



**LIST OF
RECOMMENDATIONS
AND REPORTS**


ITU-R



LIST OF ITU-R RECOMMENDATIONS AND REPORTS

Edition 2006-1

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INTRODUCTION

Dear Customer,

ITU-R Recommendations constitute a set of international technical standards developed by the Radiocommunication Sector (ITU-R) of the ITU. They are the result of studies undertaken by Radiocommunication Study Groups on:

- the use of a vast range of wireless services, including popular new mobile communication technologies;
- the management of the radio frequency spectrum and satellite orbits;
- the efficient use of the radio frequency spectrum by all radiocommunication services;
- terrestrial and satellite radiocommunication broadcasting;
- radiowave propagation;
- systems and networks for the fixed-satellite service for the fixed and mobile services;
- space operation, Earth exploration-satellite, meteorological-satellite and radio astronomy services.

ITU-R Recommendations are approved by ITU Member States. Their implementation is not mandatory; however, as they are developed by experts from administrations, operators, the industry and other organizations dealing with radiocommunication matters from all over the world, they enjoy a high reputation and are implemented worldwide.

ITU-R Reports contain technical, operational or procedural statements prepared by a Radiocommunication Study Group on a given subject.

CD-ROMs of the all the ITU-R Recommendations in force are published twice yearly and a CD-ROM of all ITU-R Reports in force is published every year in September and is sent with that of the ITU-R Recommendations.

ITU-R Recommendations and ITU-R Reports are divided into Series according to the subjects they cover, as follows:

Series	Subject
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	Radioastronomy
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

* The BS and BT Series were published in 2002 together in one Volume containing ITU-R Recommendations (BS-BT Series – Broadcasting services).

All ITU-R Recommendations in force shall, after approval, be published as soon as possible using electronic media and may also be made available in paper form as determined by the Director in consultation with the Radiocommunication Study Group Chairman.

Some of the ITU-R Recommendations in force are still available in the following Series Volumes or Supplements (although these Volumes are no longer re-published):

- **2000 Series Volumes** – All ITU-R Recommendations in force following the Radiocommunication Assembly (Istanbul 2000) (RA-2000); and,
- **Supplements to the 2000 Series Volumes** – New and revised ITU-R Recommendations approved after the RA-2000.

In some cases specific ITU-R Recommendations have also been published separately.

All ITU-R Recommendations since January 2005 are available in six languages: English, French, Spanish, Arabic, Chinese and Russian. The choice of ITU-R Recommendations that are to be translated is established in collaboration with the ITU Member States concerned. Readers interested in such language versions should get in touch with the ITU Sales and Marketing Service at the address provided in this List.

As well as being available in printed format, all of the ITU-R Recommendations in force are now accessible online, and can be downloaded via the ITU World Wide Web server at **www.itu.int**. They are available in both Microsoft® Word for Windows® 7.0 and 9.0 and Adobe® Acrobat® PDF file formats.

Two online services are provided:

- **ITU-R Recommendations Online** – where payment of an annual subscription allows the customer to download any or all of the ITU-R Recommendations in force; and
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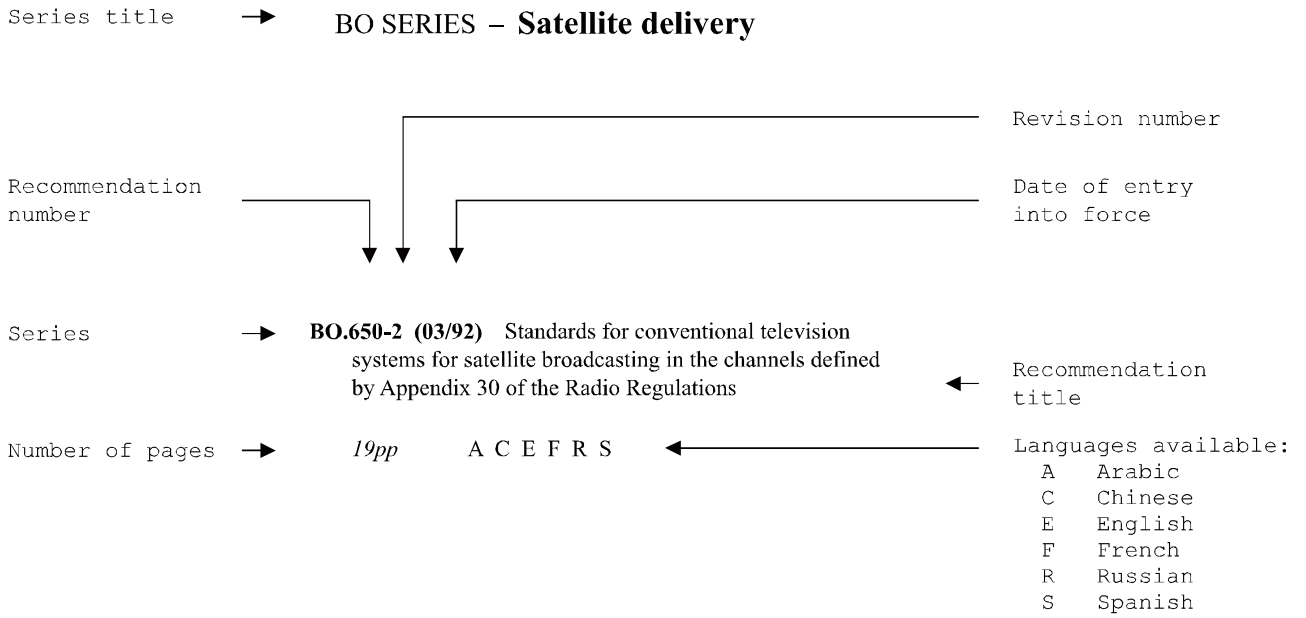
A **CD-ROM** of all ITU-R Recommendations is published in March and two CD-ROMs containing respectively ITU-R Recommendations and ITU-R Reports are published in September every year.

The Editor

The List of ITU-R Recommendations and Reports is published annually and is kept continuously up to date on the ITU World Wide Web server

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LEGEND



LIST OF ITU-R RECOMMENDATIONS IN FORCE

SERIES BO – Satellite delivery

BO.600-1 (07/86) Standardized set of test conditions and measurement procedures for the subjective and objective determination of protection ratios for television in the terrestrial broadcasting and the broadcasting-satellite services

5pp E F S

BO.650-2 (03/92) Standards for conventional television systems for satellite broadcasting in the channels defined by Appendix 30 of the Radio Regulations

22pp E F S

BO.651 (07/86) Digital PCM coding for the emission of high-quality sound signals in satellite broadcasting (15 kHz nominal bandwidth)

2pp E F S

BO.652-1 (03/92) Reference patterns for earth-station and satellite antennas for the broadcasting-satellite service in the 12 GHz band and for the associated feeder links in the 14 GHz and 17 GHz bands

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BO.712-1 (03/92) High-quality sound/data standards for the broadcasting-satellite service in the 12 GHz band

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BO.786 (03/92) MUSE system for HDTV broadcasting-satellite services

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BO.788-1 (08/94) Coding rate for virtually transparent studio quality HDTV emissions in the broadcasting-satellite service

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BO.789-2 (10/95) Service for digital sound broadcasting to vehicular portable and fixed receivers for broadcasting-satellite service (sound) in the frequency range 1 400-2 700 MHz

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BO.790 (03/92) Characteristics of receiving equipment and calculation of receiver figure-of-merit (G/T) for the broadcasting-satellite service

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BO.791 (03/92) Choice of polarization for the broadcasting-satellite service

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BO.792 (03/92) Interference protection ratios for the broadcasting-satellite service (television) in the 12 GHz band

6pp E F S

BO.793 (03/92) Partitioning of noise between feeder links for the broadcasting-satellite service (BSS) and BSS downlinks

6pp E F S

BO.794 (03/92) Techniques for minimizing the impact on the overall BSS system performance due to rain along the feeder-link path

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BO.795 (03/92) Techniques for alleviating mutual interference between feeder links to the BSS

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- BO.1130-4 (04/01)** Systems for digital satellite broadcasting to vehicular, portable and fixed receivers in the bands allocated to BSS (sound) in the frequency range 1 400-2 700 MHz
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- BO.1211 (10/95)** Digital multi-programme emission systems for television, sound and data services for satellites operating in the 11/12 GHz frequency range
22pp E F S
- BO.1212 (10/95)** Calculation of total interference between geostationary-satellite networks in the broadcasting-satellite service
22pp E F S
- BO.1213-1 (11/05)** Reference receiving earth station antenna pattern for the broadcasting-satellite service in the 11.7-12.75 GHz band
5pp A C E F R S
- BO.1293-2 (04/02)** Protection masks and associated calculation methods for interference into broadcast-satellite systems involving digital emissions
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- BO.1295 (10/97)** Reference transmit Earth station antenna off-axis e.i.r.p. patterns for planning purposes to be used in the revision of the Appendix 30A (Orb-88) Plans of the Radio Regulations at 14 GHz and 17 GHz in Regions 1 and 3
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- BO.1296 (10/97)** Reference receive space station antenna patterns for planning purposes to be used for elliptical beams in the revision of the Appendix 30A (Orb-88) Plans of the Radio Regulations at 14 GHz and 17 GHz in Regions 1 and 3
3pp E F S
- BO.1297 (10/97)** Protection ratios to be used for planning purposes in the revision of the Appendices 30 (Orb-85) and 30A (Orb-88) Plans of the Radio Regulations in Regions 1 and 3
1pp E F S
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- BO.1383 (12/98)** Introduction of the broadcasting-satellite service (sound) in the same frequency bands as used by mobile aeronautical telemetry systems in the frequency range 1-3 GHz
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- BO.1408-1 (04/02)** Transmission system for advanced multimedia services provided by integrated services digital broadcasting in a broadcasting-satellite channel
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- BO.1443-1 (04/02)** Reference BSS earth station antenna patterns for use in interference assessment involving non-GSO satellites in frequency bands covered by RR Appendix 30
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- BO.1444 (03/00)** Protection of the BSS in the 12 GHz band and associated feeder links in the 17 GHz band from interference caused by non-GSO FSS systems
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- BO.1445 (03/00)** Improved patterns for fast roll-off satellite transmit antennas of the Regions 1 and 3 BSS plans of RR Appendix S30
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BO.1505 (07/00) Coordination procedure for assignments of space operation service in the guardbands of Appendices S30 and S30A Plans of the Radio Regulations

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BO.1506 (07/00) A methodology to evaluate the impact of solar interference on GSO BSS link performance

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BO.1516 (04/01) Digital multiprogramme television systems for use by satellites operating in the 11/12 GHz frequency range

Note – This Recommendation replaces Rec. ITU-R BO.1294

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BO.1597 (10/02) Methodology for the calculation of the worst-case interference levels between non-geostationary broadcasting-satellite service (sound) systems using highly-elliptical orbit and geostationary orbit satellite networks operating in the band 2 630-2 655 MHz

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BO.1658 (12/03) Continuous curves of *epfd*down versus the geostationary broadcasting-satellite service earth station antenna diameter to indicate the protection afforded by systems complying with the limits of antennas with diameters other than those in Article 22 of the Radio Regulations

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BO.1659 (12/03) Mitigation techniques for rain attenuation for broadcasting-satellite service systems in frequency bands between 17.3 GHz and 42.5 GHz

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BO.1696 (02/05) Methodologies for determining the availability performance for digital multi-programme BSS systems, and their associated feeder links operating in the planned bands

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BO.1697 (02/05) Power flux-density values in the band 11.7-12.7 GHz and associated calculation methodology which may be used for bilateral coordination when the power flux-density values in Section 3 of Annex 1 to Appendix 30 or Annex 4 to Appendix 30 of the Radio Regulations are exceeded

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BO.1724 (04/05) Interactive satellite broadcasting systems (television, sound and data)

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SERIES BR – Recording for production, archival and play-out; film for television

BR.265-9 (02/04) Operating practices for the international exchange of programmes on film for television use

11pp E F S

BR.408-7 (04/01) International exchange of sound programmes recorded in analogue form

Note – This Recommendation replaces Rec. ITU-R BR.407-4

3pp E F S

BR.469-7 (06/02) Analogue composite television tape recording

Approved in accordance with Resolution ITU-R 45

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BR.602-5 (02/04) Exchange of standard definition television recordings for programme content evaluation

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BR.649-1 (03/92) Measuring methods for analogue audio tape recordings

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BR.714-2 (12/01) International exchange of programmes produced by means of high-definition television

Approved in accordance with Resolution ITU-R 45

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BR.777-3 (04/01) International exchange of two-channel digital audio recordings

Note – This Recommendation replaces Rec. ITU-R BR.648

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BR.780-2 (04/05) Time and control code standards, for production applications in order to facilitate the international exchange of television programmes on magnetic tapes

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Note – This Recommendation replaces Rec. ITU-R BR.1214

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(sound)**

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Note – This Recommendation replaces Rec. ITU-R BS.562-3

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SERIES BT – Broadcasting service (television)

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BT.655-7 (02/04) Radio-frequency protection ratios for AM vestigial sideband terrestrial television systems interfered with by unwanted analogue vision signals and their associated sound signals

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- 2pp E F S
- M.1313-1 (05/00)** Technical characteristics of maritime radionavigation radars
- 4pp E F S
- M.1314-1 (06/05)** Reduction of unwanted emissions of radar systems operating above 400 MHz
- 9pp A C E F R S
- M.1315 (10/97)** Methodology for evaluating interference from narrow-band mobile-satellite networks to spread-spectrum direct-sequence mobile-satellite networks operating with space stations in low-earth orbit at frequencies below 1 GHz
- 8pp E F S
- M.1316-1 (06/05)** Principles and a methodology for frequency sharing in the 1 610.6-1 613.8 MHz and 1 660-1 660.5 MHz bands between the mobile-satellite service (Earth-to-space) and the radio astronomy service
- 16pp A C E F R S
- M.1317 (10/97)** Considerations for sharing between systems of other services operating in bands allocated to the radionavigation-satellite and aeronautical radionavigation services and the global navigation satellite system (GLONASS-M)
- 5pp E F S
- M.1318 (10/97)** Interference protection evaluation model for the radionavigation-satellite service in the 1 559-1 610 MHz band
- 2pp E F S
- M.1319-2 (06/03)** The basis of a methodology to assess the impact of interference from a time division multiple access/frequency division multiple access (TDMA/FDMA) mobile-satellite service (MSS) satellite system operating in the 2 GHz range on the performance of line-of-sight fixed service receivers
- 7pp E F S
- M.1343-1 (06/05)** Essential technical requirements of mobile earth stations for global non-geostationary mobile-satellite service systems in the bands 1-3 GHz
- 14pp A C E F R S
- M.1372-1 (06/03)** Efficient use of the radio spectrum by radar stations in the radiodetermination service
- 14pp E F S
- M.1388 (01/99)** Threshold levels to determine the need to coordinate between space stations in the broadcasting-satellite service (sound) and particular systems in the land mobile service in the band 1 452-1 492 MHz
- 3pp E F S
- M.1389 (01/99)** Methods for achieving coordinated use of spectrum by multiple non-geostationary mobile-satellite service systems below 1 GHz and sharing with other services in existing mobile-satellite service allocations
- 3pp E F S
- M.1390 (01/99)** Methodology for the calculation of IMT-2000 terrestrial spectrum requirements
- 23pp E F S
- M.1391 (01/99)** Methodology for the calculation of IMT-2000 satellite spectrum requirements
- 9pp E F S
- M.1450-2 (06/03)** Characteristics of broadband radio local area networks
- 19pp E F S
- M.1451 (05/00)** Transport information and control systems: functionalities
- 8pp E F S
- M.1452 (05/00)** Transport information and control systems – Low power short-range vehicular radar equipment at 60 GHz and 76 GHz
- 3pp E F S

M.1453-2 (06/05) Intelligent transport systems –
Dedicated short range communications at 5.8 GHz

11pp A C E F R S

M.1454 (05/00) E.i.r.p. density limit and operational
restrictions for RLANS or other wireless access
transmitters in order to ensure the protection of
feeder links of non-geostationary systems in the
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7pp E F S

M.1455-2 (06/03) Key characteristics for the
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31pp E F S

M.1456 (05/00) Minimum performance
characteristics and operational conditions for high
altitude platform stations providing IMT-2000 in the
bands 1 885-1 980 MHz, 2 010-2 025 MHz and
2 110-2 170 MHz in Regions 1 and 3 and
1 885-1 980 MHz and 2 110-2 160 MHz in Region 2

21pp E F S

M.1458 (05/00) Use of the frequency bands between
2.8-22 MHz by the aeronautical mobile (R) service
for data transmission using class of emission J2D

3pp E F S

M.1459 (05/00) Protection criteria for telemetry
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geostationary broadcasting-satellite and mobile-
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1 452-1 525 MHz and 2 310-2 360 MHz

16pp E F S

M.1461-1 (06/03) Procedures for determining the
potential for interference between radars operating in
the radiodetermination service and systems in other
services

10pp E F S

M.1462 (05/00) Characteristics of and protection
criteria for radars operating in the radiolocation
service in the frequency range 420-450 MHz

5pp E F S

M.1463 (05/00) Characteristics of and protection
criteria for radars operating in the radiodetermination
service in the frequency band 1 215-1 400 MHz

6pp E F S

M.1464-1 (06/03) Characteristics of radiolocation
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sharing studies for aeronautical radionavigation and
meteorological radars in the radiodetermination
service operating in the frequency band
2 700-2 900 MHz

44pp E F S

M.1465 (05/00) Characteristics of and protection
criteria for radars operating in the radiodetermination
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5pp E F S

M.1466 (05/00) Characteristics of, and protection
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service in the frequency band 31.8-33.4 GHz

3pp E F S

M.1469-1 (06/05) Methodology for evaluating
potential for interference from time division multiple
access/frequency division multiple access
TDMA/FDMA) mobile satellite service
(MSS)(Earth-to-space) transmissions into line-of-
sight fixed service receivers in the 2 GHz range

5pp A C E F R S

M.1470 (05/00) Methodology of sharing between
MSS systems (Earth-to-space) and existing RNSS
systems (space-to-Earth) in frequency bands
149.9-150.05 MHz and 399.9-400.05 MHz

9pp E F S

M.1471 (05/00) Guidance to facilitate coordination
and use of frequency bands shared between the
mobile-satellite service and the fixed service in the
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3pp E F S

- M.1472 (05/00)** Methodology to evaluate the impact of interference from time division multiple access/frequency division multiple access (TDMA/FDMA) mobile-satellite service (MSS) systems operating in the 2 GHz range on baseband performance in frequency division multiplexing-frequency modulation (FDM-FM) analogue line-of-sight (LOS) fixed service receivers
- 13pp E F S
- M.1473 (05/00)** Methodology to evaluate the impact of interference from time division multiple access/frequency division multiple access (TDMA/FDMA) mobile-satellite service (MSS) systems operating in the 2 GHz range on video baseband performance in TV-FM analogue line-of-sight fixed service receivers
- 12pp E F S
- M.1474 (05/00)** Methodology to evaluate the impact of interference from time division multiple access/frequency division multiple access (TDMA/FDMA) mobile-satellite service (mss) systems operating in the 2 GHz range on baseband performance in digital line-of-sight fixed service receivers based on statistics of radio-frequency interference
- 5pp E F S
- M.1475 (05/00)** Methodology for derivation of performance objectives of non-geostationary mobile-satellite service systems operating in the 1-3 GHz band not using satellite diversity
- 6pp E F S
- M.1476 (05/00)** Performance objectives for narrow-band digital channels using geostationary satellites to serve transportable and mobile Earth stations in the 1-3 GHz range forming part of the integrated services digital network
- 10pp E F S
- M.1477 (05/00)** Technical and performance characteristics of current and planned radionavigation-satellite service (space-to-Earth) and aeronautical radionavigation service receivers to be considered in interference studies in the band 1 559-1 610 MHz
- 26pp E F S
- M.1478-1 (05/04)** Protection criteria for Cospas-Sarsat search and rescue instruments in the band 406-406.1 MHz
- 22pp E F S
- M.1479 (05/00)** Technical characteristics and performance requirements of current and planned radionavigation-satellite service (space-to-space) receivers to be considered in interference studies in the frequency bands 1 215-1 260 MHz and 1 559-1 610 MHz
- 5pp E F S
- M.1480 (05/00)** Essential technical requirements of mobile Earth stations of geostationary mobile-satellite systems that are implementing the Global mobile personal communications by satellite (GMPCS) – Memorandum of understanding arrangements in parts of the frequency band 1-3 GHz
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- M.1544 (08/01)** Minimum qualifications of radio amateurs
- 1pp E F S
- M.1545 (08/01)** Measurement uncertainty as it applies to test limits for the terrestrial component of International Mobile Telecommunications-2000
- 3pp E F S
- M.1579 (07/02)** Global circulation of IMT-2000 terminals
- 3pp E F S
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- 28pp C E F R S
- M.1581-1 (06/03)** Generic unwanted emission characteristics of mobile stations using the terrestrial radio interfaces of IMT-2000
- 22pp E F S

- M.1582 (07/02)** Method for determining coordination distances, in the 5 GHz band, between the international standard microwave landing system stations operating in the aeronautical radionavigation service and stations of the radionavigation-satellite service (Earth-to-space)
3pp E F S
- M.1583 (07/02)** Interference calculations between non-geostationary mobile-satellite service or radionavigation-satellite service systems and radio astronomy telescope sites
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- M.1584 (07/02)** Methodology for computation of separation distances between earth stations of the radionavigation-satellite service (Earth-to-space) and radars of the radiolocation service and the aeronautical radionavigation service in the frequency band 1 300-1 350 MHz
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2pp E F S
- M.1635 (06/03)** General methodology for assessing the potential for interference between IMT-2000 or systems beyond IMT-2000 and other services
13pp E F S
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11pp E F S
- M.1637 (06/03)** Global cross-border circulation of radiocommunication equipment in emergency and disaster relief situations
3pp E F S
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10pp E F S
- M.1639-1 (0/05)** Protection criterion for the aeronautical radionavigation service with respect to aggregate emissions from space stations in the radionavigation-satellite service in the band 1 164-1 215 MHz
6pp A C E F R S
- M.1640 (06/03)** Characteristics of, and protection criteria for sharing studies for radars operating in the radiodetermination service in the frequency band 33.4-36 GHz
5pp E F S
- M.1641-1 (03.06)** A methodology for co-channel interference evaluation to determine separation distance from a system using high-altitude platform stations to a cellular system to provide IMT-2000 service
13pp E
- M.1642-1 (06/05)** Methodology for assessing the maximum aggregate equivalent power flux-density at an aeronautical radionavigation service station from all radionavigation-satellite service systems operating in the 1 164-1 215 MHz band
15pp A C E F R
- M.1643 (06/03)** Technical and operational requirements for aircraft earth stations of aeronautical mobile-satellite service including those using fixed-satellite service network transponders in the band 14-14.5 GHz (Earth-to-space)
6pp E F S
- M.1644 (06/03)** Technical and operational characteristics, and criteria for protecting the mission of radars in the radiolocation and radionavigation service operating in the frequency band 13.75-14 GHz
13pp E F S
- M.1645 (06/03)** Framework and overall objectives of the future development of IMT-2000 and systems beyond IMT-2000
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- M.1646 (06/03)** Parameters to be used in co-frequency sharing and pfd threshold studies between terrestrial IMT-2000 and BSS (sound) in the 2 630-2 655 MHz band
3pp E F S

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22pp E F S

M.1652 (06/03) Dynamic frequency selection (DFS) in wireless access systems including radio local area networks for the purpose of protecting the radiodetermination service in the 5 GHz band

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M.1653 (06/03) Operational and deployment requirements for wireless access systems including radio local area networks in the mobile service to facilitate sharing between these systems and systems in the Earth exploration-satellite service (active) and the space research service (active) in the band 5 470-5 570 MHz within the 5 460-5 725 MHz range

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M.1677 (05/04) International Morse code

6pp E F S

M.1678 (05/04) Adaptive antennas for mobile systems

2pp E F S

M.1730 (06/05) Characteristics of and protection criteria for the radiolocation

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7pp A C E R S

M.1731 (06/05) Protection criteria for Cospas-Sarsat local user terminals in the band 1 544-1 545 MHz

13pp A C E R S

M.1732 (06/05) Characteristics of systems operating in the amateur and amateur-satellite services for use in sharing studies

8pp A C E F R S

M.1739 (03/06) Protection criteria for wireless access systems, including radio local area networks, operating in the mobile service in accordance with Resolution 229 (WRC-03) in the bands 5 150-5 250 MHz, 5 250-5 350 MHz and 5 470-5 725 MHz

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6pp E F S

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54pp A C E F R S

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4pp E F S

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Note – This Recommendation replaces CCIR Report 322

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- P.679-3 (02/01)** Propagation data required for the design of broadcasting-satellite systems
14pp E F S
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- P.832-2 (07/99)** World Atlas of Ground Conductivities
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- P.834-5 (03/05)** Effects of tropospheric refraction on radiowave propagation
12pp A C E F R S

- P.835-4 (03/05)** Reference Standard Atmospheres
10pp A C E F R S
- P.836-3 (11/01)** Water vapour: surface density and total columnar content
12pp E F S
- P.837-4 (04/03)** Characteristics of precipitation for propagation modelling
8pp E F S
- P.838-3 (03/05)** Specific attenuation model for rain for use in prediction methods
8pp A C E F R S
- P.839-3 (02/01)** Rain height model for prediction methods
2pp E F S
- P.840-3 (10/99)** Attenuation due to clouds and fog
7pp E F S
- P.841-4 (03/05)** Conversion of annual statistics to worst-month statistics
6pp C E F R S
- P.842-3 (03/05)** Computation of reliability and compatibility of HF radio systems
10pp A C E F R S
- P.843-1 (08/97)** Communication by meteor-burst propagation
11pp E F S
- P.844-1 (08/94)** Ionospheric factors affecting frequency sharing in the VHF and UHF bands (30 MHz-3 GHz)
6pp E F S
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28pp E F S
- P.846-1 (10/95)** Measurements of ionospheric and related characteristics
1pp E F S
- P.1057-1 (02/01)** Probability distributions relevant to radiowave propagation modelling
16pp E F S
- P.1058-2 (10/99)** Digital topographic databases for propagation studies
7pp E F S
- P.1060 (08/94)** Propagation factors affecting frequency sharing in HF terrestrial systems
4pp E F S
- P.1144-3 (11/01)** Guide to the application of the propagation methods of Radiocommunication Study Group 3
8pp E F S
- P.1147-3 (03/05)** Prediction of sky-wave field strength at frequencies between about 150 and 1 700 kHz
19pp A C E F R S
- P.1148-1 (05/97)** Standardized procedure for comparing predicted and observed HF sky-wave signal intensities and the presentation of such comparisons
9pp E F S
- P.1238-4 (03/05)** Propagation data and prediction methods for the planning of indoor radiocommunication systems and radio local area networks in the frequency range 900 MHz to 100 GHz
17pp A C E F R S
- P.1239 (05/97)** ITU-R Reference ionospheric characteristics
Note – This Recommendation replaces Rec. ITU-R P.434-6
7pp E F S
- P.1240 (05/97)** ITU-R Methods of basic MUF, operational MUF and ray-path prediction
Note – This Recommendation replaces Rec. ITU-R P.434-6
6pp E F S

P.1321-1 (03/05) Propagation factors affecting systems using digital modulation techniques at LF and MF

1pp A C E F R S

P.1322 (08/97) Radiometric estimation of atmospheric attenuation

1pp E F S

P.1406 (07/99) Propagation effects relating to terrestrial land mobile service in the VHF and UHF bands

10pp E F S

P.1407-2 (03/05) Multipath propagation and parameterization of its characteristics

6pp A C E F R S

P.1409 (10/99) Propagation data and prediction methods required for the design of systems using high altitude platform stations at about 47 GHz

2pp E F S

P.1410-3 (03/05) Propagation data and prediction methods required for the design of terrestrial broadband millimetric radio access systems operating in a frequency range of about 20-50 GHz

18pp A C E F R S

P.1411-3 (03/05) Propagation data and prediction methods for the planning of short-range outdoor radiocommunication systems and radio local area networks in the frequency range 300 MHz to 100 GHz

18pp A E F R S

P.1412 (10/99) Propagation data for the evaluation of coordination between Earth stations working in the bidirectionally allocated frequency bands

9pp E F S

P.1510 (02/01) Annual mean surface temperature

2pp E F S

P.1511 (02/01) Topography for Earth-to-space propagation modelling

2pp E F S

P.1546-2 (08/05) Method for point-to-area predictions for terrestrial services in the frequency range 30 MHz to 3 000 MHz

53pp A E F R S

P.1621-1 (03/05) Propagation data required for the design of Earth-space systems operating between 20 THz and 375 THz

15pp C E F R S

P.1622 (04/03) Prediction methods required for the design of Earth-space systems operating between 20 THz and 375 THz

11pp E F S

P.1623-1 (03/05) Prediction method of fade dynamics on Earth-space paths

7pp A C E F R S

SERIES RA – Radioastronomy

RA.314-10 (06/03) Preferred frequency bands for radio astronomical measurements

7pp E F S

RA.479-5 (05/03) Protection of frequencies for radioastronomical measurements in the shielded zone of the Moon

8pp E F S

RA.517-3 (06/03) Protection of the radio astronomy services from transmitters operating in adjacent bands

7pp E F S

RA.769-2 (05/03) Protection criteria used for radio astronomical measurements

11pp E F S

RA.1031-1 (10/95) Protection of the radioastronomy service in frequency bands shared with other services

4pp E F S

RA.1237-1 (06/03) Protection of the radio astronomy service from unwanted emissions resulting from applications of wideband digital modulation

7pp E F S

RA.1272-1 (02/02) Protection of radio astronomy measurements above 60 GHz from ground based interference

2pp E F S

RA.1417 (10/99) A radio-quiet zone in the vicinity of the L2 Sun-Earth Lagrange point

2pp E F S

RA.1513-1 (05/03) Levels of data loss to radio astronomy observations and percentage-of-time criteria resulting from degradation by interference for frequency bands allocated to the radio astronomy on a primary basis

7pp E F S

RA.1630 (05/03) Technical and operational characteristics of ground-based astronomy systems for use in sharing studies with active services between 10 THz and 1 000 THz

15pp E F S

RA.1631 (05/03) Reference radio astronomy antenna pattern to be used for compatibility analyses between non-GSO systems and radio astronomy service stations based on the epfd concept

4pp E F S

SERIES RS – Remote sensing systems

RS.515-4 (05/03) Frequency bands and bandwidths used for satellite passive sensing

*Note – This Recommendation replaces
Rec. ITU-R SA.515-4*

9pp E F S

RS.516-1 (03/94) Feasibility of sharing between active sensors used on Earth exploration and meteorological satellites and the radiolocation service

*Note – This Recommendation replaces
Rec. ITU-R SA.516-1*

1pp E F S

RS.577-5 (06/97) Preferred frequencies and necessary bandwidths for spaceborne active remote sensors

*Note – This Recommendation replaces
Rec. ITU-R SA.577-5*

6pp E F S

RS.1028-2 (05/03) Performance criteria for satellite passive remote sensing

*Note – This Recommendation replaces
Rec. ITU-R SA.1028 2*

4pp E F S

RS.1029-2 (05/03) Interference criteria for satellite passive remote sensing

*Note – This Recommendation replaces
Rec. ITU-R SA.1029 2*

5pp E F S

RS.1165-1 (06/97) Technical characteristics and performance criteria for radiosonde systems in the meteorological aids service

Note – This Recommendation replaces Rec. ITU-R SA.1165 -1

14pp E F S

RS.1166-2 (10/99) Performance and interference criteria for active spaceborne sensors

*Note – This Recommendation replaces
Rec. ITU-R SA.1166- 2*

11pp E F S

RS.1259 (06/97) Feasibility of sharing between spaceborne passive sensors and the fixed service from 50 to 60 GHz

*Note – This Recommendation replaces
Rec. ITU-R SA.1259*

10pp E F S

RS.1260-1 (05/03) Feasibility of sharing between active spaceborne sensors and other services in the range 420-470 MHz

*Note – This Recommendation replaces
Rec. ITU-R SA.1260-1*

15pp E F S

RS.1261 (06/97) Feasibility of sharing between spaceborne cloud radars and other services in the range of 92-95 GHz

*Note – This Recommendation replaces
Rec. ITU-R SA.1261*

2pp E F S

RS.1262 (06/97) Sharing and coordination criteria for meteorological aids in the 400.15-406 MHz and 1 668.4-1 700 MHz bands

*Note – This Recommendation replaces
Rec. ITU-R SA.1262*

6pp E F S

RS.1263 (06/97) Interference criteria for meteorological aids operated in the 400.15-406 MHz and 1 668.4-1 700 MHz bands

Note – This Recommendation replaces Rec. ITU-R SA.1263

8pp E F S

RS.1264-1 (05/03) Feasibility of frequency sharing between the meteorological aids service and the mobile-satellite service (Earth-to-space) in the 1 668.4-1 700 MHz band

Note – This Recommendation replaces Rec. ITU-R SA.1264-1

4pp E F S

RS.1279 (10/07) Spectrum sharing between spaceborne passive sensors and inter-satellite links in the range 50.2-59.3 GHz

Note – This Recommendation replaces Rec. ITU-R SA.1279

6pp E F S

RS.1280 (10/97) Selection of active spaceborne sensor emission characteristics to mitigate the potential for interference to terrestrial radars operating in frequency bands 1-10 GHz

Note – This Recommendation replaces Rec. ITU-R SA.1280

9pp E F S

RS.1281 (10/97) Protection of stations in the radiolocation service from emissions from active spaceborne sensors in the band 13.4-13.75 GHz

Note – This Recommendation replaces Rec. ITU-R SA.1281

7pp E F S

RS.1282 (10/97) Feasibility of sharing between wind profiler radars and active spaceborne sensors in the vicinity of 1 260 MHz

Note – This Recommendation replaces Rec. ITU-R SA.1282

1pp E F S

RS.1346 (02/98) Sharing between the meteorological aids service and medical implant communication systems (MICS) operating in the mobile service in the frequency band 401-406 MHz

Note – This Recommendation replaces Rec. ITU-R SA.1346

6pp E F S

RS.1347 (02/98) Feasibility of sharing between radionavigation-satellite service receivers and the Earth exploration-satellite (active) and space research (active) services in the 1 215-1 260 MHz band

Note – This Recommendation replaces Rec. ITU-R SA.1347

8pp E F S

RS.1416 (10/99) Sharing between spaceborne passive sensors and the inter-satellite service operating near 118 and 183 GHz

Note – This Recommendation replaces Rec. ITU-R SA.1416

24pp E F S

RS.1449 (05/00) Feasibility of sharing between the FSS (space-to-Earth) and the Earth exploration-satellite (passive) and space research (passive) services in the band 18.6-18.8 GHz

Note – This Recommendation replaces Rec. ITU-R SA.1449

24pp E F S

RS.1624 (05/03) Sharing between the Earth exploration satellite (passive) and airborne altimeters in the aeronautical radionavigation service

in the band 4 200-4 400 MHz

Note – This Recommendation replaces Rec. ITU-R SA.1624

8pp E F S

RS.1628 (05/03) Feasibility of sharing in the band 35.5 36 GHz between the Earth exploration-satellite service (active) and space research service (active), and other services allocated in this band

Note – This Recommendation replaces Rec. ITU-R SA.1628

26pp E F S

RS.1632 (06/03) Sharing in the band 5 250-5 350 MHz between the Earth exploration-satellite service (active) and wireless access systems (including radio local area networks) in the mobile service

Note – This Recommendation replaces Rec. ITU-R SA.1632

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<input type="checkbox"/> Economy registered	<input type="checkbox"/> UPS (Int. Acc. No.)
<input type="checkbox"/> Airmail registered	<input type="checkbox"/> TNT (Int. Acc. No.)
<input type="checkbox"/> DHL _____ (Int. Acc. No.)	

Customer's shipping address (if different from above)

Name of the Company or Institution	
Division / Department	
Name of Contact Person	
Street / Post Office Box	
City, State, ZIP / Post Code	Country
Phone number	E-mail

Method of payment

<input type="checkbox"/> Cheque to the Secretary-General of ITU	<input type="checkbox"/> Money order to the Secretary-General of ITU	<input type="checkbox"/> Bank transfer of _____ CHF to UBS SA, Geneva, Account No. CH 96 0024 0240 C876 5565 0, SWIFT UBSWCHZH80A - Clearing No. 240																											
Please charge _____ CHF to my credit card account Cardholder _____																													
<input type="checkbox"/> American Express	<input type="checkbox"/> Eurocard / Mastercard	<input type="checkbox"/> Visa																											
Card number <table border="1"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																				Expiry date <table border="1"><tr><td></td><td></td><td></td><td></td></tr></table>					Security code <table border="1"><tr><td></td><td></td><td></td><td></td></tr></table>				

Please send me

Article number	Publication title	Lang. code	Unit price	Quantity	Total CHF

I confirm this order

Your order reference _____	Name of signatory _____
Date _____	Signature _____

*Please note that ITU will not be held responsible for the replacement of any undelivered orders dispatched by mail which has not been registered. ITU accepts no responsibility for loss, delay or damage in shipment.

REFPUBICATALOG.ORDER

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