

ABSTRACT

STEERING OF DIRECTIONAL SOUND BEAMS

5 Apparatus is disclosed for steering a directional audio beam (20) that is self-demodulated from an ultrasound carrier. The apparatus includes means for generating an audio signal and means (43) for generating an ultrasound carrier signal. The apparatus includes means for modulating the carrier signal with the audio signal and means (61, 62) for adjusting the amplitude and phase of at
10 least one of the audio signal and/or the carrier signal to steer the audio beam to a desired direction. The apparatus also includes means (46) for generating an ultrasound beam in the said direction driven by the modulated carrier signal. The apparatus preferably includes means for weighting the audio and/or carrier
15 signal by a zeroth order Bessel function to synthesize a Bessel distribution source. A corresponding method for steering a directional audio beam is also disclosed.

Figure 1 is to be published.