

Title (en)  
RADIO WITH A DEPLOYABLE ANTENNA

Title (de)  
FUNKGERÄT MIT AUSKLAPPBARER ANTENNE

Title (fr)  
RADIO AVEC ANTENNE DÉPLOYABLE

Publication  
**EP 3195407 A1 20170726 (EN)**

Application  
**EP 15757543 A 20150828**

Priority  
• GB 201415303 A 20140829  
• GB 2015000257 W 20150828

Abstract (en)  
[origin: GB2529689A] A radio comprises a radio electronics module and an antenna. The antenna comprises at least one active component that, when extended, converts radio signals to or from electrical signals. The active component comprises an electrically conductive Storable Tubular Extendible Member (STEM) structure 3 that is stored as a coil at 4, and unfurls to become elongate at 5 with an arcuate cross section. The STEM structure comprises a carbon fibre material electrically coupled to the electronics module. The carbon fibre material may be the main source or the sole source of electrical conductivity along the length of the active element. The STEM structure(s) may be deployed in monopole, dipole, crossed dipole or Yagi-Uda configurations. A ground plane of at least three carbon fibre STEM structures may be arranged radially with respect to a monopole antenna to enhance the antenna performance. In use, particularly for spacecraft, the outermost end of the coil is held in connection with the electronics module while the remainder of the coil unwinds to a fully extended position.

IPC 8 full level  
**H01Q 1/08** (2006.01); **H01Q 1/28** (2006.01)

CPC (source: EP GB)  
**H01Q 1/087** (2013.01 - EP GB); **H01Q 1/288** (2013.01 - EP); **H01Q 1/368** (2013.01 - EP GB)

Citation (search report)  
See references of WO 2016030655A1

Citation (examination)  
• FR 2312864 A1 19761224 - ETUD RECH CHIMIQUE LAB [FR]  
• AIDIN MEHDIPOUR ET AL: "Conductive carbon fiber composite materials for antenna and microwave applications", 29 TH NATIONAL RADIO SCIENCE CONFERENCE (NRSC 2012), 10 April 2012 (2012-04-10), pages 1 - 8, XP055440547

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
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