

Title (en)
Digital electro-acoustic transducer

Title (de)
Digitaler elektroakustischer Wandler

Title (fr)
Transducteur électroacoustique digital

Publication
EP 0966178 B1 20040526 (EN)

Application
EP 99304612 A 19990614

Priority
JP 17186598 A 19980618

Abstract (en)
[origin: EP0966178A2] A digital electro-acoustic transducer for improving the speech quality of sound under noisy circumstances is disclosed. A plurality of sound generating units A (22) constituted by electrostatic electro-acoustic transducers (condenser earphones) and a sound receiving unit B (23) constituted by an electrostatic acousto-electric transducer (condenser microphone) are disposed in a cavity of a soundproof housing (21). The units A (22) are provided in a feedback loop and an output level of the unit B (23) is adjusted by a preamplifier (24). An output of the preamplifier is sampled by a sample-and-hold circuit (25) and an output thereof is delta-modulated by a delta modulation circuit (26). The number of pulses produced by the circuit (26) is subjected to arithmetic operation in an arithmetic circuit (27) to produce a drive signal for the units A. Vibration of a vibration film of the unit B (23) is detected and arithmetical control is made to be always maintained to zero. On the other hand, an audio signal supplied from a signal terminal (28) is superposed on a drive signal for the units A and is emitted into the cavity. <IMAGE>

IPC 1-7
H04R 1/00; H04R 1/10; G10K 11/178

IPC 8 full level
H04R 17/00 (2006.01); **H04M 1/00** (2006.01); **H04R 1/00** (2006.01); **H04R 5/033** (2006.01)

CPC (source: EP)
H04R 1/005 (2013.01); **H04R 19/00** (2013.01); **H04R 5/033** (2013.01)

Cited by
EP1009144A3

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 0966178 A2 19991222; **EP 0966178 A3 20010321**; **EP 0966178 B1 20040526**; CN 1173599 C 20041027; CN 1241107 A 20000112; DE 69917531 D1 20040701; DE 69917531 T2 20050804; JP 2000013890 A 20000114; JP 3553375 B2 20040811

DOCDB simple family (application)
EP 99304612 A 19990614; CN 99108651 A 19990618; DE 69917531 T 19990614; JP 17186598 A 19980618