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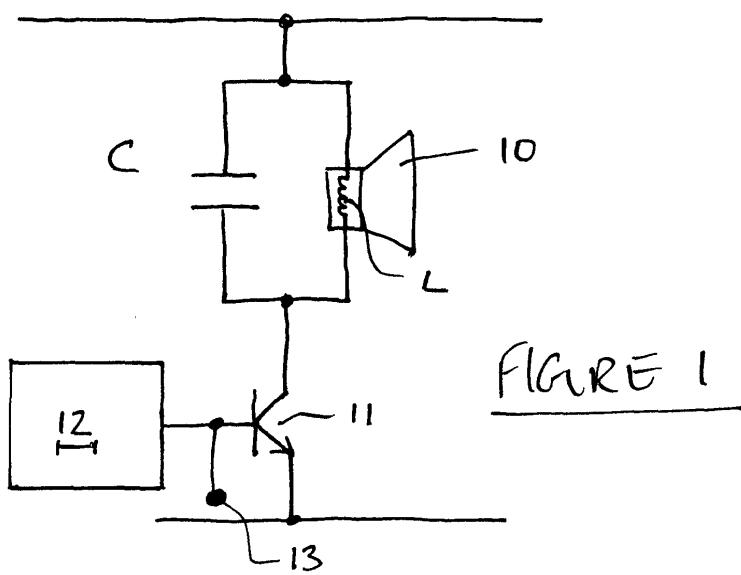
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(54) Audible warning devices

(57) An audible warning device e.g. for a fire alarm system is arranged to generate an audible output signal having a first frequency $1/T_1$ and comprises an audible output transducer 10 and a driver circuit 12 for applying an alternating drive signal, having a second and higher frequency $1/T_2$, to the transducer 10 over successive distinct periods, the frequency of the periods being equal to the first frequency $1/T_1$. The (second) frequency at which the transducer 10 is driven is at or near the resonant frequency of the transducer 10. However, the (second) frequency signal is only applied in successive

distinct periods at the (first) lower frequency and thus the transducer appears to produce an audible output signal at this lower frequency.

There is also disclosed a method of tuning the a transducer to output an audible output signal at the (first) lower frequency by determining the (second) frequency at which the audible output of the transducer is high and driving the transducer 10 with a drive signal at the determined (second) frequency over successive distinct periods, the frequency of the periods being equal to the desired (first) frequency.





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EUROPEAN SEARCH REPORT

Application Number
EP 01 30 5973

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	GB 2 101 452 A (RICOH KK) 12 January 1983 (1983-01-12) * page 1, line 5 - line 6 * * page 1, line 87 - line 90 * * page 1, line 108 - line 123; figures 3A,3B * * figures 1,5 *	1-4	G08B3/10
Y	US 5 293 149 A (WILSON CARL R ET AL) 8 March 1994 (1994-03-08) * column 3, line 10 - line 13 * * column 4, line 1 - line 4 * * column 8, line 54 - line 57 * * column 8, line 59 - column 9, line 4 *	5	
-----			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
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The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
THE HAGUE	8 January 2003	Meister, M	
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone	T : theory or principle underlying the invention		
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P : intermediate document	& : member of the same patent family, corresponding document		

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

EP 01 30 5973

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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