

Title (en)  
CONE LOUDSPEAKERS

Publication  
**EP 0235991 A3 19890524 (EN)**

Application  
**EP 87301271 A 19870213**

Priority  
GB 8603645 A 19860214

Abstract (en)  
[origin: EP0235991A2] In a cone loudspeaker having a central dome (14), an annular cone (10) around the dome, and a voice coil (18), the central dome (14) is made mechanically strong and axially stiff and is an acoustic radiator in its own right. The dome (14) is preferably also radially stiff and its radial stiffness may be enhanced by a circumferential reinforcing ring. The dome is preferably hemispherical and may be made of aluminium, titanium or fibre-reinforced plastics materials.

IPC 1-7  
**H04R 7/12**

IPC 8 full level  
**H04R 7/12** (2006.01); **H04R 9/02** (2006.01)

CPC (source: EP)  
**H04R 7/12** (2013.01)

Citation (search report)

- [X] US 4531608 A 19850730 - HEINZ HARRO K [US]
- [Y] GB 2113041 A 19830727 - JENSEN INT INC
- [A] GB 2057224 A 19810325 - INOUE K
- [A] GB 2147174 A 19850501 - TANNOY LTD
- [A] EP 0160478 A2 19851106 - WHARFEDALE LOUDSPEAKER [GB]

Cited by  
EP0644706A1; US5933508A; GB2359213A; GB2359213B; FR2595497A1; EP1061771A3; US6792127B1

Designated contracting state (EPC)  
AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)  
**EP 0235991 A2 19870909; EP 0235991 A3 19890524; EP 0235991 B1 19931201**; AT E98081 T1 19931215; CA 1292307 C 19911119; DE 3788293 D1 19940113; DE 3788293 T2 19940623; ES 2048733 T3 19940401; GB 2186761 A 19870819; GB 2186761 B 19891108; GB 8603645 D0 19860319; GB 8703315 D0 19870318; JP S62248398 A 19871029

DOCDB simple family (application)  
**EP 87301271 A 19870213**; AT 87301271 T 19870213; CA 529745 A 19870213; DE 3788293 T 19870213; ES 87301271 T 19870213; GB 8603645 A 19860214; GB 8703315 A 19870213; JP 3071087 A 19870214