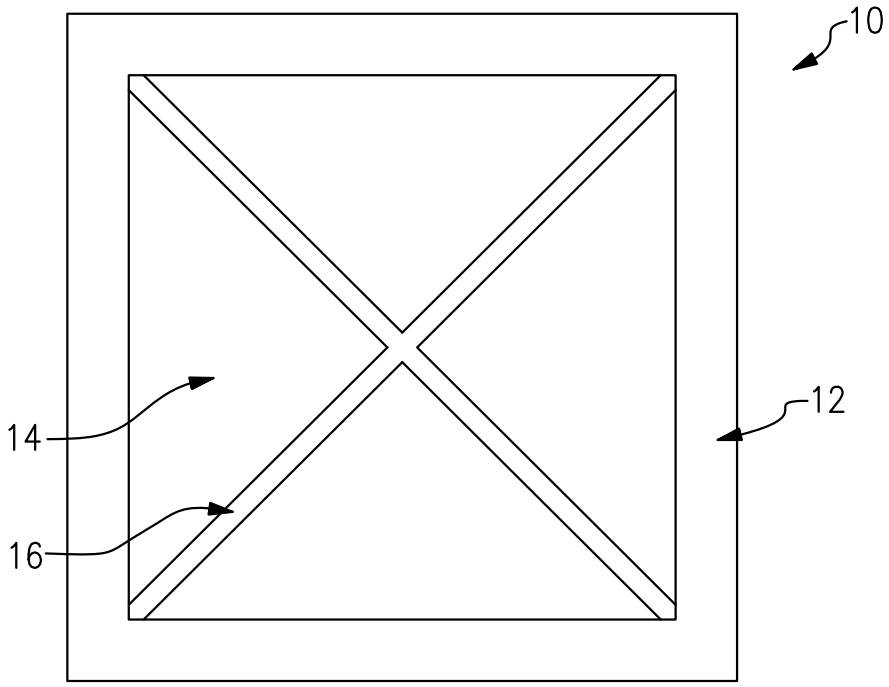


FIG.1A

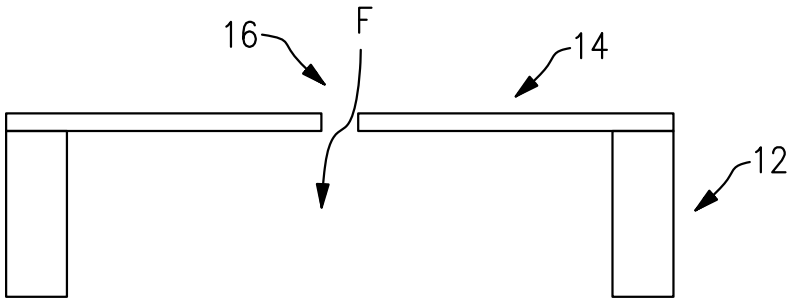


FIG.1B

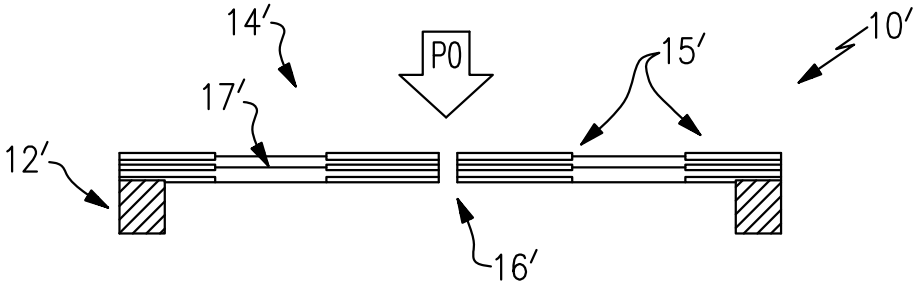


FIG.2A

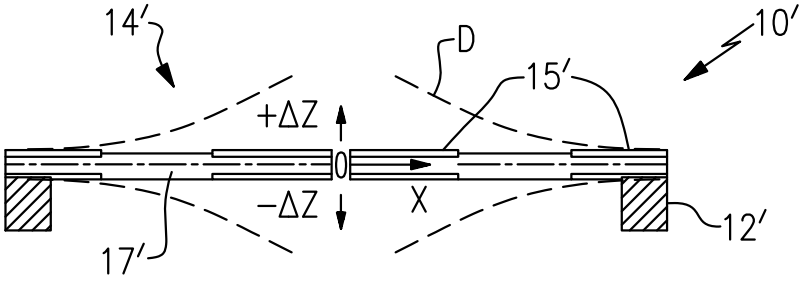


FIG.2B

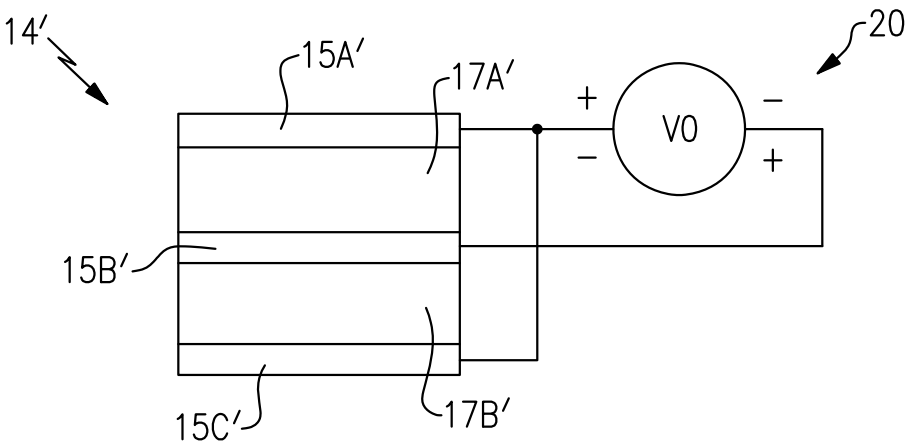

14′
15A′
17A′
20
+
V0
−
−
+
15B′
15C′
17B′

FIG.3

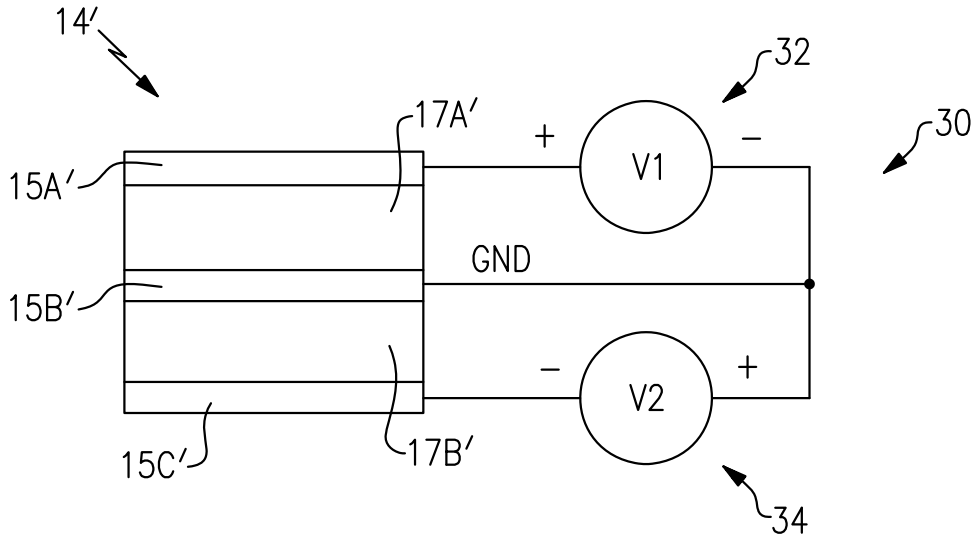

14′
32
17A′
+
V1
−
30
15A′
GND
15B′
−
V2
+
15C′
17B′
34

FIG.4

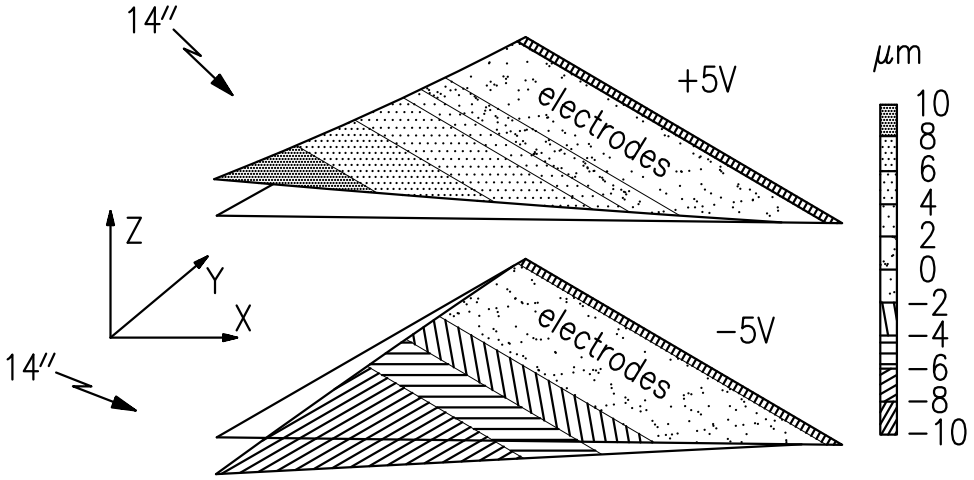

14″
+5V
electrodes
μm
10
8
6
4
2
0
−2
−4
−6
−8
−10
Z
Y
X
−5V
electrodes
14″

FIG.5

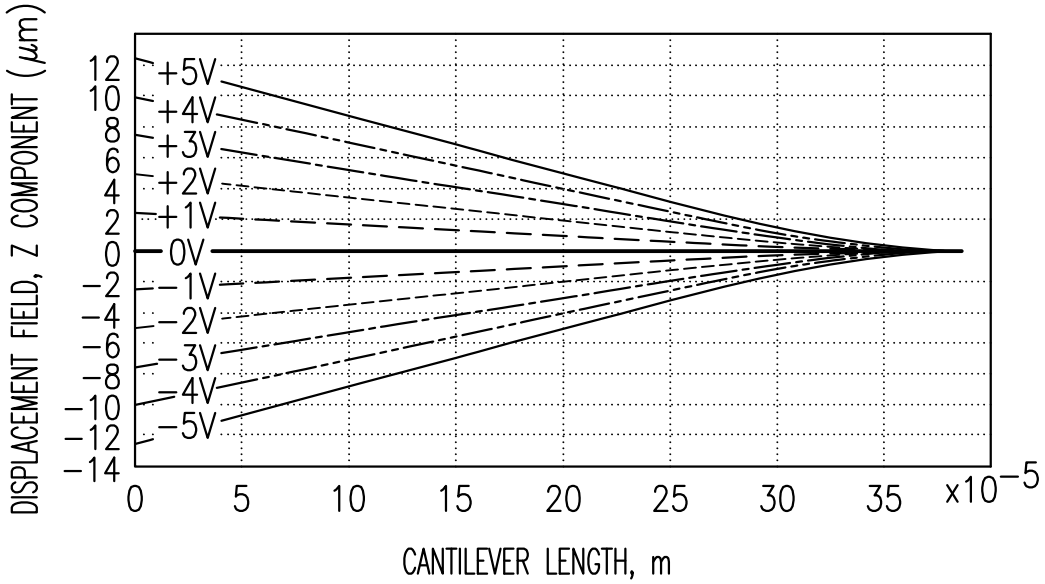

DISPLACEMENT FIELD, Z COMPONENT (μm)
12
10
8
6
4
2
0
−2
−4
−6
−8
−10
−12
−14
+5V
+4V
+3V
+2V
+1V
0V
−1V
−2V
−3V
−4V
−5V
0
5
10
15
20
25
30
35
x10−5
CANTILEVER LENGTH, m

FIG.6

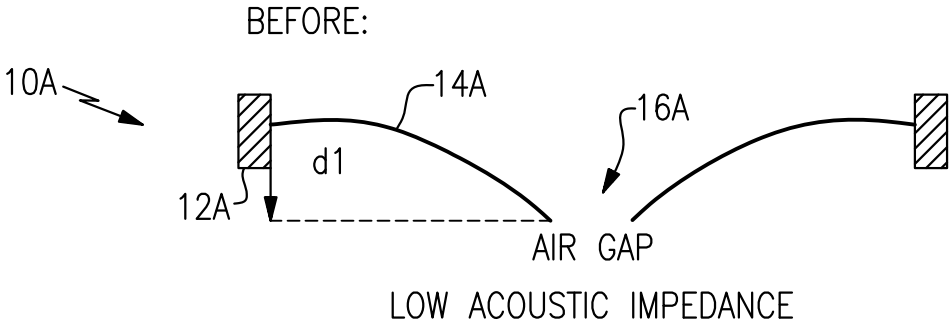


FIG.7A

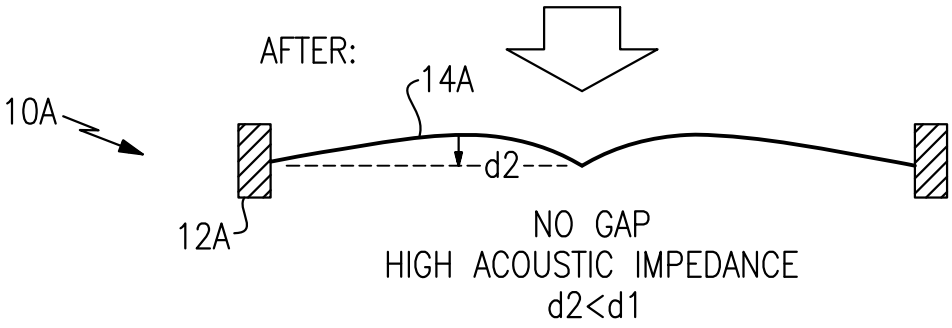


FIG.7B

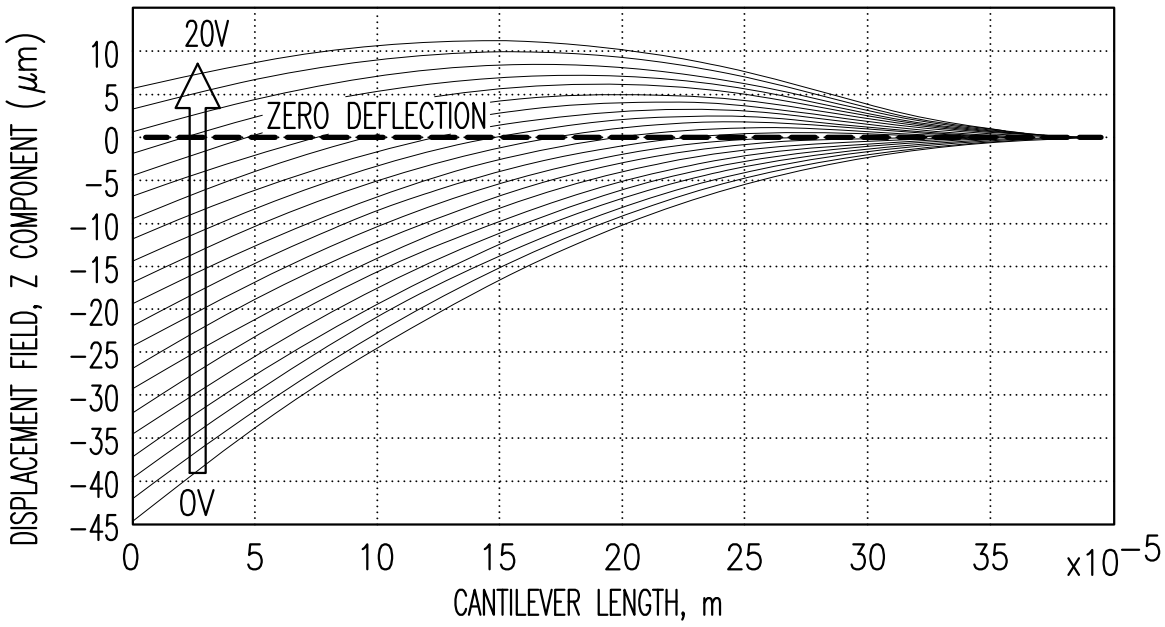


FIG.8

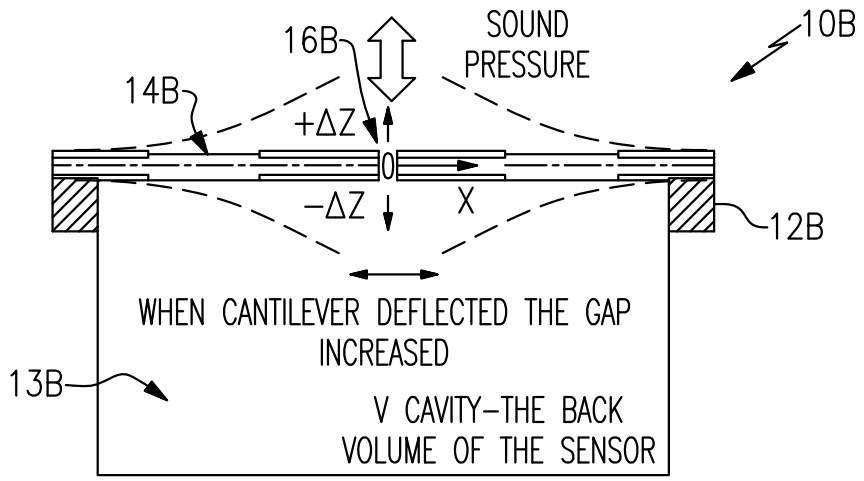

16B
SOUND
PRESSURE
10B
14B
+ΔZ
0
−ΔZ
X
12B
WHEN CANTILEVER DEFLECTED THE GAP
INCREASED
13B
V CAVITY–THE BACK
VOLUME OF THE SENSOR

FIG.9

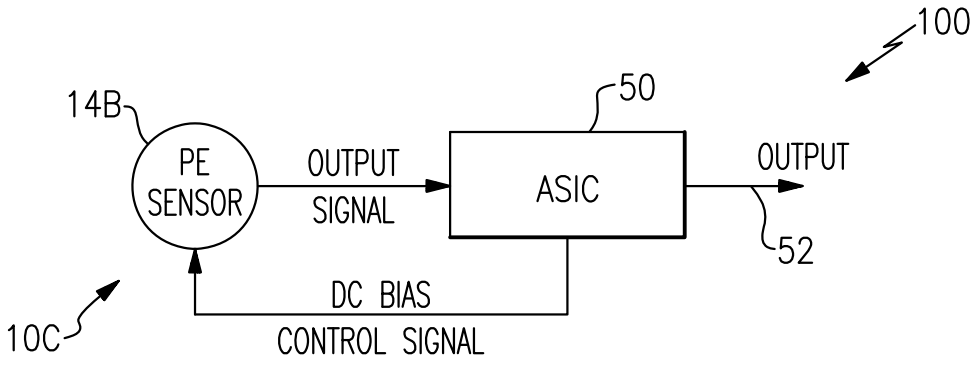

100
14B
50
PE
SENSOR
OUTPUT
SIGNAL
ASIC
OUTPUT
52
DC BIAS
CONTROL SIGNAL
10C

FIG.10

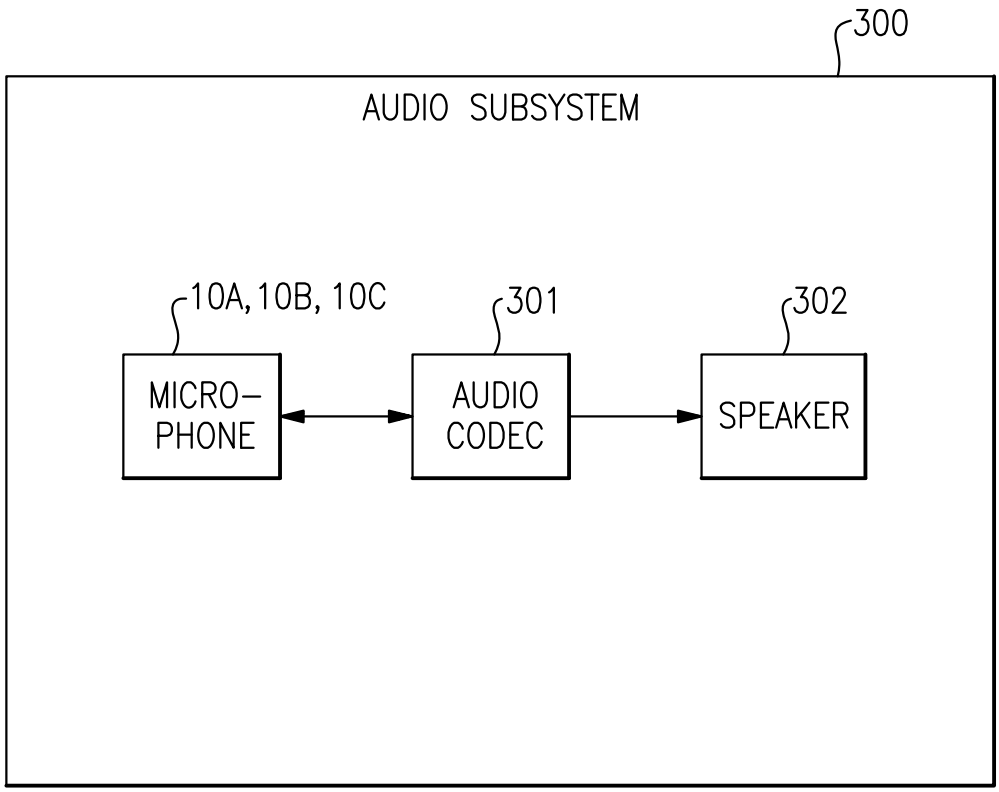

300
AUDIO SUBSYSTEM
10A, 10B, 10C
301
302
MICRO-PHONE
AUDIO CODEC
SPEAKER

FIG.11

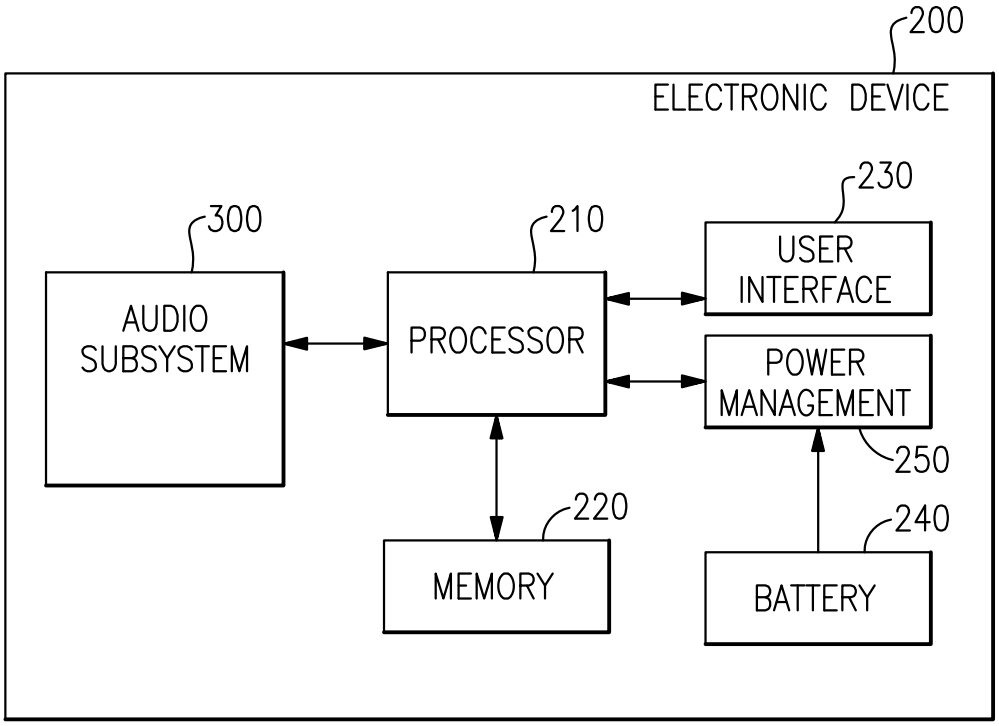


FIG.12A

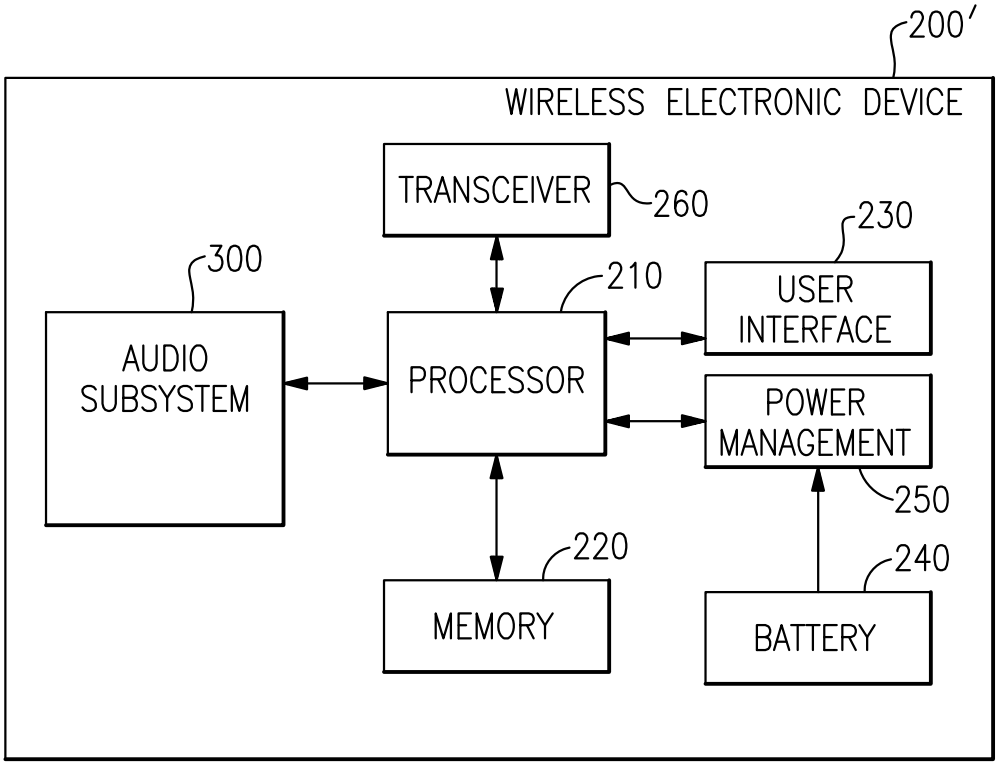


FIG.12B