Figure 8: Sound pressure levels for three frequencies (200, 650 and 2000 Hz) versus distance –r-, compared to the ideal reference 20log(1/r) behaviour.
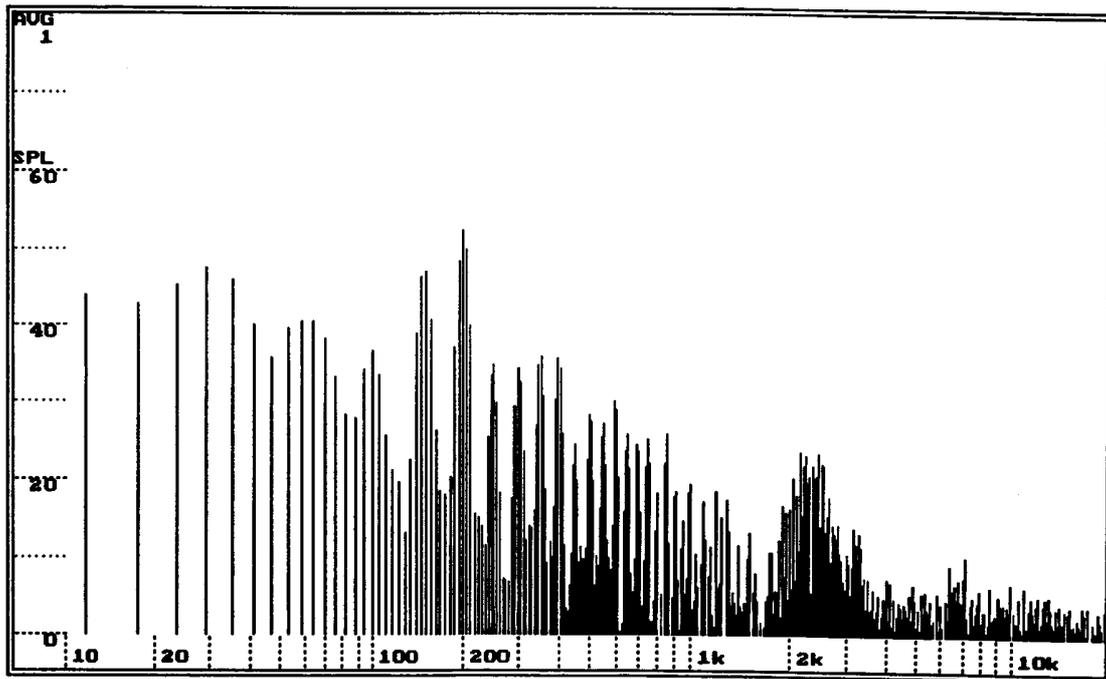

Figure 9: Example of a Liberty Audiosuite measurement of the noise produced in the Noise Test Chamber by a noisy example transformer. The vertical axis is in dB-SPL, while the horizontal axis shows the frequency in Hz.
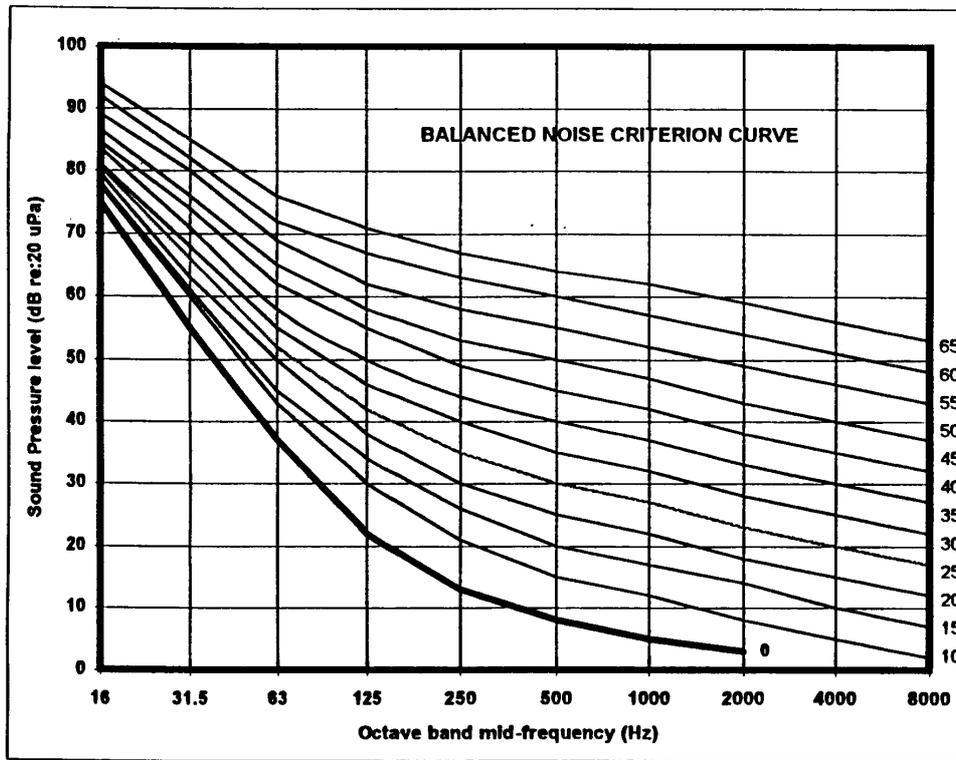
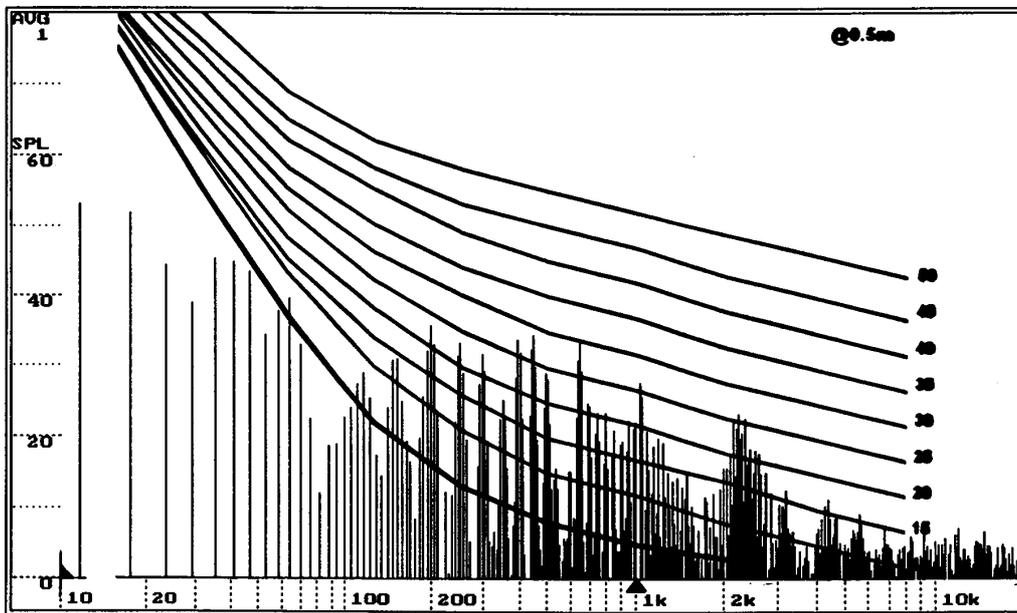Figure 10: Balanced Noise Criterion Curves (reference [17])

Figure 11: Example of a measurement of the noise of a transformer, combined with the NC-curve overlay. The measurement is performed at a 0.5 m distance, and the maximum noise level is just at NC30 close to 600 Hz. The noise level at 1 m distance equals 30 – 6 = NC24.
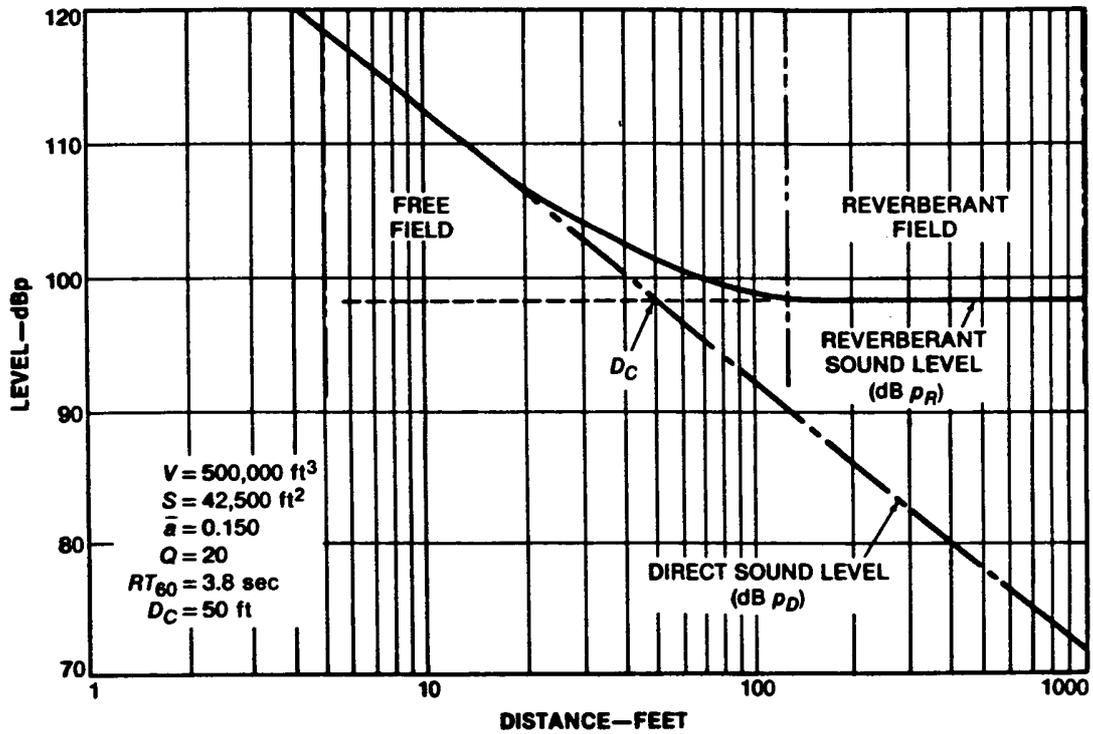
Figure 12: The noise level from a point source, as a function of the distance, is indicated by the sloped line (Direct Sound Level). The reverberant Sound Level (caused by the point source) is independent of the distance to the source in the room. The critical distance D_C is found where the Direct and Reverberant Sound Levels are equal (reference [18]).
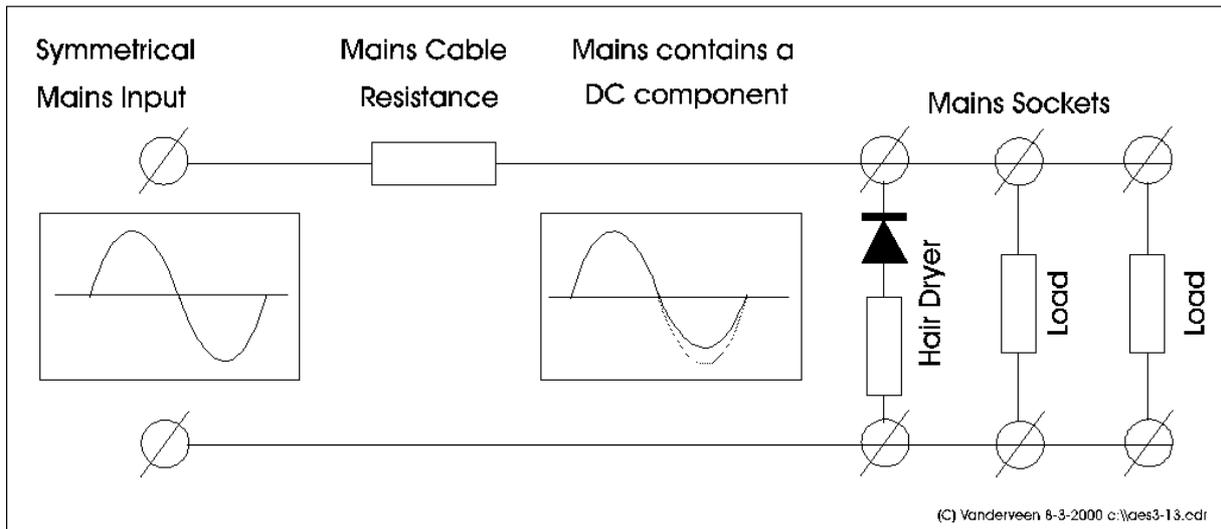

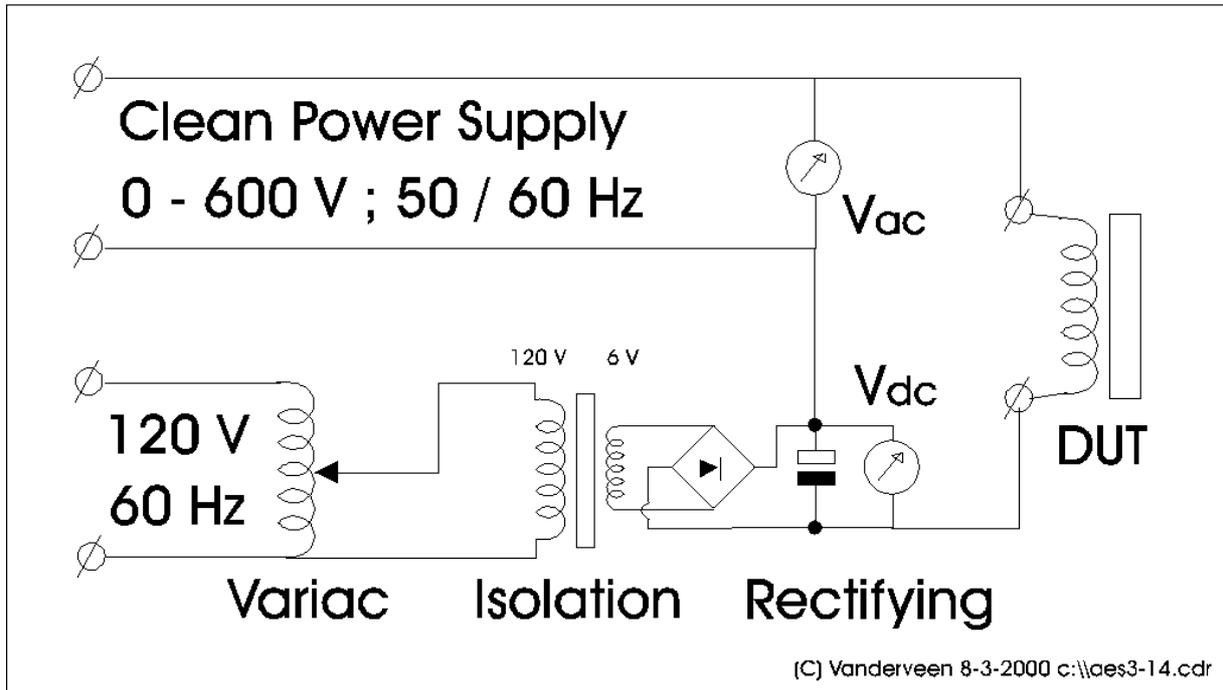Figure 13: When the mains is loaded by an asymmetrical load, a DC-component will occur at the mains sockets.

Figure 14: Representation of the measurement setup for emulating "dirty" mains conditions.

Figure 15: The four transformers under test. From Left to Right: Plitron 6931, Plitron 87053201, Standard EI and Other Toroid.