**DAFX: Digital Audio Effects, 2nd Edition**

Udo Zölzer (Editor)

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**DESCRIPTION**

The rapid development in various fields of Digital Audio Effects, or DAFX, has led to new algorithms and this second edition of the popular book, *DAFX: Digital Audio Effects* has been updated throughout to reflect progress in the field. It maintains a unique approach to DAFX with a lecture-style introduction into the basics of effect processing. Each effect description begins with the presentation of the physical and acoustical phenomena, an explanation of the signal processing techniques to achieve the effect, followed by a discussion of musical applications and the control of effect parameters. Topics covered include: filters and delays, modulators and demodulators, nonlinear processing, spatial effects, time-segment processing, time-frequency processing, source-filter processing, spectral processing, time and frequency warping musical signals.

Updates to the second edition include:

- Three completely new chapters devoted to the major research areas of: Virtual Analog Effects, Automatic Mixing and Sound Source Separation, authored by leading researchers in the field.

- Improved presentation of the basic concepts and explanation of the related technology.

- Extended coverage of the MATLAB TM scripts which demonstrate the implementation of the basic concepts into software programs.

- Companion website (www.dafx.de) which serves as the download source for MATLAB TM scripts, will be updated to reflect the new material in the book.
Discussing DAFX from both an introductory and advanced level, the book systematically introduces the reader to digital signal processing concepts, how they can be applied to sound and their use in musical effects. This makes the book suitable for a range of professionals including those working in audio engineering, as well as researchers and engineers involved in the area of digital signal processing along with students on multimedia related courses.

ABOUT THE AUTHOR

Udo Zölzer, Helmut Schmidt University, Hamburg, Germany

Professor Zölzer is Head of the Department of Signal Processing and Communications at Helmut Schmidt University (University of the Federal Armed Forces, Hamburg, Germany) since 1999. His research interests include audio and video signal processing and communications.

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