

Contents

Preface	ix
Chapter 1: Acoustic Sound	1
Chapter 2: From Acoustic Sound to Electrical Signals	13
Chapter 3: Digital Representation	17
Chapter 4: Signal Types	33
Chapter 5: How Large Is an Audio Signal?	51
Chapter 6: The dB Concept	59
Chapter 7: The Ear, Hearing, and Level Perception	71
Chapter 8: Time Weighting	85
Chapter 9: Frequency Weighting and Filters	91
Chapter 10: Determination of Loudness	111
Chapter 11: Characteristics of Level Meters	121

Chapter 12:	The Standard Volume Indicator (VU Meter)	127
Chapter 13:	Peak Program Meter – PPM	133
Chapter 14:	Loudness Metering	139
Chapter 15:	Calibration of Level and Loudness Meters	155
Chapter 16:	Relationships Between Scales	163
Chapter 17:	Dynamic Scales	171
Chapter 18:	Polarity and Phase Reading	177
Chapter 19:	Display of Level Distribution	189
Chapter 20:	Multichannel/Immersive Audio	197
Chapter 21:	Standards and Practices	217
Chapter 22:	Summation of Audio Signals	237
Chapter 23:	Digital Interface	245
Chapter 24:	Audio-over-IP	257
Chapter 25:	Where to Connect a Meter	267
Chapter 26:	FFT, Fast Fourier Transformation	283

Chapter 27:	Spectrum Analyzer	291
Chapter 28:	Other Measurement Systems	299
Chapter 29:	Measurement Signals	311
Chapter 30:	Sound Level Meters	317
Chapter 31:	NR, NC, PNC, RNC, and RC Curves	323
Chapter 32:	Room Acoustic Measures	335
Chapter 33:	Listening Tests	355
	Glossary	373
	Index	403