US 20230232174A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2023/0232174 A1**

McKee et al. (43) **Pub. Date: Jul. 20, 2023**

(54) **NON-INTRUSIVE TRANSDUCER HEALTH DETECTION**

(71) Applicant: **Dolby Laboratories Licensing Corporation**, San Francisco, CA (US)

(72) Inventors: **Joseph McKee**, Wollstonecraft (AU); **Timothy Alan Port**, Drummoyne (AU); **Paul Holmberg**, North Ryde (AU)

(73) Assignee: **Dolby Laboratories Licensing Corporation**, San Francisco, CA (US)

(21) Appl. No.: **18/000,835**

(22) PCT Filed: **Jun. 21, 2021**

(86) PCT No.: **PCT/US2021/038187**

§ 371 (c)(1),
(2) Date: **Dec. 6, 2022**

Related U.S. Application Data

(60) Provisional application No. 63/041,685, filed on Jun. 19, 2020.

(30) **Foreign Application Priority Data**

Jun. 19, 2020 (EP) 20181112.2

Publication Classification

(51) **Int. Cl.**
H04R 29/00 (2006.01)

(52) **U.S. Cl.**
CPC ***H04R 29/001*** (2013.01); ***H04R 29/004*** (2013.01)

(57) **ABSTRACT**

Embodiments are disclosed for non-intrusive transducer health detection in an audio system. In an embodiment, a method performed by the audio system comprises outputting one or more encoded inaudible acoustic signals into an acoustic transmission medium using a first transducer. The one or more encoded inaudible acoustic signals are received from the acoustic transmission medium using a second transducer of the audio system. The received one or more encoded inaudible acoustic signals are used to identify failure or degradation of the first or second transducer.