

Hearing protectors — Recommendations for selection, use, care and maintenance — Guidance document

The European Standard EN 458:1993 has the status of a
British Standard

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This British Standard, having been prepared under the direction of the Personal Safety Equipment Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 March 1994

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National foreword

This British Standard has been prepared under the direction of the Personal Safety Equipment Standards Policy Committee and is the English language version of EN 458 *Hearing protectors — Recommendations for selection, use, care and maintenance — Guidance document*, published by the European Committee for Standardization (CEN).

EN 458 was produced as a result of international discussions in which the United Kingdom took an active part.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 18, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

UDC

Descriptors: Personal protective equipment, hearing protectors, ear-plugs, classifications, selection, utilization, warning notices, maintenance, certification

English version

Hearing protectors — Recommendations for selection, use, care and maintenance — Guidance document

Protecteurs contre le bruit —
Recommandations relatives à la sélection, à
l'utilisation, aux précautions d'emploi et à
l'entretien — Document de guide

Gehörschützer — Empfehlungen für Auswahl,
Einsatz, Pflege und Instandhaltung —
Leitfaden Dokument

This European Standard was approved by CEN on 1993-12-16. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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CEN

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Foreword

These guidelines have been prepared by Technical Committee CEN/TC 159, Hearing Protectors, based upon material made available by ISO/TC 94/SC12, Hearing Protectors.

This European Standard has been prepared under a mandate given to CEN by the Commission of the European Communities and the European Free Trade Association, and supports essential requirements of EC Directive(s).

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 1994, and conflicting national standards shall be withdrawn at the latest by June 1994.

In accordance with the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

WARNING

This document was published as a European Standard to provide a harmonized base for national standards.

It is a guidance document which means that it cannot be used for type-approval purposes.

The guidance contained in this standard is not intended to be exhaustive, but to highlight important aspects to which attention should be given.

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0 Introduction

Hearing protection devices are items of personal protection equipment which as a result of their attenuation properties, reduce the effects of noise on hearing, in order to avoid hearing damage.

This document has been prepared to give guidance to all persons who have to supply, purchase or wear hearing protectors, and to encourage the use of effective criteria in their selection, use, care and maintenance.

In order that the protection offered by hearing protectors be effectively realized, hearing protectors should be used all the time that the user is in a potentially hazardous noise environment. In the selection of hearing protectors, attention is therefore drawn to the importance of considering factors which may influence comfort and acceptance.

In hearing conservation programmes, measures other than personal hearing protection, such as the identification of noise areas, assessment of personal noise exposure, and noise abatement, require attention as a priority, as shown in Figure 1.

1 Scope

This European Standard gives recommendations for the selection, use, care and maintenance of hearing protectors.

Special types of hearing protectors are outside the scope of this standard, although they are classified in 4.4, and some of the guidance will be relevant to them.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 352-1:1992, *Hearing protectors — Safety requirements and testing — Part 1: Ear-muffs*.

EN 352-2:1992, *Hearing protectors — Safety requirements and testing — Part 2: Ear-plugs*.

EN 457:1990, *Danger signals for workplaces — Auditory danger signals*.

EN 24869-1:1992, *Acoustics — Hearing protectors — Part 1: Subjective method for the measurement of sound attenuation* (ISO 4869-1:1990).

ISO/DIS 4869-2:1992, *Acoustics — Hearing Protectors — Part 2: Estimation of effective A-weighted sound pressure levels when hearing protectors are worn*.

3 Definitions

For the purpose of this standard, the following definitions apply.

3.1

action level L_{act}

maximum daily personal noise exposure level ($L_{Aeq\ 8h}$) and/or peak level L_{peak} above which level protectors must be made available and/or must be worn as stipulated by national laws or regulations, or custom and practice

3.2

care

the day-to-day attention given to the protector by the wearer

3.3

effective protection

the reduction in $L_{Aeq\ 8h}$ achieved by wearing the hearing protector, taking into account the time for which it is worn during exposure to the noise

3.4

maintenance

the regular inspection and repair of the protector, for example the replacement of defective ear-muff cushions

3.5

over-protection

the selection and wearing of a hearing protector with too high an attenuation

NOTE This may lead to a sense of isolation and difficulties with perception of sounds.

3.6

selection

the process of choosing the most suitable protector

3.7

use

the day-to-day wearing of a hearing protector by the person to be protected

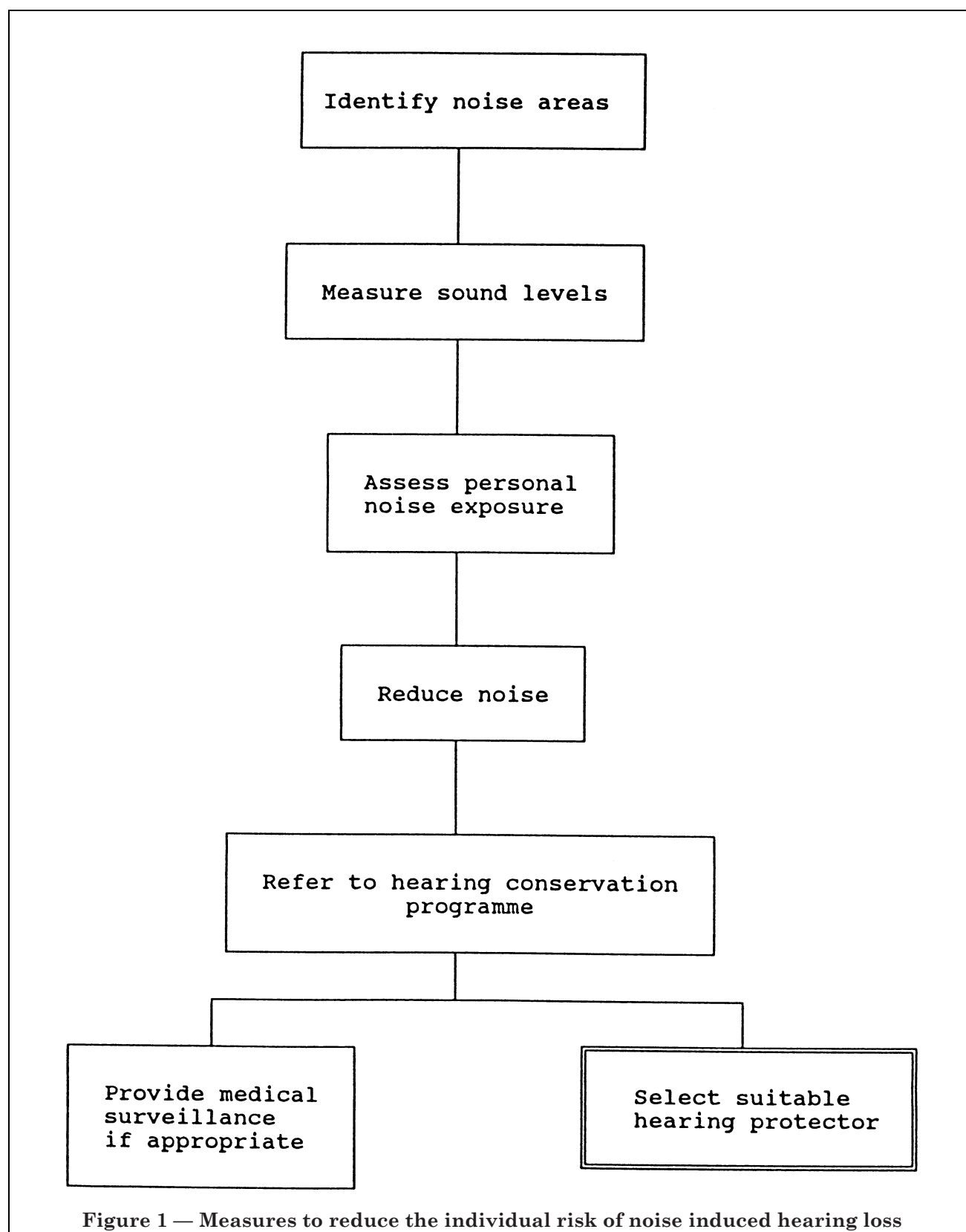


Figure 1 — Measures to reduce the individual risk of noise induced hearing loss