

1. The Signal Chain
  - a. Program Sources
  - b. The Mixer
  - c. Signal Processors
  - d. Power Amplifiers
  - e. Loudspeakers
  - f. The Room
  - g. The Listener
2. Audio Interfaces
  - a. Unbalanced
  - b. Balanced
  - c. Impedance
3. Decibels and Frequency
  - a. What's a dB and Why Should I Care?
  - b. Relative Levels
  - c. Absolute Levels
  - d. Frequency and Frequency Response
4. The Audio Signal
  - a. Amplitude and Level
  - b. RMS Level
  - c. Crest Factor
  - d. Dynamic Range
  - e. Signal-to-Noise Ratio
5. System Issues
  - a. System Gain Structure
  - b. Mixer Gain Structure
  - c. Setting the Amplifier Level
6. Mixer Fundamentals
  - a. Analog Mixers
  - b. Digital Mixers
  - c. Signal Flow
  - d. Pros and Cons of Each
7. Audio Meters
  - a. VU Meters
  - b. 0dBFS Meters
  - c. Peak Program Meters (PPM)
8. Dynamic Range Control
  - a. Compressors
  - b. Limiters
  - c. Peak vs. RMS Detectors
9. Grounding and Shielding
  - a. For Safety
  - b. For Interference Immunity
  - c. Ground Loops
10. Special Case Interfacing
  - a. The TS Plug
  - b. The TRS Plug
  - c. Direct Boxes
11. Acoustics
  - a. Inverse-Distance Laws
  - b. The Speed of Sound
  - c. Point Source vs. Line Source
12. Loudspeakers
  - a. Passive
  - b. Active
  - c. Powered
13. Basic System Equalization
  - a. What To Do
  - b. What NOT To Do
14. Microphone Majors
  - a. Sensitivity
  - b. Polar Patterns
  - c. Working Distance
  - d. The 3-to-1 Rule
  - e. Polarity
15. Acoustic Gain
  - a. How To Avoid Feedback
16. Microphone Selection and Placement
  - a. Direct-to-Reflected Ratio
  - b. Placement Tips
17. Phase Interference
  - a. Between Loudspeakers
  - b. Between Microphones
  - c. How To Minimize It
  - d. Miking Ensembles
18. Summary of Sound System Setup

# Audio Essentials

## Training Course



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