A set of useful audio test signals on CD and iPod

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3.3 kHz Mono and Stereo Noise Spectra

7 MHz Micro T2 with 3.3 kHz noise into microphone input. Suppressed carrier at 5000 Hz.
8 kHz Noise Stereo Right and Left Channels

Note gain flatness deviation less than 0.5 dB and close agreement between uncorrelated left and right channels.
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2 Tone Mono Spectrum

7 MHz Micro T2 with close-spaced 2 tones into microphone input. Suppressed carrier at 5000 Hz.
4 tone audio test spectrum showing effect of 3 different window functions. Hann provides the best peak amplitude accuracy but the other two show much more detail near the noise floor.
10 tone spectrum using Blackman window. This test signal is useful to observe SSB transmitter performance with very high peak-to-average waveforms such as SSB voice.
Test signals stored as wave files on disk, 44.1 kHz CD audio files on CD, and MP3 files on the iPod. These spectra were all measured using the iPod source, which is considered the worst case.

2 Tone Mono--identical files in right and left channels
2 Tone Stereo equal 710Hz and 830Hz tones in left channel
equal 970 Hz and 1130 Hz tones in right channel
3 kHz Noise Mono--identical files in right and left channels
3 kHz Noise Stereo--identical statistics, but uncorrelated right and left channels
4 Tone Mono
8 kHz Noise Mono--identical files
8 kHz Noise Stereo--uncorrelated files
10 Tone Mono
15 kHz Noise Mono--identical files
15 kHz Noise Stereo--uncorrelated files

As a check on the correlation, stereo right and left channels may be summed and the output power will be 3.0 dB higher. Mono right and left channels may be summed and the output power will be 6.0 dB higher if phase relationships are observed.

A useful set of tones for transmitter and receiver testing. Apply these in pairs to the input of your receiver audio amplifier and observe the output spectrum.