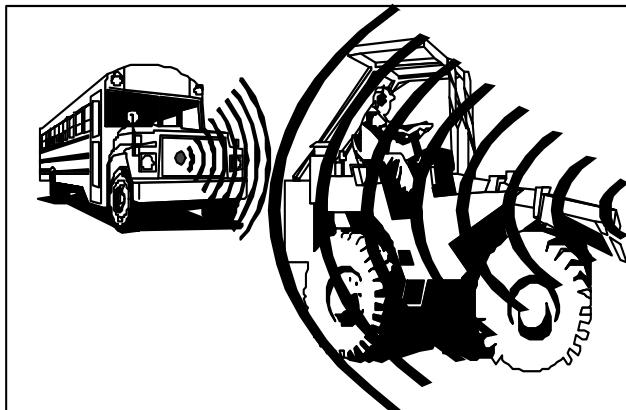


Focus on BIA's work

Berufsgenossenschaftliches Institut für Arbeitsschutz

No.: 0015 Hearing protectors for vehicle drivers

○ Problem



In the past, German road transport legislation has not permitted drivers of vehicles to wear hearing protectors. Generally, however, drivers' cabs do not constitute a high-noise area in which hearing protectors need to be worn. Only on certain types of vehicle – in particular ride-on machines – are rating levels observed which require hearing protectors to be worn under the UVV accident prevention regulations governing noise.

However, not all hearing protectors ensure conservation of signal audibility when used. In order to enable vehicle drivers to wear hearing protectors, the traffic police and the expert committee of the federal and regional authorities responsible for road transport have required certification of the necessity for hearing protectors to be worn and of the type of hearing protector which is licensed. This certificate, which must be produced at police checks, is issued by the BGs.



Illustration

Hearing test in a driver's cab in accordance with BGI 673 (formerly ZH 1/563)

Picture courtesy of the Institution for Statutory Accident Insurance and Prevention in the Vehicle Operating Trades

○ Activities

The influence of hearing protectors upon the audibility of acoustic traffic signals was studied on test subjects with normal hearing ability. Model analyses of signal audibility were performed for a selection of representative workplaces and for all hearing protectors with EU type-examination certificate registered with the BIA. The sound attenuation of the driver's cab was also considered with regard to audibility of the traffic signal where appropriate.

○ **Results and Application**

A list of suitable hearing protectors was drawn up which are recommended as being suitable for adequate signal audibility according to the assessment metrics formulated by the BG Expert Committee Transport. A code of practice (BGI 673, formerly ZH 1/563) issued by this committee describes the licensing procedure for hearing protectors for use by vehicle drivers in high-noise areas on the public highway:

- Preliminary selection of suitable hearing protectors according to the BIA list
- Hearing test at the workplace
- Issuing of the requisite certificate

○ **Area of Application**

Construction, transport, sanitation and disposal businesses; highway maintenance departments

○ **Additional Information**

- Pfeiffer, B.H.; Hoormann, H.-J.; Liedtke, M.: Lärmarbeitsplätze in und auf Fahrzeugen im öffentlichen Straßenverkehr. Der Einfluss von Gehörschützern auf die Hörbarkeit von Verkehrssignalen. BIA-Report 5/97. Published by: Hauptverband der gewerblichen Berufsgenossenschaften (HVBG), Sankt Augustin 1997
- Empfehlung zur Benutzung von Gehörschützern durch Fahrzeugführer bei der Teilnahme am öffentlichen Straßenverkehr (BGI 673, formerly ZH 1/563) (01.03). Carl Heymanns, Cologne 2003
- Liedtke, M.: Use of Zwicker method to predict signal audibility in noise with hearing protection devices. Joint Meeting. 137th Regular Meeting of the Acoustical Society of America. 2nd Convention of the European Acoustics Association, Forum Acousticum 1999. Integrating the 25th German Acoustics Data Conference. Technical University, 14-19 March 1999, Berlin. Acta Acustica 85 (1999) No. 1, p. 205
- Liedtke, M.: Selection of hearing protectors to be used in noise areas in road traffic or railway systems in Germany. Advances in Noise Research, Protection Against Noise. Vol. II. Ed.: Deepack Prasher, Linda Luxon and Ilmari Pyykkö. Whurr Publisher Ltd, London 1998, pp. 177-182

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○ **“Focus on BIA's Work”**

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