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# Australian Standard 2254-1979

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## RECOMMENDED NOISE RATINGS FOR VARIOUS AREAS OF OCCUPANCY IN VESSELS



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THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL organizations and departments were officially represented on the committee entrusted with the preparation of this standard:

Acoustic, Marine, and Engineering Consultants

Australian Acoustical Society

Australian Chamber of Shipping

Australian Shipbuilders Association

Classification Societies

Department of Defence

Department of Industry and Commerce

Department of Transport

Royal Australian Institute of Architects

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This standard, prepared by Committee AK/7, Noise in Ships, was approved on behalf of the Council of the Standards Association of Australia on 19 March 1979, and was published on 1 May 1979.

In order to keep abreast of progress in industry, Australian standards are regularly reviewed. Suggestions for improvements to published standards, addressed to the head office of the Association, are welcomed.

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**AUSTRALIAN STANDARD**

**RECOMMENDED NOISE  
RATINGS FOR VARIOUS  
AREAS OF OCCUPANCY IN  
VESSELS**

**AS 2254—1979**

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## PREFACE

This standard was prepared by the Association's Committee on Noise in Ships.

It provides design criteria for conditions affecting the acoustic environment within spaces in various categories of vessels. The ambient sound levels recommended take into account the requirements and activities of the occupants. They will also assist in selection of plant and equipment used in these spaces.

This standard is intended to assist in preserving the hearing of persons exposed to shipboard noise, and to provide an acceptable shipboard acoustic environment for working, communicating, rest, and recreation. By recommending noise rating criteria on the deck of new ships, this standard will also assist planning authorities in the siting of residential areas relative to ports and the constructional requirements of buildings.

For specification purposes with respect to the control of noise, this standard considers the technical provisions necessary for various categories of vessels and it is recommended that the provisions of Clause 5.3.2 be used in relation to new vessels after 1 January 1980.

This standard requires reference to the following standards:

- AS 1269 SAA Hearing Conservation Code
- AS 1270 Hearing Protection Devices
- AS 1319 Safety Signs for the Occupational Environment
- AS 1469 Criteria Curves for Rating Noise and Establishing Acoustic Environment
- AS 1948 Method for Measurement of Airborne Noise on Board Vessels.

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# STANDARDS ASSOCIATION OF AUSTRALIA

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## Australian Standard

### RECOMMENDED NOISE RATINGS FOR VARIOUS AREAS OF OCCUPANCY IN VESSELS

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**1 SCOPE.** This standard provides design criteria for maximum recommended noise ratings within occupied spaces in new vessels of the categories described in Table 1, taking into account the functions of the different spaces.

**NOTES:**

1. Some deterioration in acoustic environment may take place with the elapse of time after the vessel enters service. This standard does not attempt to quantify this change.
2. For passenger vessels, appropriate noise ratings (or sound levels) for sleeping accommodation and other areas used by passengers should be set by the prospective owner. Such noise ratings (or sound levels) should be no higher than those set for crew areas in this standard.

**2 APPLICATION.** This standard provides guidance to the designer for the provision of a certain acoustic environment within occupied spaces of a vessel. It also provides guidance in the selection of plant and equipment used in such spaces.

**NOTES:**

1. Attention is drawn to the cumulative noise effect of more than one noise source within an area. Due allowance should be made for the total number of noise sources.
2. See Appendix A regarding corrections where sound level measurements are made to determine the acceptability of plant and equipment used in the occupied spaces.

### **3 METHOD OF SOUND MEASUREMENT AND NOISE RATING.**

**3.1 General.** Sound level measurements shall be made in accordance with AS 1948. The noise rating shall be determined in accordance with AS 1469, under conditions prescribed in Clause 4.

**NOTE:** For approximate evaluations and monitoring control purposes, maximum sound level values in dB(A) may be used. See also Notes to Clause 5.3.

**3.2 Narrow Band Signals.** The presence of discrete tones or narrow band signals may cause the sound level to vary spatially within a particular area. Where this occurs, the sound level shall be determined as the highest level measured in the occupied location(s).

Discrete tones or narrow band signals in the ambient sound level affect the annoyance of sound. Where a discrete tone or narrow band signal is audible and where the ambient sound level is measured in dB(A), an upward adjustment of 5 shall be made to the value of the measured level. Where the ambient sound level has been determined as a noise rating number, this adjustment shall not be made.