E-Shift explained: how Porsche is adding a new dimension to electric driving

12/08/2026 Porsche enhances the driving experience of the Taycan with the E-shift option – an active, emotive element that brings virtual gear changes, gear shift kicks and acoustic feedback. The software-based technology simulates an eight-speed dual-clutch transmission, involving the driver more closely in the electric sports car's power delivery.

The instantaneous responsiveness of an electric powertrain is among its greatest strengths. Torque is available without delay, and acceleration is delivered with virtually no interruption in power delivery. While this is a major advantage in terms of performance, it also presents a challenge as many of the traditional feedback cues that have long defined the sports car driving experience fade into the background. So how can the emotional connection between driver and machine be intensified when elements such as rising revs and gear changes no longer play a significant role due to the vehicle's design? The answer is E-Shift.

Driving pleasure for all the senses

Thanks to its new E-Shift option, Porsche simulates an eight-speed Porsche Doppelkupplung (PDK) transmission that can be operated either manually via the steering wheel paddles or automatically. Each gear change is accompanied by distinct interruptions to the otherwise seamless acceleration, a centrally positioned rev counter that climbs to 7,500 rpm, and a specially developed sound concept.

The aim of E-Shift is not to make the car faster. Rather, it is designed to allow drivers to experience the power delivery even more intensely and to influence it even more actively. Choosing the right moment to change gear, selecting the appropriate gear and experiencing the interplay of sound, acceleration and tactile feedback add an extra layer to the driving experience. “E-Shift brings more emotion and more feedback into the car,” says Markus Lindermeier, the Function Owner for E-Shift, summarising the vision behind the innovation.

Software complements hardware

The technology behind E-Shift is entirely software-based. Put simply, the developers have written seven additional gear changes into the code, recreating the behaviour of a real PDK transmission within the vehicle's control units. The system takes into account factors such as downshifts during braking, different shift strategies and a number of characteristic traits of conventional gearboxes. “We wanted to preserve an authentic driving experience without inheriting the drawbacks of a traditional transmission,” continues Lindermeier. “For example, gear changes can be executed more quickly than in a conventional combustion-engined car.”

One particularly distinctive aspect of the Taycan's drivetrain concept is that it already features a two-speed transmission on the rear axle. The transition from the virtual second to virtual third gear has been deliberately matched to the real mechanical gear change. E-Shift therefore combines digital driver interaction with existing hardware, seamlessly blending virtual and physical elements of the powertrain.

Sound as an integral part of the experience

The acoustic dimension is just as important as the shift action itself. Building on the Taycan's Porsche Electric Sport Sound, Porsche has developed an enhanced soundscape that responds to virtual engine speed, load conditions and road speed. A new acoustic experience also accompanies the vehicle start-up. The sound is delivered through the existing interior and exterior loudspeakers, with a distinctive rear-biased sound signature.

Operation directly from the GT-sports steering wheel

E-Shift is activated via a switch on the GT-sports steering wheel. From there, drivers can choose between automatic and manual shifting modes, while the paddles behind the steering wheel are used to execute virtual gear changes. When E-Shift is deactivated, the same paddles can be used to adjust recuperation in two stages. Pulling both paddles simultaneously also activates the Push-to-Pass function, providing a temporary boost in performance.

Despite the simulated gear changes, the Taycan's performance remains unchanged. During each shift, the system briefly reduces drive torque before immediately restoring it. As a result, overall acceleration remains the same while another layer of driving pleasure is added.

Interactive E-Performance

Through E-Shift, Porsche is demonstrating how software-defined features can expand the driving experience for those behind the wheel of an electric sports car. The technology appeals to multiple human senses – adding acoustic, visual and tactile layers of feedback to the precision of the electric powertrain to introduce a whole new level of engagement. In doing so, E-Shift combines electric performance with a more interactive driving experience.

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Consumption data

Taycan Turbo GT (WLTP)*: Consumo energia elettrica ciclo misto (gamma modelli): 21.2 – 20.5 kWh/100 km; Emissioni CO_2 ciclo misto (gamma modelli): 0 g/km; Stato [StandHeute]

Taycan GTS (WLTP)*: Consumo energia elettrica ciclo misto (gamma modelli): 20.1 – 17.7 kWh/100 km; Emissioni CO_2 ciclo misto (gamma modelli): 0 g/km; Stato [StandHeute]

*Further information on the official fuel consumption and the official specific CO_2 emissions of new passenger cars can be found in the "Leitfaden über den Kraftstoffverbrauch, die CO_2-Emissionen und den Stromverbrauch neuer Personenkraftwagen" (Fuel Consumption, CO_2Emissions and Electricity Consumption Guide for New Passenger Cars), which is available free of charge at all sales outlets and from DAT (Deutsche Automobil Treuhand GmbH, Helmuth-Hirth-Str. 1, 73760 Ostfildern-Scharnhausen, www.dat.de).

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