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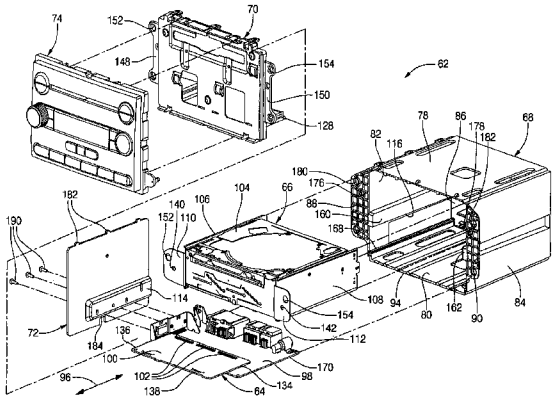
(54) Title: LIGHTWEIGHT AUDIO SYSTEM FOR AUTOMOTIVE APPLICATIONS AND METHOD



(57) Abstract: A lightweight radio/CD player for vehicular application is virtually "fastenerless" and includes a case and frontal interface formed of polymer based material that is molded to provide details to accept audio devices such as playback mechanisms (if desired) and radio receivers, as well as the circuit boards required for electrical control and display. The case and frontal interface are of composite structure, including an insert molded electrically conductive wire mesh screen that has been pre-formed to contour with the molding operation. The wire mesh provides EMC, RH, BCI and ESD shielding and grounding of the circuit boards via exposed wire mesh pads and adjacent ground clips. The PCB architecture is bifurcated into a first board carrying common circuit components in a surface mount configuration suitable for high volume production, and a second board carrying application specific circuit components in a wave soldered stick mount configuration. The major components and subassemblies are self-fixturing during the final assembly process, eliminating the need for dedicated tools, fixtures and assembly equipment. The major components and subassemblies self-interconnect by integral guide and connection features effecting "slide lock" and "snap lock" self- interconnection. The radio architecture includes improved push buttons employing 4-bar living hinge linkage and front loaded decorative trim buttons.

WO 2008/024251 A3

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B. FIELDS SEARCHED

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
US PGPub, USPAT, DERWENT, FPRS,JPO,EPO

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2002/0180108 A1 (Koshiba) 5 December 2002 (05.12.2002)	1 --- 2-3
Y	US 5,473,111 A (Hattori et al.) 5 December 1995 (05.12.1995), Fig. 7c	2
Y	US 5,560,572 A (Osborn et al.) 01 October 1996 (01.10.1995), Fig. 2	3
A	US 2002/0080593 A1 (Tsuge et al.) 27 June 2002 (27.06.2002), Fig. 5	

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
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