Limited-Edition Racing Simulators Carving a New Path for Brabham

The Brabham name is synonymous with innovation and a staunch loyalty to heritage. David Brabham, the force behind the iconic brand, successfully champions his father’s legacy while building on its robust foundations. A challenge is presented for even the most dominant players in motorsport to maintain relevance as rapidly evolving 21st Century technologies demand strategy overhaul. So how does a powerhouse like Brabham maintain his edge?

16 years ago, David Brabham transformed the legendary racing name into a global brand. With the Virgin model serving as inspiration, he recounts the progression: “It’s been a journey including losing seven years in the court case to get the name back and continue the legacy my father started. The Brabham brand was iconic but I had to ensure it stayed current.” Starting with Australian investors, he carved its future out by initiating the Brabham Partnership Program to create Brabham Automotive. The stunning Brabham BT62 and BT63 high performance vehicles resulted from its founding. Successful alliances have been forged including the most recent with Base Performance Simulators, taking them into the exciting world of virtual reality and broadening their target demographic to include a younger audience.

The three limited-edition racing simulators showcase a nostalgic livery of Brabham’s most iconic race cars. The trio includes the BT19 in which Sir Jack Brabham took home his third Formula 1 World Drivers’ Championship trophy in 1966; the controversial BT46B fan car which won its only race at the 1978 Swedish Grand Prix before being withdrawn; and the triumphant World Championship winning BT52 which secured three outstanding wins in 1983 despite its mere six-week design turnaround.

The sim collaboration with Darren Turner of BPS evolved from a shared past. Turner previously worked in racing simulator development at McLaren, equipping him with the skills to eventually create his own company developing well-respected simulators. Brabham explains, “Darren and I go back a long way; we won Le Mans and other races together so we have a strong link. BPS is an established company with a great product so aligning with three simulators reflecting Brabham Formula 1 history to take to market simply made sense.”

While simulators are often utilised in motorsport, David Brabham’s history of refining sim technology gives him an obvious advantage. While working with motorsport R&D company Wirth Research in developing the Honda LMP2 Program for the America Le Mans Series, Brabham was tasked with testing and modifying a particularly high spec sim. Brabham details the initial factory test at Cruden: “You walk up the stairs to a moving platform fitted with huge hydraulics. Once belted in, it ducks and dives, giving the driver the sensation of controlling a real race car. The problem was the excessive up-and-down movement coupled with only a single screen and lack of a canopy created an uneasy experience. I felt sick straight away. People often feel disoriented their first time in a sim but this was extreme.” The initial test prompted Brabham to pinpoint necessary improvements. With over £1million of further investment, the sim underwent significant modifications to be adapted for high-level use which made it state of the art.

Brabham’s sim development experience allowed him to view possibilities through a broader lens: “I entered into the world of simulators and identified advantages from the driver’s perspective. It gives an opportunity to learn the circuits and become familiar with the car’s performance. We even received tyre models from Michelin to ensure handling was as accurate as possible in addition to developing their tyres.” By immersing himself into the simulator world, Brabham improved the entire operation which resulted in major benefits for the team.

To understand track conditions prior to a race, a virtual model of the Detroit Grand Prix circuit was run through. It was the first time Brabham had attempted this and though it was only a rough model - as tracks at the time were not yet laser scanned - it gave him an extra shot of confidence. When arriving at the track, he walked its length to confirm the accuracy of the sim’s representation. He was then placed in the car prior to other racers without anyone else knowing of his preceding virtual track run. His performance was clear: “I clicked into the circuit quicker than I’d ever done before. Within my first run, I was 1.5 seconds faster than anyone else and it took most of the session for anyone to get near me. Gaining an understanding of the track by using the simulator lap after lap, I felt much more mentally prepared to learn the circuit. It was my first lightbulb moment.”

By the time Laguna Seca came around, the simulator was fine-tuned. Aerodynamic alterations were made resulting in significant lap time gains demonstrated when Brabham went into qualifying mode. Though correct gears weren’t always consistent between the sim and reality while cornering, Brabham was on point with the lap time: “I did a 1:15.1 in the sim then managed 1:15.0 in qualifying, receiving pole position. When the seed is planted in your mind, you’ve already developed the possibility. The simulator conditions the mind to create the future physical realities. I began realising great opportunities are available to drivers who utilise them.”

Sim technology has greatly advanced since Brabham’s run at Laguna Seca, shortening the distance between virtual and reality. Tracks are now laser scanned for accuracy which is standard on most racing eSports platforms. Brabham explains, “Track models are updated regularly to replicate subtle changes. Anyone using this simulator to prepare for their next real-world race will be up to date and know exactly what to expect on the track.” Brabham’s work during sim development highlights the attention to detail to produce an authentic racing experience: “We honed in on areas where modifications were needed like when a race car was too quick over bumps. As a professional driver, you understand the track so numbers are modified to give the driver the right sensation.” From grip behaviour on changing surfaces to detailed kerb assessment, sims deliver a higher level of precision than ever before.

Base Performance Simulator’s limited-edition Brabham Motorsport inspired design comprises a steering wheel, screens, pedals and a stationary build. The Brabham sim can equally be placed in a man cave to bring friends together or utilised by professional drivers preparing for a race. In either case, practicing on the sim unquestionably boosts confidence and results in successes. Brabham asserts, “An amateur or professional driver could simply buy a standard sim but when you invest in the Brabham Motorsport inspired simulator with the iconic Formula 1 race car livery, the driver becomes part of the Brabham racing family. It’s an experience you cannot get with a generic sim.” Sim drivers can also communicate with those they virtually race against which establishes a community of likeminded enthusiasts, elevating sim driving to an entirely different level.

The evocative Brabham Racing Motorsport simulators help to build a larger picture for the brand. The current strategy is to expand into different areas while ensuring partnerships align with the foundational values laid out by Sir Jack Brabham. “The brand has DNA. Brabham has always been pioneering in its thinking with technology so we look to collaborate with partners - whether it’s investors to start a project or a product to develop such as the case with Base Performance Simulators. The brand is an instrument for accelerating products and companies to market. Sims are advancing all the time so it’s crucial for the Brabham name to be in this space. Our racing simulators look cool, improve driver development and give us a footprint in the virtual reality world.”

While not stepping away from their motorsport focus, the simulator collaboration with BPS has naturally progressed into the opportunity to partake in the Esports Racing League competition and develop a Brabham Esports team. David Brabham looks to the future: “We’ve done the simulators. Now it’s time to get the Brabham brand into the Esports world and continue our winning ways in the virtual racing world.”