BOOK REVIEW

Acoustical Designing in Architecture

By Vern O. Knudsen and Cyril M. Harris. Published (1950) by John Wiley, 440 Fourth Ave., New York 16. 404 pp. + 45 pp. appendix + 7 pp. index. 180 illus. + 8 tables. 5½ × 8¾ in. Price $7.50.

This is the most readable, useful and practical book on architectural acoustics which we have encountered. Naturally, most of the information can be found in more complete and complicated form in the Acoustical Society Journals, earlier books and other periodical literature. Such a collection, we believe, would be far too extensive and technical for the average architect and engineer (other than the acoustical engineer) to maintain or use to his advantage.

Professor Knudsen's earlier book, *Architectural Acoustics*, embracing much of his original research, furnishes fit foundation for this new and excellent collaboration. Comparison of the two in such matters as sound absorptive materials shows that many of the materials mentioned in the first book have disappeared from the market, while new ones (they generally have coined names) have been developed by a fast-moving industry even since the publication of the present book. Changes such as this can be expected in materials, methods and sound systems, but certainly, the well-presented basic information will remain useful.

The authors have designed this book primarily for architects and students of architecture, and there is no doubt that if an architect will make use of this book intelligently, he will avoid most of the glaring errors which crop up in public buildings. We suggest that Chapters 9 through 14 be read before consigning the book to a shelf. This procedure will probably arouse enough interest to make the reader do the first eight chapters, at least lightly. Chapters 1 through 8 deal largely with the physics of sound and with the nature of speech and hearing. Chapters 9 through 14 are concerned with basic design, the selection of a proper site, arrangement of rooms, control of noise both air-borne and structurally transmitted, and use of sound amplification systems. These parts together offer a fairly simple and lucid explanation of the nature and behavior of sound in its relation to architecture. Specific problems in rooms for special uses are treated in the remainder of the book. Reference may be made to these sections as the need requires.

There is a chapter on each of the following: auditoriums; school buildings; commercial and public buildings; homes, apartments and hotels; church buildings; broadcasting, television and sound-recording studios.

While this book purports to be a non-mathematical treatise, it frequently steps out of character with the sudden appearance of mathematical terms not commonly met with in architecture. These constitute the common language of the acoustical engineer or physicist but probably convey little information to the architect. However, many of the expressions given are interpreted by graphs which, if studied, will supply a fairly close answer.

Undoubtedly, complicated problems will arise where the architect may need the services of a specialist in this field, but his task will be considerably lightened and his resulting design better if he has a basic understanding of the acoustic principles underlying the form and structure being considered.

Aside from the use of this book by the architect and reader of general interest, it is recommended as a good additional reference work for engineers in the sound field. The careful listing of design procedure, the extensive collation of sound-absorbing coefficients of different materials and data on sound transmission of various constructions make the book very much worth while.—JAMES Y. DUNBAR, William J. Scully Acoustics Corp., 101 Park Ave., New York 17.

SMPTE Officers and Committees: New rosters are scheduled to be published in the April JOURNAL.