

Title (en)
DUAL FREQUENCY ANTI-THEFT SYSTEM.

Title (de)
ANTI-DIEBSTAHLSYSTEM MIT ZWEI FREQUENZEN.

Title (fr)
SYSTEME ANTIVOL A FREQUENCE DOUBLE.

Publication
EP 0062056 A4 19850606 (EN)

Application
EP 81902853 A 19811001

Priority
US 19557280 A 19801009

Abstract (en)
[origin: WO8201437A1] An anti-theft tag (34) containing a semiconductor diode (36) connected to a metal antenna loop (38) is configured to receive two distinct radio frequency transmissions. The diode (36) bridges a closed loop at one end of the antenna (38), forming a tank circuit resonant at twice a selected center frequency. A first transmitter (26) generates a tone modulated radio frequency (f) displaced on one side of the center frequency, and a second transmitter (30) generates a continuous wave radio frequency (f) displaced on the other side of the center frequency. Both signals are fed separately to respective dipole radiating antenna strips (18, 19, 20, 21) on opposite sides of a surveillance area. The dipole strips for the different frequencies are at right angles to each other on each side; those for the same frequency are at right angles to each other on opposite sides. This produces cross polarized transmission of both frequencies within the area. Diode (36) of tag (34) mixes the two frequencies received by the antenna loop (38), causing the tank circuit to resonate at the sum of the two frequencies (double the center frequency). That resonant frequency is reradiated to receiver antennae (22, 24) on each side for detection by a very narrow band receiver (42) responsive to the sum frequency. The modulating tone is derived from the received signal and processed to trigger an alarm (44) when the detected signal is of sufficient strength and duration.

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IPC 8 full level
G08B 13/18 (2006.01); **G08B 13/24** (2006.01)

IPC 8 main group level
G08B (2006.01)

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• [A] FR 2371128 A7 19780609 - NEDAP NV [NL]

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