

Title (en)  
Speaker apparatus for handheld electronic device

Title (de)  
Lautsprecher für tragbares elektronisches Gerät

Title (fr)  
Haut-parleur pour dispositif électronique portable

Publication  
**EP 1696693 B1 20070418 (EN)**

Application  
**EP 05251072 A 20050223**

Priority  
EP 05251072 A 20050223

Abstract (en)  
[origin: EP1696693A1] An improved speaker apparatus for use in association with a handheld electronic device includes an actuator, an audio transducer, and a connection that is connectable with the handheld electronic device. The speaker apparatus additionally includes a power system that is connectable with a power source. The connection enables the communication of audio signals between the speaker apparatus and the handheld electronic device, and also provides power to operate and/or charge the handheld electronic device. When the speaker apparatus is connected with the handheld electronic device, the audio transducer serves as both a loudspeaker and a microphone for use in, for example, telephone communications using a wireless communication apparatus of the handheld electronic device.

IPC 8 full level  
**H04R 1/02** (2006.01)

CPC (source: EP)  
**H04R 1/02** (2013.01); **H04R 2499/11** (2013.01); **H04R 2499/13** (2013.01)

Cited by  
US9130445B1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA HR LV MK YU

DOCDB simple family (publication)  
**EP 1696693 A1 20060830; EP 1696693 B1 20070418**; AT E360345 T1 20070515; CA 2537478 A1 20060823; CA 2537478 C 20131008; DE 602005000931 D1 20070531; DE 602005000931 T2 20080117; EP 1708541 A1 20061004

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