14. <u>**Investigation of Consonance/Dissonance:**</u>
- Electronics setup (4 DMMs, 4-channel analog mixer, oscilloscope) for investigating consonance & dissonance.
- Electronic Keyboard and oscilloscope.

15. <u>**Psycho-Acoustics Facility:**</u>
- Electronics setup (2 DMMs, headphones) for investigating physics of human hearing – e.g. frequency response, phase sensitivity, perfect pitch, etc.

16. <u>**Measurement of Percussion Instrument Properties:**</u>
- PC-based DAQ setup for measuring frequency response of percussion instruments (Strike once with sound analysis options.vi).

17. <u>**Computer Simulation(s) of Complex Waveforms, Guitar String Vibrations:**</u>
- PC-based program that simulates plucking of guitar string, shows/displays the harmonic (*i.e.* Fourier) content and plays the actual sound (guitar.prj).
- PC-based program that enables user to investigate harmonic (i.e. Fourier) content of ~ 25 different waveforms – sine waves, triangle waves, saw-tooth waves, square waves, gaussian waves and various other waves (Fourisim.prj)

18. <u>**Force-Hammer Experiments:**</u> Measure the complex mechanical modal vibrations & mechanical admittance of vibrating objects – *e.g.* bars, guitars, guitar bridges, … using force hammer technique(s).

19. <u>**Ultra-Sound Experiments:**</u>
- Investigate the phenomenon of sonoluminescence/ultra-sound waves in water.