

Basics of Auditory Perception

Demonstrations by the Institute for Perception Research (IPO) and the Acoustical Society of America

- **Section I. Frequency Analysis and Critical Bands**
 - Demo 1. Cancelled harmonics (Track 1; 1 min and 33s)
 - Demo 2. Critical bands by masking (2-6; 1:50)

- **Section II. Sound Pressure, Power, Loudness**
 - Demo 4. Decibel scale (8-10; 1:57)
 - Demo 5. Filtered noise (12-15; 1:50)

- **Section IV. Pitch**
 - Demo 12. Dependence of pitch on intensity (27-28; 0:48)
 - Demo 19. Pitch streaming (36; 1:22)
 - Demo 26. Scales with repetition pitch (49-51; 1:25)
 - Demo 27. Circularity in pitch judgement, or Shepard scale illusion (52; 1:20)

- **Section V. Timbre**
 - Demo 28. Effect of spectrum on timbre (53; 1:17)

- **Section VI. Beats, Combination Tones, Distortion, Echoes**
 - Demo 32. Primary and secondary beats (62; 1:32)
 - Demo 35. Effect of echoes (70; 1:47)

Auditory Scene Analysis

Demonstrations by Albert Bregman and Pierre Ahad

- **Sequential Integration**
 - Demo 1. Stream segregation in a cycle of six tones (Track 1; 0:47)
 - Demo 3. Loss of rhythmic information as a result of stream segregation (3; 1:22)
 - Demo 7. Streaming in African xylophone music (7; 1:30)
 - Demo 11. Stream segregation of vowels and diphthongs (11; 1:17)
 - Demo 14. Stream segregation of high and low bands of noise (14; 0:44)
- **Spectral Integration**
 - Demo 19. Fusion based on common frequency change: Illustration 1 (19; 1:00)

Advanced Auditory Perception

Demonstrations by Richard Warren and James Bashford

- **Restoration of Absent Sounds**
 - Demo 1. Homophonic temporal induction: Broadband noise (Track 2-3; 1:27)
 - Demo 2. Temporal induction of speech (10-15; 4:37)
- **Illusory Changes of Repeated Words: The Verbal Transformation Effect**
 - Demo 3. Diotic “flame” (41-43; 3:54)
 - Demo 4. Diotic bisyllabic reversible word “farewell/welfare” (46-48; 2:19)
 - Demo 5. Diotic monosyllabic reversible word “ace/say” (51-52; 1:31)