Designing Audio Effect Plug-Ins in C++: With Digital Audio Signal Processing Theory

By Will Pirkle

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Not just another theory-heavy digital signal processing book, nor another dull build-a-generic-database programming book, *Designing Audio Effect Plug-Ins in C++* gives you everything you everything you need to know to do just that, including fully worked, downloadable code for dozens of professional audio effect plug-ins and practically presented algorithms. With this book, you get access to a companion website where you can download the accompanying Rapid Plug-In Development software to compile and test the book examples, all the code examples, and view student plug-ins and tutorial videos on the development software. Start with an intuitive and practical introduction to the digital signal processing (DSP) theory behind audio plug-ins, and quickly move on to plug-in implementation, gain knowledge of algorithms on filtering, delay, reverb, modulated effects, dynamics processing, and more. You will then be ready to design and implement your own unique plug-ins on any platform and within most any host program.

Readers are expected to have some knowledge of C++, and high school math.

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Editorial Review

Review

*This is one of the most important and exciting audio books I've seen in a long, long time. It tackles the hottest topic in the industry today?authoring plug-ins. Audio design has transitioned from a hardware world to a software one, and this book places you at the forefront of the revolution. It gives you all the tools you'll need, from signal-processing theory to completed code, to fully understand and write C++ audio plug-ins. When you finish this book, you'll be playing music through your own real-time plug-ins, and you will have acquired perhaps the most valuable skill set sought by today's audio engineers. ?*Ken C. Pohlmann, Professor Emeritus, University of Miami

Finally, *the keys to the digital kingdom are made available to all recording engineers. Learn how plug-ins work, gaining a deep understanding of their rich capabilities, tempered by an informed intuition about their sonic limitations. You'll be a better user, and?should you be so inclined?you'll build a better processor. That's right.* Designing Audio Effect Plug-Ins in C++ *gives you the theory, the skills, the software tools, and the hands-on examples you need to build your own delays, reverbs, compressors, and more. Perfect audio effects?if you can't buy 'em, build 'em. ?*Alex U. Case, author, *Sound FX* and *Mix Smart* (Focal Press)

This is a very practical introduction to digital audio signal processing that makes writing DSP plugins in C++ easy. The author brings a career of knowledge and experience to one easily understood and very un-stuffy book that takes the mystery out of a complex set of topics. Highly recommended. ?Joe Bryan, audio guru and inventor of UAD-1 powered plug-ins

From the Back Cover

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Start with an intuitive and practical introduction to the digital signal processing (DSP) theory behind audio plug-ins and quickly move on to plug-in implementation, gaining knowledge of algorithms on filtering, delay, reverb, modulated effects, dynamics processing, and more. You'll then be ready to design and implement your own unique plug-ins.

With this book, you'll:

- Learn to build audio effect plug-ins in a widely used, implementable programming language-C++
- Get fully worked-out code for all the examples used and free development software for download from the companion website
- See these tools in action with video tutorials for the software and examples of student plug-ins complete with theory and code

Level: Readers are expected to have some knowledge of C++ and math at a high school level.

Will Pirkle is an assistant professor of music engineering technology at the University of Miami Frost School of Music. In addition to his nine years of teaching, Mr. Pirkle has twenty years of experience in the audio industry, during which he's worked and consulted for Korg Research and Development, SiriusXM Radio, Diamond Multimedia, Gibson Musical Instruments, National Semiconductor Corporation, and others. A studio owner and avid guitarist, Mr. Pirkle continues to seek projects that combine all his skills.

About the Author
Will Pirkle is an Assistant Professor of Music Engineering Technology at the University of Miami Frost School of Music, where he teaches C++ audio programming, signal processing, audio synthesis, recording studio workshops, and mobile app programming. In addition to his nine years of teaching, Mr. Pirkle has twenty years of experience in the audio industry, during which he worked and consulted for companies including Korg Research and Development, SiriusXM Radio, Diamond Multimedia, Gibson Musical Instruments, and National Semiconductor Corporation. An avid guitarist and studio owner, Mr. Pirkle continues to seek projects that combine all his skills.

Users Review

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Sally Norman:

The ability that you get from Designing Audio Effect Plug-Ins in C++: With Digital Audio Signal Processing Theory is a more deep you rooting the information that hide in the words the more you get serious about reading it. It does not mean that this book is hard to understand but Designing Audio Effect Plug-Ins in C++: With Digital Audio Signal Processing Theory giving you joy feeling of reading. The writer conveys their point in particular way that can be understood by anyone who read the item because the author of this reserve is well-known enough. This specific book also makes your personal vocabulary increase well. So it is easy to understand then can go to you, both in printed or e-book style are available. We propose you for having this specific Designing Audio Effect Plug-Ins in C++: With Digital Audio Signal Processing Theory instantly.

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Elsie Fiala:

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Randall Barbee:

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