

Title (en)  
Loudspeaker

Title (de)  
Lautsprecher

Title (fr)  
Haut-parleur

Publication  
**EP 0690658 A3 19960612 (DE)**

Application  
**EP 95107547 A 19950518**

Priority  
DE 4419312 A 19940601

Abstract (en)  
[origin: EP0690658A2] The diaphragm (10) of a loudspeaker is coupled to the end of the moving coil (12) carrier tube (11). An air gap (15) is formed between the pole plate (13) and the core (14) which extends into a rod (17) with a flanged end (17). The diaphragm support tube (11) has a support sleeve (19) that has coil springs (23) on both sides. At the lower end the support tube locates over the core elements (14). A clamping ring (27) can be bonded around the tube for additional support. <IMAGE>

IPC 1-7  
**H04R 9/06**; **H04R 9/04**

IPC 8 full level  
**H04R 9/00** (2006.01); **H04R 7/16** (2006.01); **H04R 9/04** (2006.01); **H04R 9/06** (2006.01)

CPC (source: EP US)  
**H04R 7/16** (2013.01 - EP US); **H04R 9/04** (2013.01 - EP US); **H04R 9/06** (2013.01 - EP US)

Citation (search report)

- [A] GB 2062408 A 19810520 - VICTOR COMPANY OF JAPAN
- [A] DE 9109452 U1 19911017
- [A] US 3614181 A 19711019 - MEEKS CRAWFORD R
- [A] EP 0291053 A1 19881117 - SIEMENS AG [DE]

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EP0685980B1

Designated contracting state (EPC)  
AT BE DE DK ES FR GB IT NL SE

DOCDB simple family (publication)  
**US 5546470 A 19960813**; AT E164719 T1 19980415; DE 4419312 A1 19951207; DE 59501748 D1 19980507; EP 0690658 A2 19960103; EP 0690658 A3 19960612; EP 0690658 B1 19980401; JP H089495 A 19960112

DOCDB simple family (application)  
**US 44755895 A 19950523**; AT 95107547 T 19950518; DE 4419312 A 19940601; DE 59501748 T 19950518; EP 95107547 A 19950518; JP 13384295 A 19950531