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(54) METHOD AND APPARATUS FOR CANCELING NOISE FROM SOUND INPUT THROUGH MICROPHONE

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(57) **ABSTRACT**

Provided is a method and apparatus for canceling noise from a sound signal input through a microphone. The method includes filtering a high-frequency signal having a frequency that is higher than a reference frequency and a low-frequency signal having a frequency that is lower than the reference frequency from input signals obtained through a microphone array, obtaining a high-frequency target signal by canceling a noise signal from the filtered high-frequency signal using a beamforming method, obtaining a low-frequency target signal by canceling a noise signal having a phase difference that is different from a phase difference of a target signal from the filtered low-frequency signal, and obtaining a sound source signal from which noise is cancelled, by synthesizing the obtained high-frequency target signal with the obtained low-frequency target signal. Thus, it is possible to accurately obtain a target sound source signal by minimizing signal distortion occurring in a low-frequency band in a digital sound obtaining apparatus having a small-size microphone array and accurately canceling or attenuating unnecessary noise.

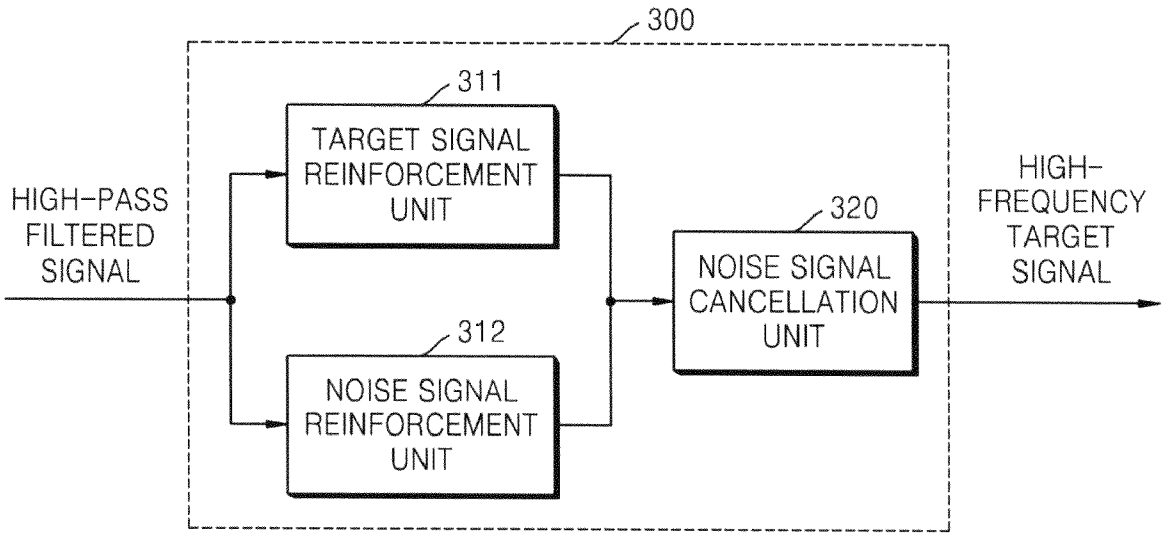


FIG. 1A

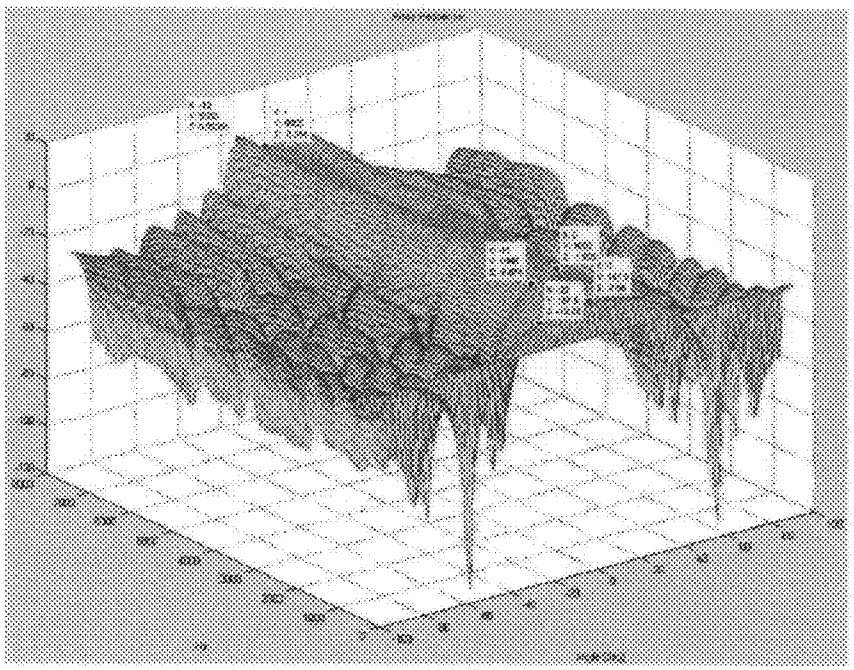


FIG. 1B

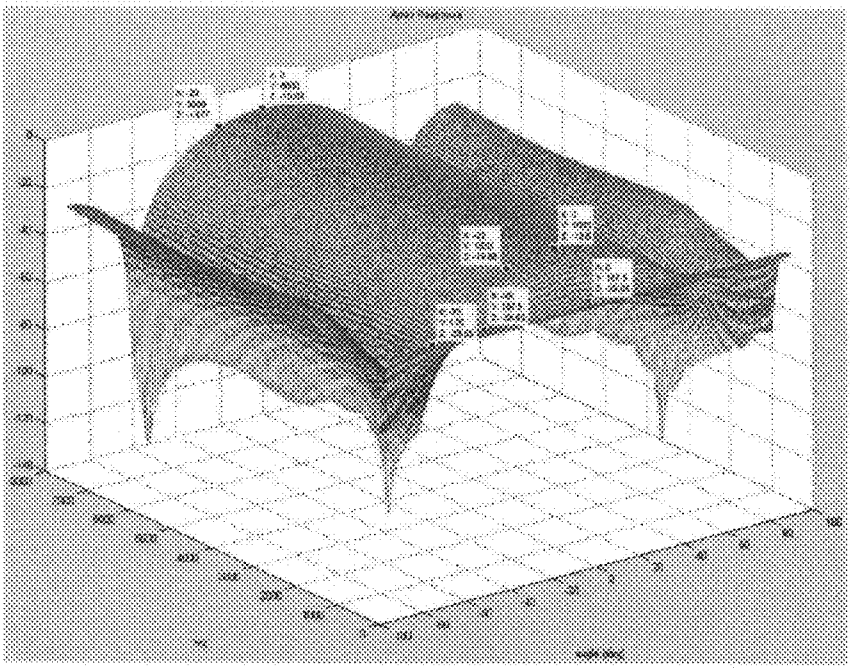


FIG. 2

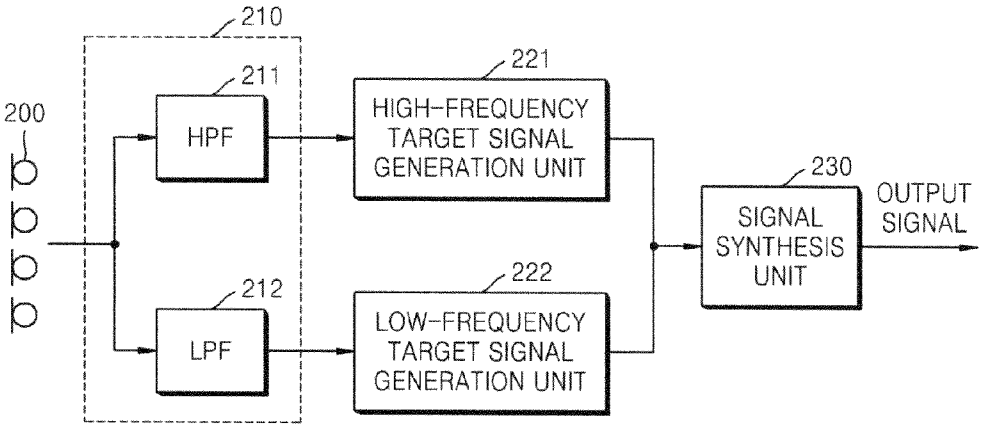


FIG. 3A

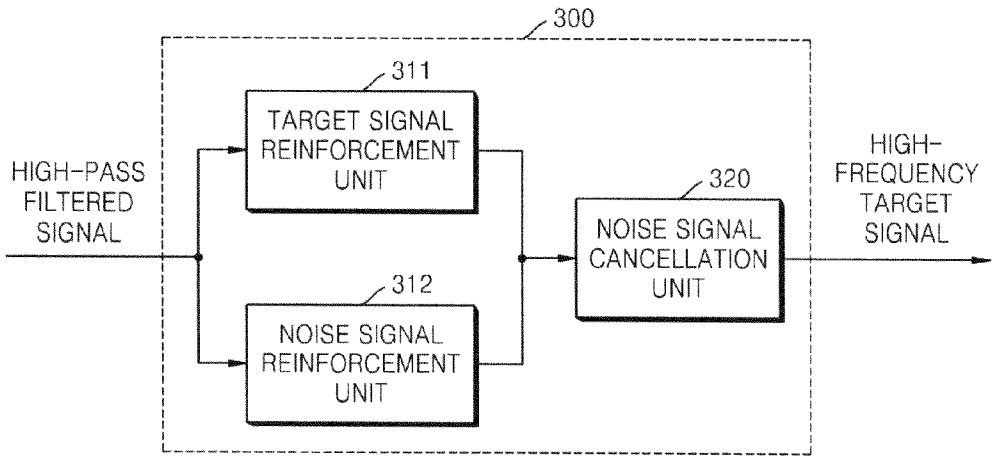


FIG. 3B

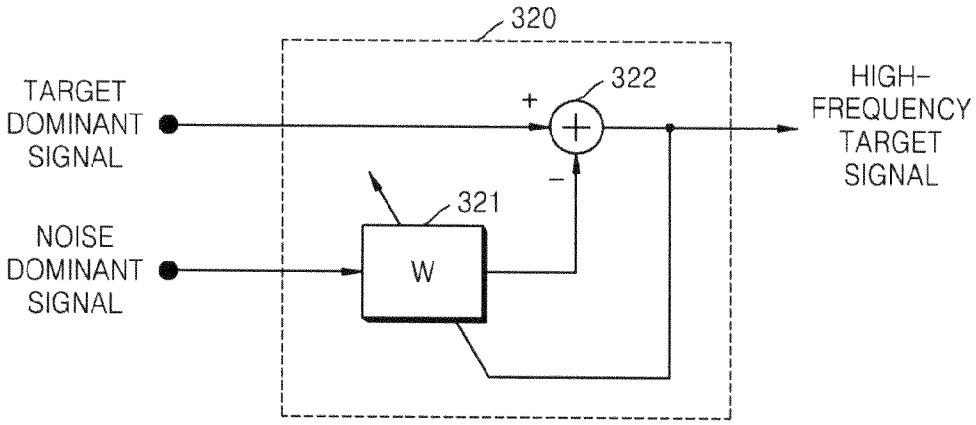


FIG. 4

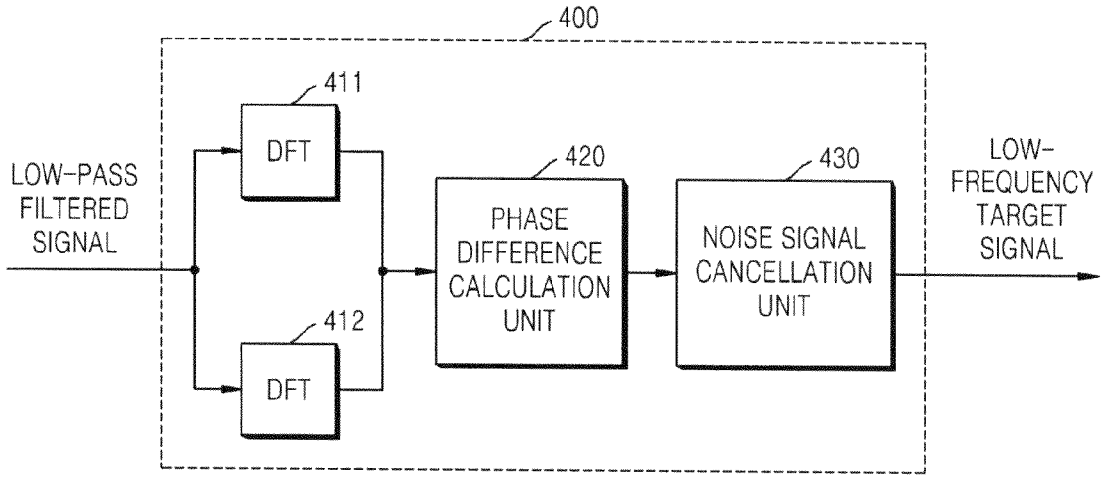
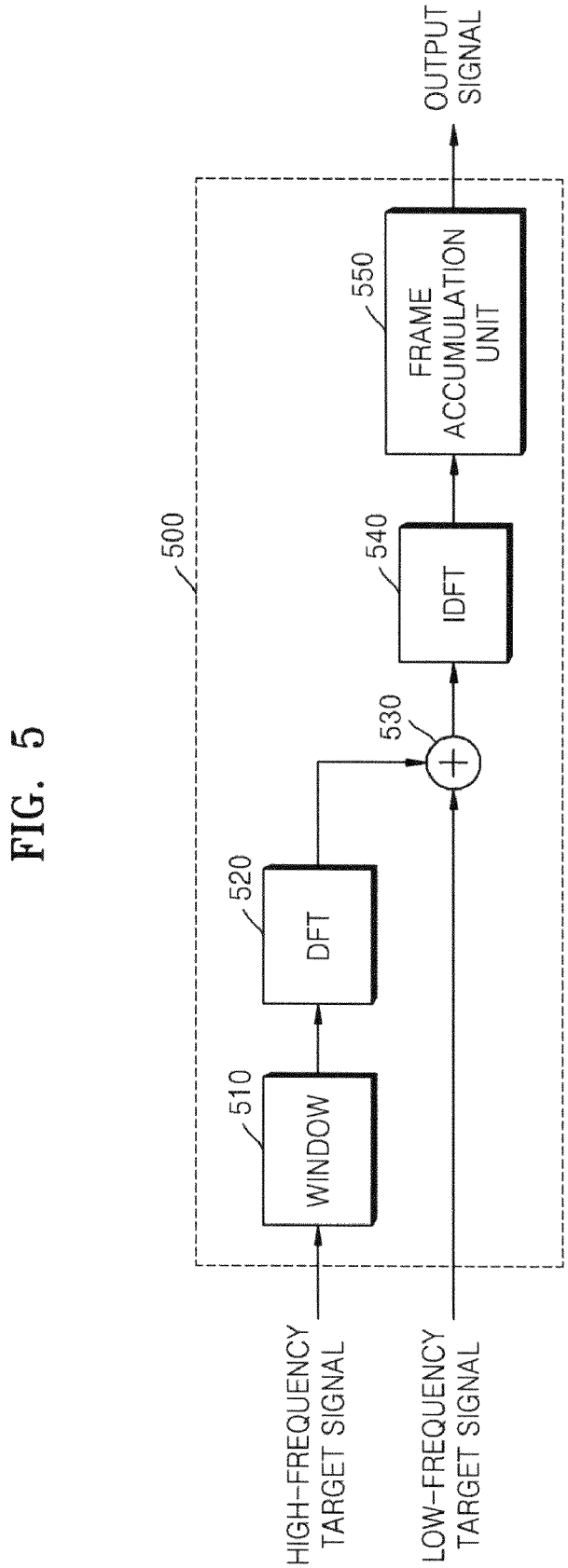


FIG. 5



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