

Title (en)  
NOISE REDUCTION DEVICE

Publication  
**EP 0212840 A3 19870923 (EN)**

Application  
**EP 86305415 A 19860714**

Priority  
GB 8517716 A 19850713

Abstract (en)  
[origin: EP0212840A2] An automatic gain active noise reduction arrangement for reducing the level of acoustic noise within the internal cavity or enclosure of an ear-defender or earphone structure (2), the arrangement comprises a noise pick-up microphone (4) and a noise-cancelling transducer (9) mounted within said cavity or enclosure, the noise pick-up microphone (4) being adapted to produce an electrical signal output in response to an acoustic noise field within said cavity or enclosure, and phase inverter means (5), filtering means (6) and amplifying (8) means connected in a feedback control path extending between the noise pick-up microphone (4) and the noise-cancelling transducer (9) and effective in response to the generation of an electrical signal output by the noise pick-up microphone (4) to produce a noise-cancelling signal output which is fed to the noise-cancelling transducer (9), in which the output from the noise pick-up microphone (4) is also applied to signal processing (10,11) and control means (7) for producing an electrical output which is dependent upon the microphone output and a predetermined non-linear control algorithm and which is applied to variable loop gain control means coupled with the feedback control path for controlling the loop gain in accordance with a preselected parameter of the microphone output.

IPC 1-7  
**G10K 11/16**

IPC 8 full level  
**G10K 11/16** (2006.01); **G10K 11/178** (2006.01)

CPC (source: EP US)  
**G10K 11/17825** (2017.12 - EP US); **G10K 11/17857** (2017.12 - EP US); **G10K 11/17875** (2017.12 - EP US); **G10K 2210/3011** (2013.01 - EP); **G10K 2210/3012** (2013.01 - EP); **G10K 2210/3013** (2013.01 - EP); **G10K 2210/3039** (2013.01 - EP)

Citation (search report)  
[A] GB 2097629 A 19821103 - NAT RES DEV

Cited by  
AU639761B2; US5675658A; EP0468610A3; GB2289960A; US5182774A; US4953217A; EP0412902A3; US5001763A; US6118878A; US5313945A; US5524058A; EP0629995A1; EP0385713A3; US5091954A; WO0167434A1; WO9002513A1; WO9113429A1; WO8900746A1; EP0705472B1; WO9417512A1; WO9218975A1

Designated contracting state (EPC)  
AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)  
**EP 0212840 A2 19870304**; **EP 0212840 A3 19870923**; **EP 0212840 B1 19911023**; AT E68903 T1 19911115; DE 3682147 D1 19911128; GB 8517716 D0 19850821

DOCDB simple family (application)  
**EP 86305415 A 19860714**; AT 86305415 T 19860714; DE 3682147 T 19860714; GB 8517716 A 19850713