

Title (en)  
Three-wave receiving antenna apparatus

Title (de)  
Antennenanordnung für Dreibandempfang

Title (fr)  
Dispositif d'antenne pour réception tribande

Publication  
**EP 0747993 A2 19961211 (EN)**

Application  
**EP 96304052 A 19960604**

Priority  
JP 13954995 A 19950606

Abstract (en)  
In a three-wave receiving apparatus mounted on, e.g. a vehicle, a GPS wave receiving antenna (20) capable of receiving GPS waves from a satellite is integrally mounted in an attachment base (F) of an AM/FM wave receiving antenna (10, 30, 50) capable of receiving AM waves and FM waves. Thus, three waves, i.e. an AM wave, an FM wave and a GPS wave can be received selectively. It is desirable that the GPS wave receiving antenna (20) be contained within the attachment base (F) in the state in which a disk-like antenna body (21) and an amplifier (22) connected to the antenna body (21) are integrally contained in a holding case (23). <IMAGE> <IMAGE>

IPC 1-7  
**H01Q 5/00**; **H01Q 1/32**; **H01Q 23/00**

IPC 8 full level  
**H01Q 21/00** (2006.01); **H01Q 1/32** (2006.01); **H01Q 5/00** (2015.01); **H01Q 5/10** (2015.01); **H01Q 5/40** (2015.01); **H01Q 23/00** (2006.01)

CPC (source: EP)  
**H01Q 1/3233** (2013.01); **H01Q 5/40** (2015.01); **H01Q 23/00** (2013.01)

Cited by  
EP1533864A1; US7119752B2; EP1766721A4; CN105449336A; GB2318217A; FR2754396A1; EP1286414A1; GB2400497B; EP0891002A1; US6078300A; US7193572B2; US7633452B2; US7688277B2; US10164327B2; EP3093920B1

Designated contracting state (EPC)  
DE ES FR GB IT NL SE

DOCDB simple family (publication)  
**EP 0747993 A2 19961211**; **EP 0747993 A3 19980923**; JP H08335824 A 19961217; TW 295734 B 19970111

DOCDB simple family (application)  
**EP 96304052 A 19960604**; JP 13954995 A 19950606; TW 85106691 A 19960605