

# Status report to GRBP #75

This document is based on GRBP-75-12.  
The framework of the proposed new regulation,  
focusing on points related to the GRSG are explained in  
this document.

## Task Force on Reverse Warning Sound issues

# History of TFRWS

- At the sixty-fifth session of the former Working Party on Noise (GRB), “GRB agreed that, rather than amending Regulation No. 28 (Audible warning device), a new Regulation on reversing alarm should be prepared. GRB noted that the main issues of the future Regulation would be its scope (categories of vehicles), the possible existence of a pause switch and the alarm sound composition (sound levels and frequencies).
- After first task force meeting held on November 2018, 29 meetings were held to make the draft of new regulation.
- At the seventy-fifth session of the GRBP, GRBP adopted ECE/TRANS/WP.29/GRBP/2022/5, as amended by GRBP-75-13, and requested the secretariat to submit it for consideration and vote at the June 2022 sessions of WP.29 as a draft new UN Regulation on reversing alarm.
- The proposed draft of new regulation refer to the GRSG regulations (R158) as the requirements for the pause switch, and we were kept informed to GRSG by Switzerland of the progress.

# Results of discussion

## Composition of the draft

- The draft consists of 2 parts.
  - I. Part I. Audible reverse warning device
  - II. Part II. Audible reverse warning signals of motor vehicles

## Scope

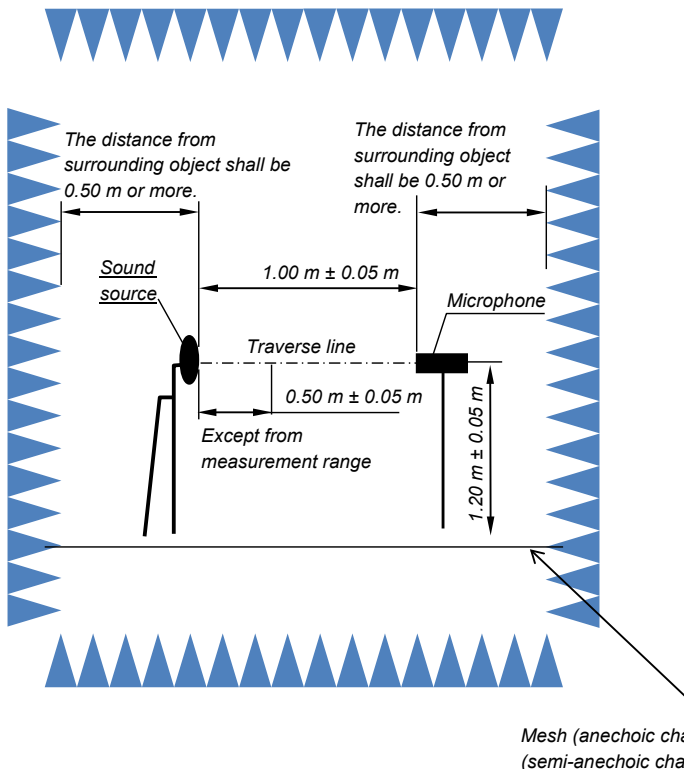
- 1.1.1. PART I: Approval of audible reverse warning devices which are intended for fitting to motor vehicles of categories M2 ( $M > 3500$  kg), N2, N3 and M3;
- 1.1.2. PART II: Approval of motor vehicles listed in 1.1.1. with regard to fitting of audible reverse warning devices automatically activated when reverse gear is selected and the propulsion system is on.

# Results of discussion

## Test method : Part I (Non-self-adjusting)

Non-self-adjusting device is tested at 1m distance and 1.2m height.

Since the upper limit of “*Low level*” and the lower limit of “*Normal level*” are adjacent to each other, the difference between the measured value of “*Low level*” and the measured value of “*Normal level*” is specified to be 5 dB or more.



6.3.7. Under the conditions set forth above, the A-weighted sound pressure level shall comply with the following for “*Non-self-adjusting audible reverse warning device*” or “*Multiple audible reverse warning systems*”:

- equal to 62 dB(A) and less than 77 dB(A) for the signal of “*Low level*”
- equal to 77 dB(A) and not greater than 92 dB(A) for the signal of “*Normal level*”
- equal to 97 dB(A) and not greater than 112 dB(A) for the signal of “*High level*”

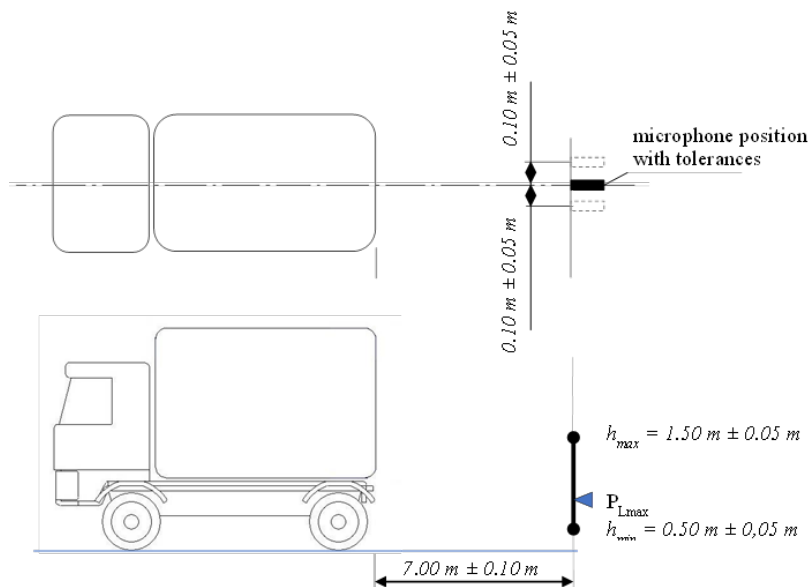
The offset between the measured values of “*Low level*” and “*Normal level*” shall be at least 5 dB in the practical design of the audible reverse warning device.

# Results of discussion

## Test method : Part II (Non-self-adjusting)

SPL is measured at 7m distance from rear edge of a vehicle and find  $L_{MAX}$  between 0.5m and 1.5m height.

The offset between the measured values of “*Low level*” and “*Normal level*” shall be at least 5dB.



$h_{\min}$ : minimum height for measurements  
 $h_{\max}$ : maximum height for measurements  
 $P_{L_{\max}}$ : point of maximum sound pressure level

14.2.2.1. “*Non-self-adjusting audible reverse warning device*” or “*Multiple audible reverse warning system*” shall emit sound:

equal to 45 dB(A) and less than 60 dB (A) for the signal of “*Low level*”

equal to 60 dB(A) and not greater than 75 dB (A) for the signal of “*Normal level*”

equal to 80 dB(A) and not greater than 95 dB (A) for the signal of “*High level*”

The offset between the measured values of “*Low level*” and “*Normal level*” shall be at least 5dB in the practical design of the audible reverse warning device.

# Results of discussion

## Pause function

In order to temporarily stop the reverse warning sound, it was decided to allow the vehicle to be installed with a pause function in case it has another safety device approved by UN-R158 (Device(s) for means of rear visibility or detection).

### 14.3. Pause function

The manufacturer may install a pause function to disable temporarily the audible reverse warning device when a vehicle of category M2 (M>3500 kg), N2, M3 or N3 is equipped with a non-audible safety system, device(s) for means of rear visibility or detection **as described in UN Regulation No. 158, paragraph 1.3.**, allowing the driver to check the hazard area behind the vehicle, including when towing vehicle(s) of category O, and it is ensured that such safety system(s) functions while reversing. Any other disabling function which does not satisfy the specifications below is prohibited.

14.3.1 When the towed vehicle(s) of category O is(are) not equipped with a device described in UN Regulation No. 158, paragraph 1.3. which is valid for vehicles of category O, the activation of the pause function shall be disabled at the vehicle of category M2 (M>3500 kg), N2, M3 or N3 (the audible reverse warning device shall still be active).

Thank you !!