

Title (en)

THREE-DIMENSIONAL SOUND SYSTEM, RECORDING DEVICE, AND PLAYBACK DEVICE

Title (de)

DREIDIMENSIONALES TONSYSTEM, AUFZEICHNUNGSGERÄT UND WIEDERGABEGERÄT

Title (fr)

SYSTÈME, DISPOSITIF D'ENREGISTREMENT ET DISPOSITIF DE LECTURE SONORE TRIDIMENSIONNEL

Publication

EP 4124056 A4 20240320 (EN)

Application

EP 20925956 A 20201021

Priority

- JP 2020045899 A 20200317
- JP 2020039513 W 20201021

Abstract (en)

[origin: EP4124056A1] A three-dimensional sound system provided with a recording unit having 12 microphones that are three-dimensionally arranged in a sound recording space, and a playback unit having 12 speakers that are three-dimensionally arranged in a sound playback space. The playback unit performs playback in the sound recording space on the basis of sound signals recorded by the recording unit. A sound recording polyhedron constituted by linking the arrangement points of the 12 microphones and a sound playback polyhedron constituted by linking the arrangement points of the 12 speakers are almost isomorphic to each other, the shape of said polyhedrons being a cubic octahedron. This makes it possible to realize highly realistic recording and playback of three-dimensional sounds easily with a reduced calculation load.

IPC 8 full level

H04R 1/00 (2006.01); **H04R 1/40** (2006.01); **H04S 3/00** (2006.01); **H04S 7/00** (2006.01); **H04R 3/00** (2006.01); **H04R 3/12** (2006.01); **H04R 5/02** (2006.01)

CPC (source: EP)

H04R 1/403 (2013.01); **H04R 1/406** (2013.01); **H04S 3/002** (2013.01); **H04R 3/005** (2013.01); **H04R 3/12** (2013.01); **H04R 5/02** (2013.01); **H04R 5/027** (2013.01); **H04R 2201/401** (2013.01); **H04S 2400/09** (2013.01); **H04S 2400/15** (2013.01); **H04S 2420/11** (2013.01)

Citation (search report)

- [X] DE 102014211224 A1 20150513 - SENNHEISER ELECTRONIC [DE]
- [A] US 5260920 A 19931109 - IDE HIROAKI [JP], et al
- [A] DE 3512155 A1 19851031 - WOYWOD GERHARD
- [A] YOKOYAMA SAKAE ET AL: "6-channel recording/reproduction system for 3-dimensional auralization of sound fields.", ACOUSTICAL SCIENCE AND TECHNOLOGY, vol. 23, no. 2, 1 January 2002 (2002-01-01), JP, pages 97 - 103, XP055859359, ISSN: 1346-3969, Retrieved from the Internet <URL:https://www.jstage.jst.go.jp/article/ast/23/2/23_2_97/_pdf/-char/en> DOI: 10.1250/ast.23.97
- [A] DICKINS GLENN ET AL: "Validation of Soundfield Duplication for Device Testing", CONFERENCE: 2016 AES INTERNATIONAL CONFERENCE ON SOUND FIELD CONTROL; JULY 2016, AES, 60 EAST 42ND STREET, ROOM 2520 NEW YORK 10165-2520, USA, 14 July 2016 (2016-07-14), XP040680856
- [A] DIAZ CHRISTOPHER: "Three Etudes for Symmetrical Cuboctahedral Speaker Array: An Exploration of Aural Space- Time Symmetry", UC RIVERSIDE ELECTRONIC THESES AND DISSERTATIONS, 1 December 2019 (2019-12-01), pages IV-VIII, 1 - 94, XP055859352, Retrieved from the Internet <URL:https://escholarship.org/content/qt0032x4pv/qt0032x4pv.pdf> [retrieved on 20211109]
- See also references of WO 2021186780A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 4124056 A1 20230125; **EP 4124056 A4 20240320**; JP 2021150695 A 20210927; WO 2021186780 A1 20210923

DOCDB simple family (application)

EP 20925956 A 20201021; JP 2020039513 W 20201021; JP 2020045899 A 20200317