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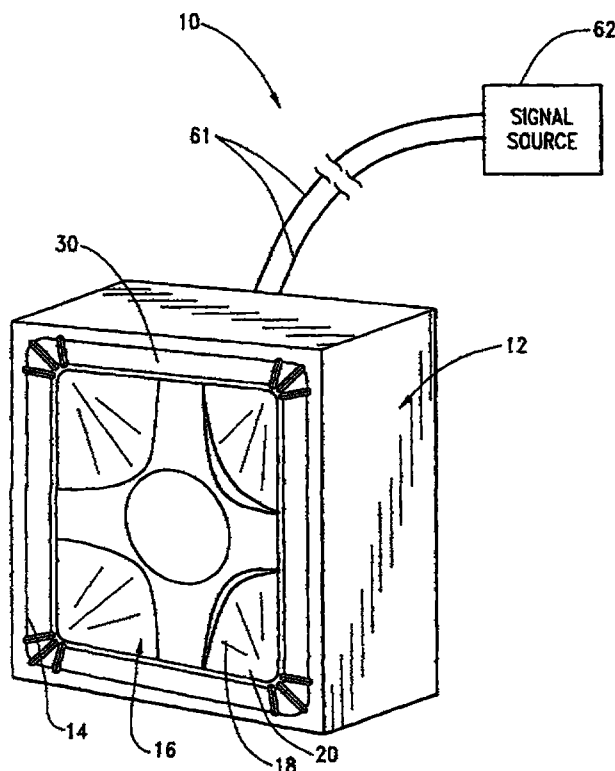
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(54) Title: ULTRA LOW FREQUENCY TRANSDUCER AND LOUD SPEAKER COMPRISING SAME



(57) Abstract: An ultra low frequency transducer or subwoofer for automotive speaker systems with a concave diaphragm and a pleated surround. Preferably, the periphery of the diaphragm is square or rectangular and sized to be substantially coextensive with the front of the speaker housing or cabinet. In this way, air displacement in the subwoofer is maximized for a given size of enclosure, and thus so is the loudness of the speaker. The transducer typically includes a frame or basket with a square front for supporting the periphery of the diaphragm. The preferred diaphragm includes a convex surround with pleated corners. For increased durability, trusses are formed in the diaphragm.

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