Giving battery-powered vehicles a voice

Silently running hybrid (HV) and electric vehicles (EV) present real dangers to vulnerable pedestrians as well as increasingly distracted citizens wandering into crosswalks. Congress passed the Pedestrian Safety Enhancement Act (PSEA) in 2010 to improve roadway safety and adapt to automotive trends. Analyzing crash and performance data, lawmakers determined that every vehicle needs to be equipped with a capability that allows all pedestrians to gauge the speed, motion, location and direction of its travel.

The PSEA prompted the National Highway Traffic Safety Administration to develop regulations (FMVSS 141) that define the minimum sound requirement for HVs and EVs. Manufacturers must install a sound-emitting mechanism for these vehicles by September 2020. Anything driving on public roads or operating in public spaces needs to sound like a running, motorized vehicle.

The Electric Vehicle Alert System Surpasses Standards

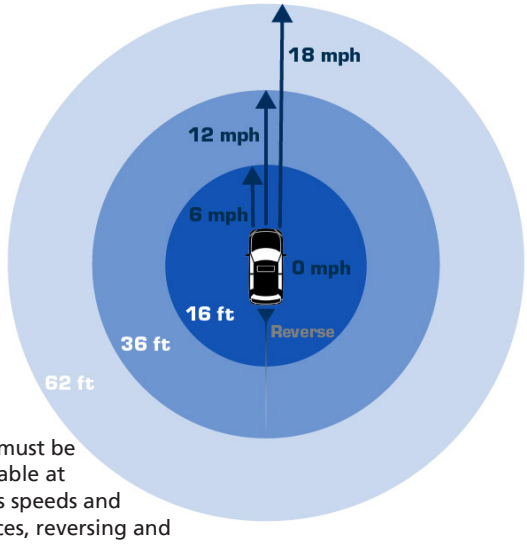
As the leading manufacturer of audible warning devices, ECCO is developing the Electric Vehicle Alert System (EVAS) to enhance safety and provide automakers a dependable, compliant solution.

EVAS fully complies with regulations and it exceeds them in several areas. The durable, compact design has been tested to withstand the most extreme conditions, on and off the road. The tones are customizable and operate in nine frequency bands, allowing automakers to develop an audible brand. ECCO is also working with companies such as bus, material handling and autonomous vehicle manufacturers. Although these types of vehicles are not required to have a sound-emitting device, safety-conscious industry professionals are proactively adapting the technology.

Mount it, plug it in and customize the sound profile. Going into electric vehicle production or need to upgrade a fleet? EVAS is a unique all-in-one solution that will have battery-powered vehicles humming in no time.

FMVSS 141 By the Numbers

HVs and EVs under 10,000 lbs. are required to have a sound-emitting device.



Tones must be detectable at various speeds and distances, reversing and while stationary (not in park).

More Numbers to Know

315 – 5,000 Hz
Authorized tone frequency range

55 dB
Must hear above ambient street noise

September 1, 2020
Compliance date for HVs and EVs