

Title (en)

Method and device for the protection of buildings against intrusion.

Title (de)

Verfahren und Vorrichtung zum Schutz von Gebäuden gegen Eindringen.

Title (fr)

Procédé et dispositif de protection de locaux contre l'intrusion.

Publication

EP 0188165 A2 19860723 (FR)

Application

EP 85420226 A 19851210

Priority

FR 8419235 A 19841212

Abstract (en)

1. Method for the protection of buildings against intrusion, of the type consisting : in a first referencing phase in which there are no intruders in the building under surveillance : in emitting an acoustic reference wave inside the building, in detecting and recording the acoustic reference signal reflected by the building, and in a second phase corresponding to the building being under effective surveillance : in emitting inside the building an acoustic wave constituted by trains of pulses modulated within a predetermined band, for a limited period and with a preselected recurrence time, in detecting the acoustic signal reflected by the building, and in comparing the variations of said reflected signal with the reflected reference signal in order to detect an intrusion into the building, characterized in that it consists : for the referencing phase : in transmitting an acoustic reference wave constituted by a train of pulses which are linear frequency-modulated inside a band (B) ranging between 500 Hz and 5 kHz for a limited period (T) comprised between 5 and 20 milliseconds, in intercorrelating the reflected reference signal and the emitted reference wave, in analyzing and recording the obtained intercorrelation reference signal in order to count and localize the various reference echos that it contains, and for the phase when the building is under effective surveillance ; in transmitting an acoustic wave constituted by trains of pulses which are linear frequency-modulated inside a band (B) ranging between 500 Hz and 5 kHz, for a limited period (T) comprised between 5 and 20 milliseconds and with a recurrence period which is at least about the reverberation period of the local to be protected, in intercorrelating, for every pulse train transmitted, the reflected signal and the transmitted wave, in analyzing the intercorrelation signals produced, in order to count and localize the various echos that they contain, in comparing every intercorrelation signal produced, with the reference intercorrelation signal, noting the modification of the echos from one signal to another, and in setting off an alarm or surveillance member when modifications are noted in the echos of the intercorrelation signals.

Abstract (fr)

Des signaux acoustiques sous la forme de trains d'impulsions modulées linéairement en fréquence sont émis par un émetteur (10) dans le local à protéger. Les signaux acoustiques reçus par au moins un détecteur (20) sont appliqués à des circuits de traitement (30) qui comprennent des moyens d'intercorrélation des signaux émis par l'émetteur et reçus par le détecteur pour fournir un signal d'intercorrélation, des moyens d'analyse de l'enveloppe du signal d'intercorrélation et de reconnaissance des échos, des moyens de comparaison du signal d'intercorrélation et d'un signal de référence présentant un nombre prédéterminé d'échos caractéristiques du local à protéger et des moyens de comptage et repérage des échos apparus ou disparus dans le signal d'intercorrélation, qui permettent le déclenchement d'une alarme (40) selon une stratégie de logique décisionnelle programmée.

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G08B 13/16

IPC 8 full level

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