Rolls-Royce Wraith

**March 2013**

***Torsten Müller-Ötvös, Rolls-Royce Motor Cars CEO, March 2013***

“I am delighted to unveil a new Rolls-Royce model that promises to draw superlatives from its audience. In launching Wraith we present the boldest design, the most dramatic performance and most powerful Rolls-Royce that has ever played host to the famous Spirit of Ecstasy figurine.

Naturally, the starting point is luxury, refinement and exclusivity, traits that have made Rolls-Royce the world’s pinnacle luxury brand for the last 109 years. But this is also a car defined by a timeless elegance, one that encapsulates a sense of power, style and drama - and just a hint of the noir.

The launch will revive one of the most famous Rolls-Royce names first used in 1938 and one which perfectly expresses the character of our new car. Wraith alludes to an almost imperceptible force, something rare, agile and potent, a spirit that will not be tethered to the earth. And I can assure you that performance delivers on the promise of its dramatic exterior styling, while of course remaining steeped in hallmark luxury, refinement and exclusivity.

Our new car will boldly shape the years ahead for Rolls-Royce, building on the success of Ghost, bringing more new customers to the marque. For Wraith is the ultimate gentleman’s gran turismo; it is the car we believe our great founding forefather and adventurer the Honourable Charles Rolls would have chosen to drive were he alive today.”

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**INTRODUCTION**

*“One is so accustomed to seeing Rolls-Royces slipping silently through Mayfair or purring down to Ascot in a 30 mph traffic stream that one is apt to forget that these cars are just about the fastest non-sporting proposition of their time.” –* The Earl of Cardigan ‘Britannia and Eve’ May 1930

**....when it does not exist design it**

When Rolls-Royce Motor Cars came to update its Phantom family of models, the words of company co-founder Sir Henry Royce informed everything that designers, engineers and craftspeople set out to achieve: *Take the best that exists and make it better*.

This historic *cri de coeur* came to represent the significant improvements made to the marque’s pinnacle cars when launched in 2012, and continues to resontate strongly from the design studios to the assembly hall at the Home of Rolls-Royce at Goodwood today.

But that was only part of Royce’s famous quote. *Take the best that exists and make it better*:***when it does not exist design it.***

These words informed the development of Rolls-Royce Wraith: nothing like it existed in the Rolls-Royce portfolio, nor the wider automotive world.

The expression of *when it does not exist, design it* is steeped in Rolls-Royce heritage. It can be seen in the pioneering spirit and vehicles that defined the company in the early 20th century. Adventures that took place on land, sea and in the air, that once led Rolls-Royce to three consecutive world speed records.

And of course there was the company’s founding forefather, the Honourable Charles Rolls, a man whose appetite for adventure drove him to success in motor racing, ballooning and aviation. He became the first man in history to cross the English Channel and return without stopping in a powered aircraft, an achievement that earned him the highest praise of King George V.

Wraith echoes the spirit of these historic endeavours, pushing the boundaries of design and engineering, challenging perceptions and delivering the most dynamic, involving driving experience in the marque’s 109 year history. It didn’t exist, so Rolls-Royce designed it.

**Power, style, drama**

In its design, Rolls-Royce Wraith presents a masterpiece of elegant simplicity, exuding poise and the promise of dynamism. There is a sense that this car is ready to move with purpose on its driver’s command.

Grace and beauty define the exterior presentation. The swept lines of the fastback, a style whose origins can be found in 1930s automotive design, most clearly signal its purposeful character, one which hints gently at the noir.

Performance complements the drama of exterior styling. A shorter wheelbase, wider rear track, 624 bhp / 465kW derived from the twin turbo V12 and a 0-60 time of 4.4 seconds (0-62, 4.6 seconds) give expression to the car’s dynamic looks.

But Wraith is no GT bruiser; it is every inch a refined and luxurious Rolls-Royce, a car where the sense of arrival and joy of the journey are as important as the canvas upon which it is drawn.

**Effortless performance, luxurious interior**

Wraith debuts the most intelligent drive train ever to feature in a Rolls-Royce, including the application of ground-breaking technologies like Satellite Aided Transmission (SAT). This processes GPS data to predict the driver’s next move and automatically select the right gear for the road ahead. Unnecessary gear changes are thus avoided, augmenting the famous Rolls-Royce trait of waftability and ensuring Wraith is constantly poised to deliver on its dynamic promise. Following a sweeping bend, for example, the optimum gear is always pre-selected for effortless acceleration.

Complementing Satellite Aided Transmission, Wraith’s further dynamic enhancements include a more direct steering response to aid precision in corners, as well as more dynamic spring and damper settings.

Step inside Wraith’s coach doors and there is the feeling of going aboard a luxury yacht. It is a serene space for four occupants, who will be cocooned in a striking and contemporary interior furnished in beautiful materials, surrounded by tactile Phantom-grade leathers.

Design details like the expansive Canadel Panelling and blood orange needle tips for speedometer and power reserve gauge hint further at agility, speed and performance. Look upwards however, and Rolls-Royce presents something more traditional – at least for the 21st century. Starlight headliner – offered for the first time beyond the Phantom range – features thousands of tiny fibre optic lamps hand-woven by craftspeople into the roof lining.

It remains one of the company’s most endearing and popular features.

**The Honourable Charles Rolls**

Wraith is a model that draws parallels with the story of founding forefather Honourable Charles Rolls. For like the pioneering Rolls, this car pushes boundaries, taking Rolls-Royce further than it has gone before, challenging then delivering on the promise of pace and adventure.

In a similar vein, this car also embraces the very finest things in life, the elegance and refinement enjoyed by a new generation of confident gentlemen and women. It will establish a reputation as the ultimate gentleman’s gran turismo – the car Charles Rolls would have chosen to drive from Paris to Madrid were he alive today. Or from New York to Washington. Or from Shanghai to Beijing. Or from ........

**DESIGN**

*“The purposeful fastback profile is Wraith’s defining element. Inherent in this graceful line that sweeps from the top of the screen to the very rear edge, is the promise of fast, yet effortless touring.”* Giles Taylor, Design Director.

Like a world-class athlete poised at the starting blocks, Wraith presents a picture of anticipation and quickens the pulse when viewed for the first time. Without overstatement there is drama and an immediate sense of refined power expressed by its bold fastback design. Wraith exudes effortless style and beauty... derived through elegant simplicity. A high waistline combined with low roof line and raked cabin accelerate the eye rearwards, while tension in its surfaces suggests a car set to move – quickly if necessary.

**Unique in character**

In terms of sheer presence Wraith is clearly cut from the same luxurious cloth as today’s Phantom and Ghost models. Yet it displays cues that can be traced through past generations; effortless poise with accentuated rear overhang, elegant coach doors and, of course, the Spirit of Ecstasy adorning the grille.

But this is a very different model to those of the last century – and stands alone among Rolls-Royce models today. A wider rear track, longer bonnet, raked glass house and deeply recessed pantheon grille, unite in presenting a truly focused car, a Rolls-Royce with its own unique character.

The consummate gentleman’s gran turismo, Wraith stands as a contemporary homage to the era of effortless spacious coupés and grand tourers. A time where pioneers and adventurers became legends and their masterful machines objects of desire.

**The expression of power**

The traditional pantheon grille design has further evolved with Wraith. The cue here is that of a more functionally derived air intake, not unlike that of a jet turbine, giving greater expression to the car’s dynamic promise. The grille itself is recessed by 45mm compared with Rolls-Royce Ghost. The surround has also been lengthened by 40mm while the bumper has been designed to incorporate the number plate surround with a focused lower air dam.

Recessed and finished in black, the lower valance mesh helps create depth to echo that of the grille. Chrome blades plant the car, complementing horizontal lines that accelerate the sense of flow around the exterior.

Gentle evolution is also a theme of the 102-year-old Spirit of Ecstasy figurine. Positioned further forward on the grille and angled by five degrees, her eager position draws the eye up and along the bonnet, helping define the development of three harmonious lines: the waftability line, waist line and roof line.

**Beauty in profile**

In side view, it is the fastback that most clearly sets this latest Rolls-Royce design apart from its thoroughbred stable mates. There is a dramatic combination of linear tension and expressive line that bestows Wraith with such an elegant yet uniquely powerful character.

Developing from the masculine frontal architecture, the linear formality of the waist line gently dips to the rear providing a sense of stability and effortless poise. This combines with the expressive gesture of the window graphic that sweeps downwards to the coach door swage line and gives expression to that essential Rolls-Royce trait of waftability.

Frameless coach doors and the absence of a b-pillar further augment elegance and drama. Perfectly sized to complement long front wings, these are the epitome of effortless entry and egress, but also impart a sense of theatre and occasion that are so important to Rolls-Royce customers. Doors open to reveal an exquisite interior and are closed from inside at the touch of a button.

With all four windows down, the side opening adds length and a sense of waftable debonair to Wraith’s character. The elegant chrome side finisher frames this graphic beautifully and pulls the eye seamlessly down onto the rear wheel. For further open view touring enjoyment, a fixed glass roof can also be specified, complete with leather sun blind.

In Wraith’s design, every detail has been considered; stainless steel door handles for example conceal barrel locks maintaining clean exterior panels. Three new wheels have also been designed to fit like a tailored shoe. Confident yet understated, these include a standard 20” seven spoke design along with optional 21” seven spoke part polished and 21” five-spoke part-polished, bi-colour choices.

**Architecture in two-tone**

The wide rear track reinforces the promise of Wraith’s athletic prowess and powerful intent. Prominent rear shoulders with powerful wheel arches nestle the tapered glasshouse, so beautifully accentuated by the raked rear screen. These design elements present the perfect three dimensional canvas for a two-tone paint scheme that further enhances the unique, architectural design qualities of Wraith and hints at a nautical theme.

**The fastback**

The origins of fastback design lie in the streamlined design era of the 1930s. Initially popular in America, the word fastback soon came to define the spirit of adventure and dynamism that epitomised early and mid 20th century European sporting and GT cars.

Rather than take inspiration from any one car, Wraith simply evokes the alluring pedigree of some of the most iconic designs from this influential era.

Creating a visible distinction between a sporting GT and a true Rolls-Royce was very much key to the success of Wraith’s modern design statement. Whilst the striking silhouette of the long fastback hints at a sporting dynamic, Wraith is clearly a consummate gentleman’s gran turismo. The perfect balance has been struck between the visual language of the fastback’s heyday and a thoroughly contemporary Rolls-Royce motor car. Traditional high-seating position and Rolls-Royce proportions remain, leaving the beholder in no doubt that it is true to the marque’s DNA.

Wraith presents the perfect marriage of glamour and refinement, as well as an underlying, brooding sense that power and drama lie beneath. One can imagine that this Rolls-Royce in particular would perfectly match the inimitable lifestyle of adventure and speed enjoyed by Rolls-Royce’s founding forefather the Honourable Charles Rolls.

**Luxurious interior**

Wraith’s coach doors open to present an inviting, harmonious interior space – one with every possible comfort, delivered in a thoroughly modern way.

The eye is immediately drawn to the contemporary panelling that elegantly adorns the inside of the doors and sweeps round the entire lower space. Finished in either wood or leather, the effect draws the eye quickly around the cabin, similar in dynamic effect to the clean fastback style of the exterior.

**Canadel Panelling**

Wraith’s mellow interior is the perfect space to present the debut of a very special new wood treatment , *Canadel Panelling,* a beautiful open grain wood. Tactile and with a light satin finish that retains the material’s natural texture, this crafted wood contributes to the cabin’s warm, contemporary ambiance, evoking the interior feel of a fine, super-luxury yacht.

In this wood configuration, the car stands as a testament to the skills of craftspeople in the wood shop at the home of Rolls-Royce in Goodwood, England. Every detail has been carefully considered; the veneer gently curved to hug the contours of the doors, delighting the eye as well as increasing space for occupants. In orientation the grain is angled at 55 degrees increasing dynamic flow through the interior. Echoing the wood craftsmanship of its pinnacle stable mate Phantom, Canadel Panelling is bookmatched throughout, creating a perfect mirror image through the centre console and featuring a contemporary chevron pattern that runs through the centre of the car, adding to the sense of cutting edge dynamic.

**Dynamism... and delicacy**

The dynamic theme is reinforced when viewed from the driver’s seat. Black chrome dials are framed by a black horseshoe sweep. Blood orange tips to gauge indicators pay homage to the marque’s aviation heritage whilst the steering-wheel is thicker rimmed to build dynamic intent.

Detailed with a delicate subtlety, the interior complements Wraith’s dramatic exterior aesthetic. Four individual seats cosset driver and occupants ensuring the most involving Rolls-Royce driving experience ever, whilst never compromising on pinnacle standards of comfort and contemporary elegance. Touches like the chrome bullet tips to recessed piping on the seat panels further enhances the sense of a vehicle tailored for performance.

The finest Phantom-grade natural grain leather adds to the luxury, its tactility unequalled in the motor industry. Detailing to armrests and panniers reinforce the opulence, inspired in their design by fine saddle-making.

**Light from darkness**

The Rolls-Royce principle of effortlessness has informed designers’ thinking throughout. Perfectly appointed storage compartments for two iPads add convenience for rear seat passengers, whilst automatic door closing buttons located behind the a-pillar aid those in the front.

Warm and serene, Wraith’s interior lighting bathes occupants in gentle light. Beyond this, additional ambient lighting comes on request – courtesy of reading lights above c-pillars and waterfall roof lights that deliver increased but unobtrusive illumination with a hint of Art Deco influence.

One of the marque’s most popular Bespoke features is now available to complete the glamour that befits this stunning new Rolls-Royce interior. *Starlight Headliner* presents a starry night sky within the cabin, an effect that is achieved with 1,340 individual fibre optic lights hand-woven into the leather roof-lining by craftspeople in the Rolls-Royce Leathershop.

**ENGINEERING**

*“Wraith is powerful, but never brutal. It’s a cultivated power which perfectly complements the dynamism of its exterior styling. This is a true Rolls-Royce.”* DrHelmut Riedl, Director of Engineering.

One hundred years ago Rolls-Royce entered the gruelling 1913 Alpine trial with four 75hp cars. It won six awards, including the Archduke Leopold Cup.

Under the stewardship of founding forefather Sir Henry Royce, engineering credentials that had been established through events like the London to Edinburgh top gear trial in 1911, were further reinforced by this astonishing achievement. A series of Alpine Eagle cars were subsequently produced by the company.

But 1913 also represented another dynamic milestone for the company, one which the Honourable Charles Rolls would have cherished, had he not tragically perished in an aircraft accident two years earlier.

For in that year, Don Carlos de Salamanca took to the wheel of a Rolls-Royce Silver Ghost and won the first ever Spanish Grand Prix. The victory built on racing success such as the 1906 Isle of Man Tourist Trophy, where Rolls himself had triumphed in a Light Twenty.

After 190 miles of competing, the grand prix winner emerged relaxed and serene, a picture that continues to define the Rolls-Royce driving experience today. The power that underpins any modern Rolls-Royce is always delivered effortlessly, never brutally.

Rolls-Royce engineers were acutely aware that the most powerful Rolls-Royce in history would have to deliver dynamism and agility, without any hint of compromise to the famous magic carpet ride. Wraith stands as a testament to their skills, the ultimate gran turismo, and a car that remains true to values of quality, luxury and excellence in engineering.

**Drivetrain**

Wraith is the most powerful Rolls-Royce ever to have played host to the famous Spirit of Ecstasy figurine. It develops 624 bhp, from a 6.6 litre twin-turbo V12, an engine that features direct petrol injection to maximise efficiency and reduce emissions. Should they wish to take advantage of the extraordianary power at their disposal, drivers may choose to be propelled from rest to 60 mph in just 4.4 seconds (0-62 mph, 4.6 seconds) and on to an electronically governed top speed of 155 mph.

Power is transmitted – effortlessly – thanks to an eight speed, automatic ZF transmission. The combination of powerful engine and sophisticated transmission leads to immediate power delivery with 800 Nm of torque available to the driver from 1,500 rpm.

The sense of scale is illustrated deftly by the power reserve gauge on the fascia. This reveals how much power is available should it be needed – or simply desired – by the driver at any time during a journey.

Rolls-Royce Wraith also features the ability to multi-shift down gears. When the accelerator is pushed rapidly, the car knows that the driver is seeking to maximise acceleration and it moves directly to an appropriate lower gear.

**Satellite Aided Transmission (SAT) – a new technology**

*“From powertrain engineers to our director of engineering, everyone instinctively realised the affinity of Satellite Aided Transmission to the Rolls-Royce brand – and particularly to Wraith. It’s an effortless system that knows the car’s location and reads the mind of its driver. It selects the optimum gear as though it were a skilled pilot changing a manual ‘box himself.”* Philip Harnett, Product Manager, Rolls-Royce Wraith.

Abundant power comes effortlessly thanks to Wraith’s powerful V12 twin-turbo engine married to an eight-speed automatic transmission. But Satellite Aided Transmission technology takes the powertrain to a new level of effortless delivery, one that perfectly suits the Rolls-Royce brand.

Satellite Aided Transmission uses GPS data to see beyond what the driver sees; it anticipates his next move based on location and current driving style, then selects the most appropriate gear for the terrain ahead. Corners, motorway junctions and roundabouts are all anticipated in advance, meaning Wraith is constantly poised to deliver on its promise of performance.

A more polished, effortless driving experience and even better response brings a new, more dynamic dimension to the famous Rolls-Royce trait, waftability.

With eight years experience as electronic and systems engineer with the BMW Formula 1 team – and subsequent experience in the BMW engine development department – Product manager Philip Harnett was instrumental in bringing the technology to Rolls-Royce Wraith.

*“A former F1 colleague who worked on gearbox software demonstrated Satellite Aided Transmission to us one afternoon. I was very impressed. A few months later I moved from BMW to Rolls-Royce and quickly lobbied for its inclusion in Wraith. The reason was simple; it augments effortlessness and dynamism; the fit was perfect.*

*In context, the benefits of Satellite Aided Transmission become clear. Consider piloting Wraith in its natural environment, through the twisting roads of an Alpine pass for example. While negotiating a hairpin, approaching an inviting series of bends, the car knows its location; it sees what you are seeing, but importantly is also anticipating what is to come.*

*It knows when a sweeping curve approaches and can predict how you wish to drive through it. Easing off the accelerator tells Wraith that this is no cruise on a straight country road. Rather, the driver is controlling speed to negotiate a series of bends. Instead of shifting up a gear to allow more relaxed cruising, the lower gear is held, thereby ensuring the powertrain is perfectly primed and ready to accelerate from the corner.*

*When travelling home, as Alpine roads approach a highway, Satellite Aided Transmission once more effortlessly assists. On indication, the car recognises an intention to enter the highway slip road identified by GPS, so the car then maintains the appropriate gear for a smooth and powerful entry.”*

**Body**

Wraith is built around a steel monocoque body, which means there is no separation of chassis and body. The advantage of this construction is a reduction in exterior dimensions whilst maximising interior space.

The body has been engineered with a double front bulkhead to help insulate the interior from engine noise. It is constructed from steel sections and then wrapped in steel panels, which are brazed by hand. This allows a seamless join, which is then sanded by hand until it is perfect. In total, 6,364 individual spot-welds are applied to Wraith. In addition, 900m laser welded seams between the side panel and c-pillar and fully laser welded water drain in trunk compartment maintain the aesthetic purity of the car.

**Chassis and suspension**

The chassis and suspension set-up urge a sense of adventure in the driver, an inference to be immediately drawn when first placing hands on Rolls-Royce Wraith’s slightly thicker steering wheel.

Compared with Rolls-Royce Ghost, the rear axle is 24 mm wider, the wheelbase is 183 mm shorter and the centre of gravity nearer the road thanks to a reduction in height of 50 mm.

The car’s suspension has been tuned to minimise body roll and discreetly amplify feedback when cornering; while steering weight is heavier at high speeds and lighter at low speeds adding to the spirited drive.

These agility improvements have been achieved with absolutely no compromise to the sensation of riding on a bed of air.

A combination of double-wishbone front suspension and multi-link rear suspension, which work with an intelligent, four-cornered, air-suspension system and electronic variable damping, maintain the hallmark ‘magic carpet ride’. The refinement is extraordinary; the smallest of changes can be detected by the air suspension and body roll is minimised through bends accordingly.

Multiple inputs from sensors in and around the car are constantly processed by a complex computer system. Individual load calculations are made by the dampers every 2.5 milliseconds. The benefits are outstanding comfort but also poise and assurance for the driver.

In addition, composure on virtually any surface is assured thanks to a series of electronic driver assistance systems. As one would expect this includes anti-roll stabilisation, dynamic stability control including dynamic traction control, together with cornering brake control and dynamic brake control.

These technologies work in harmony under dual integrated chassis management systems. So Wraith remains poised, even when subjected to a vigorous test. Both in terms of handling and safety, these systems operate as one. And of course, they work imperceptibly to driver and passengers.

**CONNECTIVITY**

**...and the Rolls-Royce on-board valet**

For over a century a Rolls-Royce motor car has featured technologies designed to operate discreetly, thereby delivering a driving experience that is as effortless and enjoyable as possible. These assist the driver when called upon, but are prepared to return without fuss to the background when no longer required.

In the 21st century, the drive to improve the famous Rolls-Royce trait of effortlessness takes on a new persona. For while advances in mechanical and electrical technology deliver systems like head-up display, adaptive headlights and Wraith’s keyless opening boot, improvements in connectivity have taken the human-machine interface to a new level of sophistication.

Wraith presents the most comprehensive example of effortless connectivity in the Rolls-Royce portfolio, a network where communication between car, environment and driver helps lower the pulse, ease the journey and delight its occupants. It could almost be likened to a contemporary on-board valet, a service fit for the Honourable Charles Rolls were he alive today.

**Voice activated navigation**

Service starts – as one might expect – with a one-touch call button. Located on the steering wheel, this allows navigation, telephone and other commands to be directed straight into Wraith’s on-board computer. The car’s response is then displayed on a 10.25” High Definition screen – rich in depth and colour – located in the dashboard.

Finding a destination, for example, no longer requires manual input from the navigation menu. For example the driver with a lunch date at the Ritz Hotel in London would merely command Wraith to “Navigate to Piccadilly in London”.

Its location is found automatically without effort and route assistance begins immediately, on-screen and via audio guidance. And also through head-up display, where the Driver Assistance package has been specified.

Should any hold up occur en route, Real Time Traffic Information (RTTI) is summoned to minimise inconvenience. In addition to sources used by Traffic Message Channel (traffic messages from police and jam sensors) RTTI uses data processed from the location of mobile phones fitted to commercial vehicle fleets and in taxis. This data is collated anonymously via a traffic control centre, with updates sent to Wraith every three minutes.

Green, yellow, orange and red are used to illustrate traffic flow on chosen roads. When twenty or more minutes are likely to be added to any given journey, an alternative route is plotted. Information including additional mileage and predicted time saving by choosing this alternative is also presented to the driver.

Of course, in such circumstances the driver may wish to call their companion to advise of a delay. Once again Wraith makes this as effortless as possible with the same one touch system. The command “Call Penny Jones” automatically connects the call.

At the end of the conversation, a command such as “Play BBC Radio 4” will return the driver directly to the in-car entertainment options.

**RR Connect App**

Effortless navigation is extended to searches with a mobile device when away from Wraith – once a client has downloaded the free Rolls-Royce Connect App.

Consider a business meeting for example, where the need to locate and visit a venue off-site has been identified. From the application menu on an iPhone or iPad, this is easily found; then by selecting ‘send to car’, on returning to Wraith navigation guidance will commence immediately.

Additional features of the RR Connect App include news updates displayed via RSS, web radio streamed directly into the cabin and Google local search.

**Spirit of Ecstasy Rotary Controller**

In 2013, the famous Spirit of Ecstasy figurine celebrates her 102nd birthday. More than any other symbol of luxury, the flying lady stands as a genuine icon, one whose beautiful image continues to adorn the grille, but is now also reproduced within Wraith’s cabin, gently rotating on-screen when the engine is started. It is also depicted within the crystal glass surface of the new rotary controller.

This Spirit of Ecstasy Rotary Controller presents a touch pad (rather than a touch screen which might leave unsightly fingerprints at driver and passenger eye level), with the ability to ‘write’ characters by finger, as well as the ability to scroll through function menus by turning the chrome dial and pressing down to select its functions.

The Rotary Controller’s touch pad also allows ‘pull and pinch’ features, replicating intuitive smart phone functionality. These help occupants pinpoint chosen areas on the screen or help to make them larger. For example, different areas of a map can be found by moving a finger across the touch pad, whilst street resolution can be made larger or smaller by pinching or pulling.

A pointer function allows menu options to be selected more quickly. The inclusion of inputs by written text, for example where a name and number must be added via the telephone menu is an additional improvement. Wraith recognises English, Latin and Arabic characters as well as Mandarin, to assist drivers in the company’s second largest global market, mainland China, where character selection can otherwise be a time-consuming process.

**Taking the best sound system, and making it better**

Rolls-Royce employs experts for all aspects of high-end craftsmanship, from hand-painted coach lines to finely-tuned audio systems. Today Wraith presents a bespoke audio system that has been specially optimised by experts for stereo and multi-channel sources, that – naturally – incorporates the finest hardware and latest advances in connectivity.

Wraith’s on-board hard drive holds 20.5 GB of storage, meaning it can host approximately 5,700 items of music downloaded via the USB port located within the centre console or glove compartment. iPod and iPad connection allows the importation of music, but also podcast and audio book downloads. Bluetooth audio streaming is an option too, from one of two phones that can be paired with equal functionality.

A number of music searches can be made via the Spirit of Ecstasy Rotary Controller, including a “play more like this” function while online Gracenote® access for CDs with hit selection make navigating music collections an easy experience. But it is the sound quality itself that places Wraith at the pinnacle of in-car audio.

Finely tuned by Rolls-Royce experts, the system takes the best features and components to produce a sound that is rich in quality and depth. DIRAC settings, ‘studio’ and ‘theatre’ guarantee optimal aural pleasure, for a pure, original sound or ‘larger than live’ sensation within the car.

The fully active 18-channel amplifier delivers surround sound through 18 speakers. This includes two central bass speakers located in the boot, seven tweeters, seven mid-range and two ‘exciter’ speakers in the headliner bringing the sound sensation to ear level.

Maximum power output is 1,300W. But the set-up is also very sensitive. A microphone measures the ambient exterior noise, with the digital processing unit using this information to adjust volume and tone settings automatically, ensuring the system is always perfectly set-up. DIRAC technology complements this, with frequency and phase correction for individual speakers, eliminating potential loud and dead spots caused by reflections from windows.

**SAFETY AND TECHNOLOGY**

As one would expect of a Rolls-Royce, no technical avenue has been left unexplored to ensure occupant safety.

The Advanced Crash Management system (ACSM) for example, utilises sensors placed around the car to make 2,000 measurements per second. This data ensures the car deploys the correct safety features in the event of an accident.

A combination of seat belts with force limiters and smart airbags help protect occupants in the event of a severe impact. Those in the front seats have the reassurance of knee airbags and intelligent front airbags which feature graduated output and adaptive vents ensuring that the strength of bag deployment directly responds to the severity of a collision.

In the event of a lateral collision, an integrated head airbag system, whose curtain extends to cover the side window areas in their entirety, protect against an impact with the vehicle structure, as well as from glass splinters. Side airbags in the front seat offer further extended protection.

**Illuminating Active Safety**

Wraith incorporates a selection of technologies designed to improve illumination at night, protecting occupants and improving safety for other road users.

Night vision technology, for example, now includes warning messages, as well as automatic brake preparation to support evasive action should an accident be imminent. Infrared cameras located in the upper corner of the grille are used to project a thermal image on-screen, an image which highlights warm objects, but which also identifies specific hazards on the road between 15m and 200 m ahead.

Pedestrians and animals such as cattle and deer are shown, and where a hazard is identified, they are accompanied by a yellow, triangular warning symbol on-screen and via the head-up display function. Depending on the position and movement of the hazard relative to the car, the triangular image turns red. An audible warning alerts the driver to imminent danger, and brakes are preconditioned to reduce the stopping distance if the situation becomes critical.

When driving in dark conditions a camera monitors the road ahead, automatically dipping the headlights when a light-source is present – once it passes, lights will effortlessly return to full-beam.

Wraith also comes with a groundbreaking third brake light, located above the rear windscreen. A first in the motor industry, this feature incorporates two LEDs at either end of a light bar and prism technology to deliver an unbroken, clear red light across its length. This illuminates more quickly and presents a brighter warning for drivers of following vehicles. And contributes to the uncluttered simplicity of Wraith’s exterior design.

In the event of an accident Auto eCall ensures that the emergency services are immediately aware of the incident’s location. If a driver is unable to respond to telephone calls, the car automatically alerts emergency services to its location via GPS positioning.

**Active Cruise Control (ACC)**

Effortless cruising in the city and on the open road is delivered by Wraith’s Active Cruise Control system. Radar-camera sensors monitor the car ahead, increasing or decreasing speed to maintain the perfect gap. New to Wraith, ACC now also reacts to static vehicles, assisting in urban driving conditions.

**iBrake 6**

The iBrake 6 function uses information from the radar sensor and front camera to help the driver stop quickly and with maximum efficiency should an emergency situation arise. Working with the early or late crash warning system, the pedal reacts to the force applied to it, pre-filling the brake pedal and reducing the amount of pressure required to brake suddenly.

The system also alerts the driver with a series of warnings, urging action via the head-up display and on-screen. If no action is taken a further audible and visual warning is given. The active third brake light also flashes under emergency braking.

**Top View Cameras**

Effortless motoring in both the city and on the open road is augmented by a sophisticated series of cameras discreetly placed around the car. Rear, front and 360 degree top view cameras ensure total ease of manoeuvrability.

When working in combination, the cameras are able to provide a ‘fish-eye’ view at blind junctions, whilst parking is made more effortless through obstacle recognition and reverse path prediction on-screen.

**TECHNICAL SPECIFICATIONS**

|  |  |
| --- | --- |
| **Rolls-Royce Wraith** |  |
|  |  |
| **Dimensions** |  |
| Vehicle length | 5269 mm / 17 ft.3”  |
| Vehicle width | 1947 mm / 6 ft 5” |
| Vehicle height (unladen) | 1507 mm / 4 ft 11” |
| Wheelbase | 3112 mm / 10 ft 2” |
| Turning circle | 12.7 m / 41.7 ft |
| Boot Volume (DIN) | 470 ltr / 16.6 ft3  |
|  |  |
| **Weight** |  |
| Unladen Weight (DIN) | 2360 kg / 5203 lb |
|  |  |
| **Engine** |  |
| Engine / cylinders / valves | V / 12 / 48 |
| Fuel management | Direct injection |
| Power output @ engine speed | 624 bhp / 632 PS (DIN) / 465 kW @ 5,600 rpm |
| Max torque @ engine speed | 800 Nm / lb ft @ 1,500-5,500 rpm |
| Fuel type | Super unleaded1 |
|  |  |
| **Performance** |  |
| Top speed | 250 km/h / 155 mph (governed) |
| Acceleration 0 - 60 mph (UK) | 4.4 sec |
| Acceleration 0 - 100 km/h | 4.6 sec |
|  |  |
| **Fuel Consumption** |  |
| Urban | 21.2 ltr/100 km / 13.3 mpg (Imp.) |
| Extra urban | 9.8 ltr/100 km / 28.8 mpg (Imp.) |
| Combined consumption / range | 14.0 ltr/100 km / 20.2 mpg (Imp.) |
| CO2 emissions | 327 g/km |