



Acoustic Absorbers and Diffusers

Theory, Design and Application

Trevor J. Cox
University of Salford, UK
and
Peter D'Antonio
RPG Diffusor Systems Inc., USA

Absorbers and diffusers are two of the main design tools for altering the acoustic conditions of a room, semi-enclosed spaces and the outdoor environment. Their correct use is important for delivering high quality acoustics.

This unique and authoritative text describes how to effectively measure, model, design, optimise and apply diffusers and absorbers. Surface diffusion is a relatively young subject area, and diffuser design, application and characterisation are new to practitioners and researchers, who may not have been exposed to this new information in their formal training. This book is a resource for new and experienced acousticians seeking an understanding of the evolution and current state of the art in diffuser research and practice. Absorption is a more established technology, and so the book blends traditional design with modern developments. By collecting the key aspects of absorbers in one text, the book offers new and experienced professionals an opportunity to understand this subject in more depth. This detailed book serves to cover the practical and theoretical aspects of absorbers and diffusers and is well illustrated, with examples of installations and case studies.

- First textbook on diffuser design
- A book solely about diffusers and absorbers rather than general room acoustics
- A mixture of practical design advice and theoretical treatment

Contents: Introduction: Absorption Verses Diffuse Reflection. 1. Applications and Basic Principles of Absorbers. 2. Applications and Basic Principles of Diffusers. 3. Measurement of Absorber Properties. 4. Measurement and Characterisation of Diffuse Reflections or Scattering. 5. Porous Absorption. 6. Resonant Absorbers. 7. Miscellaneous Absorbers. 8. Prediction of Scattering. 9. Schroeder Diffusers. 10. Geometric Reflectors and Diffusers. 11. Hybrid Surfaces. 12. Absorbers and Diffusers in Rooms and Geometric Models. 13. Active Absorption and Diffusion.

February 2004: 246x174: 448pp
274 line figures, 4 tables and 31 b+w photos
Hb: 0-415-29649-8: £ 90.00

 **Spon Press**
Taylor & Francis Group