

FUNDAMENTALS OF ACOUSTICS AND AUDIO EAR-TRAINING

This file contains pink noise and simple sine wave sounds, arranged in complementary fashion.

The groups of sounds comprise $\frac{1}{3}$ octave-wide bands of pink noise, cross fading to pure sine wave tones whose frequencies are the center of the band in which they appear.

Sine wave octaves:

20 Hz	Common label 20 Hz
40 Hz	40 Hz
79 Hz	80 Hz
158 Hz	160 Hz
316 Hz	315 Hz
631 Hz	630 Hz
1258 Hz	1200 Hz
2511 Hz	2500 Hz
5011 Hz	5000 Hz
7943 Hz	8000 Hz
15849 Hz	16000 Hz

Sine wave one-third octaves:

20 Hz	251 Hz	3162 Hz
25 Hz	316 Hz	3981 Hz
31 Hz	398 Hz	5012 Hz
40 Hz	501 Hz	6310 Hz
50 Hz	631 Hz	7943 Hz
63 Hz	794 Hz	10,000 Hz
79 Hz	1000 Hz	12,589 Hz
100 Hz	1259 Hz	15,849 Hz
126 Hz	1585 Hz	19,953 Hz
158 Hz	1995 Hz	
200 Hz	2512 Hz	

Please adjust your volume to a comfortable low level with the pink noise band after the first spoken announcement.

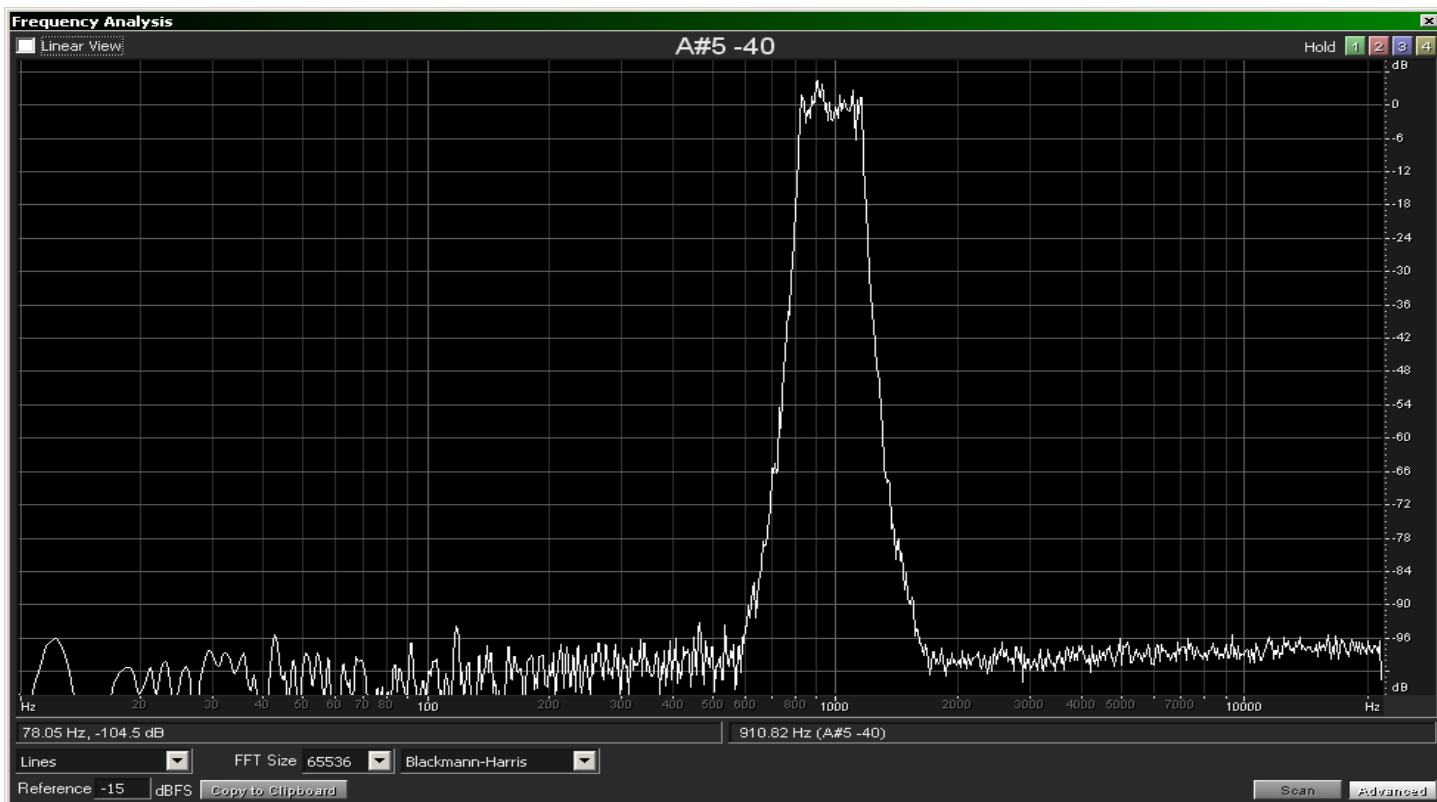
Following the pink noise level-setting band are one-third octave bands of pink noise centered on the ISO standard frequency centers in the list above. Each band of noise cross-fades to a pure sinewave tone whose frequency is the center of the ISO band in which it appears. For example, the $\frac{1}{3}$ octave-wide band labeled 1000 Hz contains frequencies ranging from 833 Hz to 1167 Hz, and its sinewave tone falls at 1000 Hz. The $\frac{1}{3}$ octave-wide band labeled 3162 Hz contains frequencies ranging from 2635 Hz to 3689 Hz and its sinewave tone is 3162 Hz.

CAUTION !

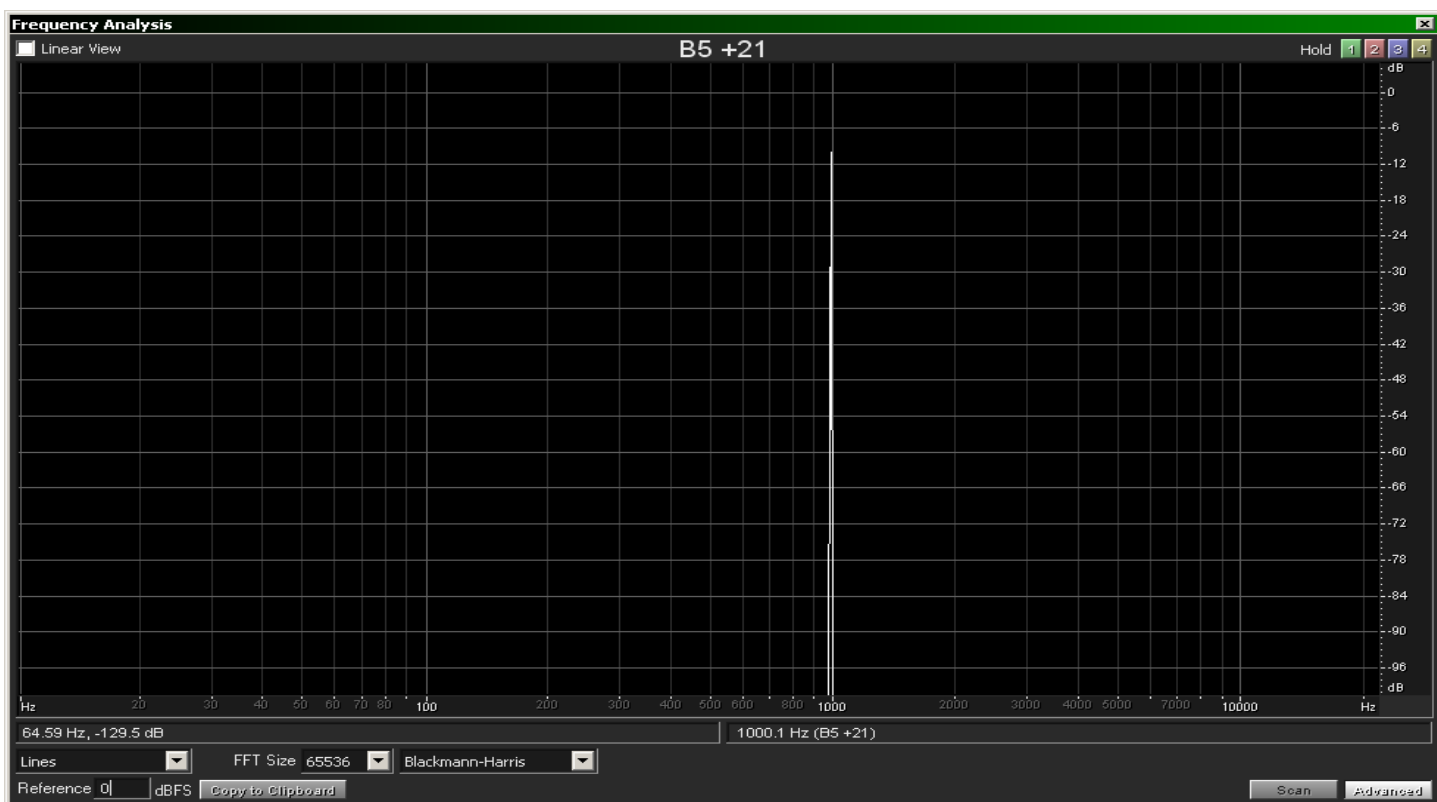
Common or poor-quality loudspeakers are easily damaged by very low and very high frequency sounds, played above very low volume levels.

Only high-quality studio monitors can handle low frequencies at high volume, and even they will be damaged –tweeters or horns burned out – from high frequency tones that may be inaudible to listeners.

YOU HAVE BEEN WARNED ! KEEP VOLUME LOW !



SPECTRUM OF 1 kHz NOISE BAND



SPECTRUM OF 1 kHz TONE FOR 1 kHz BAND