Title (en)
　　SOUND GENERATOR WITH A PUMP ACTUATOR

Title (de)
　　SCHALLGENERATOR MIT PUMPANTRIEB

Title (fr)
　　GENERATEUR DE SONS A COMMANDE PAR POMPE

Publication
　　EP 1149507 A2 20011031 (DE)

Application
　　EP 00908949 A 20000128

Priority
　　• DE 0000252 W 20000128
　　• DE 19904106 A 19990202

Abstract (en)
　　[origin: DE19904106A1] The aim of the invention is to produce a sound generator for eliminating interference by means of sound absorption and for reproducing signals, speech and music. The sound is preferably generated by means of micro- and nanomechanical air pumps (12) whose output flow is controlled by the actuator (16) according to the required sound signal and exits via a sound channel (11); the complementary channel (11') acting on a closed buffer volume (15). As with conventional loudspeaker enclosures, the function of the buffer volume (15) is to make an acoustic monopole radiator out of the ineffective dipole of the sound channel (11) and the channel (11'). In the case of air pumps (12) with high pressure ratios, the necessary buffer volume is correspondingly small. The sound-generating volume flow is measured in the sound channel (11) by means of a micromechanical flowmeter (18) and can be readjusted according to a comparison of the desired value and the actual value. Finally, a bore (19) with a high flow resistance balances out air pressure fluctuations and drift errors in the buffer volume (15).

IPC 1-7
　　H04R 21/00; G10K 11/00

IPC 8 full level
　　G10K 7/00 (2006.01); **G10K 15/04** (2006.01); **H04R 1/28** (2006.01); **H04R 23/00** (2006.01)

CPC (source: EP KR)
　　G10K 7/00 (2013.01 - EP KR); **G10K 15/04** (2013.01 - EP KR); **H04R 23/00** (2013.01 - EP KR)

Citation (search report)
　　See references of WO 0047012A2

Citation (examination)
　　DE 3618106 A1 19871203 - SIEMENS AG [DE]

Designated contracting state (EPC)
　　DE FR GB IT

DOCDB simple family (publication)
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　　DE 19904106 A 19990202; AU 3144300 A 20000128; CN 00803413 A 20000128; DE 0000252 W 20000128; EP 00908949 A 20000128; JP 2000597974 A 20000128; KR 20017009783 A 20010802