

Title (en)
Headphone reproducing apparatus

Title (de)
Kopfhörer-Wiedergabegerät

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

Publication
EP 0744881 B1 20040714 (EN)

Application
EP 96303604 A 19960521

Priority
JP 14832395 A 19950522

Abstract (en)
[origin: EP0744881A2] 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>

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H04R 5/033

IPC 8 full level
H04R 3/00 (2006.01); **H04R 5/033** (2006.01)

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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DE FR GB

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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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EP 96303604 A 19960521; CN 96108997 A 19960522; DE 69632889 T 19960521; MY PI19961922 A 19960522; SG 1996009852 A 19960522