35 audio upgrade in car with twin subwoofers; complete sound deadening; custom Alcantara flat bottom steering wheel; Tillet Carbon B2 race seats with custom Alcantara and purple stitching; Alcantara rear seat retrim; JCR billet aluminium shift paddles – anodised purple.

Follow the build: @rockyhattel and @gtrcartel on Instagram

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BADGE
ENGINEERING

No 5:

ASTON MARTIN



One of the world's most iconic car badges has got a whole load of history, dating back to 1913 and Buckinghamshire hillclimbing competitions...

The traditional way of naming a motor manufacturer is to take the surname of its originator. But in Aston Martin's case, that is only half the story.

Tracing history right back to 1913, this company was created by engineer Robert Bamford and Lionel Martin and called, Bamford and Martin Ltd. More back street garage than motor manufacturer, the duo were using other chassis and engines to produce specials they would enter, with some success, at the popular hillclimb competitions at Aston Clinton in Buckinghamshire.

Building their own car was always the ambition though and that happened just before the First World War. And it needed a name. Enter Lionel's wife, Kate Martin.

Showing an astute eye for promotion she suggested they call the machine an Aston-Martin (note the hyphen) to reflect the success at the local hillclimb and so that it would appear at the very top of any alphabetical list of manufacturers. That such a simple decision would remain (minus the hyphen) over 100 years later on some of the world's most expensive, luxurious and

blindingly fast gentleman's express road cars is pretty impressive.

The war halted this embryonic company and when peace returned the Martin and Bamford partnership dissolved and Bamford left. Perhaps the lack of his surname on that badge, or maybe the influence of Mrs Martin had an effect, who knows?

It is not recorded whether she was directly involved in the first Aston Martin badge design, which like many other car badge designs of the time, was an amalgamation of the company's initials. The A and M design was rather ugly, truth be told, and certainly didn't shout, 'This is an Aston Martin'.

Things improved when the design was completely revised and the wings arrived in 1927. Still somewhat clumsy aesthetically, but now easy to read.

The first recognisable modern stylised wing arrived in 1932, company history claiming it emphasised 'a traditional symbol of speed, freedom and exploring boundaries'.

Given the many financial difficulties that the company has experienced over the years, and the numerous different owners involved, it's astonishing that the badge remains so close to this 1927 original. One blip in the story occurred in 1947 when David Brown's

ego got the better of him and he included his name above the words Aston Martin. Even today, this looks rather vulgar, but we have to thank him for rescuing the company and being responsible for some very special models - just adding your initials to the model name was enough Mr Brown, you should have left the bonnet badge alone. His name was removed after he sold the company in 1972.

The final design tweak occurred in 2003 when Aston Martin opened its new global headquarters at Gaydon. Each badge is hand crafted and enamelled like a piece of exquisite jewellery, which is exactly what it is. However, that didn't impress world renowned race car designer Adrian Newey when he penned the stunning Aston Martin Valkyrie hypercar.

The chunky bonnet badge was deemed 'too heavy', the engineers were sent back to their software programmes. The answer has been to chemically etch the badge onto a piece of aluminium said to be only 70 microns thick (some 30 percent thinner than human hair), which is then fixed to the bonnet under an equally thin coat of clear lacquer. One suspects that Mrs Martin would have thoroughly approved. **NF**

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