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Noise reduction device.

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 param-

eter of the microphone output.

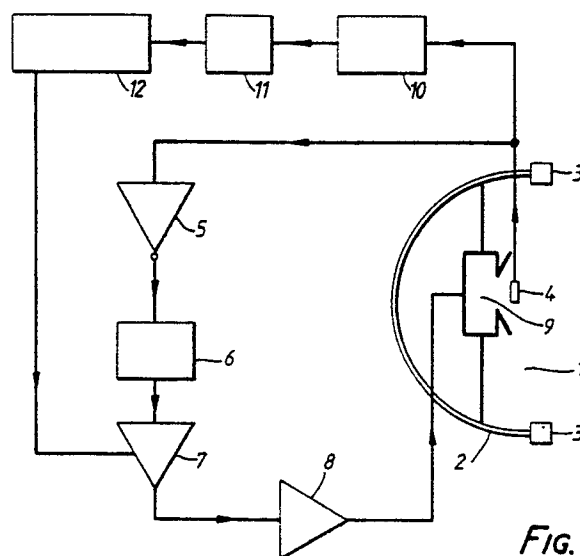


Fig. 1.



EP 86 30 5415

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
A	GB-A-2 097 629 (NRDC) * Page 1, lines 14-25; figure 1 * -----	1	G 10 K 11/16 A 61 F 11/02
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			G 10 K A 61 F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 29-06-1987	Examiner WILHELM A.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

