

Title (en)  
Motor antenna device for use with vehicules.

Title (de)  
Motorantenne für Fahrzeuge.

Title (fr)  
Dispositif d'antenne à moteur pour véhicules.

Publication  
**EP 0320242 B1 19931201 (EN)**

Application  
**EP 88311595 A 19881207**

Priority  

- JP 31007987 A 19871208
- JP 31008087 A 19871208
- JP 31683687 A 19871215
- JP 31683787 A 19871215
- JP 31683887 A 19871215

Abstract (en)  
[origin: EP0320242A1] A power source (RX) for a car radio receiver which is kept on-state is temporarily turned off by a starter switch (12). However, three-second timer (20) is arranged between the power source (RX) and an antenna motor (M) to keep the antenna motor (M) not driven for three seconds even when the power source (RX) is shut off. This prevents the motor antenna to be unnecessarily lifted and lowered every time when the starter switch is made on and off.

IPC 1-7  
**H01Q 1/10**

IPC 8 full level  
**H01Q 1/10** (2006.01)

CPC (source: EP)  
**H01Q 1/103** (2013.01)

Cited by  
US5235344A; EP0447182A1

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**EP 0320242 A1 19890614; EP 0320242 B1 19931201**; AU 2667588 A 19890608; AU 605945 B2 19910124; DE 3886016 D1 19940113; DE 3886016 T2 19940331

DOCDB simple family (application)  
**EP 88311595 A 19881207**; AU 2667588 A 19881207; DE 3886016 T 19881207