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Handbuch der Tonstudioteknik (Handbook of Audiotechnology)

7th Edition, completed and fully new edited

Published by ARD.ZDF medienakademie, Nürnberg

1280 pages in 2 volumes, with 703 figures and 156 tables

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The *Handbuch der Tonstudioteknik*, since its first edition before more than 30 years, has become a classic within the professional textbooks on audio technology. Now it is available since the end of 2008 as a completely new edited and completed edition .

It was edited by the ARD.ZDF medienakademie, formerly srt (Schule für Rundfunktechnik), Nuremberg. Editors of the 19 chapters are *Michael Dickreiter, Volker Dittel, Wolfgang Hoeg* and *Martin Wöhr*, in co-operation with more than 25 expert authors coming from science, education, industry and studio practice.

Highlights of the 7th edition:

Volume 1 displays basics of room acoustics, sound sources, acoustic perception, microphones, loudspeakers as well as analogue sound studio technique. The new edited chapters on recording and reproduction technology, sound design and sound reinforcement refer to the latest knowledge from science and practice.

Volume 2 provides comprehensive information on the most significant issues of digital audio technology. Besides of an introduction into digital signal processing actual coding formats, possibilities on digital audio recording, new broadcast systems, digital working principles in studio and broadcasting and common workflow in audio, video and multimedia processes are explained. Also standardised methods and recommendations of sound quality management and industrial safety are displayed.

All of 19 chapters are completed with lists of the relevant standards, references and further reads. Also a comprehensive list of English terms and abbreviations as well as an extensive index were added.

Target groups of the book are members of broadcasting, tv and media studios, students and trainees in media technology, technical schools from the media branch and technical interested non-professionals as well.



Content of the 7th edition of the Handbuch der Tonstudioteknik

Acoustics

(Sound field, room acoustics)

Sound sources

(Human voice, musical instruments, direction patterns, artificial sound sources)

Acoustic perception

(Human ear and its functions, sound event (Schallereignis) and perceptual impression (Hörereignis), acoustic perception, spatial hearing of real sound sources and with electro-acoustical reproduction)

Sound converter

(Physical principles, microphones, loudspeakers, , ear-phones, wireless transmission)

Recording technology

(Binaural Reproduction, two-channel stereophony, multi-channel stereophony, artificial head, wave-field synthesis)

Sound design

(Dynamics, timbre, sound effects , localisation direction, spatial impression, aesthetic aspects)

Analogue soundrecording

(Magnetical und mechanical analogue recording)

Analogue mixing desks

(Mixing desk architecture, wiring, alignment, microphone amplifier, adaptation of external device, fader, crosspoints, amplifier, signal monitoring)

Sound reinforcement

(Central, non-central and direction-related PA-systems, Ausrüstung, device, 100V-device, simulation)

Analogue audio measurement

(Amplification and attenuation, non-linear distortion, noise, stereo-parameters, sound pressure level, measurement for microphones, loudspeakers, signal recorders or disk player)

Basics of digital audio

(A/D- and D/A-conversion, digital audio signals, digital interfaces, digital exchange formats)

Audio coding

(MPEG-1/2/4, MP3, DOLBY-E, DOLBY DIGITAL, DTS, apt-X, lossless coding, audio watermarking and fingerprinting, Digital Rights Management)

Digital studio processes

(Digital audio processing, digitale programme production und continuing technology)

Digital audio recording

(Digital recording, mastering, digital archiving)

Audio for television

(Picture-/sound-relation, sound recording, synchronisation, transcoding, embedded audio, interfaces)

Digital production technique

(Central equipment, transmission channel)

Broadcast systems

(Overview, modulation, channel coding, terrestrial broadcast systems, satellite based broadcasting, IP-based radio, programme-associated services, multi-channel transmission)

Quality management

(Audio parameters, dynamics, objective and subjective quality assessment, data security)

Safety and health in the workplace

(Guidelines, standards, exposures, elektrical safety)

Technical terms and abbreviations / English - German

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