

Title (en)  
MULTIPLE LOOP ANTENNA

Title (de)  
MEHRFACH-SCHLEIFENANTENNE

Title (fr)  
ANTENNE A BOUCLES MULTIPLES

Publication  
**EP 1138098 A4 20050126 (EN)**

Application  
**EP 98960188 A 19981112**

Priority  
US 9824182 W 19981112

Abstract (en)  
[origin: CA2350217A1] A multiple loop antenna (70) is provided which may be connected to either a transmit circuit, a receive circuit, or a transmit/receive circuit (80). When powered by a transmit circuit (60), the antenna (70) generates radio frequency magnetic fields in an area or zone proximate to the antenna, but which are substantially canceled at a distance approximately one wavelength and more from the antenna (70), thereby defining a surveillance zone proximate to the antenna (70). The loop antenna (70) includes a first, upper loop (36) and a second, lower loop (38). The upper (36) and lower (38) loops lie in separate, spaced, parallel planes and are preferably disposed at a fixed angle with respect to the surveillance zone.

IPC 1-7  
**H01Q 11/12**; **H01Q 21/00**; **G01R 21/00**; **G08B 13/14**

IPC 8 full level  
**H01Q 21/24** (2006.01); **H01Q 7/00** (2006.01); **H01Q 21/29** (2006.01); **H04B 5/48** (2024.01)

CPC (source: EP KR)  
**G08B 13/2474** (2013.01 - EP); **H01Q 7/00** (2013.01 - KR)

Citation (search report)

- [X] US 4135184 A 19790116 - PRUZICK RONALD
- [X] US 3577136 A 19710504 - WOLF JOHN E
- See also references of WO 0030214A1

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

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CA 2350217 A1 20000525; CA 2350217 C 20060404; CN 1123089 C 20031001; CN 1322391 A 20011114; EP 1138098 A1 20011004; EP 1138098 A4 20050126; IL 142387 A0 20020310; IL 142387 A 20040620; JP 2002530910 A 20020917; KR 100605341 B1 20060728; KR 20010106513 A 20011129

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CA 2350217 A 19981112; CN 98814304 A 19981112; EP 98960188 A 19981112; IL 14238798 A 19981112; JP 2000583121 A 19981112; KR 20017004544 A 20010410