Principles Of Digital Audio, Sixth Edition (Digital Video/Audio)
Synopsis
The definitive guide to digital engineering—fully updated Gain a thorough understanding of digital audio tools, techniques, and practices from this completely revised and expanded resource. Written by industry pioneer and Audio Engineering Society Fellow Ken C. Pohlmann, Principles of Digital Audio, Sixth Edition, describes the technologies behind today’s audio equipment in a clear, practical style. Covering basic theory to the latest technological advancements, the book explains how to apply digital conversion, processing, compression, storage, streaming, and transmission concepts. New chapters on Blu-ray, speech coding, and low bit-rate coding are also included in this bestselling guide. Learn about discrete time sampling, quantization, and signal processing Examine details of CD, DVD, and Blu-ray players and discs Encode and decode AAC, MP3, MP4, Dolby Digital, and other files Prepare content for distribution via the Internet and digital radio and television Learn the critical differences between music coding and speech coding Design low bit-rate codecs to optimize memory capacity while preserving fidelity Develop methodologies to evaluate the sound quality of music and speech files Study audio transmission via HDMI, VoIP, Wi-Fi, and Bluetooth Handle digital rights management, fingerprinting, and watermarking Understand how one-bit conversion and high-order noise shaping work

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Customer Reviews

First off, this book is in its fifth edition, and has lumped together reviews of all editions of this book. So the oldest review shown, written in 1998, is speaking of the 3rd edition, and reviews written prior to 2005 are talking about the 4th edition. This book is more about the principles of digital audio hardware design than anything. The author, also a college professor, starts with the absolute beginning and the binary number system, sampling, quantization, aliasing, and dither and then moves into all of the topics that you need to design and analyze modern digital audio systems. However, if the information in the first two chapters is news to you, chances are the rest of the book will be over your head. The book is full of flow charts, frequency response diagrams, and detailed block diagrams of actual systems. What it is lacking in is any kind of signal processing mathematics to explain the detailed theory behind what is being covered. There is a chapter entitled "Digital Signal Processing", but it barely introduces and defines the terms. It does show some assembly code for performing some simple filtering tasks, though, but that’s the extent of the coverage. If you didn’t know DSP before you read this chapter, you certainly won’t know it after you read this chapter. The book does a pretty good job of discussing some of the more popular audio standards including MP3. I think this book is best suited for someone with an electronics/electrical engineering background that already knows the theory of digital signal processing and wants to apply that knowledge to the actual design and analysis of digital audio processing systems.

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