

Title (en)  
DIRECT COUPLING OF WAVEGUIDE TO COMPRESSION DRIVER HAVING MATCHING SLOT SHAPED THROATS

Title (de)  
DIREKTKOPPLUNG VON WELLENLEITERN AN EINEN KOMPRIMIERUNGSTREIBER MIT PASSENDEN SCHLITZFÖRMIGEN HÄLSEN

Title (fr)  
COUPLAGE DIRECT DE GUIDE D'ONDES A UN CIRCUIT D'ATTAQUE DE COMPRESSION DOTE D'EMBOUCHURES FORMEES DE FENTES D'ADAPTATION

Publication  
**EP 1330936 B1 20091111 (EN)**

Application  
**EP 00965650 A 20000922**

Priority  
AU 0001157 W 20000922

Abstract (en)  
[origin: WO0225991A1] There is disclosed an acoustic driver having a phasing and compression plug and its direct coupling to an acoustic waveguide having an entry throat with a non-unity aspect ratio, such as a rectangular diffraction slot. The phasing and compression plug has an input end with an input surface having a plurality of input apertures configured in a parallel array of spaced-apart chordal slits. The opposite, output end of the plug has a like plurality of output apertures contained in an output region having unequal length and width dimensions such that the area of the output region is less than that of the input surface. A plurality of passages through the plug body connect each respective input aperture to the corresponding output aperture wherein the relative lengths of the passages are preselected to provide an acoustic wavefront which is concave at its major (vertical) axis and planar or convex across its minor (horizontal) axis. The phasing and compression plug of the invention affects the transition of the bounds of the wavefront from round to a shape having a non-unity aspect ratio such that the throat of the driver can be directly coupled to an acoustic waveguide having a throat with a matching non-unity aspect ratio shape, thereby eliminating the requirement for a round-to-rectangular transition coupled and also for a waveguide or horn with an internal diffraction slot. Consequently, the above factors contribute to enable a cylindrically expanding wavefront to be accurately propagated out of one of and thus out of an array of waveguide mouths.

IPC 8 full level  
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CPC (source: EP)  
**H04R 1/30** (2013.01); **H04R 1/345** (2013.01)

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• US 4776428 A 19881011 - BELISLE BRUNO [CA]  
• JP S54162536 A 19791224 - MATSUSHITA ELECTRIC IND CO LTD

Cited by  
EP4294045A1; US9111521B2; US9049519B2; US8917896B2; US9185476B2; US10425723B2; US11006212B2

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