

P. N. Kulkarni and P. C. Pandey, Perceptually balanced filter response for binaural dichotic presentation to reduce the effect of spectral masking, J. Acoust. Soc. Amer., vol. 120(5), p. 3253, 2006

Contact: Prof. P. C. Pandey
Department of Electrical Engineering,
Indian Institute of Technology Bombay, Powai, Mumbai.
mailto: pcpandey@ee.iitb.ac.in

Abstract - Earlier investigations show that the scheme of binaural dichotic presentation with spectral splitting of speech signal helps in reducing the effect of spectral masking for persons with moderate bilateral sensorineural hearing impairment. Speech perception improved by employing filters with interband crossover gain adjusted between 4 and 6 dB below the pass band gain. The relationship between scaling factors for a tone presented to the two ears, so that perceived loudness is that of a monaural presentation, is investigated for design of comb filters with improved perceptually balanced response. Results from the listening tests show that, for perceptual balance, the sum of the two scaling factors should be constant, indicating that the magnitude response of the comb filters should be complementary on a linear scale.