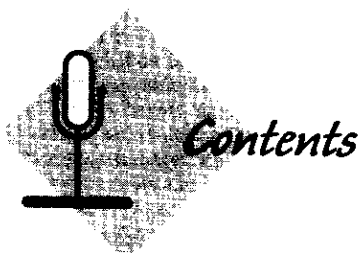


Carl Hausman | Philip Benoit | Fritz Messere | Lewis B. O'Donnell

A photograph of a radio production console. In the foreground, a pair of black-rimmed glasses sits on the console. Behind them, a laptop is open, displaying a software interface with various sliders and controls. The background is dark and out of focus.

Modern Radio Production

Production, Programming, and Performance 6th Edition



Preface *xviii*

Foreword *xxi*

PART ONE ♦ THE TOOLS 1

1 *Production in Modern Radio* 2

Sound of the Station 4

Formats 4

 Reaching a Specific Audience 5

 How Target Audiences Affect Format 5

 How Formats Are Constructed 6

Networks 7

Other Programming Developments in Radio 8

Noncommercial Radio 8

♦ *Tuning into Technology: Web Radio* 9

Economics of Noncommercial Radio 11

♦ *Industry Update: Satellite Radio Goes Coast-to-Coast* 13

The Role of the Producer in Modern Radio 15

Summary 18

- ◆ *You're On! Techniques for Effective On-Air Performance:
The Role of the Announcer in Modern Radio* 19

2 The Console 22

Function of the Console 22

Amplification 23

Routing 23

Mixing 23

Understanding Console Function: Some Hypothetical Examples 23

Hypothetical Console A 24

Hypothetical Console B 27

- ◆ *Industry Update: Simplify, Simplify* 30

Hypothetical Console C 32

Hypothetical Console D 35

Summary of the Hypothetical Consoles 36

Understanding Console Function: Actual Consoles 36

Operation of the Console 40

The Virtual Console 40

Submixing 42

Patching 43

A Final Look at Two Broadcast Consoles 45

Summary 45

Applications 47

Exercises 48

- ◆ *You're On! Techniques for Effective On-Air Performance* 49

3 CD Players, Recordable CDs and Turntables 51

Compact Discs 52

- ◆ *Tuning into Technology: How a CD Stores Binary Information* 54

Recordable CDs 56

Audio CDs and MP3s 58

Structure of a Turntable 59

Parts of the Turntable 59

The Drive Mechanism 59

The Tonearm 59

The Disc	61
Handling and Cueing a Disc	61
Review of Turntable Operation	66
Summary	66
Applications	66
Exercises	67

4 *Recording and Playback Devices* 68

Sampling	69
Magnetic Tape	71
Digital Audiotape	73
Workings of the Digital Tape Machine	74
R-DAT Heads and Controls	76
Tape Machine Controls and Indicators	77
Cueing a Tape	79
DAT Playback	79
Disk Drive Recording	80
Digital Audio Workstations	82
Enter Minidiscs	82
The Digital Cart Machine	84
♦ <i>Tuning into Technology: Digital Sound and Audio Compression</i>	85
Analog Tape Machines	86
The Heads	87
The Tape Transport Mechanism	88
Tape Machine Controls and Indicators	89
Cueing a Tape	90
Heads and Tracks	91
How Tracks Work	91
Cassette Machines	91
Cartridge Machines	93
Bulk Eraser	94
Summary	95
Applications	96
Exercises	96

5 *Microphones and Sound* 97

The Basics of Sound	97
The Elements of Sound	98

The Nature of Sound: Frequency	101
The Nature of Sound: Amplitude	101
Other Characteristics of Sound	102
◆ <i>Tuning into Technology: The Shape of Sound</i>	103
Summary of the Basics of Sound	105
The Microphone: How It Works	105
Electronics of the Microphone	105
Pickup (Polar) Patterns of the Microphone	107
Frequency Response of Microphones	111
Review of Microphone Workings	113
Physical Types of Microphones	114
Hand-Held	114
Studio, Mounted	114
Headset	114
Lavalier	114
Shotgun	114
Review of the Physical Types	116
Microphone Selection and Use	116
Selection by Mic Type	117
Selection by Pickup Pattern	117
Selection by Element	117
Selection by Frequency Response	117
Selection by Personality	119
Adding Up Selection Factors	119
Notes on Microphone Use	119
Summary	122
Applications	123
Exercises	123
◆ <i>You're On: Techniques for Effective On-Air Performance: Microphone Techniques for Announcers</i>	124

PART TWO ◆ THE TECHNIQUES 127

6 *Electronic Editing*

The Basics of Splicing and Dubbing	129
Looking at the Waveform	129
Splicing and Editing a Sound File	130
Marking the Edit Points	131
Nondestructive Editing	134

Copying, Pasting and Looping	135
Editing with a Minidisc	136
♦ <i>Tuning into Technology: The Electronic Edit</i>	137
Dubbing	142
Advantages of Dubbing	143
Review of Dubbing	143
Summary	143
Applications	144
Exercises	145

7 *Recorded Program Production* 146

Recorded versus Live, On-Air Production	146
Complexity	146
Scheduled Airtime	147
Convenience	147
Layout of a Production Studio	147
Equipment in the Production Studio	149
Sound Treatment in the Production Studio	149
Working in a Production Studio	150
Music	151
Sources of Music	151
Choosing Music for Production Work	152
Styles of Music	153
Recorded Voice	154
Miking Multiple Speakers	155
Communicating with Speakers	158
Sound Effects	160
Combining Elements in Production	160
♦ <i>Industry Update: The Ultimate Recording Studio</i>	161
Summary	163
Applications	163
Exercises	164

8 *Live, On-Air Production* 165

Typical Airshift	165
Duties of the On-Air Producer	166
Typical Schedule	168

Sound of the Station 168

Pace 170

Content 170

Announcing Style 171

Blending the Sound Sources 171

◆ *Industry Update: What to Do . . . and What Not To* 172**Suggestions for Live, On-Air Production 173**

Console Operation 173

Establishing a Routine 174

Planning in Advance 174

Being Aware of False Endings 174

Recueing Carts 175

Listening to the Air Monitor 175

Clearing Equipment 175

Planning for the Worst 175

◆ *Tuning into Technology: Automated Software Programs* 176**Working with Satellite Services 178**

The Satellite Feed 179

Programming from Satellite 179

How to Use Service Material 180

Summary 181

Applications 181

Exercises 182

◆ *You're On! Techniques for Effective On-Air Performance: Ad-Libbing* 183**9 *More About the Computer in Radio
Production* 186****Computer Basics 186****Computer-Generated Effects 188****Computer-Assisted Editing 191**◆ *Industry Update: SmartSound* 192**Computers in Automation 199****Computers in the Programming Function 204****Digital Audio Broadcasting 205****Summary 206**

Applications 207

Exercises 207

10 *Achieving an Effect* 210

What Is an Effect? 210

Kinds of Effects 211

How Production Elements Support a Theme 211

Creating Excitement 212

Creating Immediate Identification 212

Evoking an Emotion 213

Summary of Effects 213

How a Producer Uses Production Elements 213

Music 213

Sound Effects 215

Coloration of Sound 216

Timing and Pace 217

Voice Quality 218

Sound of Words 218

♦ *Industry Update: Achieving an Effect and the Bottom Line: Production Promotion* 219

Copywriting 221

Using Elements of Sound to Achieve an Effect 222

Putting Voice on Tape 222

Recording Music on Tape 223

Summary 224

Applications 225

Exercises 226

11 *Drama and Dramatic Elements in Radio Production* 227

The Structure of Drama 227

Action 228

Dialogue 228

Plot 228

Beginning, Middle, and End 228

Conflict 228

Suspense 228

Exposition	229
Role of Dramatic Elements in Commercial Production	229
Capturing Attention	229
Compressing Time	231
Role of Dramatic Elements in News Production	231
Technical Considerations of Radio Drama	232
Giving the Illusion of Place	233
Giving the Illusion of Movement	233
Making the Background a Fabric of Believability	233
Mic Techniques to Achieve Illusions of Place and Movement	234
Sound Design	234
Summary	234
Applications	235
Exercise	235

12 *Commercial Production* 237

What Makes a Commercial Effective?	238
Elements of Effective Radio Advertising	239
A Shoe Store Advertisement	240
A Car Dealership Advertisement	240
Practical Approaches to Radio Commercials	240
Advertising Appeals	241
Execution of Radio Commercials	244
♦ <i>Industry Update: The Home Studio: Technology Makes Big-Time Sound Available to Small Production Agencies</i>	247
Suggestions for Producing Effective Commercials	248
Know Your Audience	248
Avoid Gimmicks	249
Summarize the Thrust	249
Don't Blast the Listener	249
Read the Spot to the Client	249
Don't Force Humor	250
Achieve High Technical Quality	250
Don't Overuse a Particular Piece of Music	250
Keep the Message Simple	250
Avoid the "Big Five"	250
Production Applications in Station Promotion	251

- Summary 253
 - Applications 253
 - Exercises 254
- ◆ *You're On! Techniques for Effective On-Air Performance* 255

13 *Radio Production for News and Public Affairs* 257

- News Gathering 258
- News Writing 259
- News Assembly 260
 - Choosing Stories and Story Order 260
 - Choosing Sound Elements 260
- ◆ *Industry Update: A Quick Primer on Radio Newswriting* 261
- News Reading and Reporting 278
- News and Public-Affairs Programming 279
- Newscasts 279
 - Exclusively Local News 281
 - Local News with Wire Copy 281
 - News with Wire Copy and Network Audio 285
- Talk Shows 286
- Special Events 287
- Production Techniques for News and Public Affairs 287
 - Interviewing 287
 - Story and Actuality Editing 288
 - Using Sound Sources in Radio News Production 289
 - Using the Telephone to Maximum Benefit 289
 - Using Modern News-Gathering Technology 291
 - Making the Newscast a Cohesive, Unified Whole 292
- Summary 293
- ◆ *You're On! Techniques for Effective On-Air Performance* 294
 - Applications 305
 - Exercises 305

14 *Remote and Sports Production* 307

- Remote Radio Equipment 308
 - Telephone Lines 308

◆ <i>Tuning into Technology: Getting the Signal from There to Here</i>	310
Other Equipment	312
Planning the Remote	314
Preparing the Site	315
Preparing the Equipment	316
Preparing a Communication System	316
The Sports Remote	317
Baseball	318
Hockey	318
Football	318
Basketball	319
Field Sports	319
Boxing	319
A Final Note	320
Summary	320
Applications	321
Exercises	321

15 *Advanced Radio Production* 323

Multichannel Recording	323
Input Modules	326
Output Buses	328
Monitor Controls	328
Further Note About Multichannel Consoles	329
Role of Multitrack Recording	329
◆ <i>Industry Update: A Simple Multichannel Console</i>	329
Stereo	331
Recording Music	331
Total-Sound Recording Microphone Techniques	332
Isolated-Component Recording	334
Electronic Equipment and Its Use in Radio Production	335
Equipment	336
Techniques	339
Summary	341
Applications	341
Exercises	342

16 *Production, Programming, and the Modern Format* **343**

The Audience and the Format **343**

 The Audience 344

 Methods of Measuring Audience 345

 Calculating How Efficiently a Station Reaches Its Audience 348

 Paying for Efficiency 348

The Specifics of the Radio Format **350**

 Defining Current Formats 350

 Filling the Niche: Today's Trends 354

On-Air and Off-Air Production in the Modern Format **354**

 Production and Tune-Out 354

◆ Industry Update: *Format Trends and What the Producer Needs to Know About Them* **355**

 Production for Adult Contemporary 359

 Production for Album-Oriented Rock 360

 Production for Country 360

 Production for Easy Listening 361

 Production for News/Talk 361

 Production for Top 40/CHR 362

 Production for Urban/Churban/Rhythmic Top 40 363

Putting the Format on Air **364**

 The Format and Sound Hour 364

 Constructing the Playlist 365

Conclusion **365**

Summary **365**

◆ You're On! *Rotating New Music* **366**

 Exercises 369

APPENDICES

A *Another Time: A Play by Richard Wilson* **371**

B *A Capsule History of Radio: Past Meets Future for the Modern Producer and Programmer* 381

The Beginnings of the Magic Medium 381

Radio Finds a Voice 382

Radio After World War I 383

Radio Carries a Tune 385

Radio After KDKA: The Coming Chaos 386

AT&T Develops Toll Broadcasting 387

Exit AT&T 388

Development of the Networks 388

NBC and CBS 389

New Competitors Set Their Sights on NBC 389

Paley Takes Over CBS 390

Advertising Comes of Age 390

The Golden Age and Mass Entertainment 391

◆ *Sidebar: David Sarnoff and William S. Paley* 392

Radio Comes of Age 395

Television Lowers the Boom 398

Rock Saves Radio 399

Radio Tunes into Its Audience 400

Glossary 401

Suggested Readings 413

Web Links 417

Credits 420

Index 421