

QRTV - France

Positions and proposals

**Measures ensuring the
audibility of hybrid and
electric vehicles**

France positions

- France prefer a compulsory system for installation of *Acoustic Vehicle Alerting System (AVAS)*.
 - France supports Japan proposal :
 - Basis on the R.E.3 and the recommendation in ECE/WP29/GRB/2012/6
 - Regulation should be quantifiable not abstract
 - Sound level: Sufficient but not excessive
- Using R.E.3 document ECE/WP29/GRB/2012/6 as a starting document with some quantifiable requirements

Proposals for Applicability

- Regulatory specifications be limited to EVs and HEVs, operating in their electric mode which have sound level below xx dB(A) (according testing method as ISO 16254)
- The AVAS shall automatically generate a sound in the minimum range of vehicle speed from start up to approximately 20 km/h. The deactivation speed would be between 21 and [40] km/h.

Proposals for signal characteristics

- The operating audible signal shall have a minimum of one tone synchronize with vehicle speed with a required pitch shifting.

Proposals for operating conditions

- Basic operating conditions to be tested shall be :
 - A “ just starting” condition (>0 km/h),
 - 10 km/h,
 - 20 km/h.

Proposals for sound level

- Specifications on overall level (not on 1/3 octave bands) for required operating conditions shall be within a range : A minimum and a maximum sound level.
- Sound level required shall be sufficient but not excessive :
 - Minimum sound level shall be adjust considering minimum ICE vehicles sound levels,
 - Maximum sound level shall be adjust considering mean ICE vehicles sound levels,

Interior sound levels shall be considered for public acceptability of E vehicles (specially for small one)

Thank you for your attention