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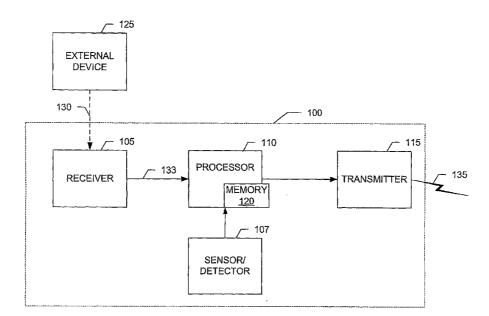
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(54) Title: REMOTELY ACTIVATED, MULTIPLE STAGE ALARM SYSTEM



(57) Abstract: An alarm system (100) to wake sleeping occupants in the event of an emergency has a receiver (105) for detecting a warning signal (130) emitted from an external device (125), such as a smoke or carbon monoxide detector. A processor (11) compares the received warning signal to a predetermined signal and, if they correspond, then a transmitter (115) transmits an alarm (135). The predetermined signal can be preprogrammed or it can be learned by alarm system. The alarm is at least one of an audible, visual, vibratory, and/or olfactory communication. A customized audible communication in a voice familiar to the occupants can be recorded and stored in the alarm system. In addition, the system may provide different alarms before and after motion is detected.

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Minimum documentation searched (classification system followed by classification symbols) U.S.: 340/506,539.1,691.3,407.1,502,628,632,693.545.3,541,692			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EAST			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where a	ppropriate, of the relevant passages	Relevant to claim No.
Х	US 6,028,513 A(ADDY) 22 Febrary 2000 (22.02.20	000), column 4, lines 17-36.	1-28
x 	US 6,384,724 B1 (LANDAIS) 07 May 2002 (07.05.2002), column 4.		29-33
Y			
Α	US 5,737,692 A (LANG) 07 April 1998 (07.04.1998), see abstract.		1-27
Α	US 5,867,105 A (HAJEL) 02 February 1999 (02.02.1999), see abstract.		1-27
Α	US 5,907,279 A (BRUINS et al) 25 May 1999 (25.05.1999), see abstract.		1-27
Further	documents are listed in the continuation of Box C.	See patent family annex.	
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