

Title (en)  
IN-VEHICLE DEVICE

Title (de)  
EINRICHTUNG IN EINEM FAHRZEUG

Title (fr)  
DISPOSITIF EMBARQUÉ

Publication  
**EP 2034448 A4 20111123 (EN)**

Application  
**EP 07745516 A 20070619**

Priority  
• JP 2007062314 W 20070619  
• JP 2006179785 A 20060629

Abstract (en)  
[origin: EP2034448A1] An objective is to provide a vehicle-mounted device that can avoid a situation such as an IC card not being inserted when a vehicle passes a tollgate on a toll road or the like. There is provided a vehicle-mounted device, fitted in a vehicle (1), and for exchanging information relating to a charge with a charging communication apparatus that is installed at a tollgate (2) of a charging area, comprising an IC card insertion section into which an IC card is inserted, wherein when it is detected that a confirmation zone (B), provided ahead of the charging communication apparatus, has been entered, it is determined whether or not the IC card is inserted in the IC card insertion section, and when the IC card is not inserted in the IC card insertion section, an alarm is issued indicating this fact.

IPC 8 full level  
**G07B 15/00** (2011.01); **G08G 1/09** (2006.01)

CPC (source: EP KR)  
**G07B 15/00** (2013.01 - KR); **G07B 15/063** (2013.01 - EP); **G08G 1/017** (2013.01 - EP); **G08G 1/09** (2013.01 - KR)

Citation (search report)  
• [X] US 5790051 A 19980804 - YOSHIDA ICHIRO [JP], et al  
• [X] US 2004046019 A1 20040311 - KOJIMA HIDEAKI [JP]  
• [X] EP 0755027 A2 19970122 - TOYOTA MOTOR CO LTD [JP]  
• See references of WO 2008001647A1

Citation (examination)  
JP 2005292084 A 20051020 - MITSUBISHI ELECTRIC CORP

Designated contracting state (EPC)  
DE GB

DOCDB simple family (publication)  
**EP 2034448 A1 20090311; EP 2034448 A4 20111123**; AU 2007264478 A1 20080103; CN 101473355 A 20090701; CN 101473355 B 20110831; HK 1129477 A1 20091127; JP 2008009732 A 20080117; KR 101024786 B1 20110324; KR 20090016477 A 20090213; MY 145909 A 20120515; WO 2008001647 A1 20080103

DOCDB simple family (application)  
**EP 07745516 A 20070619**; AU 2007264478 A 20070619; CN 200780023063 A 20070619; HK 09108220 A 20090908; JP 2006179785 A 20060629; JP 2007062314 W 20070619; KR 20087030459 A 20070619; MY PI20085114 A 20070619