

# Literature Search of Publications on Digital Hearing Aids

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A search was made of the BRS (database vendor) System for information on digital hearing aids. First, the CROS feature of BRS indicated that most information on digital hearing aids is contained in four databases, two medical and two scientific. The four databases searched were: the National Library of Medicine's database (MESH), which covers 3,600 national and international biomedical journals; Excerpta Medicas's database (EMED), which covers over 800,000 records of biomedical journals and conference papers; Computerized Engineering Index (COMP), a worldwide index to technical and engineering journals, conference proceedings, and monographs; and, Inspec (INSP), which indexes international journal articles in the fields of physics, engineering, and computer science.

**Dance B:** Digital processor improves speech-signal quality. *Electron*, 55(4):122,123, 1982.

**Dowle RD, Vaughan R, Holmes WH:** Digital processing of audio signals in the development of a modern integrated hearing aid. *IREECON Int Conv Dig Int Electron Conv & Exhib*, 290-293, Univ. of NSW, Kensington, Sydney, Australia, 1979.

**Engebretson AM, Morley RE, OConnell MP:** A wearable posket-sized processor for digital hearing aid and other hearing prosthesis applications. *ICASSP 86 Proceedings*, IEEE IECEJ ASJ International Conference on Acoustics, Speech and Signal Processing, IEEE Inst Electron & Commun, Japan Acoust Soc, Japan, 1986.

**Feldman S, Malecek R:** Signal-processing techniques in a computerized hearing aid test system. *J Acoust Soc Am*, 62(6):1457-62, 1977.

**Gomez P, Rodellar V, Newcomb R:** Parcor characterization of the ear for hearing aids. *Proc IEEE*, 70(12):1464-1466, 1982.

**Hiki S:** Electronic devices as communication aids for the handicapped. *J Inst Electron & Commun Eng Jpn*, 64(10):1086-94, 1981.

**Leijon A:** Auditory models for hearing and fitting criteria. *Scand Audiol [Suppl]*, 17:112-16, 1983.

**Levitt H:** Digital master hearing aid. *J Rehabil Res Dev*, 23(1):79-87, 1986.

**Mangold S, Rissler-Akesson G:** Programmable filter helps faulty hearing. *Eltek, Aktuell Elektron*, 20(15):64-6, 1977.

**Morley RE, Jr:** Breaking the frequency barrier. *IEEE Potentials*, 6(1):32-35, 1987.

**Morley RE, Jr, Engebretson AM, Trotta JG:** Multiprocessor digital signal processing system for real-time audio applications. *IEEE Trans Acoust Speech Signal Process*, ASSP 34(2):225-231, 1986.

**Okabe K, Hamada H, Miura T:** System for simulated *in situ* measurement of hearing aids. *J Acoust Soc Jpn*, 5(2):95-103, 1984.

**Pick G:** Use of adaptive filters in signal-processing hearing aids. *IEE Colloquium on Adaptive Processing and Biomedical Applications*, (Digest No. 81), London, England, 1984.

**Ventura JC, Morellini L:** A multi-band hearing-aid emulation using real-time digital signal processing. *Proceedings of EUSIPCO 86: Third European Signal Processing Conference*, The Hague, Netherlands, 1986.

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The editors also reviewed selected volumes of *The Journal of the Acoustical Society of America* and assembled the following references that pertain to digital hearing aids and related devices and/or procedures.

From Suppl. 2, Vol. 81 (Summer 1987), References to Contemporary Papers on Acoustics:

**Graupe D et al.:** Self Adaptive Filtering of Background Noise in Hearing Aids. *Proc 7th Ann Conf IEEE/Eng Med Biol Soc*, Chicago, IL, 27-30 Sept. 1985. Vol. 2, 1103-1109 (IEEE, New York, 1985). Phys. Abstra. 109207 (15 Oct. 1986).

**Hrebicek E et al.:** Application of Fast Fourier Transformation for the Control of Hearing Aids Charac-

teristics. *Bull Audiophonol Ann Sc Univ Franche-Comte* 2 NS(5-6):435-442 (1986) (French; English abstr.).

From Vol. 80, No. 6 (Dec. 1986), Subject Index:

**Speech identification under simulated hearing-aid frequency response characteristics in relation to sensitivity, frequency resolution, and temporal resolution.** Mark E. Lutman and Julia Clark, 80(4):1030-40 (1986).

From Vol. 79, No. 6 (June 1986), Subject Index:

**The constant-volume-velocity nature of hearing aids: Conclusions based on computer simulations.** David P. Egolf, Brett T. Haley, and Vernon D. Larson, 79(5):1592-1602 (1986).

From Vol. 78, No. 6 (Dec. 1985), Subject Index:

**The hearing aid feedback path: Mathematical simulations and experimental verification.** David P. Egolf, Henry C. Howell, Kim A. Weaver, and D. Steven Barker, 78(5):1578-87 (1985).

**Discrimination and identification of frequency-lowered speech in listeners with high-frequency hearing impairment.** Charlotte M. Reed, Kenneth I. Schultz, Louis D. Braida, and Nathaniel I. Durlach, 78(6):2139-41(L) (1985).

From Suppl. 2, Vol. 77 (Summer 1985), References to Contemporary Papers on Acoustics:

**Cole WA:** Prospects for the Application of High Technology to Hearing Aids. *Can Acoust/Acoust Can* 12(1):29-36 (1984). Phys. Abstr. 41651 (1 May 1984).

**Myers TR:** A Portable Digital Speech Processor for an Auditory Prosthesis. *Wescon '84 Conf Rec*, Anaheim, CA, 30 Oct.-1 Nov. 1984. 36/2/1-4 (Electron. Conventions, Los Angeles, CA, 1984). Phys. Abstr. 92170 (16 Sept. 1985).

From Suppl. 2, Vol. 75 (Summer 1984), References to Contemporary Papers on Acoustics:

**Hiroshi O and Tsutomu O:** Digital Hearing Aid with an Emphasized Consonant. *11th Int Congr Acoust*, Paris, 19-27 July 1983, 3:335-338 (GALF, Lannion, 1983).

**Levitt H:** Signal Processing for the Communicatively Handicapped. *Trends Percept Signal Process* 2(3):15-24 (1982). Phys. Abstr. 29784 (15 Mar. 1983).

**Ono H, Kanzaki J, and Mizoi K:** Clinical Results of Hearing Aid with Noise-Level-Controlled Selective Amplification. *Audiology* 22(5):494-515 (1983).

**Yip JCS:** A Microprocessor-Controlled System for Electroacoustic Testing of Hearing Aids and for Audiological Experiments. *Conf Microprocessor Syst*, 1981, Brisbane, Australia, 17-19 Nov. 1981. 83-87 (Inst. Eng. Aust., Barton, ACT., Aust., 1981). Phys. Abstr. 39747 (15 Apr. 1983).

From Vol. 75, No. 6 (June 1984), Subject Index:

**Use of a personal computer to model the electroacoustics of hearing aids.** Priscilla F. Bade, A. Maynard Engebretson, Arnold F. Heidbreder, and Arthur F. Niemoeller, 75(2):617-20, 1984.

From Suppl. 2, Vol. 73 (Summer 1983), References to Contemporary Papers on Acoustics:

**Lauridsen O and Birk Nielsen H:** A New Computerized Method for Hearing Aid Fitting Based on Measurements at the Ear Drum. *Scand Audiol* 10(2):109-113 (1981). Phys. Abstr. 2975 (4 Jan. 1982).

From Vol. 74, No. 6 (Dec. 1983), Subject Index:

**Discrimination of speech processed by low-pass filtering and pitch-invariant frequency lowering.** Charlotte M. Reed, Bruce L. Hicks, Louis D. Braida, and Nathaniel I. Durlach, 74(2):409-19 (1983).

From Vol. 72, No. 6 (Dec. 1982), Subject Index:

**A computer program for fitting a master hearing aid to the residual hearing characteristics of individual patients.** A. Maynard Engebretson and James D. Miller, 72(2):426-30 (1982).