

For Immediate Release

GoldenEar Awarded a US Patent for Its SuperSubs' Unique Dual-Plane Inertially-Balanced Technology

(October 14, 2016 – Stevenson, MD) GoldenEar Technology is very pleased to announce that we have been awarded a patent by the US Patent Office (US 9,462,391 B2) on our unique Dual-Plane Inertially-Balanced Technology, as incorporated in our new, award winning SuperSub™ Series of powered subwoofers, the **SuperSub X** (\$1249/ea.) and **SuperSub XXL** (\$1999/ea.). This force-cancelling inertial-balancing preserves, conserves and focuses all the energy produced by the transducers in order to effectively move the air in the room (rather than the box), as well as enabling full recovery of the finest details, rather than allowing loss and blurring due to wasted box movement. In a way, it is as if the enclosure were a totally inert 500 lb. cabinet, but in some ways even better. The cabinets are so stable during operation that you can actually stand a nickel on its edge, at full volume, without the nickel falling over. Also, because there are two active drivers that are separated horizontally in space, as well as two passive radiators, which are separated vertically, the driver-to-room coupling is distributed much more smoothly. The different driver locations couple to different room standing wave patterns, thus working better with and driving multiple room eigenmodes, almost as if you had two separate subwoofers. An additional benefit, as described in the patent, is that it allows having a downward facing passive radiator, which effectively couples acoustic energy to the floor, without incurring unwanted vibration and cabinet movement.

<p>(12) United States Patent Johnston et al.</p>	<p>(10) Patent No.: US 9,462,391 B2 (45) Date of Patent: Oct. 4, 2016</p>
<p>(54) VERTICALLY AND HORIZONTALLY BALANCED SUBWOOFER</p> <p>(71) Applicants: Robert G. Johnston, Amprior Ontario (CA); Sanford M. Gross, Owings Mills, MD (US)</p> <p>(72) Inventors: Robert G. Johnston, Amprior Ontario (CA); Sanford M. Gross, Owings Mills, MD (US)</p>	<p>(56) References Cited U.S. PATENT DOCUMENTS</p> <p>5,850,460 A * 12/1998 Tanaka H04R 1/2873 381/182</p> <p>6,626,263 B2 * 9/2003 Sabyoum H04R 1/2834 381/349</p> <p>6,704,426 B2 * 3/2004 Croff, III H04R 1/2842 381/349</p> <p>(Continued)</p>

The Abstract of the patent, reads as follows: A speaker system, particularly useful as a subwoofer, comprises an enclosure with one acoustic transducer facing to the right and one acoustic transducer facing to the left, which effectively cancels out transducer cone mass induced vibration within the enclosure. The enclosure also has one passive radiator facing up and one passive radiator facing down. The passive radiator facing down effectively couples acoustic energy at very low frequencies into the floor. The passive radiators each have a rather large area and high mass. The large, high mass, bottom mounted passive radiator will produce large amounts of enclosure vibration, and so to cancel this vibration, the upper passive radiator is of substantially the same mass and size. The resulting system will be vibrationally balanced on all axes, while simultaneously effectively coupling low frequency energy onto the floor of the listening room with good efficiency.



For more information about GoldenEar Technology, visit our website at www.goldenear.com.