



Recommendation ITU-R F.747-1
(03/2012)

**Radio-frequency channel arrangements for
fixed wireless system operating
in the 10.0-10.68 GHz band**

F Series
Fixed 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 F.747-1

**Radio-frequency channel arrangements for fixed wireless system
operating in the 10.0-10.68 GHz band**

(Question 247/5)

(1992-2012)

Scope

This Recommendation provides radio-frequency channel arrangements for fixed wireless systems operating in the 10.0-10.68 GHz band or within its sub-bands. The channel arrangements specified in Annexes 1 to 4 are based on frequency separations of 3.5, 7, 14 or 28 MHz (derived from a 3.5 MHz homogeneous pattern), or frequency separations of 2.5 or 5 MHz (derived from a 1.25 MHz homogeneous pattern).

The ITU Radiocommunication Assembly,

considering

- a) that the 10.0 to 10.68 GHz frequency range is allocated, directly in the Table of Frequency Allocations or through footnotes, to the fixed and mobile services;
- b) that this band is advantageous for various digital fixed wireless system applications using point-to-point or point-to-multipoint systems;
- c) that such systems are already in extensive use and are expected to be used more extensively in the future;
- d) that differing applications for various administrations may require different frequency plans;
- e) that several applications with various transmission signal characteristics and capacities may be in simultaneous use in this frequency band;
- f) that the specific band assigned to each application by each administration may vary from one country to another;
- g) that the applications in this frequency band may require different channel bandwidths;
- h) that a high degree of compatibility between radio-frequency channels of different arrangements can be achieved by selecting all channel centre frequencies from a homogeneous basic pattern;
- j) that the differing digital hierarchies used in various countries or regions may require the use of homogeneous basic patterns with different intervals;
- k) that when very high capacity links (e.g. twice Synchronous transfer mode 1 (STM-1)) are required, further benefits may be obtained using system bandwidths wider than the recommended channel separation, associated to highly efficient modulation formats;
- l) that Recommendation ITU-R F.1568 provides guidance on frequency block arrangements for fixed wireless access systems in the band 10.15 to 10.3 GHz paired with 10.5 to 10.65 GHz;
- m) that administrations may choose to allocate certain parts of the bands to one-way links, for example electronic news gathering/outside broadcast (ENG/OB) links within the tuning range 10.0-10.68 GHz, in agreement to the recommended radio-frequency channel arrangements,