



Recommendation ITU-R M.1730-1
(10/2009)

**Characteristics of and protection criteria for
the radiolocation service in the frequency
band 15.4-17.3 GHz**

M Series
**Mobile, radiodetermination, amateur
and related satellite services**



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Foreword

The role of the Radiocommunication Sector is to ensure the rational, equitable, efficient and economical use of the radio-frequency spectrum by all radiocommunication services, including satellite services, and carry out studies without limit of frequency range on the basis of which Recommendations are adopted.

The regulatory and policy functions of the Radiocommunication Sector are performed by World and Regional Radiocommunication Conferences and Radiocommunication Assemblies supported by Study Groups.

Policy on Intellectual Property Right (IPR)

ITU-R policy on IPR is described in the Common Patent Policy for ITU-T/ITU-R/ISO/IEC referenced in Annex 1 of Resolution ITU-R 1. Forms to be used for the submission of patent statements and licensing declarations by patent holders are available from <http://www.itu.int/ITU-R/go/patents/en> where the Guidelines for Implementation of the Common Patent Policy for ITU-T/ITU-R/ISO/IEC and the ITU-R patent information database can also be found.

Series of ITU-R Recommendations

(Also available online at <http://www.itu.int/publ/R-REC/en>)

Series	Title
BO	Satellite delivery
BR	Recording for production, archival and play-out; film for television
BS	Broadcasting service (sound)
BT	Broadcasting service (television)
F	Fixed service
M	Mobile, radiodetermination, amateur and related satellite services
P	Radiowave propagation
RA	Radio astronomy
RS	Remote sensing systems
S	Fixed-satellite service
SA	Space applications and meteorology
SF	Frequency sharing and coordination between fixed-satellite and fixed service systems
SM	Spectrum management
SNG	Satellite news gathering
TF	Time signals and frequency standards emissions
V	Vocabulary and related subjects

Note: This ITU-R Recommendation was approved in English under the procedure detailed in Resolution ITU-R 1.

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RECOMMENDATION ITU-R M.1730-1

Characteristics of and protection criteria for the radiolocation service in the frequency band 15.4 -17.3 GHz

(Question ITU-R 226/5)

(2005-2009)

Scope

This Recommendation provides the technical characteristics and protection criteria for the radiolocation systems operating and planned to operate in the band 15.4-17.3 GHz. It was developed as a resource document intended to support sharing studies in conjunction with Recommendation ITU-R M.1461 addressing analysis procedures for determining compatibility between radars operating in the radiolocation service and other services.

The ITU Radiocommunication Assembly,

considering

- a) that antenna, signal propagation, target detection and large necessary bandwidth characteristics of radar to achieve their functions are optimum in certain frequency bands;
- b) that the technical characteristics of radars operating in the radiolocation service are determined by the mission of the system and vary widely even within a band;
- c) that ITU-R is considering the potential for the introduction of new types of systems or applications in bands between 420 MHz and 34 GHz used by radars in the radiodetermination service;
- d) that representative technical and operational characteristics of radars operating in the radiodetermination service are required to determine the feasibility of introducing new types of systems into frequency bands allocated to the radiodetermination service;
- e) that procedures and methodologies to analyse compatibility between radars in the radiodetermination service and systems in other services are contained in Recommendation ITU-R M.1461,

noting

- a) that this Recommendation along with Recommendation ITU-R M.1461 are used as a guideline in analysing compatibility between radiodetermination radars and systems in other services;
- b) that the criterion of interfering signal power to radar receiver noise power level are identified in Recommendation ITU-R M.1461,

recognizing

- a) that the required protection criteria depend upon the specific types of interfering signals;
- b) that the application of protection criteria may require consideration for inclusion of the statistical nature of the criteria and other elements of the methodology for performing compatibility studies (e.g. antenna scanning including motion of the transmitter and propagation loss). Further