

**DESIGN FOR GOOD ACOUSTICS
AND NOISE CONTROL**

Design for Good Acoustics and Noise Control

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Contents

<i>Preface</i>	vii
<i>Acknowledgements</i>	viii
Section 1 Properties and Behaviour of Sound	1
Section 2 Subjective Aspects of Sound	37
Section 3 Noise Control	54
Section 4 Room Acoustics	138
<i>Bibliography</i>	205
<i>Index</i>	209

Preface

This book has been written primarily as a textbook for students of architecture, interior design, town planning and surveying. With this broad purpose in mind I have attempted to provide in one volume of reasonable size as comprehensive a survey as possible of those acoustic factors which affect the design of rooms, buildings and urban development. This has meant dealing somewhat briefly with some aspects of the subject while other areas are discussed in more depth. The fairly extensive bibliography should, however, direct the student to further sources of study in those cases where space did not allow of a more detailed treatment. For example, I considered that an introduction to noise level contouring was all that was necessary since this technique is very fully described in inexpensive publications issued by the Department of the Environment.

I have also tried to arrange the material in a way that will make subsequent reference easy. There is first of all the broad division into four sections

- (1) Properties and behaviour of sound
- (2) Subjective aspects of sound
- (3) Noise control
- (4) Room acoustics.

In the last two sections principles and calculations are separated, again for easy reference. Calculations have been limited to those which I think the student will find most useful in design and which typify the methods employed.

Within this broad framework each subsidiary item has a clear subheading in the text and these are listed on a contents page at the beginning of each section. These pages, taken together, form an index that may often be more useful than the orthodox index at the end of the book. For example, it is possible for the reader to refresh his memory of a given item by following the thread of the subject through the four contents pages. If we take the phenomenon of 'screening' as a case in point, the reader will find this developed under the following subheadings:

Diffraction and sound shadows. Reduction of internal noise by screening.
Reduction of external noise by screening. Screening by planting. Effect of screening, single-figure calculations. Effect of screening, six-figure calculations.
Acoustics for speech, sound shadows.

Finally, I have not assumed any previous knowledge of the physics of sound, building acoustics or even logarithmic scales. Many students will therefore find the earlier part of the book somewhat elementary but I considered it best not to allow any possible gaps in knowledge to hinder the understanding of the rest of the book.

J. E. MOORE

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