

December 18, 2024

Honda Presents World Premiere of Honda S+ Shift, Next-generation e:HEV Technology

TOKYO, Japan, December 18, 2024 – Honda Motor Co., Ltd. held a press briefing on next-generation technologies for its original 2-motor hybrid system, e:HEV*, and presented the world premiere of Honda S+ Shift technology. Honda plans to install Honda S+ Shift in all of its future hybrid-electric vehicle (HEV) models featuring the next-generation e:HEV, starting with the all-new Honda Prelude scheduled to go on sale in 2025.



Honda S+ Shift button

The original Honda e:HEV hybrid system combines exceptional fuel economy (environmental performance), achieved by the highly efficient 2-motor hybrid system, and high-quality and exhilarating driving experience (driving performance), delivered by the high-powered traction motor. By optimally alternating between the motor and the engine as a source of driving force and applying highly efficient controls depending on the driving environment and conditions, e:HEV achieves high fuel economy without making it a conscious effort of the driver and realizes driving at the will of the driver, responding linearly to driver inputs.

The newly developed Honda S+ Shift is a new function designed to pursue the “joy of driving” that further accentuates the sense of oneness between the driver and the vehicle, while fully leveraging the characteristics of the e:HEV system. The further advancement was made to the Linear Shift Control synchronizing vehicle speed with engine sound, which has been installed in e:HEV models starting with the Fit e:HEV that launched in 2020. Without compromising high environmental performance unique to HEV models, the Honda S+ Shift precisely controls the engine RPM during acceleration and deceleration to realize direct drive response and sharp gear shifting. Moreover, the powerful engine sound synchronizes with the Active Sound Control (ASC) system, enhancing engine sound quality by offering the engine sound in sync with engine RPM through the speaker system and the highly responsive meter display. In this way the Honda S+ Shift will stimulate all of the driver’s senses and provide exhilarating driving at the will of the driver, further “synchronizing” the driver and the vehicle.

<Key features of Honda S+ Shift>

- By linking two high-power motors with the ASC system, the Honda S+ Shift achieves dynamic engine RPM changes and a sharp upshift feeling, providing feedback that resonates with all of the driver's senses, amplifying the sense of oneness between the driver and the vehicle.
- The Honda S+ Shift further advances the Linear Shift Control applied to current e:HEV models, enabling gear shifts (upshift and downshift) according to the driving conditions and environments at all speed ranges. While turning, the Honda S+ Shift system quickly responds to driver steering input and activates shift hold, enabling the vehicle to trace the desired driving line at the will of the driver.
- By maintaining the optimal engine RPM for the particular driving conditions, the power generated by the engine during re-acceleration will be fully utilized as driving force. This greatly improves the initial response time of the motor when the driver depresses the accelerator pedal and enables overwhelmingly high response that is directly connected to driver input.
- Although e:HEV does not have a mechanical transmission mechanism, when the Honda S+ Shift is activated, the driver can shift gears with a paddle shifter, so that the driver can enjoy driving feel as if the vehicle features a transmission system. With quick gearshift responses achieved through the coordination of the engine and high-power motor, Honda S+ Shift function will strive to offer the joy of driving based on direct response to driver input.

The letter "S" in the technology name, Honda S+ Shift, has been used in the names of Honda models and technologies such as the S600, S2000, and Type S, representing the "sports spirit," which Honda believes to be the source of the joy of driving. The "+" indicates that this function will add new value represented by words such as "Synchronized" "Special" and "Sensational." The word "Shift" represents the Honda desire to make a shift that takes people and automobiles to the new world.

* e:HEV is a global communication name for the Honda high-efficiency 2-motor hybrid system with outstanding fuel economy, which is the core of Honda electrification technologies. The e: represents the Honda desire to 'energize' people and bring about a smile and high spirits by using 'electricity' as the 'energy.'