

Title (en)
SYNCHRONIZED VOICE-CONTROL MODULE, LOUDSPEAKER SYSTEM AND METHOD FOR INCORPORATING VC FUNCTIONALITY INTO A SEPARATE LOUDSPEAKER SYSTEM

Title (de)
SYNCHRONISIERTES SPRACHSTEUERMODUL, LAUTSPRECHERSYSTEM UND VERFAHREN ZUM EINBAU VON VC-FUNKTIONALITÄT IN EIN SEPARATES LAUTSPRECHERSYSTEM

Title (fr)
MODULE DE COMMANDE VOCALE SYNCHRONISÉ, SYSTÈME DE HAUT-PARLEUR ET PROCÉDÉ POUR INCORPORER UNE FONCTIONNALITÉ VC DANS UN SYSTÈME DE HAUT-PARLEUR SÉPARÉ

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Application
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Abstract (en)
[origin: WO2019136460A1] A system (400) and method for incorporating Voice-Controlled ("VC") or smart speaker system features into a separate high-performance host loudspeaker system (604) includes a "Smart Puck" VC module (404) programmed to incorporate VC functionality into the separate host loudspeaker system (604). The Smart Puck VC module (404) includes a microphone array (424) and senses noise stimuli emitted by the separate host loudspeaker system (604) in a user's listening space which is used to derive a complex transfer function (TF) between the host loudspeaker system and the microphone array, and the captured TF is utilized to improve the VC speaker system's sound in the listening space.

IPC 8 full level
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CPC (source: EP)
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Citation (search report)
• [XYI] US 9251787 B1 20160202 - HART GREGORY M [US], et al
• [XYI] US 2017242653 A1 20170824 - LANG JONATHAN P [US], et al
• [A] US 2015350804 A1 20151203 - CROCKETT BRETT G [US], et al
• [A] US 2017325044 A1 20171109 - OUBORG JORN [NL], et al
• [A] US 9813808 B1 20171107 - YANG JUN [US]
• [Y] US 5828768 A 19981027 - EATWELL GRAHAM P [GB], et al
• [Y] EP 3125237 A1 20170201 - HARMAN INT IND [US]
• [Y] US 8194874 B2 20120605 - STAROBIN BRADLEY M [US], et al
• [Y] US 9008331 B2 20150414 - AGGARWAL ASHISH [US], et al
• [A] WO 2016054090 A1 20160407 - NUNNTAWI DYNAMICS LLC [US]
• [XYI] ANONYMOUS: "Amazon Echo - Wikipedia", 4 July 2017 (2017-07-04), XP055680531, Retrieved from the Internet <URL:https://web.archive.org/web/20170704034521/https://en.wikipedia.org/wiki/Amazon_Echo> [retrieved on 20200327]
• [A] "Sound Capture and Processing: Practical Approaches", 17 August 2009, WILEY PUBLISHING, Chichester, ISBN: 978-0-470-31983-3, article TASEHV IVAN JELEV: "Chapter 7. Acoustic Echo-reduction Systems", pages: 1 - 389, XP055921177
• [A] STAN G-B ET AL: "COMPARISON OF DIFFERENT IMPULSE RESPONSE MEASUREMENT TECHNIQUES", JOURNAL OF THE AUDIO ENGINEERING SOCIETY, AUDIO ENGINEERING SOCIETY, NEW YORK, NY, US, vol. 50, no. 4, 1 April 2002 (2002-04-01), pages 249 - 262, XP001130080, ISSN: 1549-4950
• See references of WO 2019136460A1

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