



US 20230232155A1

(19) **United States**(12) **Patent Application Publication**
DHANASEKARAN(10) **Pub. No.: US 2023/0232155 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **AUDIO GROUND SWITCH CHANNEL
CROSSTALK CANCELLATION TECHNIQUE**(52) **U.S. Cl.**CPC **H04R 5/04** (2013.01); **H04R 3/04**
(2013.01); **H04R 2420/03** (2013.01); **H03F**
3/45475 (2013.01)(71) Applicant: **QUALCOMM Incorporated**, San
Diego, CA (US)(72) Inventor: **Vijayakumar DHANASEKARAN**, San
Diego, CA (US)(21) Appl. No.: **17/580,505**(22) Filed: **Jan. 20, 2022****Publication Classification**(51) **Int. Cl.****H04R 5/04** (2006.01)**H04R 3/04** (2006.01)(57) **ABSTRACT**

An aspect of the disclosure relates to an apparatus, including an audio interface including first and second outputs; a crosstalk cancelling circuit including first and second inputs coupled to the first and second outputs of the audio interface, respectively; a first summer including a first input coupled to the first output of the audio interface and a second input coupled to a first output of the crosstalk cancelling circuit; a second summer including a first input coupled to the second output of the audio interface and a second input coupled to a second output of the crosstalk cancelling circuit; a first digital to analog converter (DAC) including an input coupled to an output of the first summer; and a second DAC including an input coupled to an output of the second summer.

