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[Continued on next page]

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

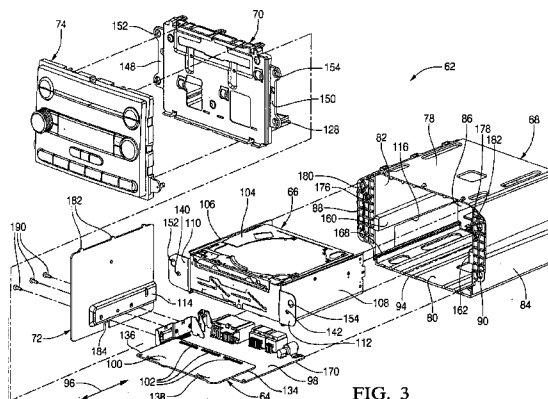


FIG. 3

(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, RFI, 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.



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USPC: 361/752,86;174/561,563

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 361/752,86,683,814; 174/561,563,559

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5467947 A (Quilling et al) 21 Nov. 1995, fig. 1, fig. 3, fig. 9, col. 1, line 14, col. 2, line 11, col. 2, line 49, col. 5, line 52, and col. 6, line 14.	1, 3-5
Y	US 6286972 B1 (Shepherd et al) 11 Sept. 2001, fig. 2, col. 1, line 8, col. 1, line 31, col. 1, line 36, and col. 3, line 38.	2
Y	US 5727866 A (Kraines et al) 17 Mar. 1998, col. 1, line 9.	6
Y	US 7404798 B2 (Kato et al) 27 Oct. 2005 (US 20050240101 A1), col. 16, line 62.	7
Y	US 20070170910 A1 (Chang et al) 26 Jan. 2006, col. 2, line 11. US20050187677 A1 (Walter) 25 Aug. 2005, [0728], [1305], [1325], and [2088]. US 6121779 A (Schutten) 19 Sept. 2000, [Abstract].	8
Y	US 6258438 B1 (Loveland et al) 10 Jun. 2001, Claim 4, and col. 2, line 53.	9



Further documents are listed in the continuation of Box C.



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"P"	document published prior to the international filing date but later than the priority date claimed		

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