

Title (en)  
Acoustic reproducing apparatus

Title (de)  
Tonwiedergabegerät

Title (fr)  
Appareil de reproduction acoustique

Publication  
**EP 0658064 A3 20040901 (EN)**

Application  
**EP 94119350 A 19941207**

Priority  
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Abstract (en)  
[origin: EP0658064A2] The invention presents means for applying negative feedback more powerfully and stably than before over a frequency range as wide as possible, in the constitution for detecting a reproduced sound of a speaker used in various acoustic appliances by a microphone, and applying a negative feedback to an input signal of the speaker by the detected signal, and correcting the reproduced signal by improving the reproduction frequency characteristic and other characteristic of the speaker. <??>A fundamental constitution of an acoustic reproducing apparatus of the invention comprises a subtractor having an input terminal, a power amplifier for amplifying the output signal of this subtractor, a speaker for reproducing the output signal of the power amplifier, a microphone for detecting the acoustic output signal radiated from the speaker, a microphone amplifier for amplifying the acoustic output signal detected by the microphone, and an adder/subtractor for adding or subtracting the output signal of the microphone amplifier and the input signal of the power amplifier, wherein the output signal of the adder/subtractor is connected to the subtractor to compose a negative feedback circuit. <??>Or, in an acoustic reproducing circuit using a speaker box incorporating a passive radiator, a microphone is disposed in the front side of the magnetic circuit of the speaker for reproducing the output signal of the power amplifier or speaker rear enclosed acoustic space, or in the enclosed acoustic space with the passive radiator of the speaker front side, and the output signal of the microphone is added or subtracted with the input signal of the power amplifier in the adder/subtractor in the fundamental constitution above, and the signal is subtracted from the input signal in the subtractor, thereby composing a negative feedback circuit. <IMAGE>

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**H04R 3/00**

IPC 8 full level  
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CPC (source: EP)  
**H04R 3/002** (2013.01)

Citation (search report)

- [XA] GB 2147166 A 19850501 - POTTER GRAHAM
- [A] GB 2211685 A 19890705 - THOMAS IAN GRENVILLE
- [XAY] PATENT ABSTRACTS OF JAPAN vol. 017, no. 128 (E - 1333) 18 March 1993 (1993-03-18)
- [Y] PATENT ABSTRACTS OF JAPAN vol. 010, no. 133 (E - 404) 17 May 1986 (1986-05-17)
- [Y] PATENT ABSTRACTS OF JAPAN vol. 014, no. 541 (E - 1007) 29 November 1990 (1990-11-29)

Cited by  
US8243942B2; DE19746645C1; GB2292854B; EP1059831A4; US2009041259A1; US7058186B2; US10425733B1; US9743181B2; US7065221B1; WO9914980A3; WO0141500A3; WO9921395A1; US10244314B2; US10299039B2; US6243472B1; US9961464B2

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