

ITU-R

Radiocommunication Sector of ITU

Recommendation ITU-R S.1587-3 (09/2015)

**Technical characteristics of earth stations
on board vessels communicating
with FSS satellites in the frequency bands
5 925-6 425 MHz and 14-14.5 GHz which
are allocated to the fixed-satellite service**

**S Series
Fixed-satellite service**



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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 S.1587-3

**Technical characteristics of earth stations on board vessels communicating
with FSS satellites in the frequency bands 5 925-6 425 MHz
and 14-14.5 GHz which are allocated
to the fixed-satellite service**

(2002-2003-2007-2015)

Scope

This Recommendation and its associated electronic databank provide representative technical characteristics of existing and planned ESVs communicating with FSS satellites in the frequency bands 5 925-6 425 MHz and 14-14.5 GHz.

Keywords

FSS, technical characteristics, earth stations on board vessels

Related ITU Recommendations, Reports

Recommendation ITU-R S.524-9	Maximum permissible levels of off-axis e.i.r.p. density from earth stations in geostationary-satellite orbit networks operating in the fixed-satellite service transmitting in the 6 GHz, 13 GHz, 14 GHz and 30 GHz frequency bands
Recommendation ITU-R S.580-6	Radiation diagrams for use as design objectives for antennas of earth stations operating with geostationary satellites
Recommendation ITU-R S.731-1	Reference earth-station cross-polarized radiation pattern for use in frequency coordination and interference assessment in the frequency range from 2 to about 30 GHz
Recommendation ITU-R S.732-1	Method for statistical processing of earth station antenna side-lobe peaks to determine excess over antenna reference patterns and conditions for acceptability of any excess
Recommendation ITU-R SF.1006-0	Determination of the interference potential between earth stations of the fixed-satellite service and stations in the fixed service
Recommendation ITU-R SM.1448-0	Determination of the coordination area around an earth station in the frequency bands between 100 MHz and 105 GHz

The ITU Radiocommunication Assembly,

considering

- a) that the World Radiocommunication Conference (Geneva, 2003) (WRC-03) agreed Resolution 902 (WRC-03) concerned with earth stations on board vessels (ESVs);
- b) that ESVs may operate under Radio Regulations (RR) No. 4.4 in the fixed-satellite service (FSS) in part of the frequency band 5 925-6 425 MHz;
- c) that ESVs may operate under RR No. 4.4 in the FSS in part of the frequency band 14-14.5 GHz;

d) that there is a requirement to protect existing and planned geostationary (GSO) FSS systems;

e) that to ensure efficient use of the spectrum and to facilitate sharing ESVs must operate with certain constraints as called for in Resolution 902 (WRC-03),

recognizing

a) that ESVs may operate in FSS networks under RR No. 4.4 and shall not claim protection from, nor cause interference to services having allocations in the band, until their status is modified by a competent radiocommunication conference,

noting

a) that Resolution 902 (WRC-03) gives regulatory and operational provisions and technical limitations for ESVs transmitting in the bands 5 925-6 425 MHz and 14-14.5 GHz,

recommends

1 that representative technical characteristics of existing and planned ESVs communicating with FSS satellites in the frequency bands 5 925-6 425 MHz and 14-14.5 GHz are compiled in an electronic databank available from the Radiocommunication Bureau (BR)¹ and may be used in frequency sharing studies involving ESVs;

2 that the Tables contained in Annexes 1 and 2 hereto, which have also been incorporated in the databank, should be used *pro forma* for the submission of technical characteristics of ESVs.

Annex 1

Technical characteristics of ESVs operating in the frequency band 5 925-6 425 MHz which is allocated to the FSS

1 Introduction

At present, ESVs are in operation in all ITU Regions on a variety of sea-going vessels and mobile platforms, utilizing existing FSS space segment in the band 5 925-6 425 MHz on an experimental basis. The broadband signal capacity, ubiquitous coverage, dependable operation, resistance to weather-related interruptions and ready availability afforded by existing FSS networks in the 5 925-6 425 MHz band make them desirable for ESV operations.

This Annex provides a description of existing and planned earth stations on vessels that operate in the band 5 925-6 425 MHz in FSS networks.

¹ <http://www.itu.int/itu-r/go/rsg4/recs1587data/>.