

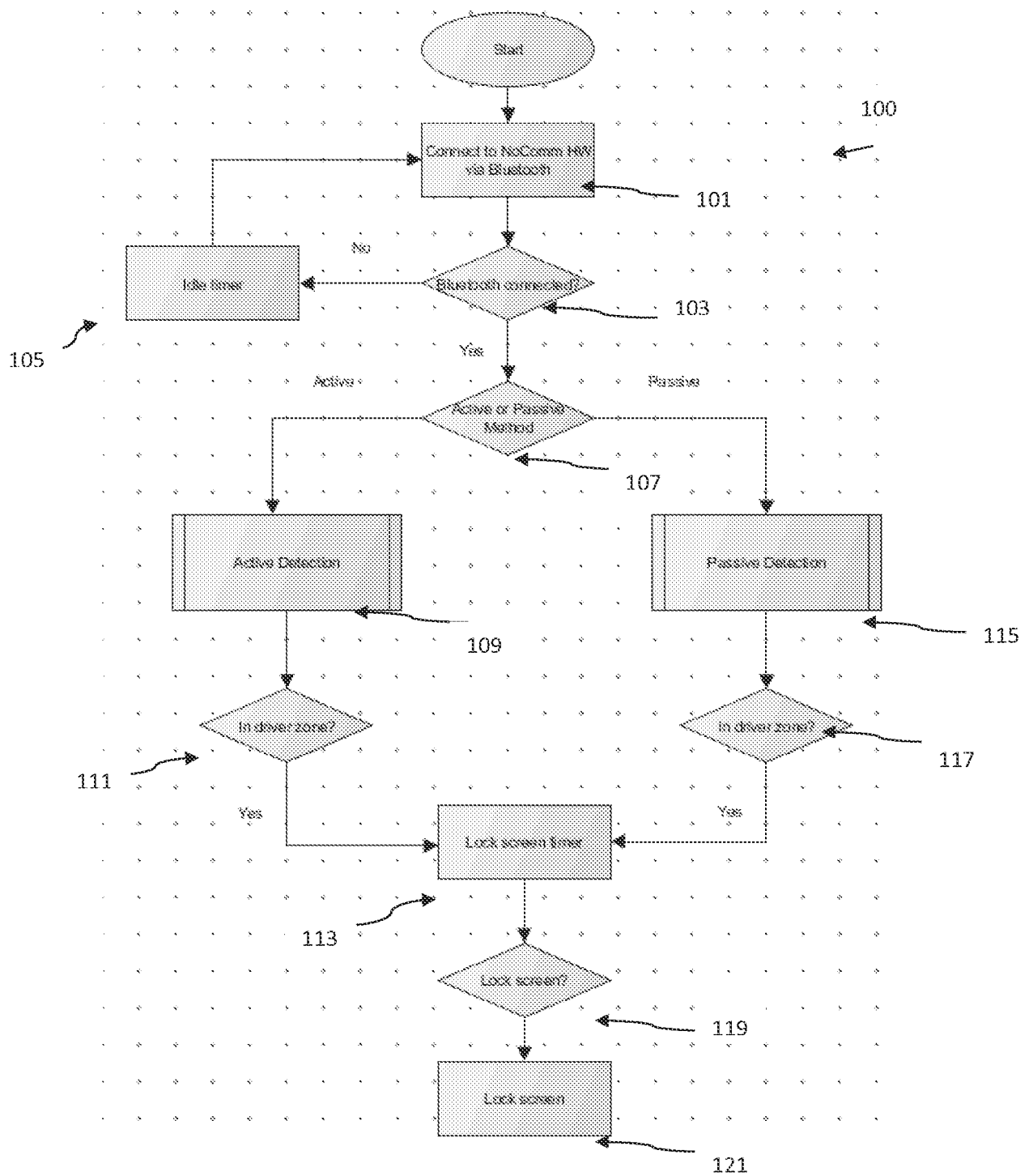
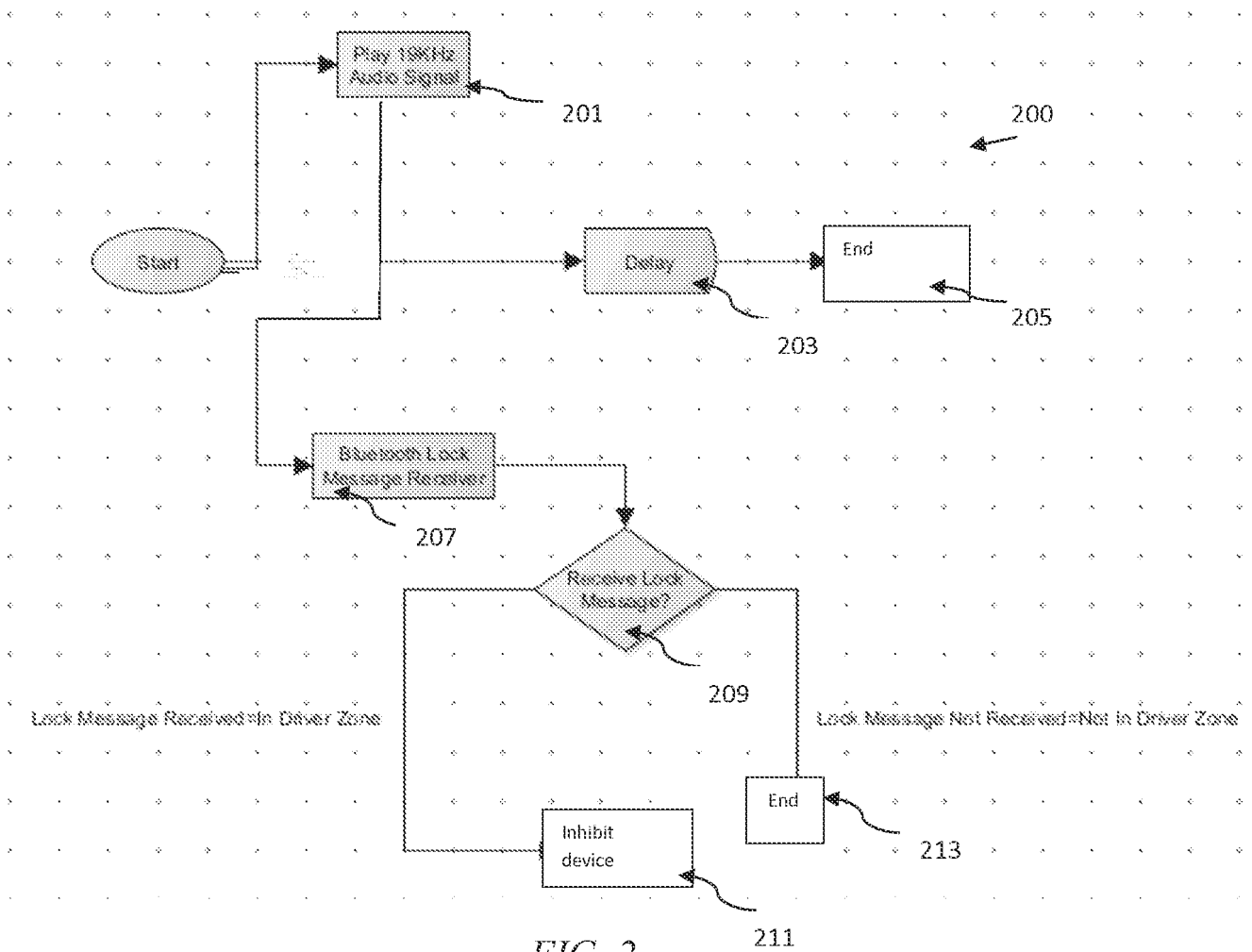


FIG. 1



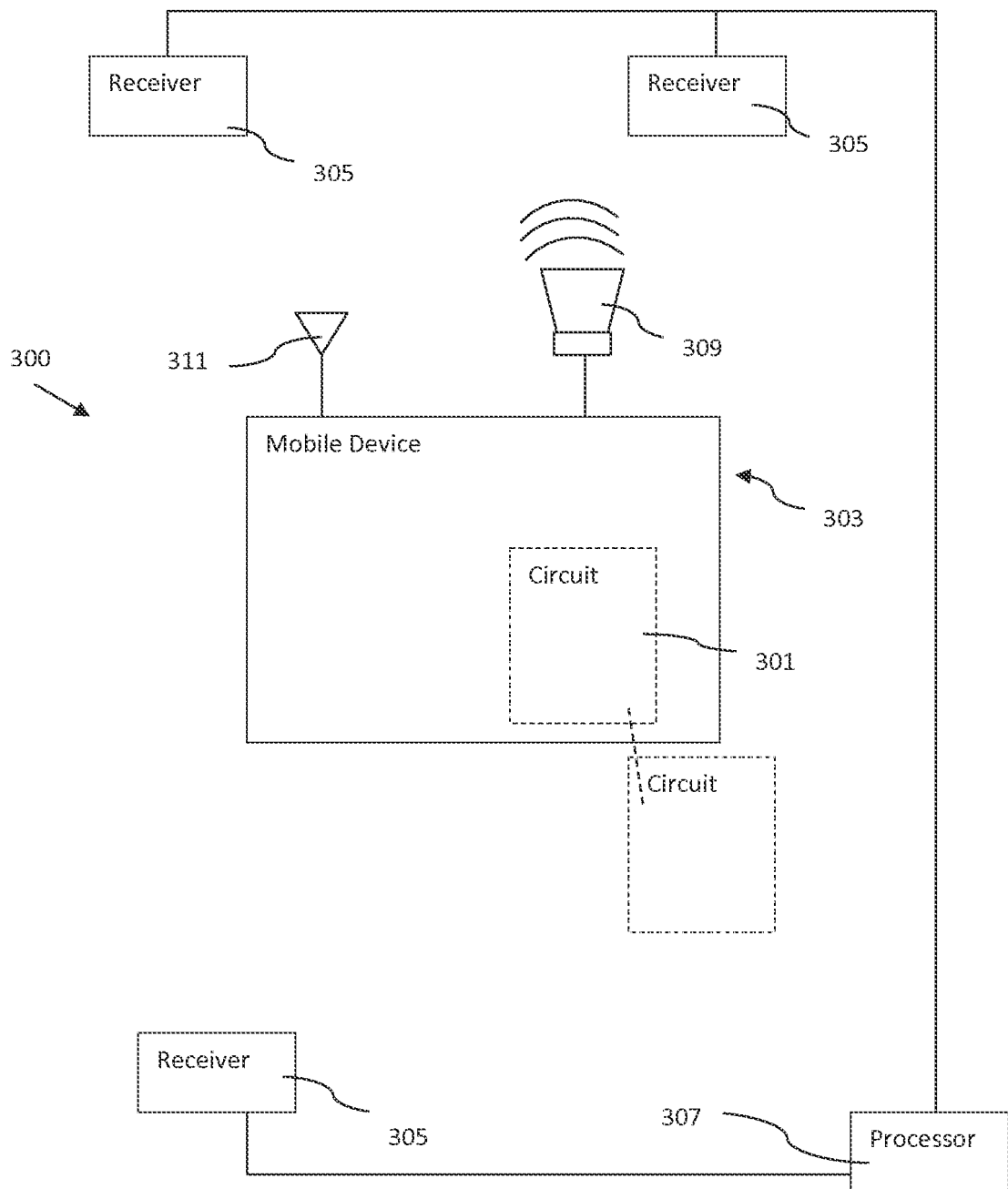


FIG. 3

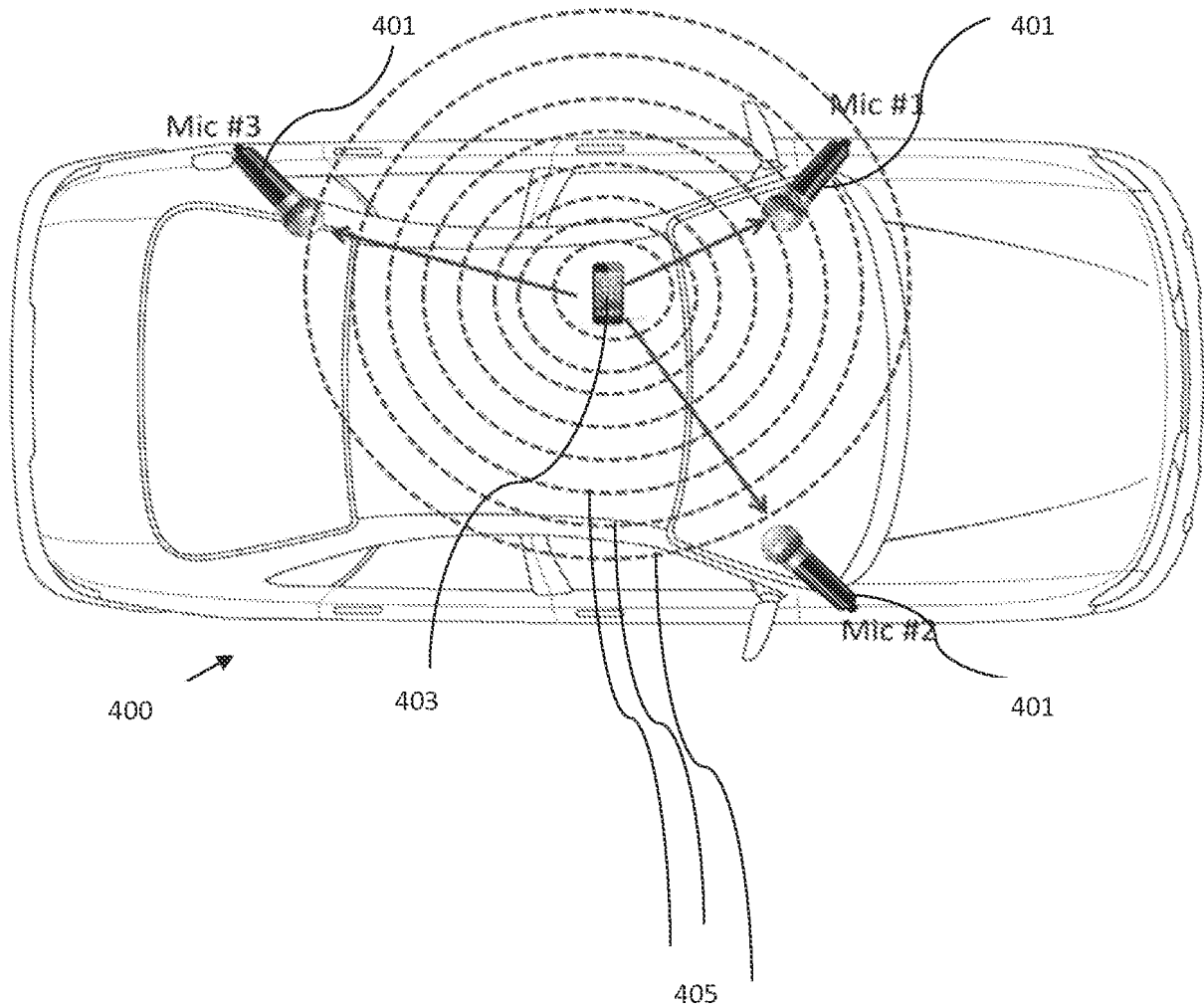


FIG. 4

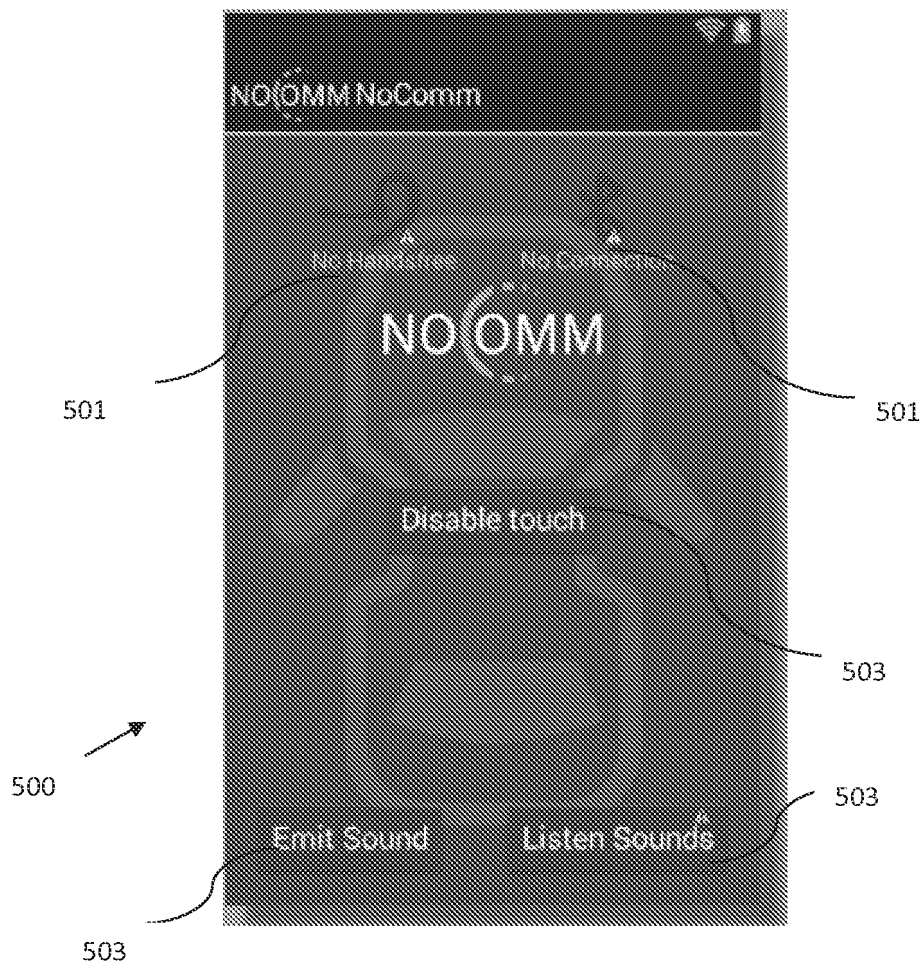


FIG. 5

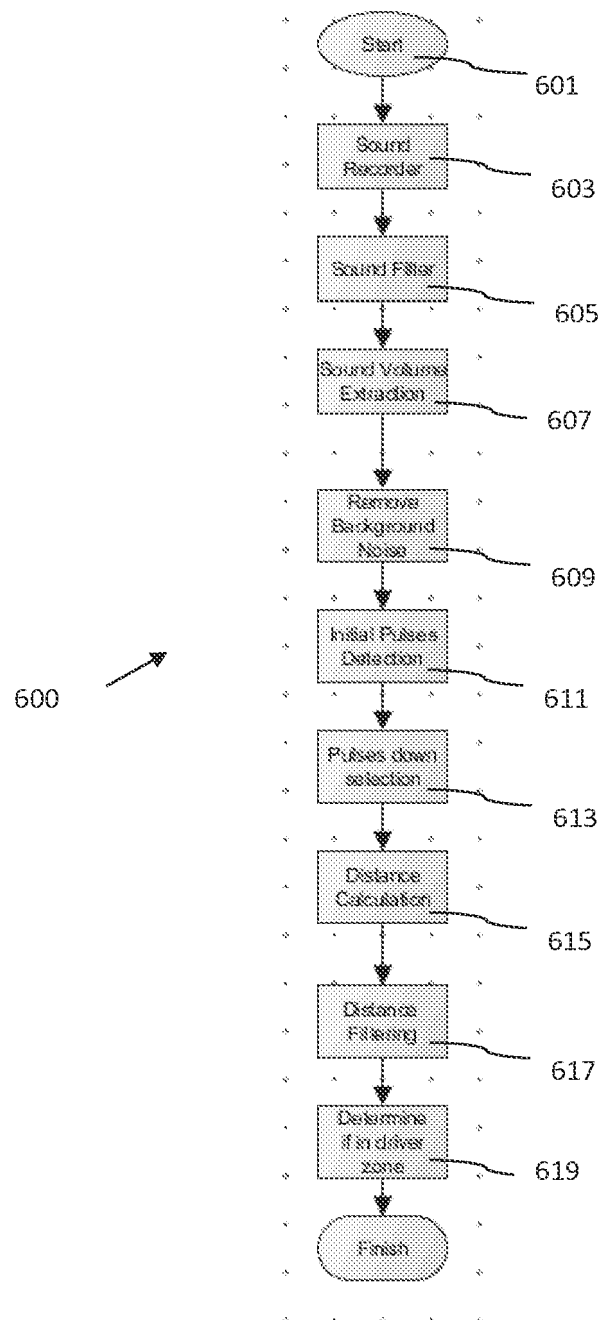


FIG. 6

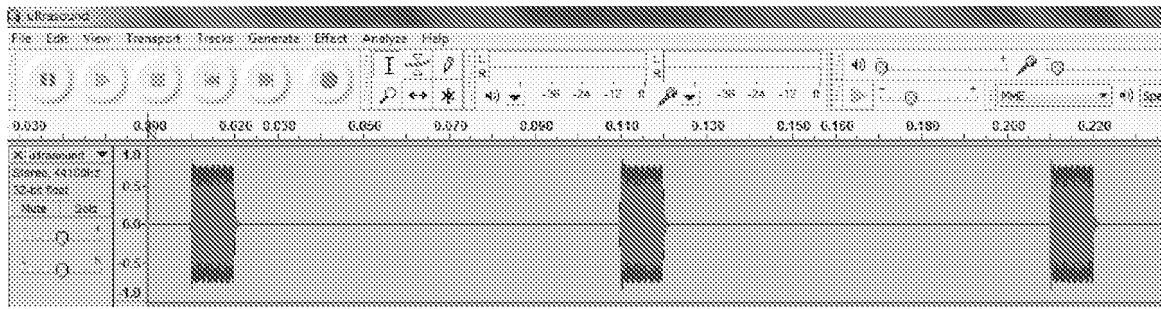


FIG. 7

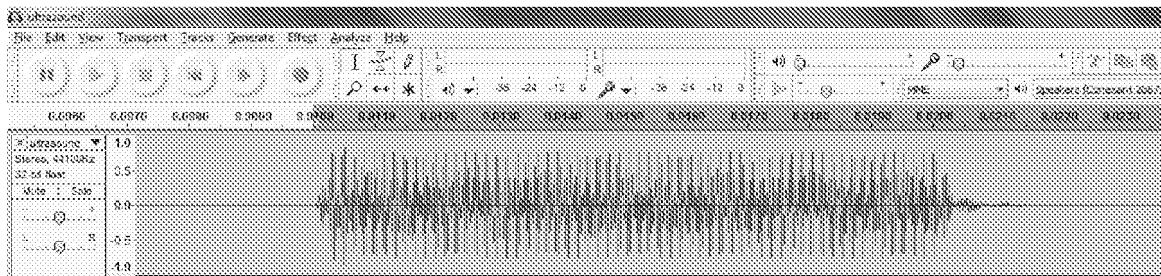


FIG. 8

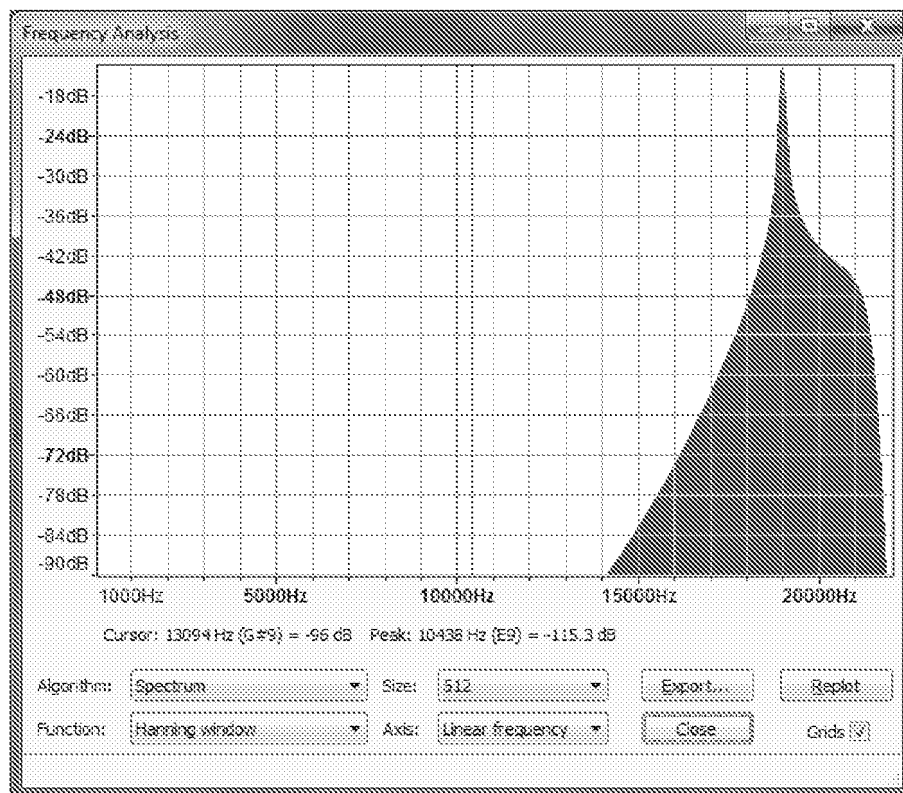
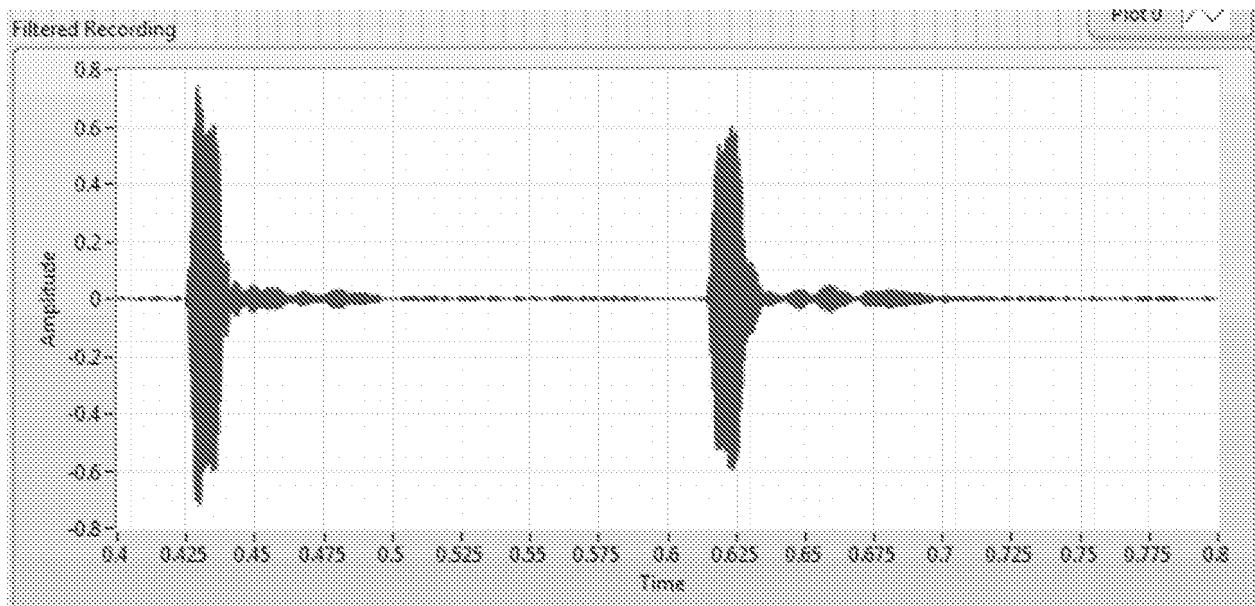
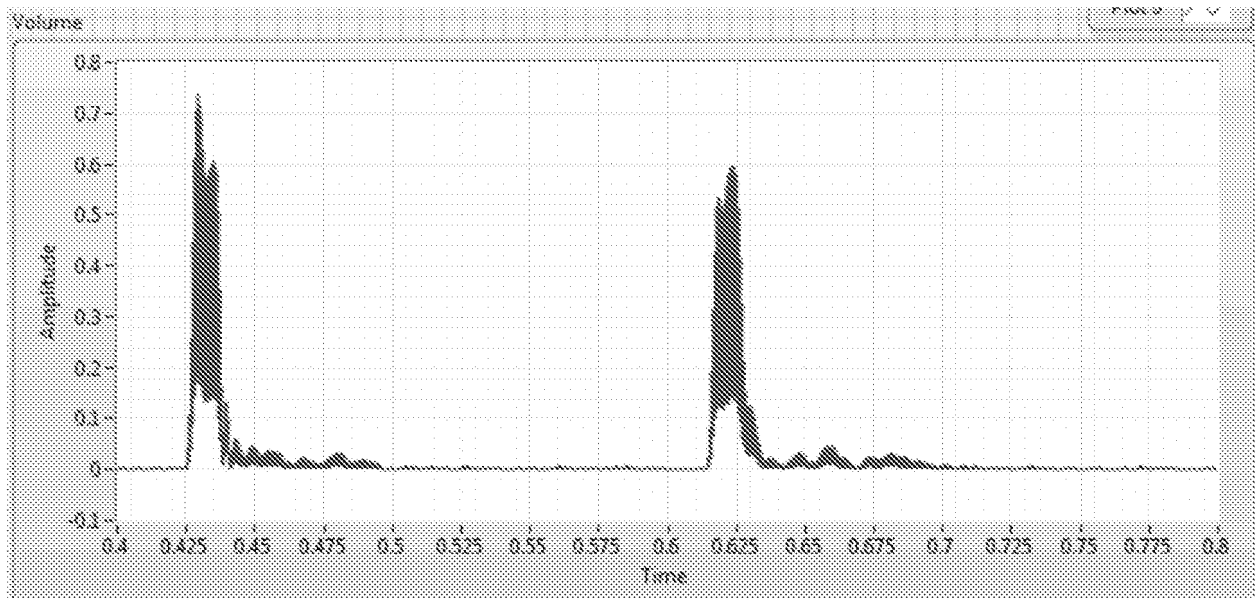


FIG. 9

*FIG. 10**FIG. 11*

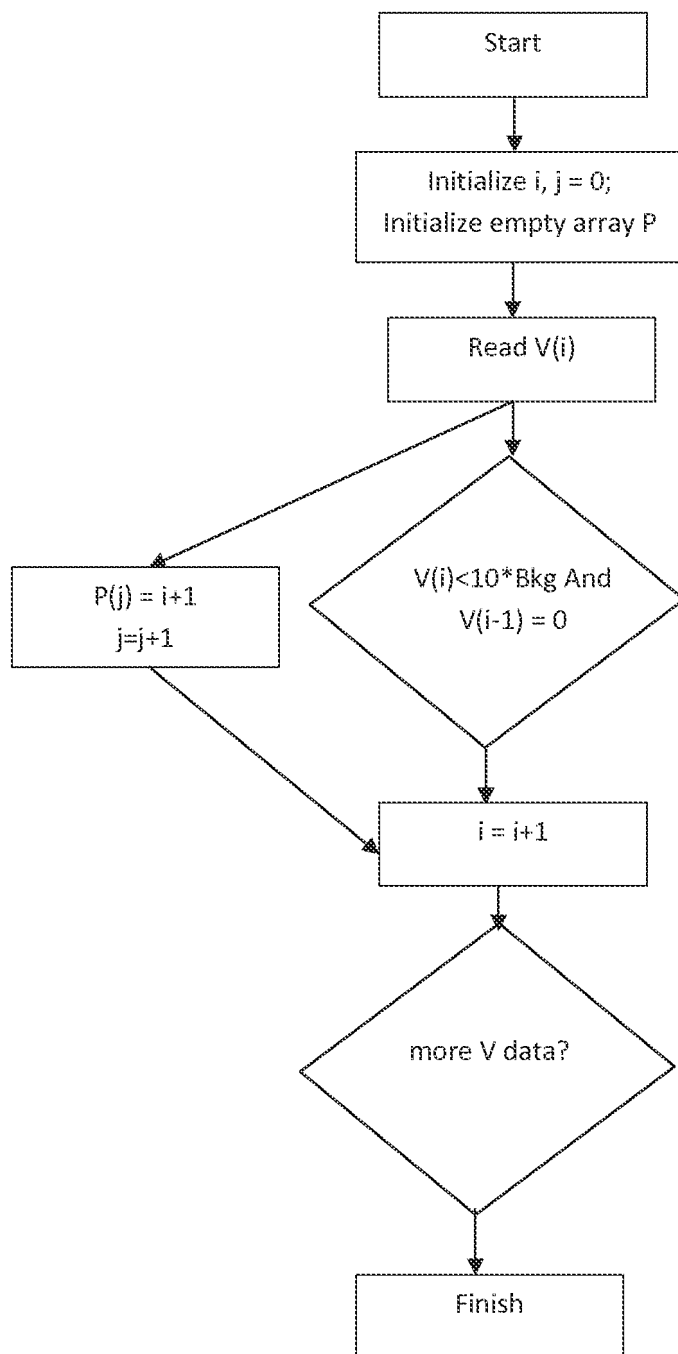


FIG. 12

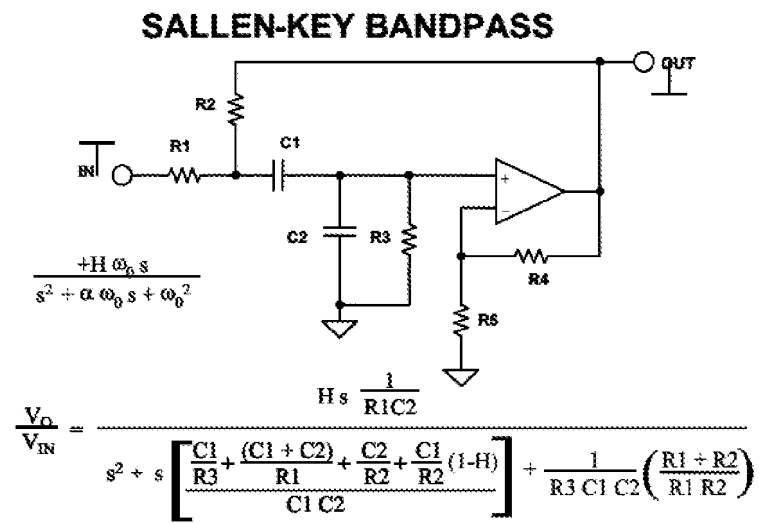
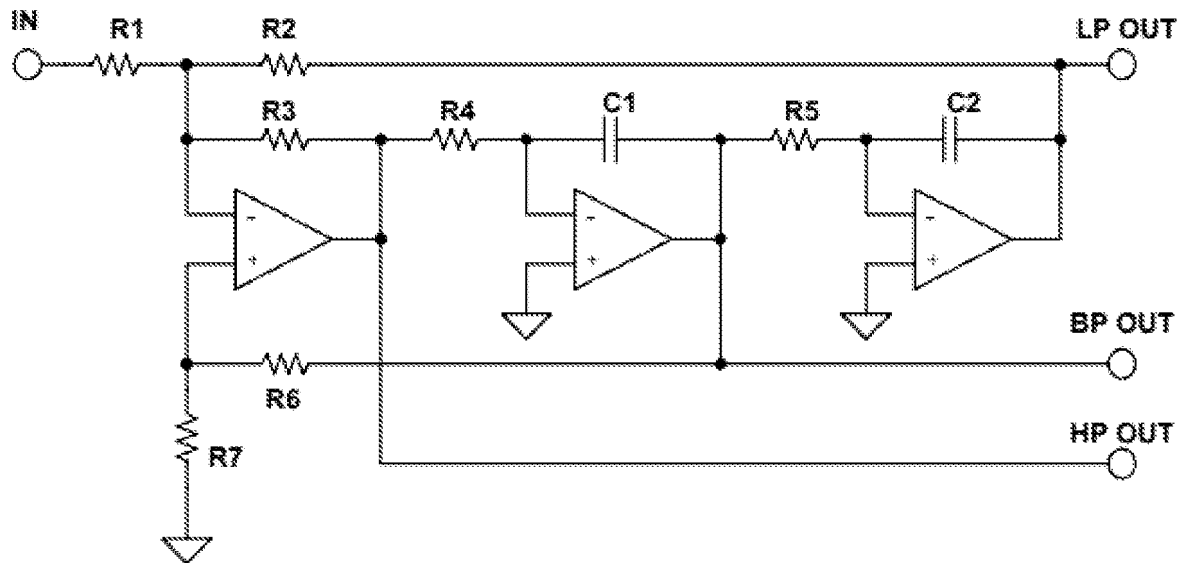


FIG. 13

STATE VARIABLE (A)



$$A_{LP}(s=0) = -\frac{R2}{R1}$$

$$A_{HP}(s=\infty) = -\frac{R3}{R1}$$

$$\omega_0 = \sqrt{\frac{R3}{R2 R4 R5 C1 C2}}$$

CHOOSE R1:

$$R2 = A_{LP} R1$$

$$R3 = A_{HP} R1$$

CHOOSE C:

$$R = \frac{1}{2 \pi F_0 C} \sqrt{\frac{A_{HP}}{A_{LP}}}$$

LET $R4 = R5 = R, C1 = C2 = C$

$$A_{BP}(s=\omega_0) = \frac{\frac{R6 + R7}{R7}}{R1 \left(\frac{1}{R1} + \frac{1}{R2} + \frac{1}{R3} \right)}$$

CHOOSE R7:

$$R6 =$$

$$R7 \sqrt{R2 R3} Q \left(\frac{1}{\frac{1}{R1} + \frac{1}{R2} + \frac{1}{R3}} \right)$$

FIG. 14

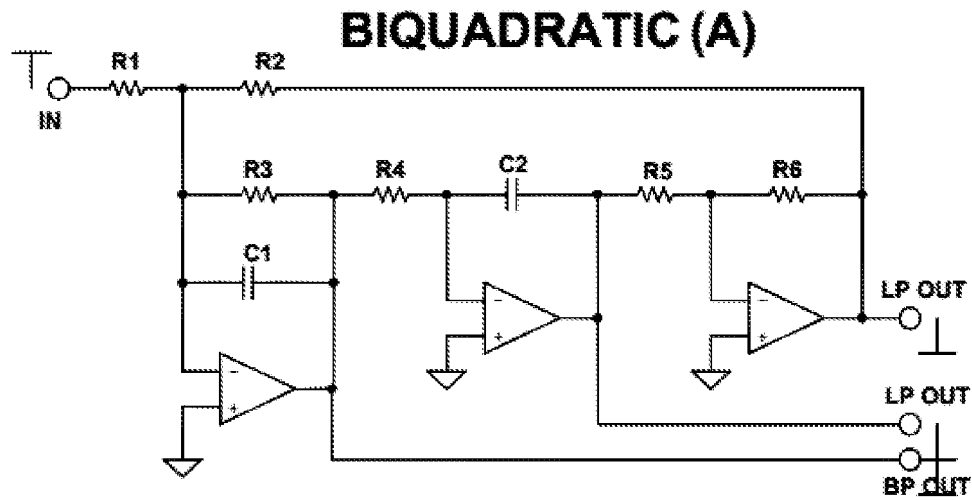


FIG. 15

MULTIPLE FEEDBACK BANDPASS

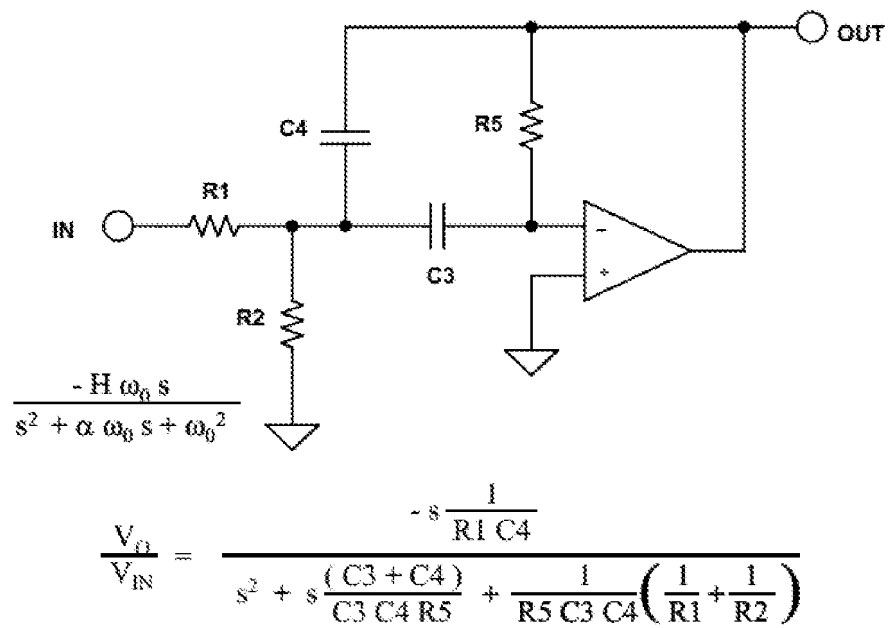


FIG. 16

DUAL AMPLIFIER BANDPASS

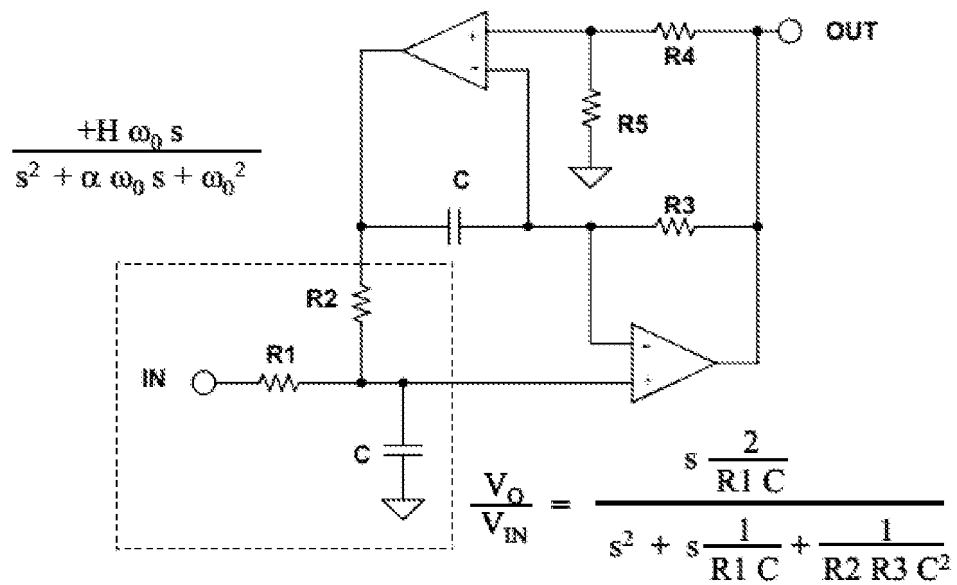


FIG. 17

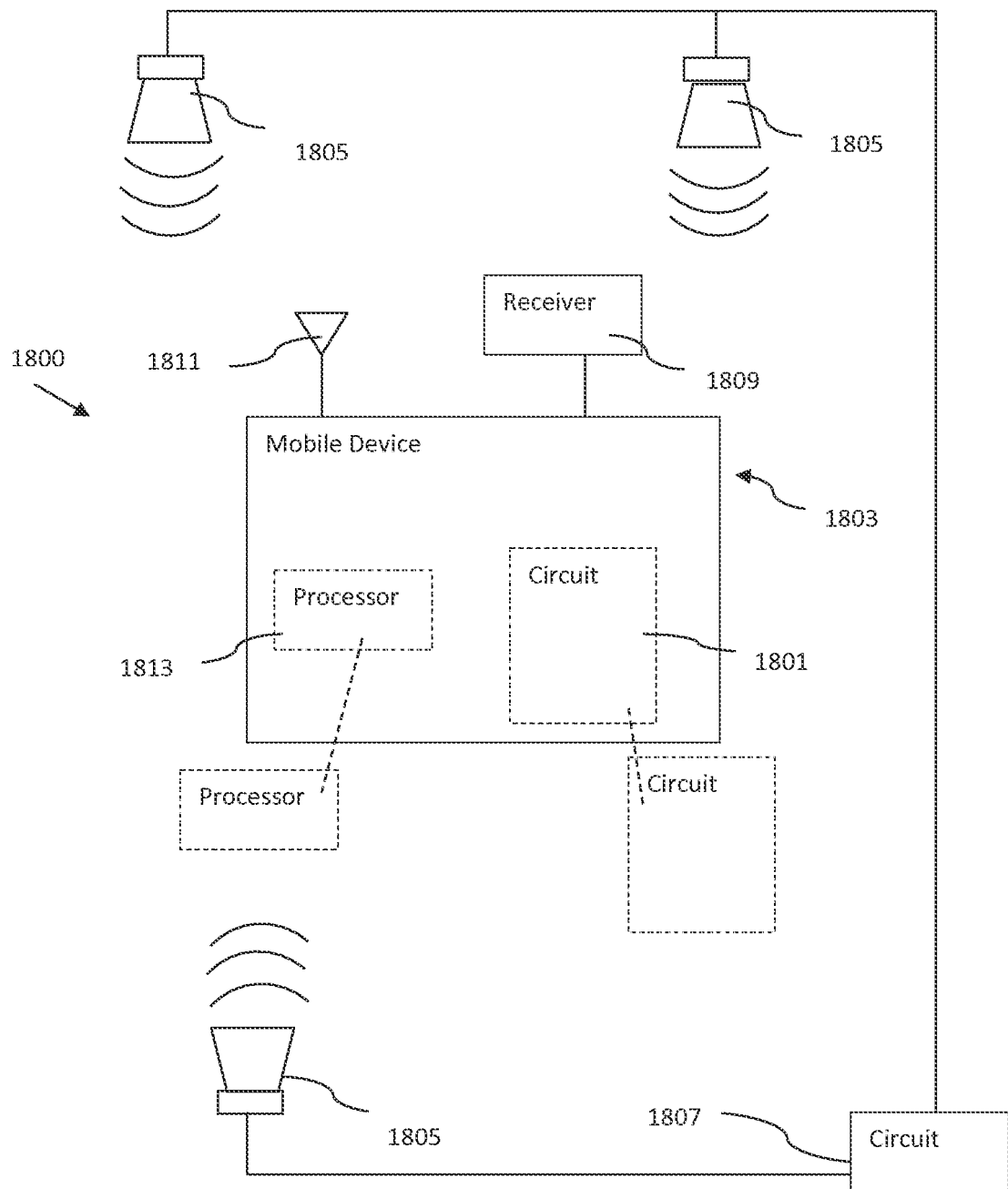
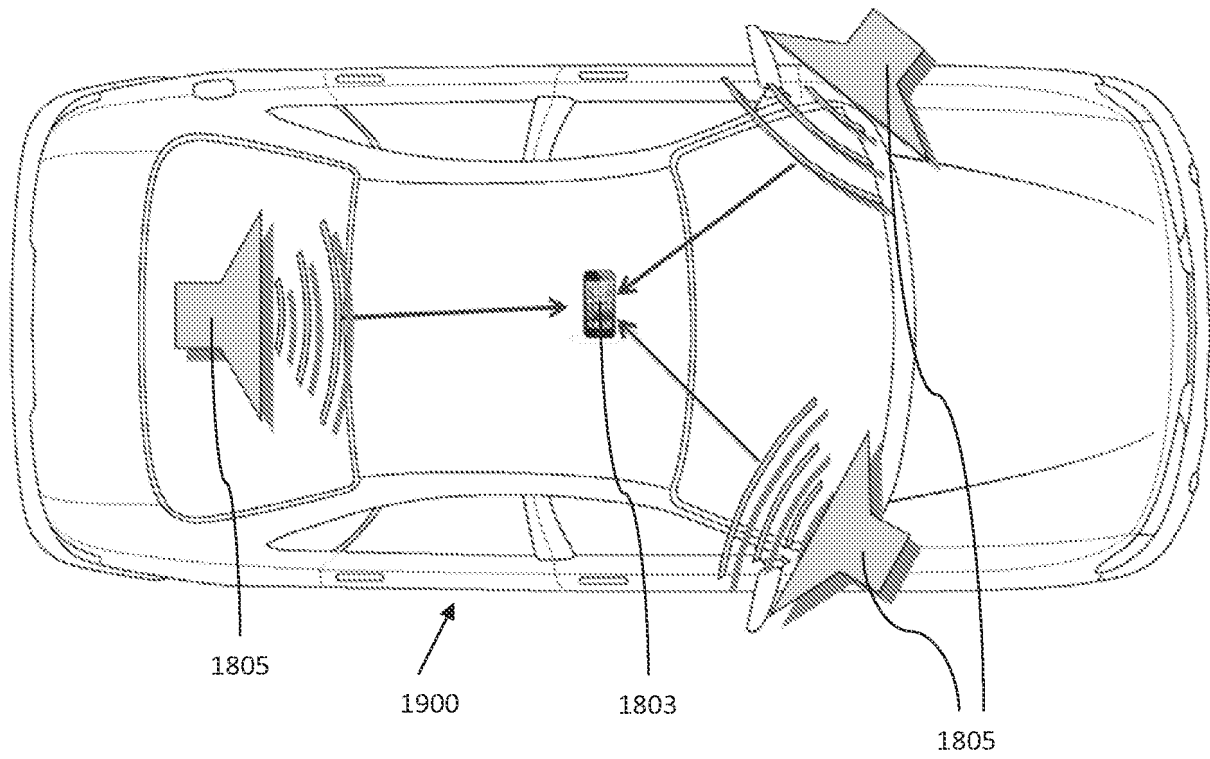
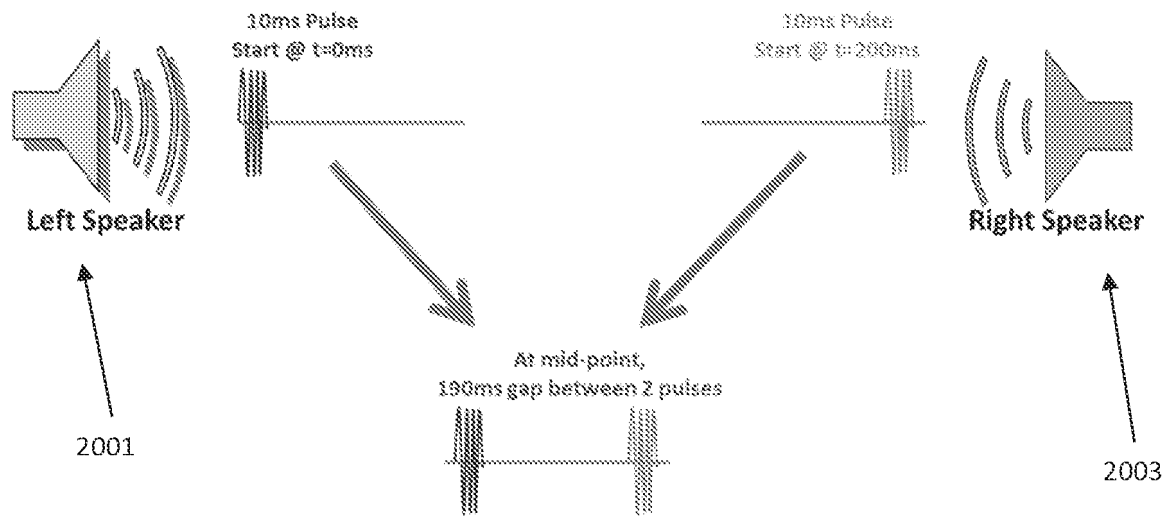


FIG. 18

*FIG. 19*

*FIG. 20*

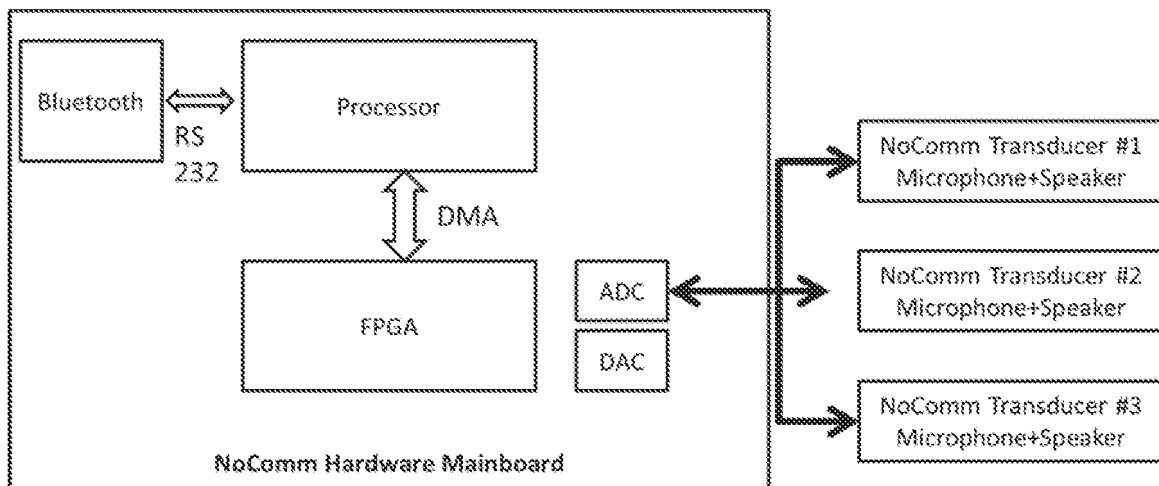


FIG. 21

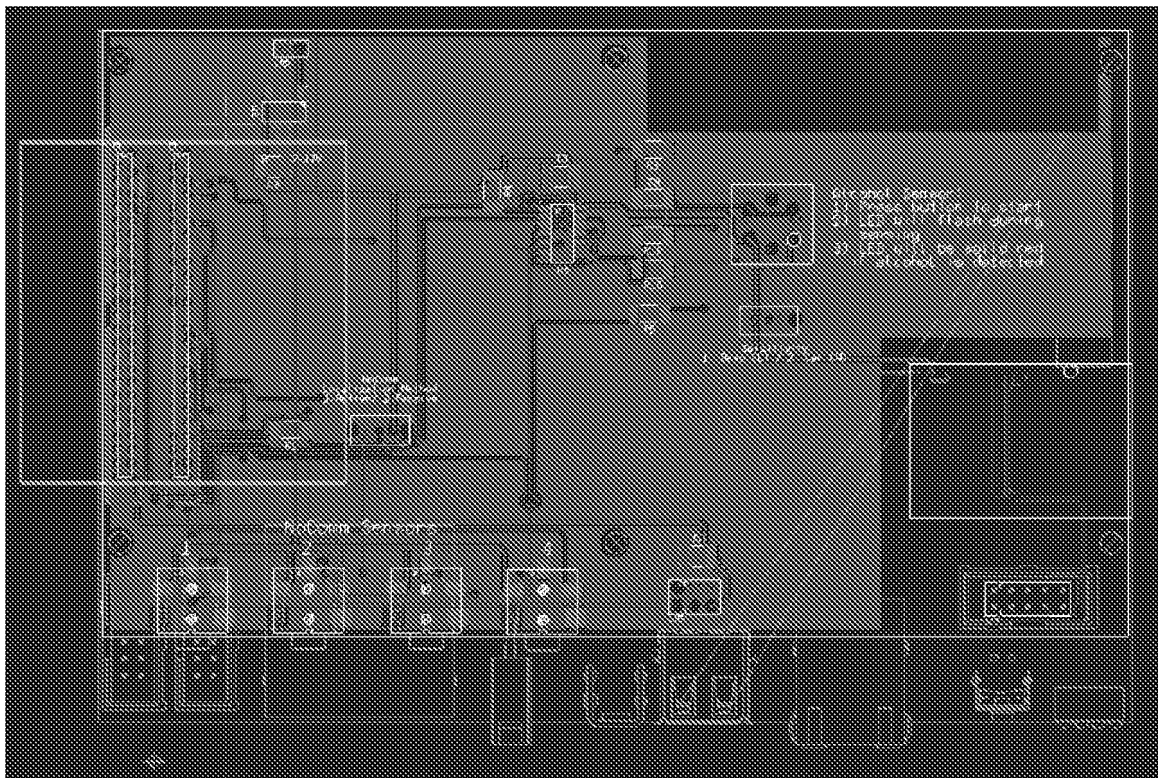


FIG. 22

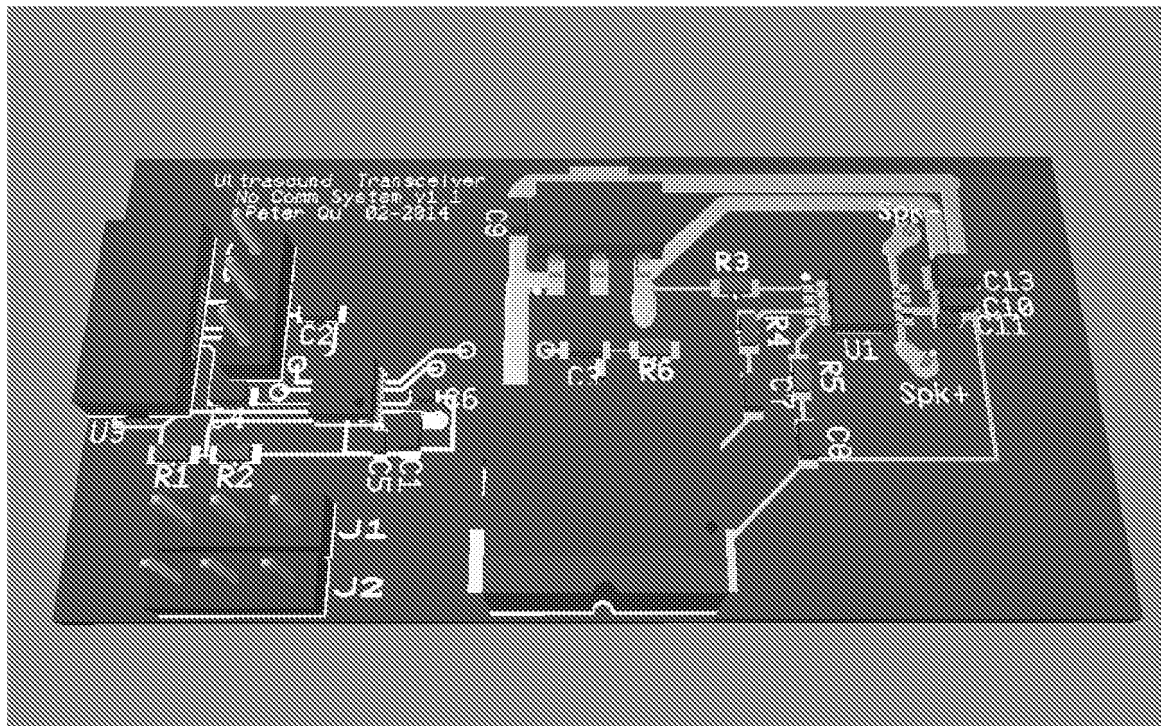


FIG. 23

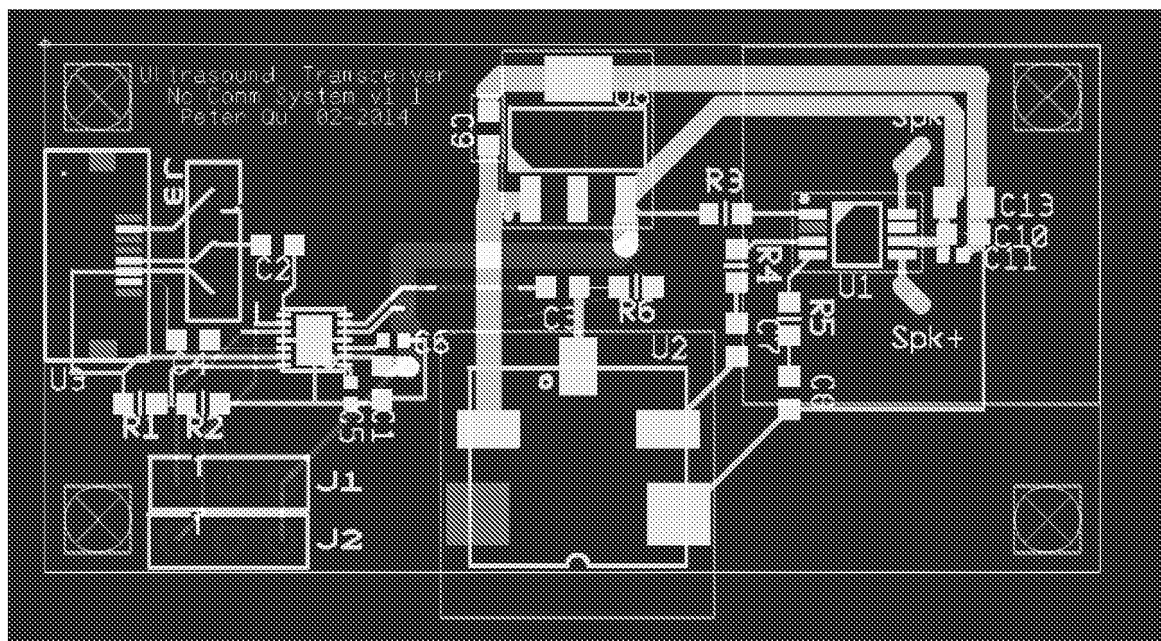


FIG. 24

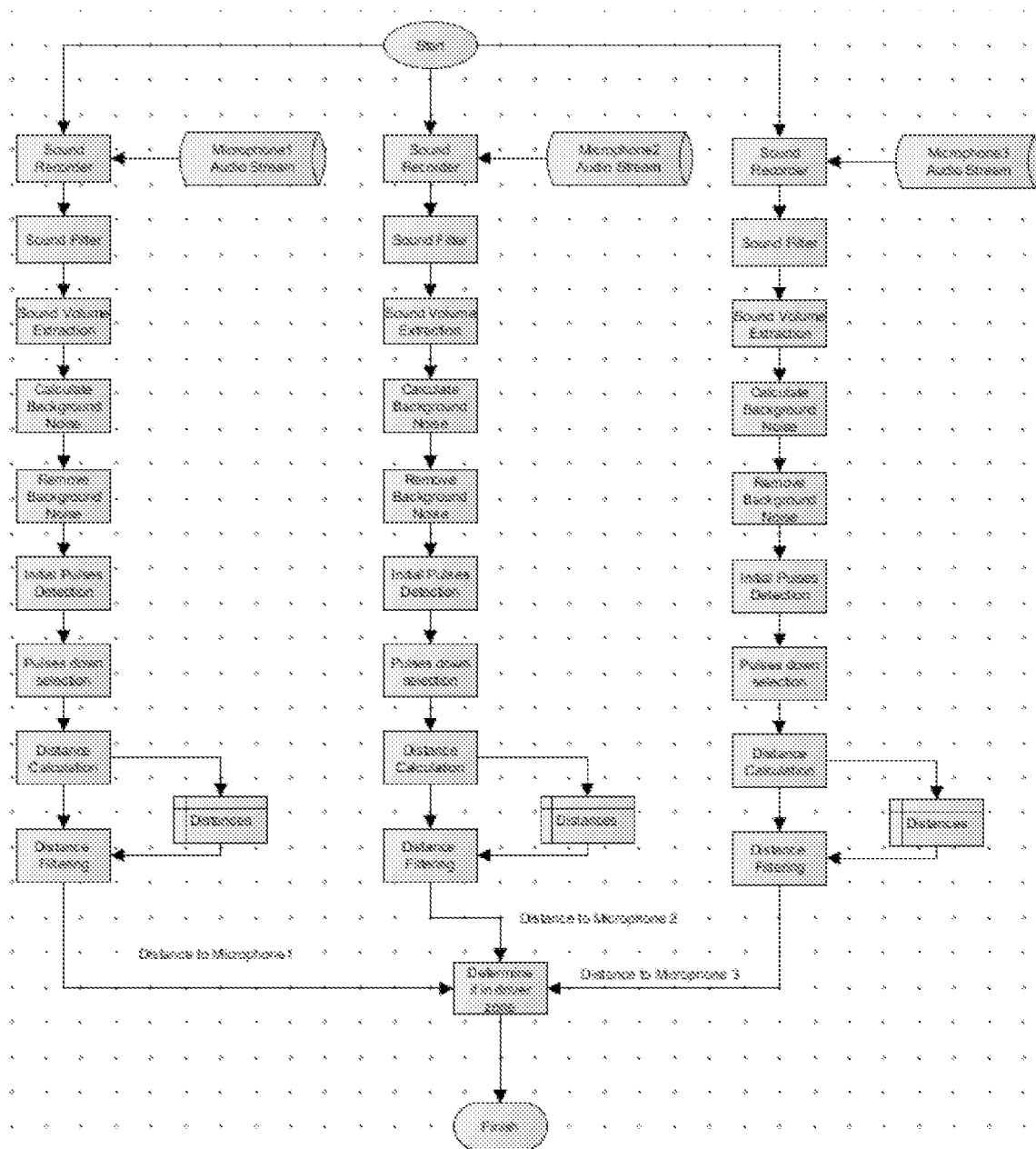


FIG. 25

**ANY REFERENCE TO FIGURE 28 SHALL BE
CONSIDERED NON-EXISTENT**

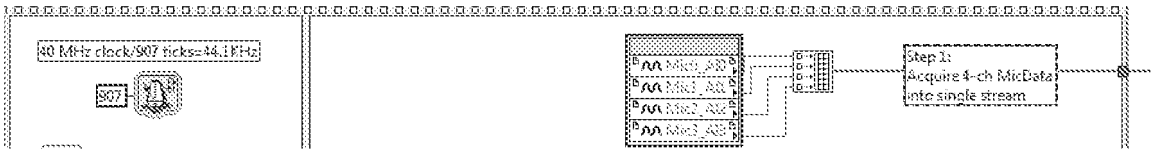


FIG. 26

FIG. 27

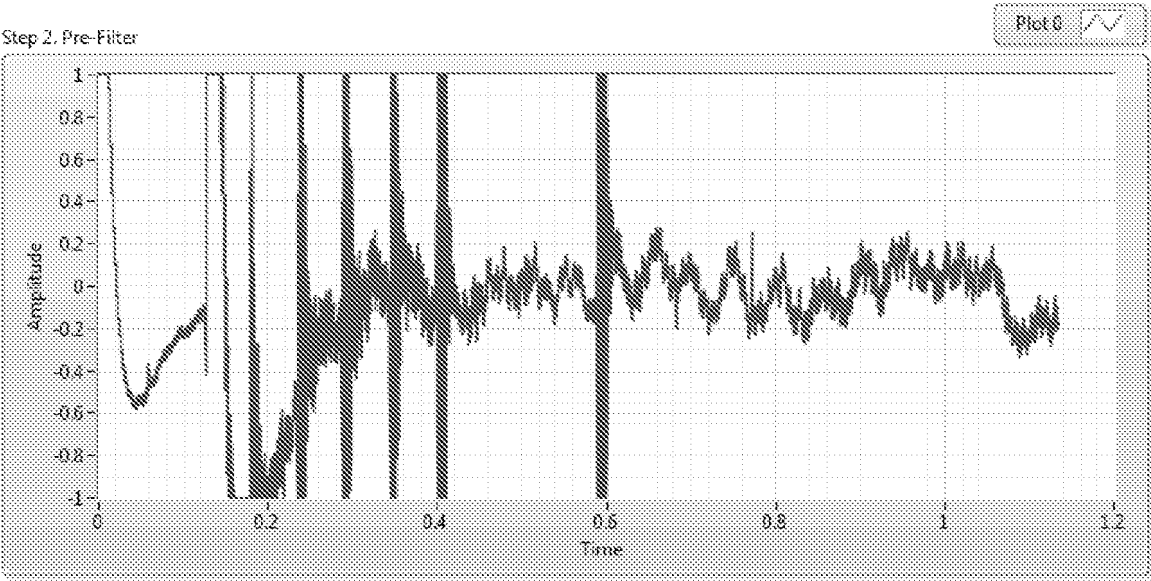


FIG. 28

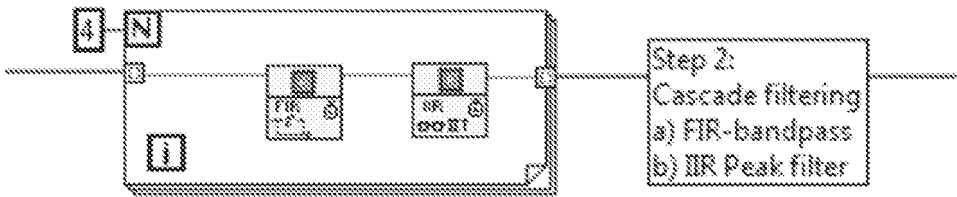
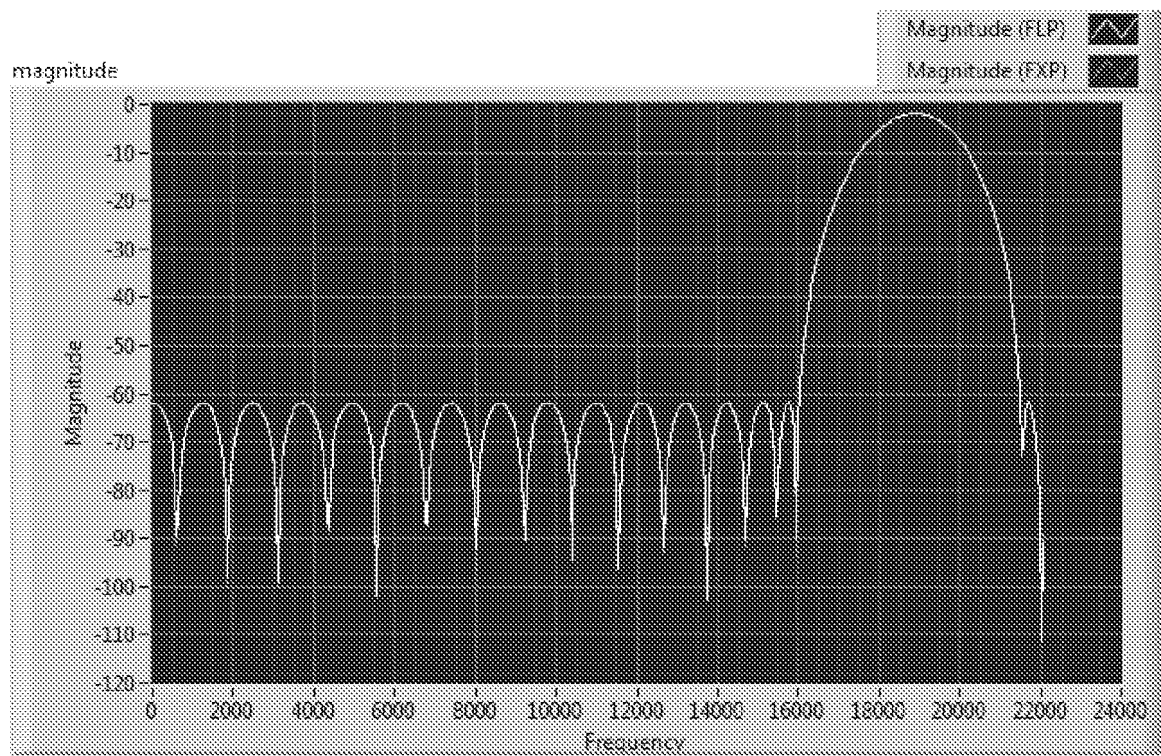


FIG. 29

*FIG. 30*

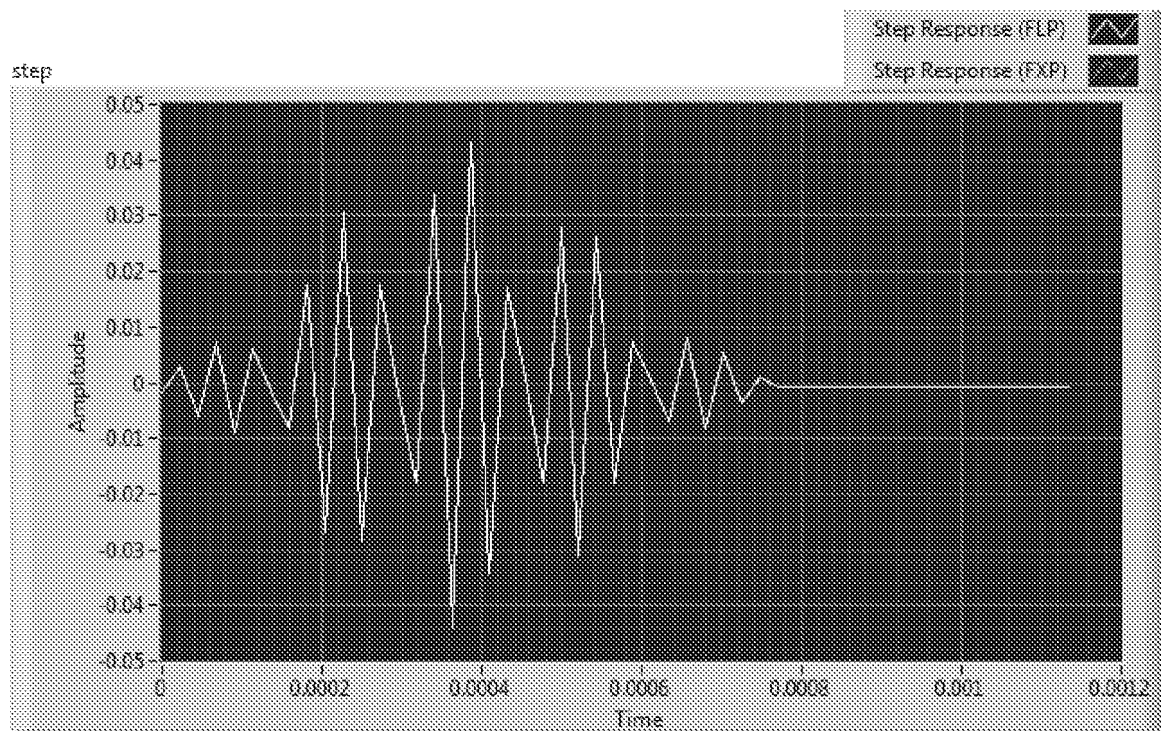


FIG. 31

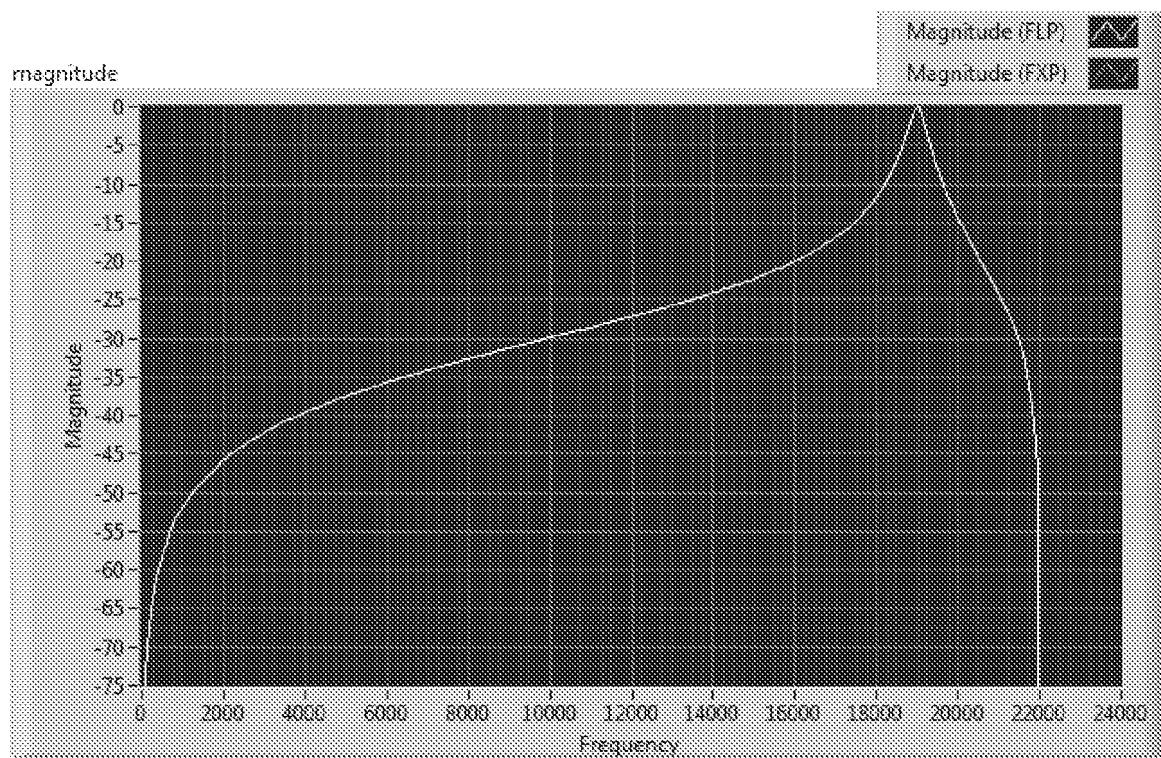


FIG. 32

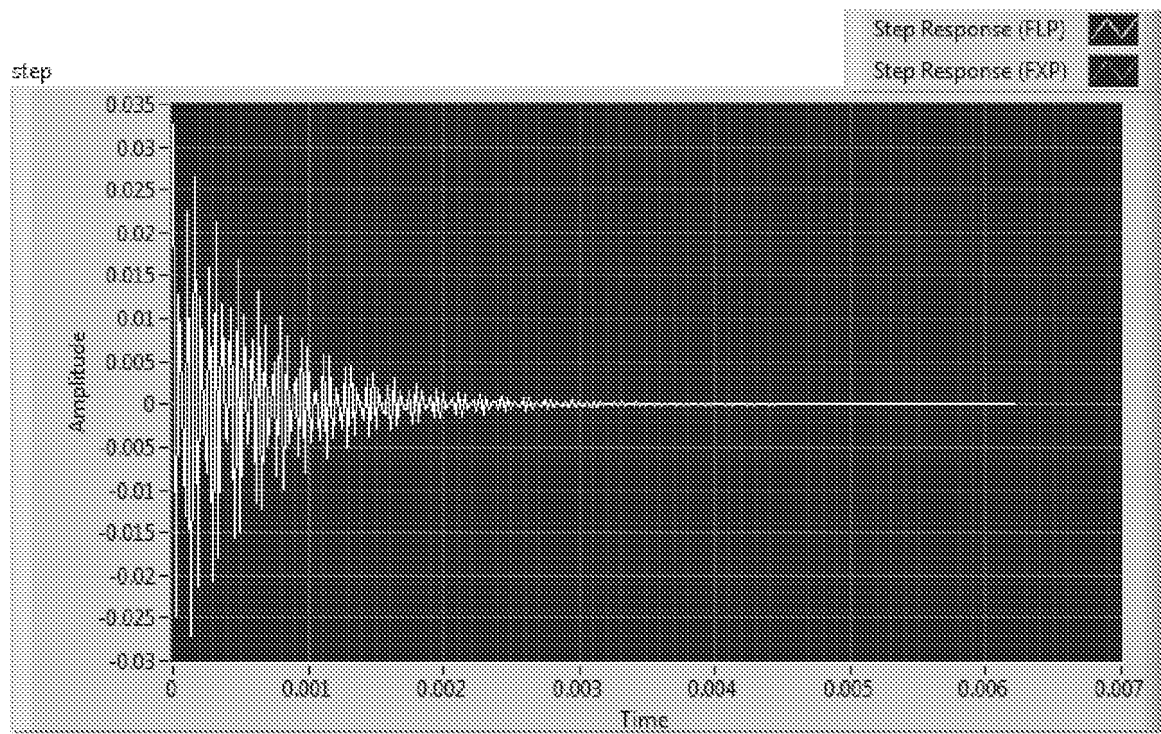


FIG. 33

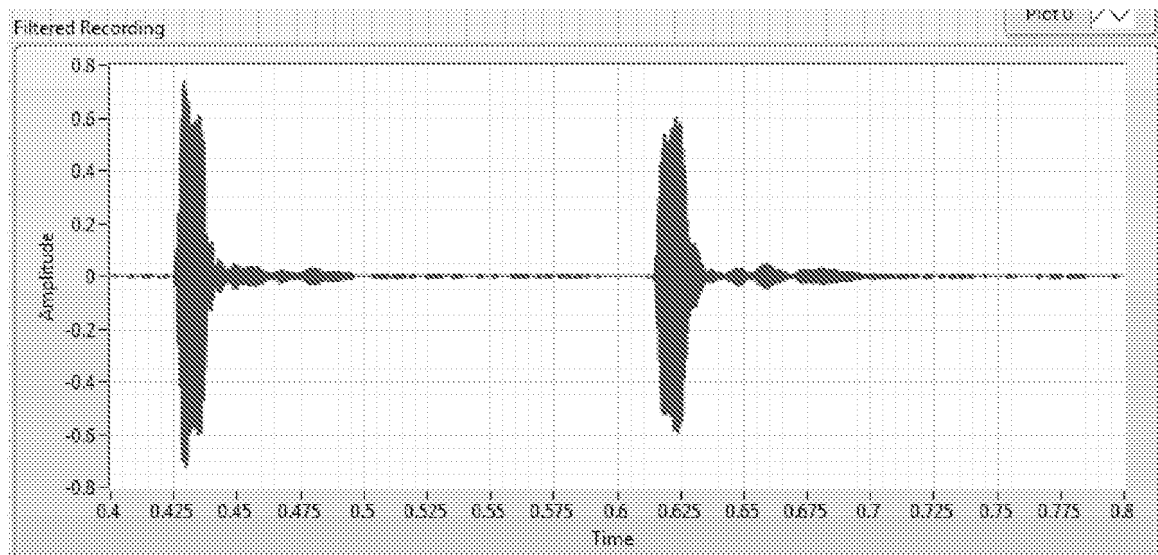


FIG. 34

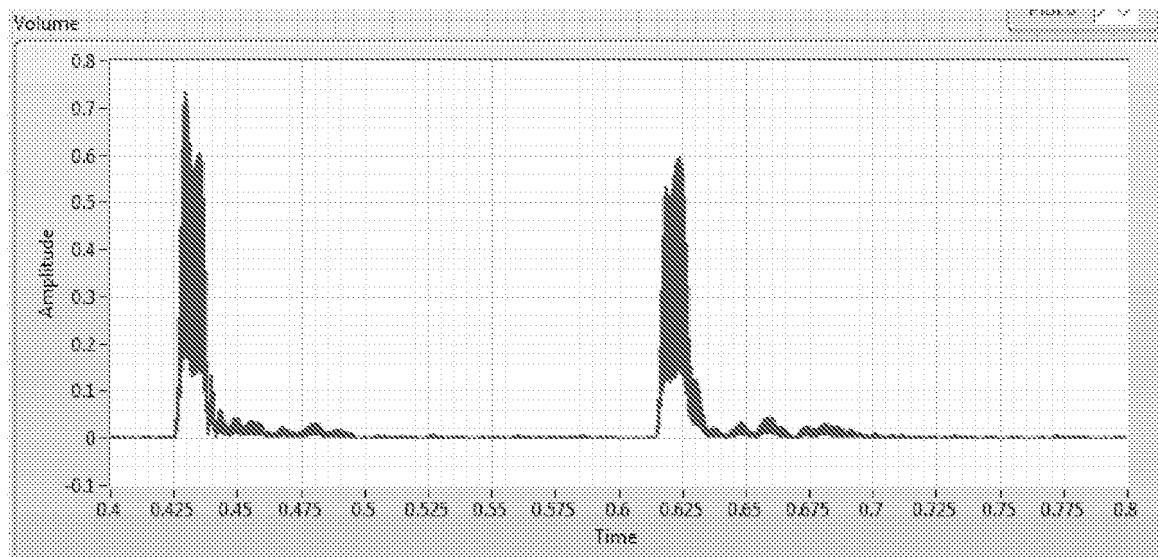


FIG. 35

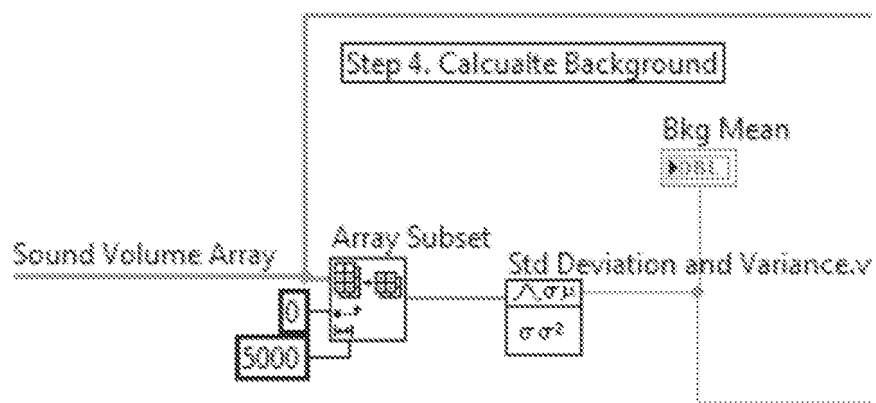


FIG. 36

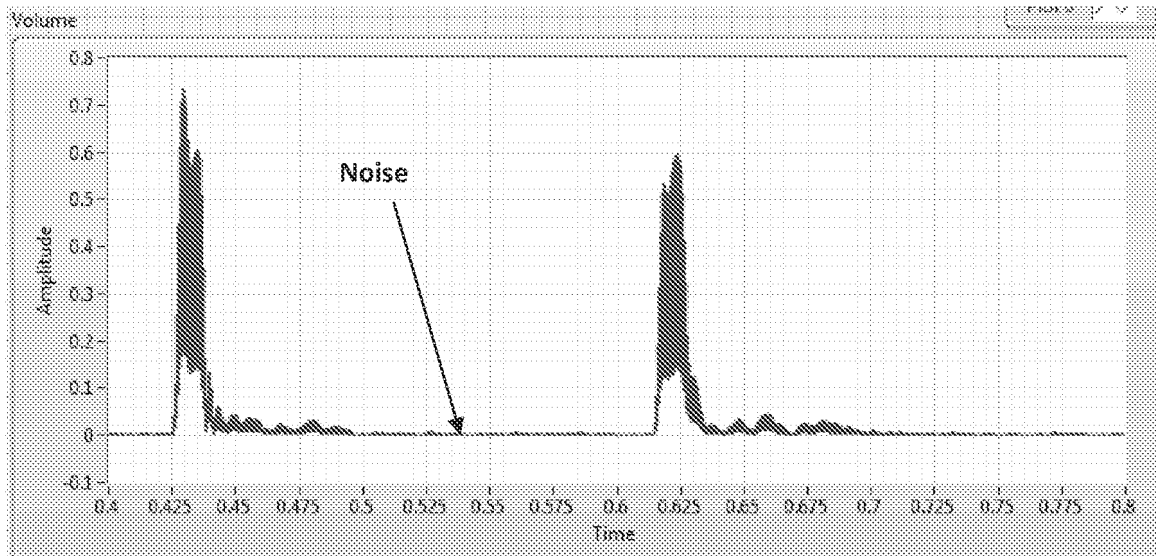


FIG. 37

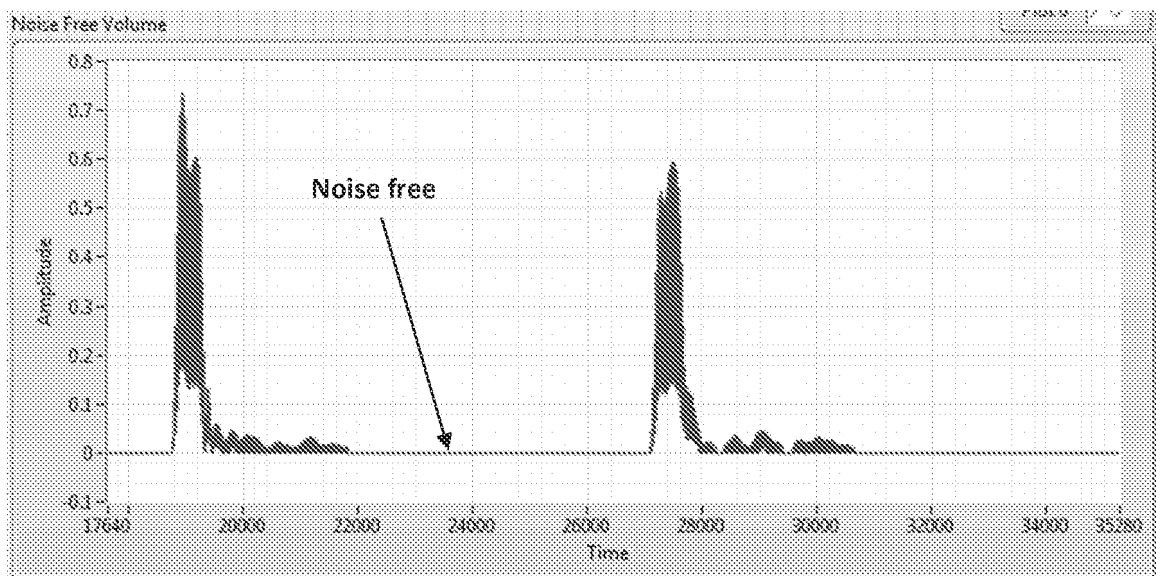


FIG. 38

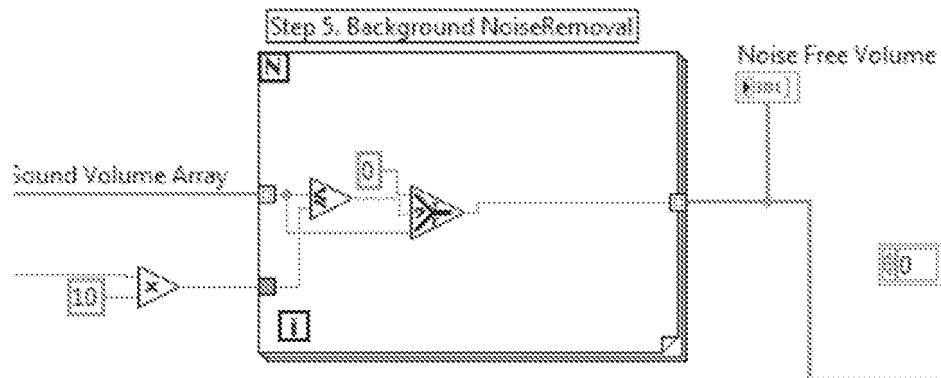


FIG. 39

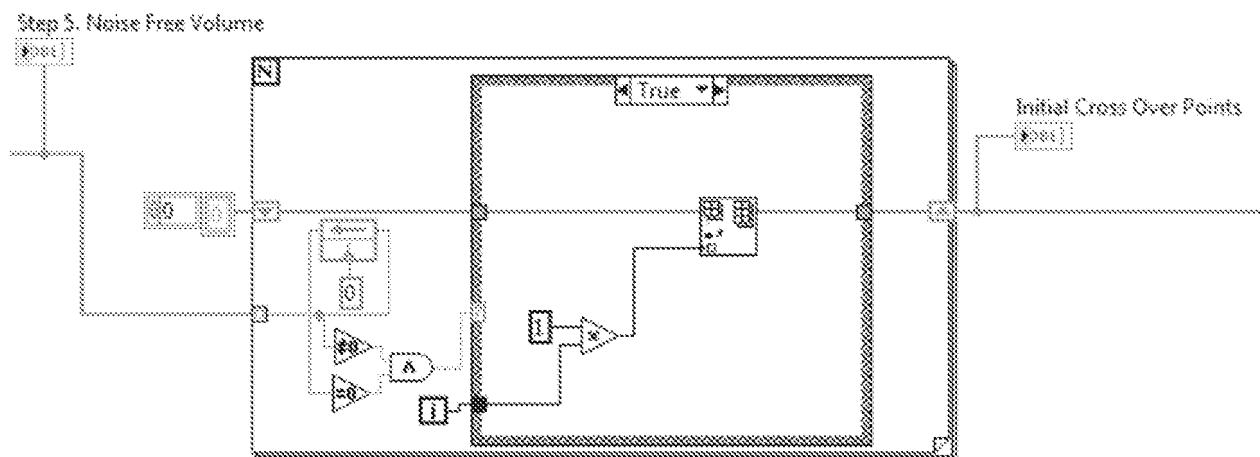


FIG. 40

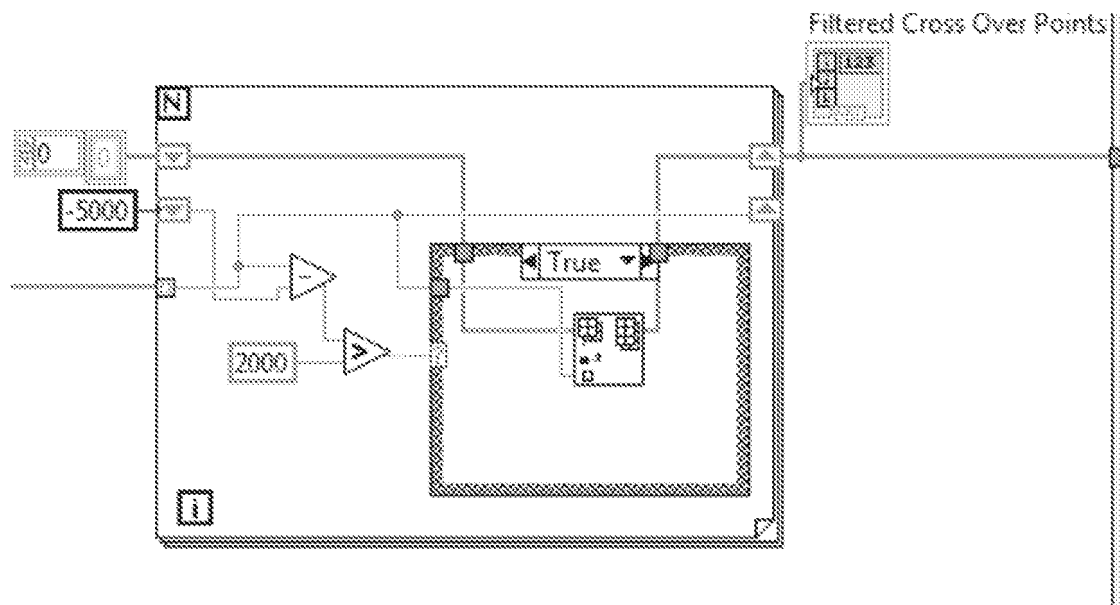


FIG. 41

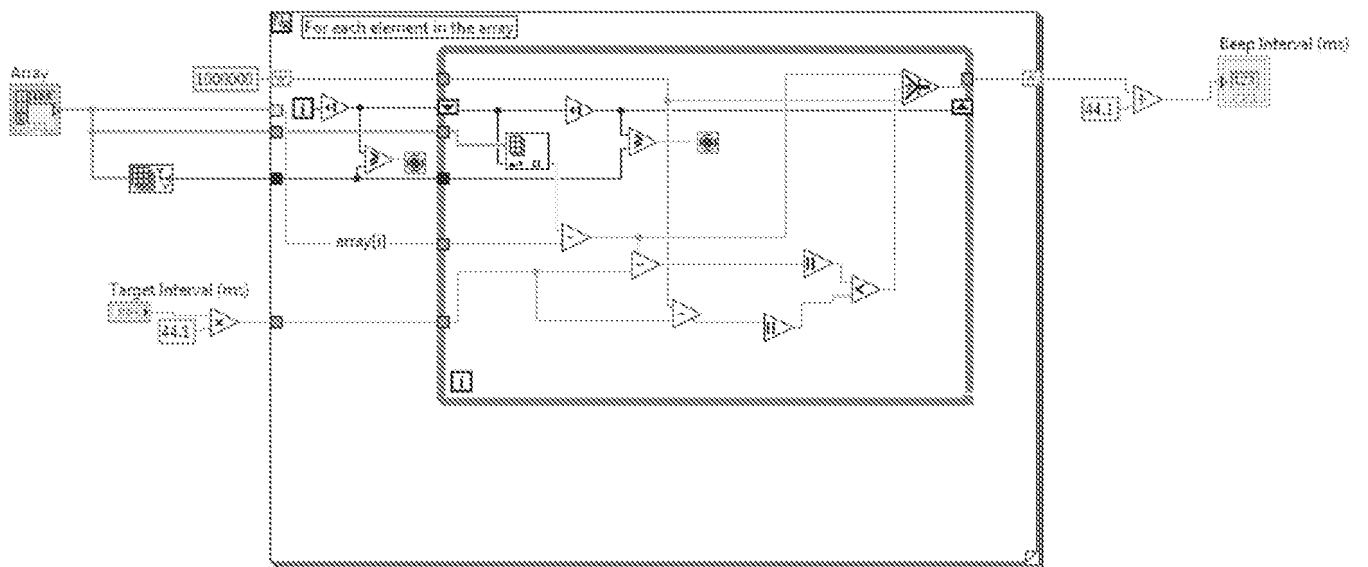


FIG. 42

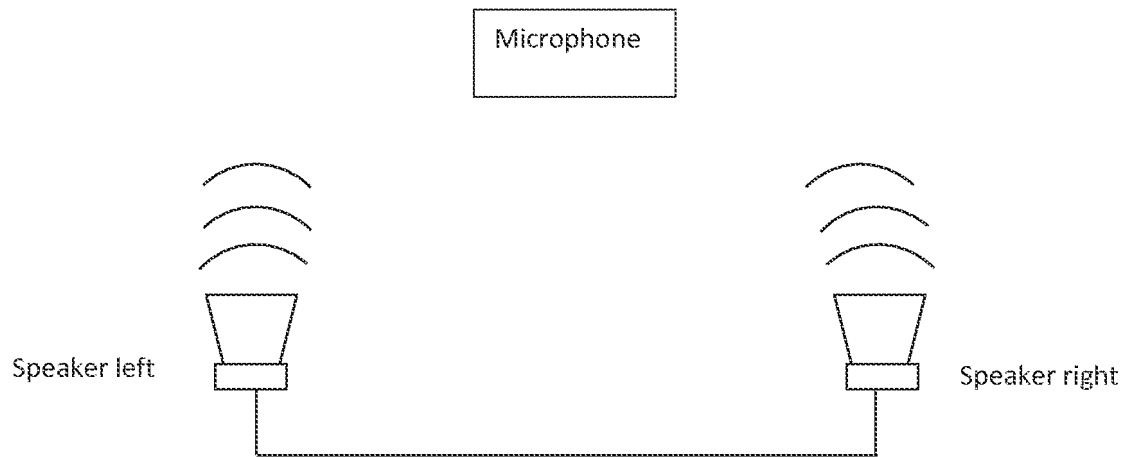


FIG. 43



FIG. 44

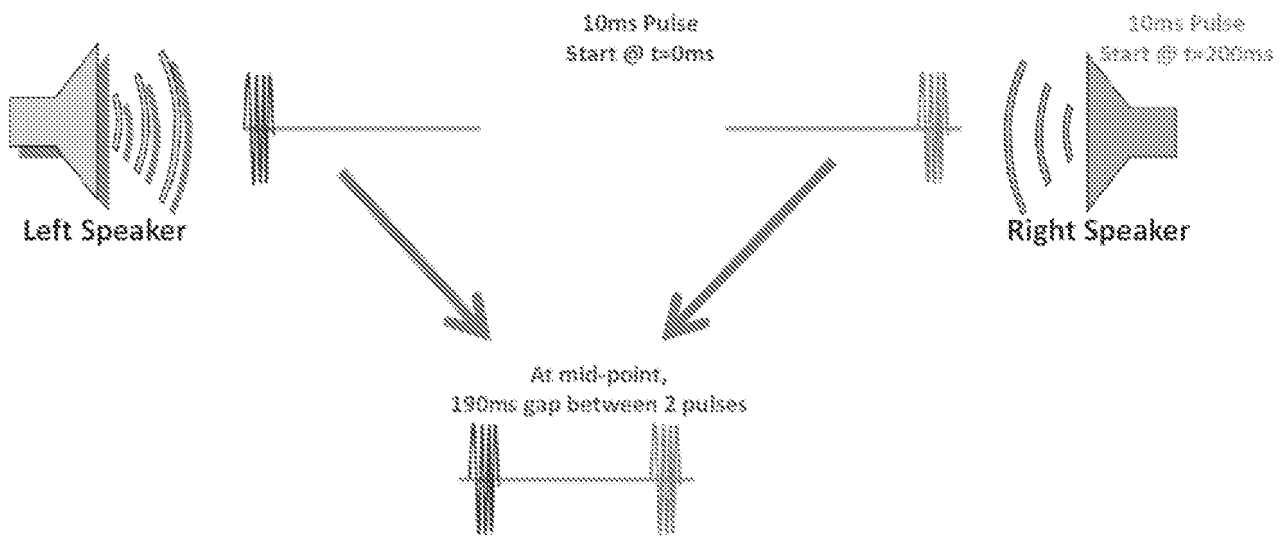


FIG. 45

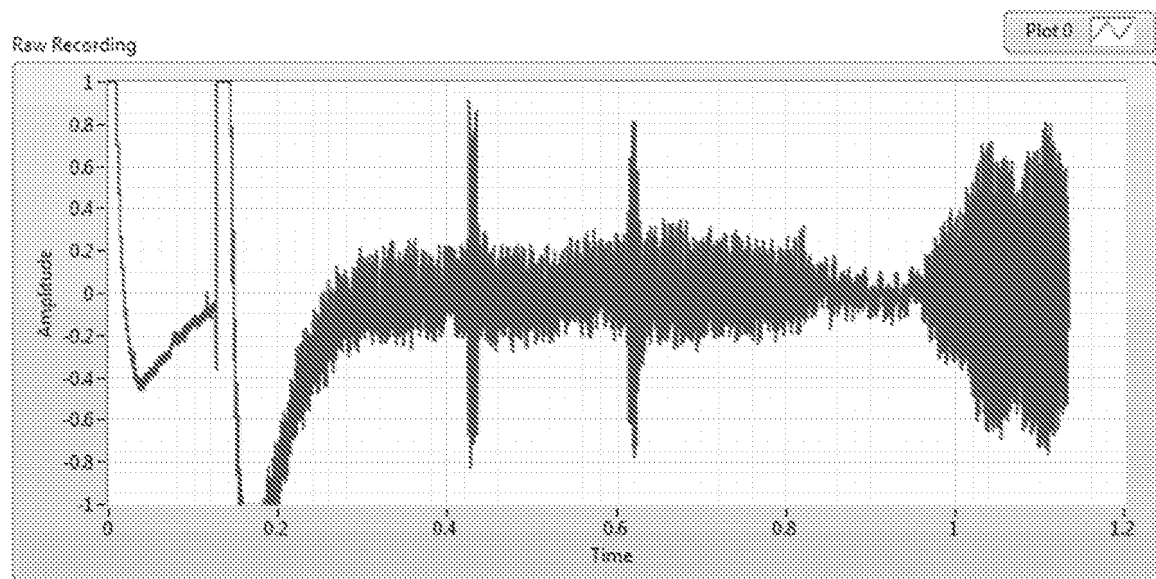


FIG. 46

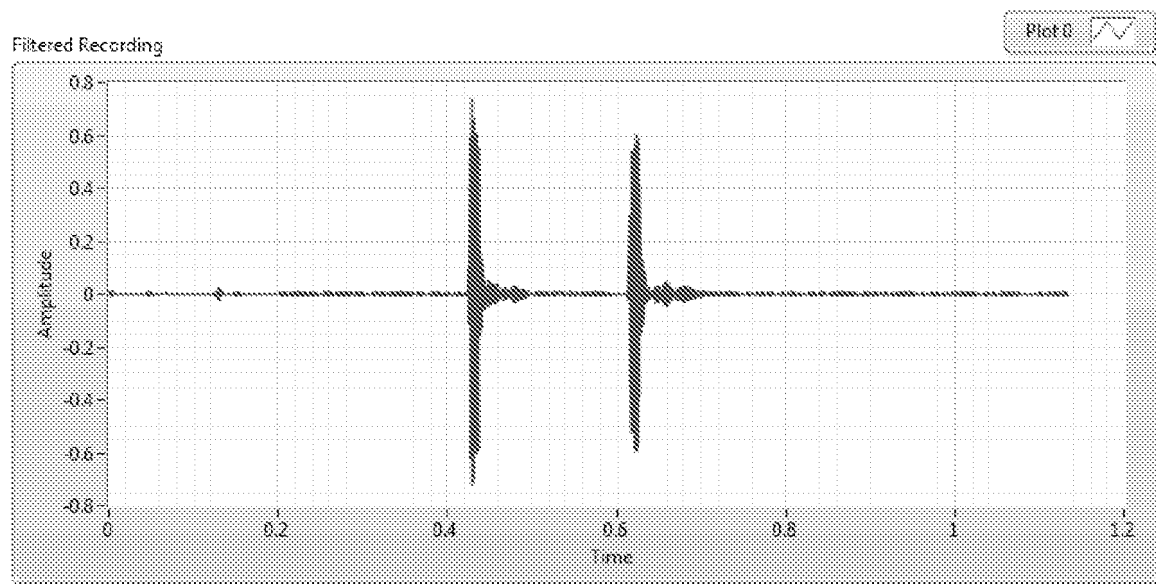


FIG. 47

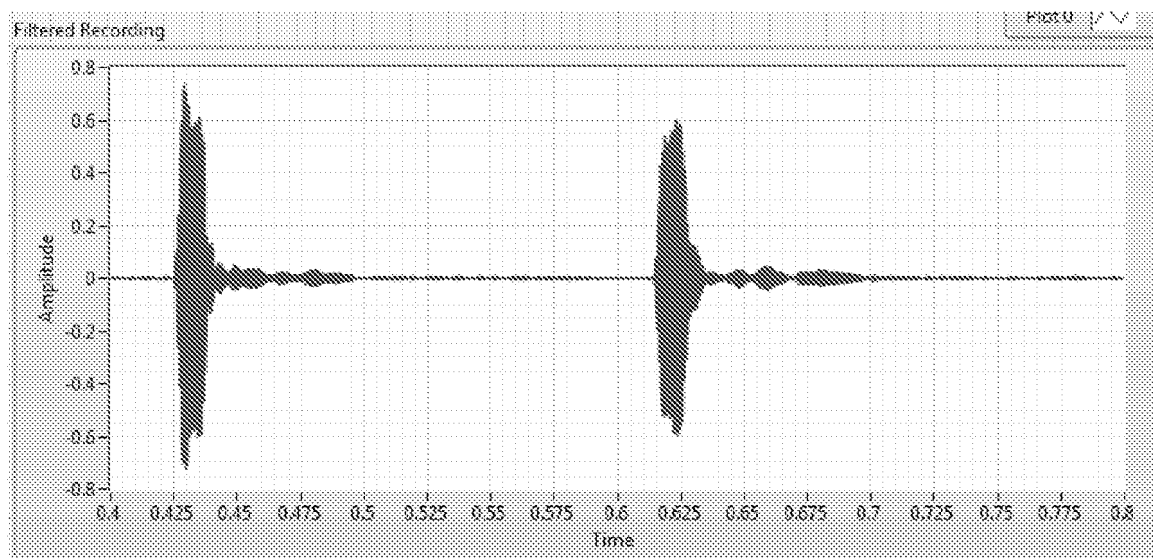
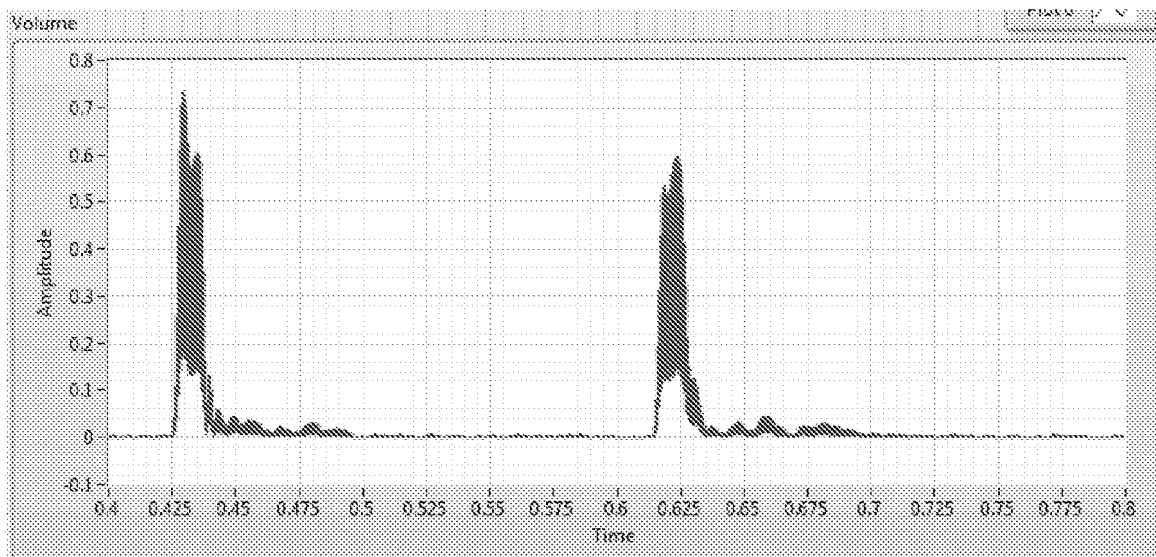
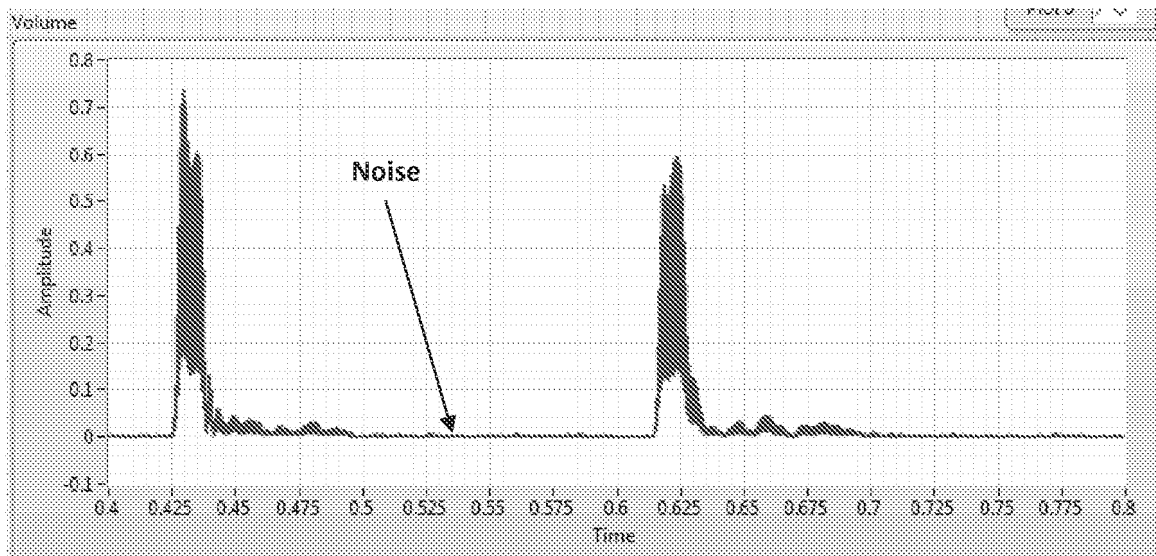
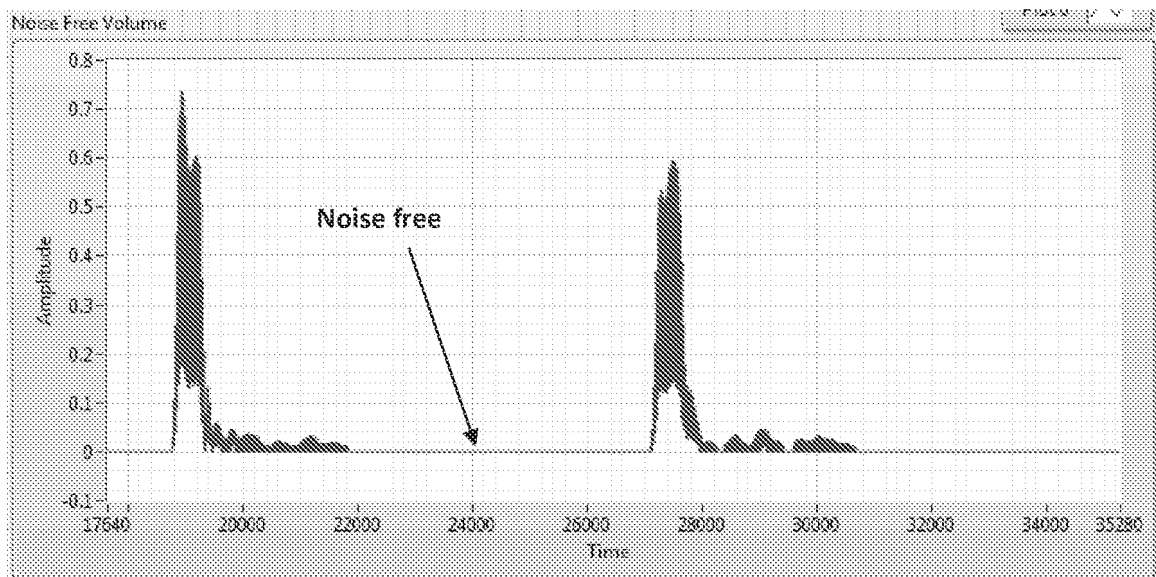


FIG. 48

*FIG. 49**FIG. 50*

*FIG. 51*