

Title (en)  
Loudspeaker heat control with state observation

Title (de)  
Lautsprecherwärmeregulierung mit Statusbeobachtung

Title (fr)  
Régulation thermique de haut-parleur avec observation d'état

Publication  
**EP 2806656 B1 20160413 (EN)**

Application  
**EP 13368015 A 20130521**

Priority  
EP 13368015 A 20130521

Abstract (en)  
[origin: EP2806656A1] An Active Heat Controller (10) for controlling the temperature of a loudspeaker (12) connected to it, the Active Heat Controller (10) comprising a Dynamic Range Controller (14) operatively interposed, in use, between an input driving signal terminal (16) for the loudspeaker (12) and the terminals (26) of a voice-coil of the loudspeaker (12), the Dynamic Range Controller (14) being configured to variably attenuate the input driving signal as output at the voice-coil's terminals (20), the Active Heat Controller (10) comprising: a probe (28) operatively connected, and for applying a probe signal, to the terminals (26) of the loudspeaker's voice-coil (12) for estimating an instantaneous temperature of the voice-coil and being characterised by: a state observer (40) for estimating an instantaneous temperature of a magnet of the loudspeaker (12); and means (38) for controlling the instantaneous attenuation of the Dynamic Range Controller (14) in response to the estimated voice-coil and magnet temperatures.

IPC 8 full level  
**H04R 3/00** (2006.01)

CPC (source: EP)  
**H04R 3/007** (2013.01)

Cited by  
CN110113694A; CN107702813A; GB2542643A; CN114630257A; CN113812170A; EP3480952A3; US9609450B2; US11221259B2; US11333622B2; US9794687B2; US12081929B2; WO2020223002A1; WO2023082159A1; WO2019129918A1; TWI698130B

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