

Title (en)  
Loudspeaker

Title (de)  
Lautsprecher

Title (fr)  
Haut-parleur

Publication  
**EP 0690658 B1 19980401 (DE)**

Application  
**EP 95107547 A 19950518**

Priority  
DE 4419312 A 19940601

Abstract (en)  
[origin: US5546470A] According to the state of the art, high-temperature resistant centering of loudspeakers is configured so that a rod (17) that is connected to the pole body (14) serves as a guide for a bushing (19) connected to the voice coil support (11). However, the narrow space between the rod (17) and the bushing (19) leads to friction between the rod (17) and the bushing (19) during excursion movements of the voice coil support (11), which retards the free movement of the voice coil support (11). The invention therefore has the task of providing high-temperature resistant centering for loudspeakers, in which any touching of rod (17) and bushing (19) is eliminated. The invention makes the rod (17) and the bushing (19) from magnetic material, and magnetizes this material radially to the loudspeaker axis (16). If the facing magnetic areas of rod (17) and bushing (19) have the same polarity, no-contact centering of the bushing (19) over the rod (17) is achieved by the mutual rejection.

IPC 1-7  
**H04R 9/06**; **H04R 9/04**; **H04R 7/16**

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 (examination)  
• DE 4241212 A1 19940609 - NOKIA DEUTSCHLAND GMBH [DE]  
• Patent Abstracts of Japan vol.3, no.94 (E129), 10/08/79 & JP-A-54072031

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**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

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