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(19) **United States**(12) **Patent Application Publication**
Chang(10) **Pub. No.: US 2022/0376667 A1**(43) **Pub. Date: Nov. 24, 2022**(54) **METHOD FOR DYNAMICALLY ADJUSTING
ADJUSTABLE GAIN VALUE TO EQUALIZE
INPUT SIGNAL TO GENERATE EQUALIZER
OUTPUT SIGNAL AND ASSOCIATED
LEVELING EQUALIZER**(52) **U.S. Cl.**CPC *H03G 5/165* (2013.01); *H03G 5/005*
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(57)

ABSTRACT

A leveling equalizer includes a graphic equalizer circuit, a first multiplication circuit, a second multiplication circuit, an addition circuit, and a gain control circuit. The graphic equalizer circuit processes a first input signal and output a first output signal and a second output signal. The first multiplication circuit multiplies the first output signal and one of an adjustable gain value and a fixed gain value to generate a first adjusted output signal. The second multiplication circuit multiplies the second output signal and another of the adjustable gain value and the fixed gain value to generate a second adjusted output signal. The addition circuit combines the first adjusted output signal and the second adjusted output signal to generate an equalizer output signal. The gain control circuit dynamically adjusts the adjustable gain value according to the equalizer output signal.

