

9-2 Installation of audible warning devices: Effective from 2019/1/1

Refer to: R28 00-S5

9-2.1 Effective date and Scope:

- 9-2.1.1 Effective date from 2019/1/1, the new vehicle variants of category symbols M and N, shall comply with this regulation and using qualified audible warning devices which has already conformed "VSTD".
- 9-2.1.2 Effective date from 2019/1/1, the new vehicle variants of category symbols L1, L2, L3 and L5, and from 2021/1/1 all vehicle variants of category symbols L1, L2, L3 and L5, shall comply with this regulation and using qualified audible warning devices which has already conformed "VSTD". The existing vehicle variants of category symbols L1, L2, L3 and L5 conform to "9-1 Installation of audible warning devices" of "VSTD" shall comply with paragraph 9-2.5.2 in addition.
- 9-2.1.3 Technical Service can carry out test according to UN Regulations that this direction harmonized with: UN R28 00 Series of amendments and following amendments of above-mentioned regulation.

9-2.2 Definition

9-2.2.1 For the purpose of this Regulation:

- 9-2.2.1.1 "Audible warning device" means a device consisting of one or several sound emission outlets that are excited simultaneously, emitting an acoustic signal which is intended to give audible warning of the presence of a vehicle in a dangerous road traffic situation and which is intentionally operated by a driver; or
- 9-2.2.1.2 "Audible warning system" means a combination of audible warning devices mounted on a common bracket operating simultaneously by the actuation of a single control; or
- 9-2.2.1.3 "Multiple audible warning system" means a combination of audible warning devices capable of functioning independently.

9-2.3 Installation of audible warning devices shall according to suitable types and range of principle are as below :

9-2.3.1 The same vehicle category symbol

The official directions are written in Chinese, this English edition is for your reference only.

9-2.3.2 The same brand and vehicle type series.

9-2.3.3 The same chassis brand.

9-2.3.4 Chassis manufacturers announced that the same chassis vehicle type series.

9-2.3.5 If use chassis vehicle instead of completed vehicle for entire or partial testing, which shall according to suitable types and range of principle are as below :

9-2.3.5.1 The same brand.

9-2.3.5.2 Chassis manufacturers declared that the same chassis vehicle type series.

9-2.4 Specifications

9-2.4.1 Declaration of design compliance

9-2.4.1.1 The audible warning device, audible warning system, multiple audible warning system shall be so designed, constructed and assembled as to enable the vehicle, in normal use, despite the vibration to which it may be subjected, to comply with the provisions of this Regulation.

9-2.4.1.2 The audible warning device(s), audible warning system(s), multiple audible warning system(s) and its (their) mounting elements to the vehicle shall be so designed, constructed and assembled as to be able to reasonably resist the corrosive phenomena to which it is exposed with regards to the conditions of use of the vehicle, including regional climate differences.

9-2.4.2 Specifications regarding sound levels

9-2.4.2.1 The sound made by the audible warning device(s), audible warning system(s), multiple audible warning system(s) fitted to the vehicle type submitted for approval shall be measured by the methods described in paragraph 9-2.5.3.

9-2.4.2.2 The values measured in accordance with the provisions of paragraph 9-2.5.3 shall be entered in the test report.

9-2.5 Motor Vehicle Signal for audible warning devices

9-2.5.1 The audible warning devices fitted on category symbols M and N: The A-weighted sound pressure level emitted by the audible warning device(s), audible warning system(s), multiple audible warning system(s) fitted on the vehicle shall be measured at a distance of 7.00 (+/- 0.10 m) in front of the vehicle (see Figure 1), which is being placed on an open site, on flat concrete or asphalt surface. The microphone of the measuring instrument shall be placed approximately (+/-0.10 m) in the mean longitudinal plane of the vehicle. The maximum sound-pressure level shall be sought within the range of 0.5 and 1.5 m above the ground, and the height, at which the maximum sound-pressure level was found has to be fixed for the purpose of taking the measurements prescribed below. The sound pressure level shall be measured at that fixed height for a duration of at least 3 seconds. The final result shall be the maximum A-weighted sound pressure level of the reading period (the sound-pressure level weighted in accordance with curve A), rounded mathematically to the nearest integer. The motor vehicle signal for audible warning devices shall be at least: equal to 87 dB (A) and not more than 112 dB (A). The sound pressure level of the background noise and wind noise must be at least 10 dB (A) below the sound to be measured.

9-2.5.2 The A-weighted sound pressure level emitted by the audible warning device(s), audible warning system(s), multiple audible warning system(s) fitted on the vehicle shall be measured at a distance of 7.00 (+/- 0.10 m) in front of the vehicle, which is being placed on an open site, on flat concrete or asphalt surface. The microphone of the measuring instrument shall be placed approximately (+/-0.10 m) in the mean longitudinal plane of the vehicle. The maximum sound-pressure level shall be sought within the range of 0.5 and 1.5 m above the ground, and the height, at which the maximum sound-pressure level was found has to be fixed for the purpose of taking the measurements prescribed below. The sound pressure level shall be measured at that fixed height for a duration of at least 3 seconds. The final result shall be the maximum A-weighted sound pressure level of the reading period (the sound-pressure level weighted in accordance with curve A), rounded mathematically to the nearest integer. The maximum sound-pressure level of the audible signal tested shall be at least :

(a) equal to 83 dB(A) and not more than 112 dB(A) for the signals of motorcycles of a power less than or equal to 7 kW(9.51 horsepower);
The sound pressure level of the background noise and wind noise must be at least 10 dB (A) below the sound to be measured.

(b) equal to 87 dB(A) and at most 112 dB(A) for the signals of a power greater than 7 kW(9.51 horsepower). The sound pressure level of the background noise and wind noise must be at least 10 dB (A) below the sound to be measured.

9-2.5.3 Methods of measurement on stationary vehicle

9-2.5.3.1 The vehicle shall comply with the following specifications:

9-2.5.3.1.1 In case of audible warning device(s), audible warning system(s), multiple audible warning system(s) supplied with direct current, the test voltage shall be supplied by either:

(a) The vehicle battery only; or

(b) The vehicle battery with the vehicle engine warmed-up and at idle; or

(c) With an external power source supply connected to the audible warning device(s), audible warning system(s), multiple audible warning system(s);

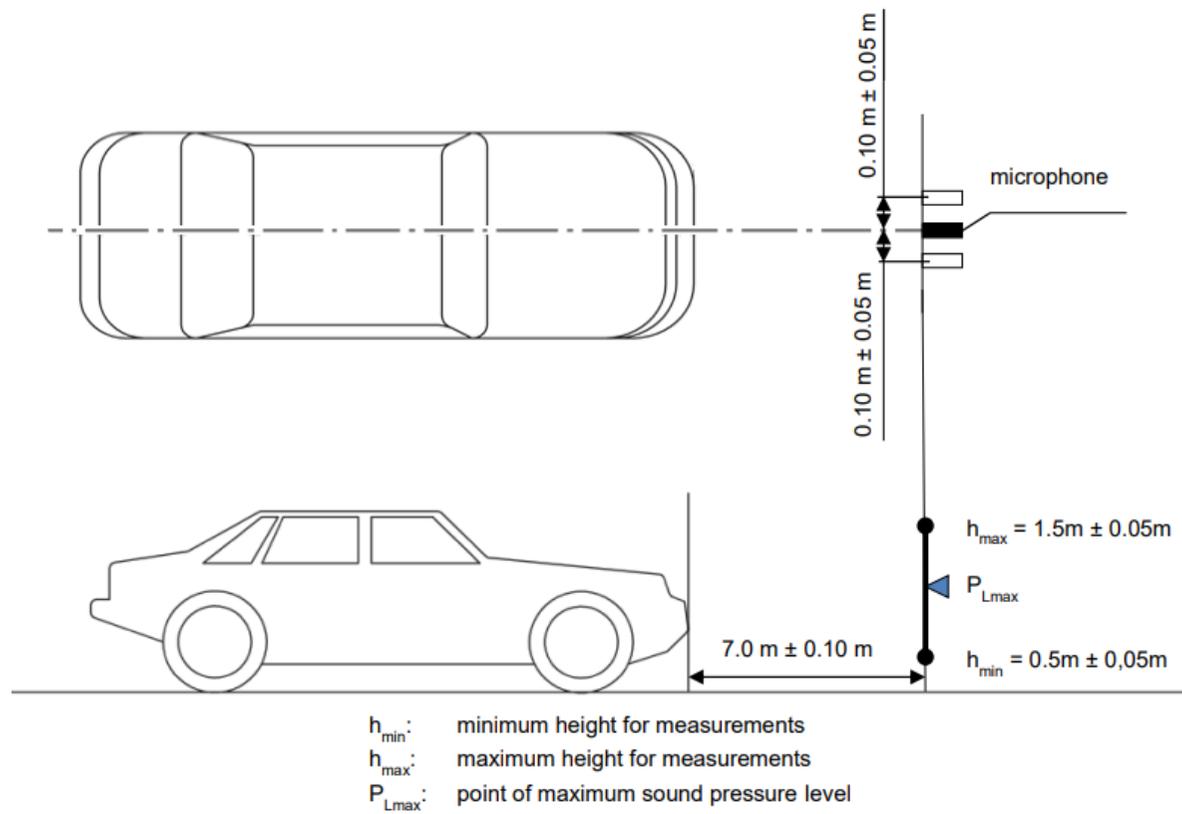


Figure 1. Microphone positions for measurements of audible warning signals of motor vehicles