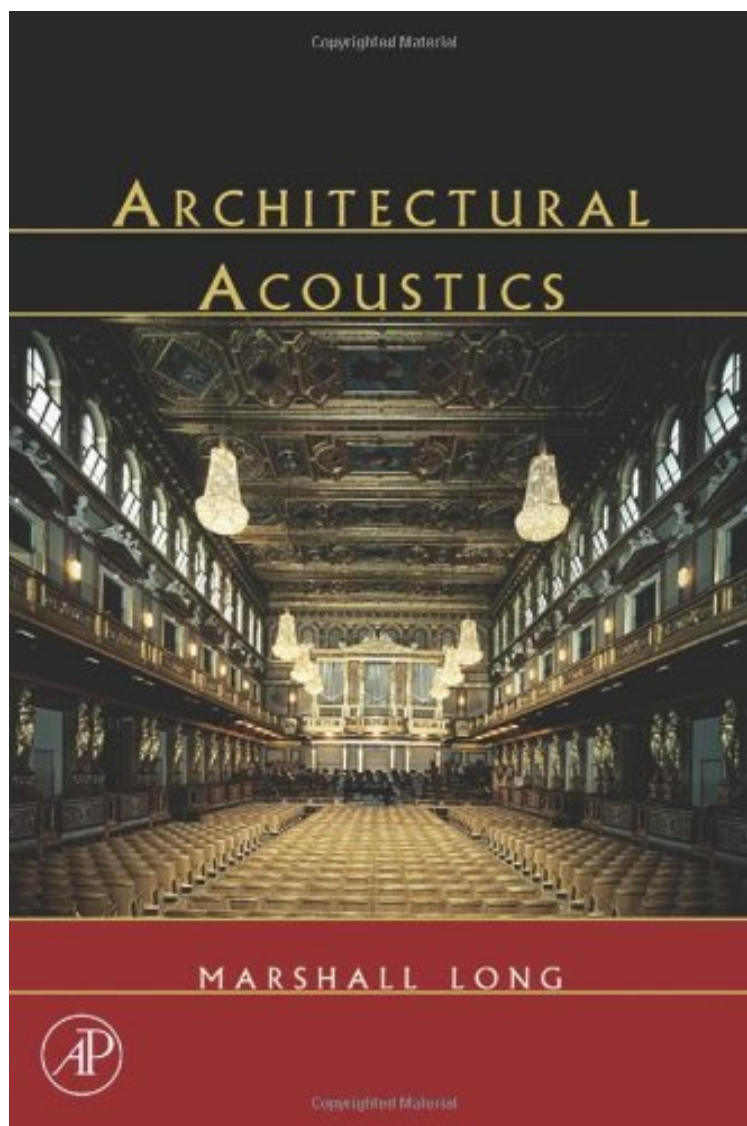


## Architectural Acoustics (Applications of Modern Acoustics)

*Marshall Long*

*\*Download PDF / ePub / DOC / audiobook / ebooks*



#2741815 in eBooks 2005-12-23 2005-12-23 File Name: B0017UGTOI | File size: 52.Mb

**Marshall Long : Architectural Acoustics (Applications of Modern Acoustics)** before purchasing it in order to gauge whether or not it would be worth my time, and all praised Architectural Acoustics (Applications of Modern Acoustics):

2 of 2 people found the following review helpful. Excelent book on AcousticsBy yoyiHaving read some architectural acoustics books, I can recommend this one as one of the best. It is an excellent resource. In fact, I should not have spent some of my money on some oldie books, which were cheap but not as good.This is an up to date book, and it is worth every penny you spend. If you are a student or someone interested in the topic architectural acoustics, it is a

good resource but it has many formulas (sorry if you do not like physics). With it I have been able to specify to an architect who does not know hardly anything about acoustics how to correct his design for a contemporary church. I also recommend "Handbook for Sound Engineers" as a compliment to this book, for people that are trying to get the best of both worlds -- acoustics and audio. These are both good buys, and can help you very much. Remember that to be a good consultant you need to have a good library of books and this one would be an excellent part of your reference library.

0 of 0 people found the following review helpful. Five Stars  
By Auditiv Klassekamp  
Great book. Easy to understand and grasp.  
20 of 21 people found the following review helpful. Professional Review  
By Leo Beranek  
I have a copy of Long's Architectural Acoustics and have read a number of sections. The book is remarkably complete and Long has correctly embodied current literature. I recommend it for professionals and architects who have some mathematics. Leo Beranek

Architectural Acoustics offers a comprehensive overview of acoustical science at a level suitable for either advanced undergraduate or introductory graduate courses in architectural design and architectural engineering. The text is organized according to how sound interacts with built structures, going from simple geometries through complex building structures. The book begins with a brief but useful history of architecture and the role of acoustics, as well as overview of human perception of, sound, and then progresses through topics ranging from acoustic measurement, noise metrics and environmental noise, to sound in enclosed spaces, sound transmission in buildings, vibration and vibration isolation, and noise in mechanical systems. Architectural Acoustics also includes more advanced chapters on specific design problems, including treatment of multifamily dwellings, office buildings, sound reinforcement systems, rooms for music, multipurpose rooms, auditoriums, sanctuaries, and studios and listening rooms. Also covered is the theory loudspeaker systems and sound system modeling as well as in-depth presentation of computer modeling, ray tracing and auralization.

\* Comprehensive guide to the basics of acoustical science and its applications to architectural design.  
\* Author is renowned expert engaged in acoustical engineering for 20 years  
\* Covers the latest environmental regulations and health and safety research related to sound inside and outside of buildings.

"A very comprehensive compendium of information that would be a valuable resource for an acoustical consultant. For me the major feature of Architectural Acoustics is the comprehensive range of useful information compiled into one book. The book is a valuable new contribution and seems to be a bargain for the immense amount of material it includes." ? John Bradley, Institute for Research in Construction, Journal Acoustical Society America, July 2006

"Marshall Long's new book is a welcome addition to the general acoustical iterations as well as to the desktop reference collection of practicing acousticians. It is voluminous, full of clear figures, and written in a rigorous but comfortable style. Long is an established consultant in Los Angeles with a thirty year plus practice in most aspects of architectural and structural acoustics. In this book he literally pours forth the broad extent and depth of his knowledge." ? John Eargle, J. Audio Eng. Soc., Vol 54, No. 7/8. 2006 July/August

"This is one of those useful 'compilation' books which collate information from many other texts, resulting in the typical response to a design office query: 'It's probably in Marshall Long.' This will be a very useful reference book by industry practitioners and a readable and informative student text. Its main value is painstakingly bringing together much useful data and knowledge from a multitude of reputable sources." ? Journal of Sound and Vibration, 22 December 2006

From the Back Cover Architectural Acoustics presents a comprehensive technical overview of the field at a level suitable for working practitioners as well as advanced undergraduate or introductory graduate architecture or engineering course. The book is structured as a logical progression through acoustic interactions. Beginning with an architectural history, it reviews the fundamentals of acoustics, human perception and reaction to sound, acoustic noise measurements and noise metrics, and environmental noise. It then moves into wave acoustics, sound and solid surfaces, sound in enclosed spaces, sound transmission loss, sound transmission in buildings, vibration and vibration isolation, noise transmission in floor systems, noise in mechanical systems, and sound attenuation in ducts. Chapters on specific design problems follow including treatment of multifamily dwellings, office buildings, rooms for speech, sound reinforcement systems, rooms for music, multipurpose rooms, auditoriums, sanctuaries, and studios and listening rooms. While providing a thorough overview of acoustics, it also includes the theory of loudspeaker systems and sound system modeling as well as an in-depth presentation of computer modeling, ray tracing and auralization. It will be particularly beneficial for architects and engineers working in fields where speech intelligibility, music appreciation, and noise isolation are critical.

With engineering degrees from Princeton and UCLA, Dr. Marshall Long has been engaged, since 1971, in acoustical engineering consulting, as principal of the firm he founded. Over the past thirty years, he has been involved in more than 2,500 projects in architectural acoustics, noise and vibration control, environmental impact assessment, and sound reinforcement design. He has taught acoustical engineering at UCLA and Southern California Institute of Architecture and published numerous papers and articles in the field of acoustics. He enjoys competitive sailing including six Transpacs, holds a fourth degree Black Belt in Judo, and coaches AYSO Soccer. He lives with his wife and three sons in Sherman Oaks, California.

Key Features:

- The latest thinking on computer room modeling, using acoustical ray tracing and auralization, is important to the design of critical listening

spaces. Figures illustrate not only the technical theory but also the practical applications. They provide guidance in the implementation of the design ideas in real structures. The author's 30+ years of experience as a consultant in the field brings a vast knowledge of solutions to difficult problems to the text. Related Titles: Foundations of Engineering Acoustics, by Frank Fahy, 0-12-247665-4. The Dictionary of Acoustics, by Christopher Morfey, 0-12-506940-5. About the Author Since 1971, Marshall Long has been engaged in acoustical engineering consulting as principal of the firm he founded. Based in California, USA, Marshall Long Acoustics, has established a national and international reputation, completing over 3,000 projects in architectural acoustics, noise and vibration control, environmental impact assessment, and audio visual design. With engineering degrees from Princeton and UCLA, Dr. Long has taught acoustical engineering courses at UCLA and Southern California Institute of Architecture, and has guest lectured at Cal State Long Beach and USC. He has published numerous papers and articles in the field of acoustics. The author has recently been awarded a US patent on the recording and reproduction of three-dimensional sound. For further information visit the firm's website at [mlacoustics.com](http://mlacoustics.com).