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Japanese Auto Maker and Musical Instrument Manufacturer Partner to Co-Develop Electric Sports Car Driving Sound

*Roland and GLM Creating Neo-futuristic Driving Sound System
Using World Leading Synthesizer Technology*

Hamamatsu, Japan, July 21 , 2015 — Roland Corporation and GLM Co., Ltd. announced an agreement to co-develop a neo-futuristic driving sound generation system for GLM's electric sports car. In this unprecedented collaboration between the world's leading electronic musical instrument maker and the maker of Japan's first mass-marketed electric sports car, the driving sound system will be designed using Roland's renowned SuperNATURAL synthesizer technology.

Herbie Hancock, Jimmy Page, George Duke and many more of the world's most talented musicians have relied on Roland synthesizers to create music. The new driving sound system for GLM's ZZ model will use this same professional synthesizer technology to produce sonically rich, studio quality sounds. In addition to refined sound quality, Roland's driving sound generation system will have the ability to change with each driver's real-time driving experiences. The driving sound system option for GLM's ZZ model featuring Roland's sound-making technology will be available this fall.

Electric sports cars are more popular now than ever as environmental concerns escalate, and some drivers are learning to appreciate quieter electric engines, but driving sounds are still crucial for many drivers, especially drivers of high-performance vehicles and those who want to have a fun and fulfilling driving experience. GLM and Roland are committed to creating a driving sound generation system that provides a one-of-a-kind driving experience that rivals anything currently on the market.

Roland's innovative SuperNATURAL synthesizer technology will power the ZZ model's sound generation system with dynamic and dramatic sounds that seamlessly change depending on real-time driving situations like acceleration, deceleration, and motor load variances on sloping roads. Roland's exclusive technology is based on responsiveness, which is especially important when recreating the subtleties of acoustic musical instruments electronically. These ingenious neo-futuristic sounds will give sports car enthusiasts the experience of driving a space ship on the road.

For decades the industry standard for reproducing the sound of traditional musical instruments was PCM sampling. The challenge with sampling is that most acoustic instruments respond differently to how hard they are struck, blown, or bowed – most acoustic instruments grow brighter as they get louder, for example. By meticulously modeling the subtle characteristics and responsiveness of acoustic instrument sounds, Roland was able to create the most realistic electronic music sounds. Roland's SuperNATURAL technology makes it possible to recreate these nuances electronically, and this same technology will be used to create the best driving sounds possible in the electric sports car.



ZZ Electric Sports Car

Main features of the Roland sound generation system:

- Generates driving sounds depending on the driving situation, i.e. acceleration, deceleration, and motor load variances
- Roland's acclaimed SuperNATURAL* synthesizer technology is used to synthesize dynamic, neo-futuristic sounds and then reproduce them through the car's stereo speakers
- Driving situations are detected by the system in real time through a car-mounted network that measures the car's speed, pressure on the accelerator pedal, and load to the power system
- Drivers can select from several driving sound types based on their personal preference including neo-futuristic options

**Adapted sound engine of Roland's flagship digital synthesizer*

Photo of sound system



Driving Sound System

Specs

- Outside dimension: 110 mm W x 250 mm D x 62 mm H
- Weight: 1.1 kg

About Roland Corporation

Roland Corporation is a leading manufacturer and distributor of electronic musical instruments, including keyboards and synthesizers, guitar products, electronic percussion, digital recording equipment, amplifiers, audio processors, and multimedia products. With more than 40 years of musical instrument development, Roland sets the standard in music technology for the world to follow. For more information, visit Roland.com.

About GLM Co., Ltd.

GLM is a sports car manufacturer established in 2010 and was initiated as the EV venture company of Kyoto University. GLM was started under this joint project to develop EV through Kyoto EV development Working Group and aims to realize a sustainable “zero-carbon society” and “recycling society.” GLM has been developing EV cars in cooperation with several companies in order to rapidly spread the popularity of EV to as many people as possible in Japan, and in 2014 as a result of these efforts, the ZZ sports car debuted as Japan’s first mass-marketed electric sports car. For more information, visit www.glm.jp.