

Title (en)

Acoustic dipole radiator for portable electronic devices

Title (de)

Akustischer Dipolsender für tragbare elektronische Geräte

Title (fr)

Radiateur acoustique à dipôle pour dispositifs électroniques portables

Publication

**EP 1113702 A3 20021218 (EN)**

Application

**EP 00310555 A 20001129**

Priority

US 47604599 A 19991231

Abstract (en)

[origin: EP1113702A2] A wearable acoustic dipole radiator accessory for portable electronic devices such as mobile phones, portable cassette players, MP3 players, portable radios, or any other suitable device. The acoustic dipole radiator has two loudspeakers that are acoustically connected by an interconnection cavity. The loudspeakers do not need to contact the user's ears. The interconnection cavity limits mutual interference between the front and backwaves of the loudspeakers. In one embodiment, the acoustic dipole radiator is implemented in a necklace. In another embodiment, the acoustic dipole radiator is implemented in a helmet. In yet another embodiment, the acoustic dipole radiator is implemented in a headset in which the loudspeakers do not contact the ears. <IMAGE>

IPC 1-7

**H04R 1/40**; **H04R 5/02**

IPC 8 full level

**H04R 3/00** (2006.01)

CPC (source: EP)

**H04R 5/033** (2013.01); **H04R 1/2857** (2013.01); **H04R 1/347** (2013.01); **H04R 5/0335** (2013.01); **H04R 2420/07** (2013.01)

Citation (search report)

- [X] WO 9721322 A1 19970612 - INTERVAL RESEARCH CORP [US]
- [XAY] US 4084139 A 19780411 - JAKOBE EUGENE J
- [Y] EP 0412205 A1 19910213 - TISSERONT ANDRE [FR], et al
- [Y] FR 2625844 A1 19890713 - AUDIO DESIGN [FR]
- [YA] US 4993065 A 19910212 - CHIOU OLIVER C [TW]

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US7139402B2; EP1282335B1

Designated contracting state (EPC)

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