

Title (en)  
Headphone reproducing apparatus

Title (de)  
Kopfhörer-Wiedergabegerät

Title (fr)  
Appareil de reproduction par casque d'écoute

Publication  
**EP 0744881 A2 19961127 (EN)**

Application  
**EP 96303604 A 19960521**

Priority  
JP 14832395 A 19950522

Abstract (en)  
A headphone reproducing apparatus creates a virtual sound. A listener feels as if a sound came from a virtual sound source that imaginarily exists in a space apart from the listener. A delay circuit delays a first-channel input audio signal and a second-channel input audio signal by predetermined delay times. A low-pass filter changes frequency characteristics of the first- and second-channel input signals to predetermined frequency characteristics. A multiplier changes sound levels of the first- and second-channel input audio signals to predetermined sound levels. The delay circuit, low-pass filter, and multiplier are connected in series to each other. A headphone reproduces the first- and second-channel input signals processed by the delay circuit, low-pass filter, and multiplier as the sound that comes from the virtual sound source. <IMAGE>

IPC 1-7  
**H04R 5/033**

IPC 8 full level  
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CPC (source: EP)  
**H04S 5/00** (2013.01); **H04S 7/304** (2013.01); **H04S 2420/01** (2013.01)

Cited by  
EP1054574A4; US8023659B2; WO2013076534A1

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**EP 0744881 A2 19961127**; **EP 0744881 A3 19990609**; **EP 0744881 B1 20040714**; CN 1108083 C 20030507; CN 1140968 A 19970122; DE 69632889 D1 20040819; DE 69632889 T2 20050721; MY 124476 A 20060630; SG 89238 A1 20020618

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