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(54) **Electronic battery-powered hearing instrument, and method for operating such a hearing instrument**

(57) An electronic battery-powered hearing instrument (10) comprises

- a first power supply terminal (1) and a second power supply terminal (2) arranged to contact a battery (3),
- a rectifier circuit (6) for providing a positive supply voltage (U_p) and a negative supply voltage (U_n) regardless of a polarity of the battery (3) relative to the first and second power supply terminal (2),
- primary function means (7) arranged to provide at least one drive signal (U_d) to a drive circuit (20) for driving an electroacoustic conversion means (13) by controlling electrical valve means (14, 15, 16,

17).

The drive circuit (20) is electrically connected to the first power supply terminal (1) and to the second power supply terminal (2), and the electrical valve means (14, 15, 16, 17) are polarity-independent, that is, they are able to operate regardless of the polarity of the voltage applied to their terminals.

As a result, the current path from the battery (3) to the electroacoustic conversion means (13) and back again comprises at the most two electrical valve means (14, 15, 16, 17), e.g. transistors, minimising voltage drop and power loss.

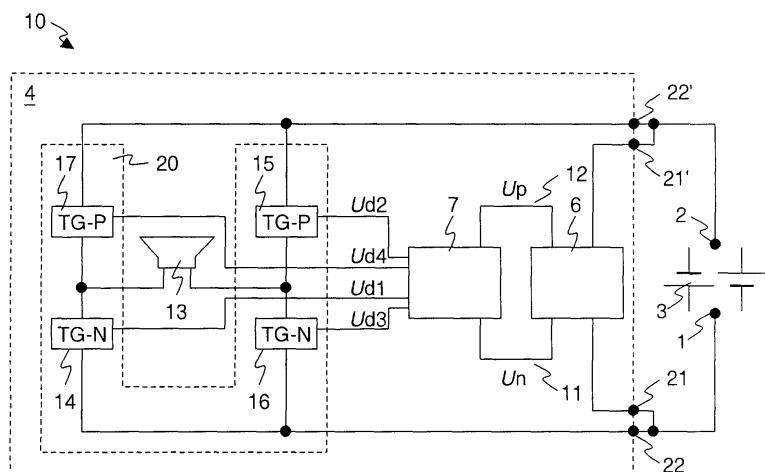


Fig. 2



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	US 2001/002100 A1 (COMPTON JAMES BARCLAY ET AL) 31 May 2001 (2001-05-31) * abstract * * paragraph [0049]; figure 1 * * paragraph [0052] - paragraph [0053]; figure 3 * * paragraph [0072] - paragraph [0076]; claims 10,17; figures 8,10 * -----	1-11	H04R25/00 H02H11/00
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2			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			H02H H04R H03F
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
Munich		16 February 2005	Gerken, S
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			

ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 04 40 5616

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

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