

# Silence is Golden: Engineering Noise Control Theory and Practice, 4th Edition

Noise pollution is a growing problem in our modern world. It can cause hearing loss, sleep disturbances, cardiovascular problems, and even mental health issues. The good news is that there are many ways to control noise, and engineers play a vital role in developing and implementing these solutions.

Engineering Noise Control Theory and Practice, Fourth Edition is a comprehensive guide to the theory and practice of noise control. Written by three leading experts in the field, this book provides a thorough overview of the principles of noise control, as well as practical guidance on how to apply these principles to real-world problems.

The fourth edition of Engineering Noise Control Theory and Practice has been extensively updated to reflect the latest developments in the field. New chapters have been added on topics such as:



## Engineering Noise Control: Theory and Practice, Fourth Edition by Colin H. Hansen

★★★★☆ 4.5 out of 5

Language : English

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X-Ray for textbooks : Enabled

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- Active noise control
- Vibroacoustics
- Architectural acoustics
- Outdoor noise control

The book also includes new material on:

- The latest noise control regulations
- Advanced noise control techniques
- Case studies of successful noise control projects

Engineering Noise Control Theory and Practice is essential reading for anyone who works with noise control, including:

- Engineers
- Architects
- Acousticians
- Consultants
- Students

The book is also a valuable resource for anyone who is interested in learning more about noise control, including:

- Homeowners
- Business owners

- Government officials

Reading Engineering Noise Control Theory and Practice will help you to:

- Understand the principles of noise control
- Apply noise control principles to real-world problems
- Design and implement effective noise control solutions
- Meet noise control regulations
- Stay up-to-date on the latest developments in the field of noise control
- - 1.1 The Nature of Noise
  - 1.2 The Effects of Noise
  - 1.3 Noise Control Legislation
- 2. Fundamentals of Acoustics
  - 2.1 Wave Propagation
  - 2.2 Sound Intensity and Pressure
  - 2.3 Sound Absorption and Reflection
- 3. Noise Sources
  - 3.1 Machinery Noise
  - 3.2 Transportation Noise
  - 3.3 Architectural Noise
- 4. Noise Control Methods

- 4.1 Noise Reduction at the Source
- 4.2 Noise Control along the Path
- 4.3 Noise Control at the Receiver
- 5. Active Noise Control
  - 5.1 Principles of Active Noise Control
  - 5.2 Active Noise Control Systems
  - 5.3 Applications of Active Noise Control
- 6. Vibroacoustics
  - 6.1 to Vibroacoustics
  - 6.2 Structural Vibration
  - 6.3 Sound Radiation from Vibrating Structures
- 7. Architectural Acoustics
  - 7.1 Room Acoustics
  - 7.2 Sound Insulation
  - 7.3 Architectural Noise Control
- 8. Outdoor Noise Control
  - 8.1 Sources of Outdoor Noise
  - 8.2 Outdoor Noise Control Methods
  - 8.3 Case Studies of Outdoor Noise Control Projects

- 9. Noise Control Regulations
  - 9.1 Occupational Noise Regulations
  - 9.2 Environmental Noise Regulations
  - 9.3 International Noise Control Regulations
- 10. Advanced Noise Control Techniques
  - 10.1 Statistical Energy Analysis
  - 10.2 Finite Element Analysis
  - 10.3 Boundary Element Method
- 11. Case Studies of Successful Noise Control Projects
  - 11.1 Noise Control in a Manufacturing Plant
  - 11.2 Noise Control in a Hospital
  - 11.3 Noise Control in a Concert Hall
- **Lester L. Beranek** is a professor emeritus of acoustics at the Massachusetts Institute of Technology. He is a member of the National Academy of Engineering and the recipient of the National Medal of Science.
- **István L. Ver** is a professor of acoustics at the Technical University of Denmark. He is a member of the International Institute of Acoustics and Vibration and the recipient of the Rayleigh Medal.
- **Niels E. Jacobsen** is a professor of acoustics at the Technical University of Denmark. He is a member of the Danish Acoustical Society and the recipient of the Leo L. Beranek Medal.

"Engineering Noise Control Theory and Practice is the definitive reference on noise control. It is a must-read for anyone who works with noise control."  
—Dr. Donald R. Schomer, President of Schomer and Associates, Inc.

"Engineering Noise Control Theory and Practice is a comprehensive and up-to-date guide to noise control. It is an essential resource for anyone who is serious about controlling noise." —Dr. David A. Nelson, Professor of Acoustics at the University of California, Berkeley

"Engineering Noise Control Theory and Practice is a valuable resource for anyone who works with noise control. It provides a clear and concise explanation of the principles of noise control, as well as practical guidance on how to apply these principles to real-world problems." —Mr. David A. Harris, President of Harris Acoustical Consultants, Inc.

Engineering Noise Control Theory and Practice is available from all major booksellers. You can also Free Download your copy directly from the publisher at:

<http://www.crcpress.com/product//9781498794942>



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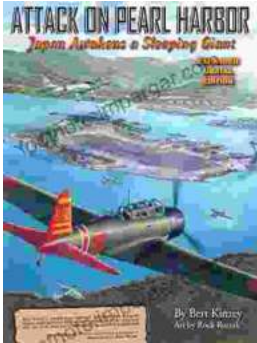
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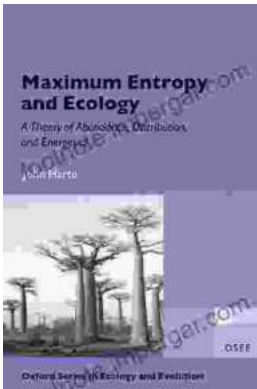
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