Series BO: Satellite delivery

Number	Approved in	Title	Status
BO.566-3	06-1990	Terminology relating to the use of space communication techniques for broadcasting *Note - Withdrawn on 18/07/00 (CACE/181)*	Withdrawn
BO.600-1	07-1986	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	In force
BO.650-2	03-1992	Standards for conventional television systems for satellite broadcasting in the channels defined by Appendix 30 of the Radio Regulations	In force
BO.651	07-1986	Digital PCM coding for the emission of high-quality sound signals in satellite broadcasting (15 kHz nominal bandwidth)	In force
BO.652-1	03-1992	Reference patterns for earth-station and satellite antennas for the broadcastingsatellite service in the 12 GHz band and for the associated feeder links in the 14 GHz and 17 GHz bands	In force
BO.712-1	03-1992	High-quality sound/data standards for the broadcasting-satellite service in the 12 GHz band	In force
BO.786	03-1992	MUSE system for HDTV broadcasting-satellite services	In force
BO.787	03-1992	MAC/packet based system for HDTV broadcasting-satellite services	In force
BO.788-1	08-1994	Coding rate for virtually transparent studio quality HDTV emissions in the broadcasting-satellite service	In force
BO.789-2	10-1995	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	In force
BO.790	03-1992	Characteristics of receiving equipment and calculation of receiver figure-of-merit (G/T) for the broadcasting-satellite service	In force
BO.791	03-1992	Choice of polarization for the broadcasting-satellite service	In force
BO.792	03-1992	Interference protection ratios for the broadcasting-satellite service (television) in the 12 GHz band	In force
BO.793	03-1992	Partitioning of noise between feeder links for the broadcasting-satellite service (BSS) and BSS downlinks	In force
BO.794	03-1992	Techniques for minimizing the impact on the overall BSS system performance due to rain along the feeder-link path	In force
BO.795	03-1992	Techniques for alleviating mutual interference between feeder links to the BSS	In force
BO.1130-4	04-2001	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	In force
BO.1211	10-1995	Digital multi-programme emission systems for television, sound and data services for satellites operating in the 11/12 GHz frequency range	In force
BO.1212	10-1995	Calculation of total interference between geostationary-satellite networks in the broadcasting-satellite service	In force
BO.1213	10-1995	Reference receiving earth station antenna patterns for replanning purposes to be used in the revision of the WARC-77 BSS plans for Regions 1 and 3	In force
BO.1293-2	04-2002	Protection masks and associated calculation methods for interference into broadcast-satellite systems involving digital emissions	In force
BO.1294	10-1997	COMMON FUNCTIONAL REQUIREMENTS FOR THE RECEPTION OF DIGITAL MULTIPROGRAMME TELEVISION EMISSIONS BY SATELLITES OPERATING IN THE 11/12 GHz FREQUENCY RANGE *Note - Withdrawn on 03/05/2001 (CACE/215) - This Recommendation has been replaced by Rec. ITU-R BR.1516*	Withdrawn
BO.1295	10-1997	Reference transmit Earth station antenna off-axis e.i.r.p. patterns for	In force

		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	
BO.1296	10-1997	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	In force
BO.1297	10-1997	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	In force
BO.1373-1	04-2002	Use of BSS assignments for FSS transmissions	In force
BO.1383	12-1998	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	In force
BO.1408-1	04-2002	Transmission system for advanced multimedia services provided by integrated services digital broadcasting in a broadcasting-satellite channel	In force
BO.1443-1	04-2002	Reference BSS earth station antenna patterns for use in interference assessment involving non-GSO satellites in frequency bands covered by RR Appendix 30	In force
BO.1444	03-2000	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	In force
BO.1445	03-2000	Improved patterns for fast roll-off satellite transmit antennas of the Regions 1 and 3 BSS plans of RR Appendix S30	In force
BO.1503	05-2000	Functional description to be used in developing software tools for determining conformity of non-GSO FSS networks with limits contained in Article S22 of the Radio Regulation (Resolutions ITU-R 130, 538 (CMR-97)) *Note - Identical to Rec. UIT-R S.1503*	In force
BO.1504	07-2000	Effective utilization of spectrum assigned to the broadcasting-satellite service (sound)	In force
BO.1505	07-2000	Coordination procedure for assignments of space operation service in the guardbands of Appendices S30 and S30A Plans of the Radio Regulations	In force
BO.1506	07-2000	A methodology to evaluate the impact of solar interference on GSO BSS link performance	In force
BO.1516	04-2001	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*	In force
BO.1517	04-2001	Equivalent power flux-density limits, epfd, to protect the broadcasting-satellite service in the 12 GHz band from interference caused by non-geostationary fixed-satellite service systems	In force
BO.1597	10-2002	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	In force

Series BR: Recording for production, archival and play-out; film for television

Number	Approved in	Title	Status
BR.265-8	10-1997	Standards for the international exchange of programmes on film for television use	In force
BR.407-4	06-1990	International exchange of sound programmes recorded in analogue form *Note - Withdrawn on 03/05/2001 (CACE/215) - This Recommendation has been replaced by Rec. ITU-R BR.408-7*	Withdrawn
BR.408-7	04-2001	International exchange of sound programmes recorded in analogue form *Note - This Recommendation replaces Rec. ITU-R BR.407-4*	In force
BR.469-7	06-2002	Analogue composite television tape recording *Approved in accordance with Resolution ITU-R 45*	In force
BR.501-2	06-1990	Appraisal of programmes on colour film intended for television use *Note - Withdrawn on 24/10/97 (RA-97)*	Withdrawn
BR.602-4	03-2000	Exchange of television recordings for programme evaluation	In force
BR.648	07-1986	Digital recording of audio signals *Note - Withdrawn on 03/05/2001 (CACE/215) - This Recommendation has been replaced by Rec. ITU-R BR.777-3*	Withdrawn
BR.649-1	03-1992	Measuring methods for analogue audio tape recordings	In force
BR.657-2	03-1992	Digital television tape recording	In force
BR.713-1	10-1997	Recording of high definition television (HDTV) images on film *Note - Withdrawn on 06/03/00 (CACE/176)*	Withdrawn
BR.714-2	12-2001	International exchange of programmes produced by means of high-definition television *Approved in accordance with Resolution ITU-R 45*	In force
BR.715-1	04-2001	International exchange of analogue electronic news gathering recordings	In force
BR.716-2	08-1994	Area of 35 mm motion picture film used in HDTV telecines *Note - Withdrawn on 24/10/97 (RA-97) - This Recommendation has been replaced by Rec. ITU-R BR.1374*	Withdrawn
BR.777-3	04-2001	International exchange of two-channel digital audio recordings *Note - This Recommendation replaces Rec. ITU-R BR.648*	In force
BR.778-1	08-1994	Analogue component television tape recording. Standards for the international exchange of television programmes on magnetic tapes	In force
BR.779-2	01-2003	Operating practices for digital television recording	In force
BR.780-1	04-2002	Time and control code standards for the international exchange of television programmes on magnetic tapes	In force
BR.781-1	08-1994	HDTV telecine colour balance for film programmes *Note - Withdrawn on 24/10/97 (RA-97)*	Withdrawn
BR.782-1	08-1994	Area of 35 mm print film used for 4:3 conventional television systems *Note - Withdrawn on 24/10/97 (RA-97) - This Recommendation has been replaced by Rec. ITU-R BR.1374*	Withdrawn
BR.783-1	08-1994	Area of 35 mm release print film used for conventional 16:9 television systems *Note - Withdrawn on 24/10/97 (RA-97) - This Recommendation has been replaced by Rec. ITU-R BR.1374*	Withdrawn
BR.784	03-1992	Exchange of television programmes on 16-mm film with two synchronous sound tracks on a separate support *Note - Withdrawn on 24/10/97 (RA-97)*	Withdrawn
BR.785-1	04-2001	The release of programmes in a multiple release media environment	In force
BR.1214	10-1995	Studio recording of sound-broadcasting programmes on magnetic tape for release on multi-programme digital channels *Note - Withdrawn on 03/05/2001 (CACE/215) - This Recommendation has been replaced by Rec. ITU-R BR.1216-1*	Withdrawn

BR.1215	10-1995	Handling and storage of television and sound recordings on magnetic tape	In force
BR.1216-1	04-2001	Recording of television or sound programmes on magnetic tape in the case when several programmes are intended for broadcasting in the same digital multiplex *Note - This Recommendation replaces Rec. ITU-R BR.1214*	In force
BR.1217	10-1995	Recording of pan-scan data of 16:9 recordings within the user bits of the longitudinal time code *Note - Withdrawn on 24/10/97 (RA-97)*	Withdrawn
BR.1218-1	04-2001	Recording of ancillary data on digital recorders for consumer use	In force
BR.1219	10-1995	Handling and storage of cinematographic film recording	In force
BR.1220-1	04-2001	Requirements for the generation, recording and presentation of high definition television programmes intended for release in the "electronic cinema"	In force
BR.1287-1	04-2001	Broadcasting of programmes on film with multichannel sound	In force
BR.1288	10-1997	Scanned area of 16 mm and 35 mm release film used for 4:3 conventional television systems *Note - Withdrawn on 30/11/98 (CACE/136) - This Recommendation has been replaced by Rec. ITU-R BR.1374*	Withdrawn
BR.1289	10-1997	Scanned area of 16 mm and 35 mm release film used for 16:9 conventional television systems *Note - Withdrawn on 30/11/98 (CACE/136) - This Recommendation has been replaced by Rec. ITU-R BR.1374*	Withdrawn
BR.1290	10-1997	Use of television disk recording in broadcasters' operations	In force
BR.1291	10-1997	Scanned area of Super 16 mm film for production and post-production in 16:9 television systems *Note - Withdrawn on 30/11/98 (CACE/136) - This Recommendation has been replaced by Rec. ITU-R BR.1374*	Withdrawn
BR.1292	10-1997	Engineering guidelines for video recording in standard definition television production and post-production chains	In force
BR.1351	02-1998	Requirements for the application of digital technology to audio archiving systems for radio broadcasting	In force
BR.1352-2	06-2002	File format for the exchange of audio programme materials with metadata on information technology media *Approved in accordance with Resolution ITU-R 45*	In force
BR.1353	02-1998	Recording of data in the user bits of the longitudinal time code *Note - Withdrawn on 03/05/01 (CACE/215)*	Withdrawn
BR.1354	02-1998	Transfer of film programmes to video tape for programme exchange and for preservation of endangered films *Note - Withdrawn on 06/03/00 (CACE/176)*	Withdrawn
BR.1355-1	03-2000	Viewing conditions for telecine transfer of film images on a television display	In force
BR.1356	02-1998	User requirements for application of compression in mainstream standard definition television production and archival	In force
BR.1357	02-1998	Use of wrappers and metadata in television production	In force
BR.1374-1	06-2001	Scanned area dimensions from 16 mm and 35 mm cinematographic film used in television *Approved in accordance with Resolution ITU-R 45*	In force
BR.1375-2	06-2002	High-definition television (HDTV) recording *Approved in accordance with Resolution ITU-R 45*	In force
BR.1376	11-1998	Compression families for use in recording and networked standard definition television production	In force
BR.1384	12-1998	Parameters for international exchange of multi-channel sound recordings	In force
BR.1385	12-1998	Exchange of sound programmes on recordable compact discs (CD-R)	In force
BR.1422	12-1999	Operational practices for television use of film soundtracks encoded with noise reduction and matrix surround	In force
BR.1440	03-2000	16:9 video images transferred to 35 mm film for optical projection	In force
BR.1441	03-2000	Compromise scanned area dimensions for television from 35 mm wide-screen films	In force
BR.1442	03-2000	User's requirements for digital HDTV tape cassette recorders	In force
BR.1515	04-2001	International exchange of digital electronic news gathering recordings	In force

BR.1530	06-2001	Guide to Recommendations on the use of film in television *Approved in accordance with Resolution ITU-R 45*	In force
BR.1531	06-2001	Exchange of sound programmes for broadcast use recorded as broadcast wave format files on compact and digital versatile recordable data disks *Approved in accordance with Resolution ITU-R 45*	In force
BR.1574	06-2002	Archival of sound-program material in the form of files recorded on information technology media *Approved in accordance with Resolution ITU-R 45*	In force
BR.1575	06-2002	Guide to the selection of digital video tape recording formats for studio production in the standard definition television (SDTV) environment based on production requirements *Approved in accordance with Resolution ITU-R 45*	In force

Series BS: Broadcasting service (sound)

Number	Approved in	Title	Status
BS.48-2	07-1986	Choice of frequency for sound broadcasting in the Tropical Zone	In force
BS.80-3	06-1990	Transmitting antennas in HF broadcasting	In force
BS.139-3	06-1990	Transmitting antennas for sound broadcasting in the Tropical Zone	In force
BS.215-2	07-1982	Maximum transmitter powers for broadcasting in the Tropical Zone	In force
BS.216-2	07-1982	Protection ratio for sound broadcasting in the Tropical Zone	In force
BS.411-4	06-1990	Fading allowances in HF broadcasting	In force
BS.412-9	12-1998	Planning standards for terrestrial FM sound broadcasting at VHF	In force
BS.415-2	07-1986	Minimum performance specifications for low-cost sound-broadcasting receivers	In force
BS.450-3	11-2001	Transmission standards for FM sound broadcasting at VHF	In force
BS.467	07-1970	Technical characteristics to be checked for frequency-modulation stereophonic broadcasting	In force
BS.468-4	07-1986	Measurement of audio-frequency noise voltage level in sound broadcasting	In force
BS.498-2	06-1990	Ionospheric cross-modulation in the LF and MF broadcasting bands	In force
BS.559-2	06-1990	Objective measurement of radio-frequency protection ratios in LF, MF and HF broadcasting	In force
BS.560-4	10-1997	Radio-frequency protection ratios in LF, MF and HF broadcasting	In force
BS.561-2	07-1986	Definitions of radiation in LF, MF and HF broadcasting bands	In force
BS.562-3	06-1990	Subjective assessment of sound quality	In force
BS.597-1	07-1986	Channel spacing for sound broadcasting in band 7 (HF)	In force
BS.598-1	06-1990	Factors influencing the limits of amplitude-modulation sound-broadcasting coverage in band 6 (MF)	In force
BS.599	07-1982	Directivity of antennas for the reception of sound broadcasting in band 8 (VHF)	In force
BS.638	07-1986	Terms and definitions used in frequency planning for sound broadcasting	In force
BS.639	07-1986	Necessary bandwidth of emission in LF, MF and HF broadcasting	In force
BS.640-3	10-1997	Single sideband (SSB) system for HF broadcasting	In force
BS.641	07-1986	Determination of radio-frequency protection ratios for frequency-modulated sound broadcasting	In force
BS.642-1	06-1990	Limiters for high-quality sound-programme signals	In force
BS.643-2	10-1995	System for automatic tuning and other applications in FM radio receivers for use with the pilot-tone system	In force
BS.644-1	06-1990	Audio quality parameters for the performance of a high-quality sound-programme transmission chain	In force
BS.645-2	03-1992	Test signals and metering to be used on international sound programme connections	In force
BS.646-1	03-1992	Source encoding for digital sound signals in broadcasting studios	In force
BS.647-2	03-1992	A digital audio interface for broadcasting studios	In force
BS.702-1	03-1992	Synchronization and multiple frequency use per programme in HF broadcasting	In force
BS.703	06-1990	Characteristics of AM sound broadcasting reference receivers for planning purposes	In force
BS.704	06-1990	Characteristics of FM sound broadcasting reference receivers for planning purposes	In force
BS.705-1	10-1995	HF transmitting and receiving antennas characteristics and diagrams	In force

BS.706-2	02-1998	Data system in monophonic AM sound broadcasting (AMDS)	In force
BS.707-4	12-1998	Transmission of multisound in terrestrial television systems PAL B, D1, G, H and I, and SECAM D, K, K1 and L	In force
BS.708	06-1990	Determination of the electro-acoustical properties of studio monitor headphones	In force
BS.773	03-1992	Radio-frequency protection ratios required by FM sound broadcasting in the band between 87.5 MHz and 108 MHz against interference from D/SECAM television transmissions	In force
BS.774-2	10-1995	Service requirements for digital sound broadcasting to vehicular, portable and fixed receivers using terrestrial transmitters in the VHF/UHF bands	In force
BS.775-1	07-1994	Multichannel stereophonic sound system with and without accompanying picture	In force
BS.776	03-1992	Format for user data channel of the digital audio interface	In force
BS.1114-4	05-2003	Systems for terrestrial digital sound broadcasting to vehicular, portable and fixed receivers in the frequency range 30-3 000 MHz	In force
BS.1115	07-1994	Low bit-rate audio coding	In force
BS.1116-1	10-1997	Methods for the subjective assessment of small impairments in audio systems including multichannel sound systems	In force
BS.1194-2	12-1998	System for multiplexing frequency modulation (FM) sound broadcasts with a sub-carrier data channel having a relatively large transmission capacity for stationary and mobile reception	In force
BS.1195	10-1995	Transmitting antenna characteristics at VHF and UHF	In force
BS.1196-1	04-2001	Audio coding for digital terrestrial television broadcasting	In force
BS.1283	10-1997	Subjective assessment of sound quality - A guide to existing Recommendations	In force
BS.1284	10-1997	Methods for the subjective assessment of sound quality - General requirements	In force
BS.1285	10-1997	Pre-selection methods for the subjective assessment of small impairments in audio systems	In force
BS.1286	10-1997	Methods for the subjective assessment of audio systems with accompanying picture	In force
BS.1348-1	02-2001	Service requirements for digital sound broadcasting at frequencies below 30 MHz	In force
BS.1349	02-1998	Implementation of digital sound broadcasting to vehicular, portable and fixed receivers using terrestrial transmitters in the LF, MF and HF bands	In force
BS.1350-1	12-1998	Systems requirements for multiplexing (FM) sound broadcasting with a sub-carrier data channel having a relatively large transmission capacity for stationary and mobile reception	In force
BS.1386-1	04-2001	LF and MF transmitting antennas characteristics and diagrams	In force
BS.1387-1	11-2001	Method for objective measurements of perceived audio quality	In force
BS.1423	12-1999	Guidelines for producing multichannel soundtracks using surround matrix techniques	In force
BS.1514-1	10-2002	System for digital sound broadcasting in the broadcasting bands below 30 MHz	In force
BS.1534-1	01-2003	Method for the subjective assessment of intermediate quality levels of coding systems	In force
BS.1547	11-2001	Terrestrial component of systems for hybrid satellite-terrestrial digital sound broadcasting to vehicular, portable and fixed receivers in the frequency range 1 400-2 700 MHz	In force
BS.1548-1	10-2002	User requirements for audio coding systems for digital broadcasting	In force
BS.1596	10-2002	Guide to ITU-R Recommendations for broadcast sound production	In force
BS.6/1005	06-2003	Draft new Recommendation ITU-R BS.[Doc. 6/324] - Planning parameters for digital sound broadcasting at frequencies below 30 MHz	Pre-published. Not available, contact sales@itu.int

Series BT: Broadcasting service (television)

Number	Approved in	Title	Status
BT.266-1	03-1992	Phase pre-correction of television transmitters	In force
BT.417-5	10-2002	Minimum field strengths for which protection may be sought in planning an analogue terrestrial television service	In force
BT.419-3	06-1990	Directivity and polarization discrimination of antennas in the reception of television broadcasting	In force
BT.470-6	11-1998	Conventional television systems	In force
BT.471-1	07-1986	Nomenclature and description of colour bar signals	In force
BT.472-3	06-1990	Video-frequency characteristics of a television system to be used for the international exchange of programmes between countries that have adopted 625-line colour or monochrome systems	In force
BT.500-11	06-2002	Methodology for the subjective assessment of the quality of television pictures *Approved in accordance with Resolution ITU-R 45*	In force
BT.565	07-1978	Protection ratios for 625-line television against radionavigation transmitters operating in the shared bands between 582 and 606 MHz	In force
BT.601-5	10-1995	Studio encoding parameters of digital television for standard 4:3 and wide-screen 16:9 aspect ratios	In force
BT.653-3	02-1998	Teletext systems	In force
BT.654	07-1986	Subjective quality of television pictures in relation to the main impairments of the analogue composite television signal	In force
BT.655-6	03-2000	Radio-frequency protection ratios for AM vestigial sideband terrestrial television systems interfered with by unwanted analogue vision signals and their associated sound signals	In force
BT.656-4	02-1998	Interfaces for digital component video signals in 525-line and 625-line television systems operating at the 4:2:2 level of Recommendation ITU-R BT.601 (Part A)	In force
BT.709-5	04-2002	Parameter values for the HDTV* standards for production and international programme exchange	In force
BT.710-4	11-1998	Subjective assessment methods for image quality in high-definition television	In force
BT.711-1	09-1992	Synchronizing reference signals for the component digital studio	In force
BT.796	03-1992	Parameters for enhanced compatible coding systems based on 625-line PAL and SECAM television systems	In force
BT.797-1	07-1994	Parameters for 4:3 enhanced television systems that are NTSC-compatible	In force
BT.798-1	07-1994	Digital terrestrial television broadcasting in the VHF/UHF bands	In force
BT.799-3	02-1998	Interfaces for digital component video signals in 525-line and 625-line television systems operating at the 4:4:4 level of Recommendation ITU-R BT.601 (Part A)	In force
BT.800-2	10-1995	User requirements for the transmission through contribution and primary distribution networks of digital television signals defined according to the 4:2:2 standard of Recommendation ITU-R BT.601 (Part A)	In force
BT.801-1	10-1995	Test signals for digitally encoded colour television signals conforming with Recommendations ITU-R BT.601 (Part A) and ITU-R BT.656	In force
BT.802-1	07-1994	Test pictures and sequences for subjective assessments of digital codecs conveying signals produced according to Recommendation ITU-R BT.601	In force
BT.803	03-1992	The avoidance of interference generated by digital television studio equipment	In force
BT.804	03-1992	Characteristics of TV receivers essential for frequency planning with PAL/SECAM/NTSC television systems	In force

BT.805	03-1992	Assessment of impairment caused to television reception by a wind turbine	In force
BT.806	03-1992	Common channel raster for the distribution of D-MAC, D2-MAC and HD-MAC signals in collective antenna and cable distribution systems	In force
BT.807	03-1992	Reference model for data broadcasting	In force
BT.808	03-1992	The broadcasting of time and date information in coded form	In force
BT.809	03-1992	Programme delivery control (PDC) system for video recording	In force
BT.810	03-1992	Conditional-access broadcasting systems	In force
BT.811-1	07-1994	The subjective assessment of enhanced PAL and SECAM systems	In force
BT.812	03-1992	Subjective assessment of the quality of alphanumeric and graphic pictures in Teletext and similar services	In force
BT.813	03-1992	Methods for objective picture quality assessment in relation to impairments from digital coding of television signals	In force
BT.814-1	07-1994	Specifications and alignment procedures for setting of brightness and contrast of displays	In force
BT.815-1	07-1994	Specification of a signal for measurement of the contrast ratio of displays	In force
BT.1117-2	10-1997	Studio format parameters for enhanced 16:9 aspect ratio 625-line television systems (D- and D2-MAC, PALplus, enhanced SECAM)	In force
BT.1118-1	10-1997	Enhanced compatible widescreen television based on conventional television systems	In force
BT.1119-2	02-1998	Wide-screen signalling for broadcasting (Signalling for wide-screen and other enhanced television parameters)	In force
BT.1120-4	05-2003	Digital interfaces for HDTV studio signals	In force
BT.1121-1	10-1995	User requirements for the transmission through contribution and primary distribution networks of digital HDTV signals	In force
BT.1122-1	10-1995	User requirements for emission and secondary distribution systems for SDTV, HDTV and hierarchical coding schemes	In force
BT.1123	07-1994	Planning methods for 625-line terrestrial television in VHF/UHF bands	In force
BT.1124-3	06-2001	Reference signals for ghost cancelling in analogue television systems *Approved in accordance with Resolution ITU-R 45*	In force
BT.1125	07-1994	Basic objectives for the planning and implementation of digital terrestrial television broadcasting systems	In force
BT.1126	07-1994	Data transmission protocols and transmission control scheme for data broadcasting systems using a data channel in satellite television broadcasting	In force
BT.1127	07-1994	Relative quality requirements of television broadcast systems	In force
BT.1128-2	10-1997	Subjective assessment of conventional television systems	In force
BT.1129-2	02-1998	Subjective assessment of standard definition digital television (SDTV) systems	In force
BT.1197-1	02-1998	Enhanced wide-screen PAL TV transmission system (the PALplus system)	In force
BT.1198	10-1995	Stereoscopic television based on R-and L-eye two channel signals	In force
BT.1199	10-1995	Use of bit-rate reduction in the HDTV studio environment	In force
BT.1200-1	02-1998	Target standard for digital video systems for the studio and for international programme exchange *Note - Withdrawn on 03/05/01 (CACE/215)*	Withdrawn
BT.1201	10-1995	Extremely high resolution imagery	In force
BT.1202	10-1995	Displays for future television systems	In force
BT.1203	10-1995	User requirements for generic bit-rate reduction coding of digital TV signals (SDTV, EDTV and HDTV) for an end-to-end television system	In force
BT.1204	10-1995	Measuring methods for digital video equipment with analogue input/output	In force
BT.1205	10-1995	User requirements for the quality of baseband SDTV and HDTV signals when transmitted by digital Satellite News Gathering (SNG)	In force
BT.1206	10-1995	Spectrum shaping limits for digital terrestrial television broadcasting	In force
BT.1207-1	10-1997	Data access methods for digital terrestrial television broadcasting	In force
BT.1208-1	10-1997	Video coding for digital terrestrial television broadcasting	In force
BT.1209-1	10-1997	Service multiplex methods for digital terrestrial television broadcasting	In force
BT.1210-2	10-2000	Test materials to be used in subjective assessment	In force

BT.1298	10-1997	Enhanced wide-screen NTSC TV transmission system	In force
BT.1299	10-1997	The basic elements of a worldwide common family of systems for digital terrestrial television broadcasting	In force
BT.1300-1	03-2000	Service multiplex, transport, and identification methods for digital terrestrial television broadcasting	In force
BT.1301	10-1997	Data services in digital terrestrial television broadcasting	In force
BT.1302	10-1997	Interfaces for digital component video signals in 525-line and 625-line television systems operating at the 4:2:2 level of Recommendation ITU-R BT.601 (Part B)	In force
BT.1303	10-1997	Interfaces for digital component video signals in 525-line and 625-line television systems operating at the 4:4:4 level of Recommendation ITU-R BT.601 (Part B)	In force
BT.1304	10-1997	Checksum for error detection and status information in interfaces conforming with Recommendations ITU-R BT.656 and ITU-R BT.799	In force
BT.1305	10-1997	Digital audio and auxiliary data as ancillary data signals in interfaces conforming to Recommendations ITU-R BT.656 and ITU-R BT.799	In force
BT.1306-1	10-2000	Error-correction, data framing, modulation and emission methods for digital terrestrial television broadcasting	In force
BT.1358	02-1998	Studio parameters of 625 and 525 line progressive scan television systems	In force
BT.1359-1	11-1998	Relative timing of sound and vision for broadcasting	In force
BT.1360	02-1998	Capture characteristics for high-definition images	In force
BT.1361	02-1998	Worldwide unified colorimetry and related characteristics of future television and imaging systems	In force
BT.1362	02-1998	Interfaces for digital component video signals in 525- and 625-line progressive scan television systems	In force
BT.1363-1	11-1998	Jitter specifications and methods for jitter measurements of bit-serial signals conforming to Recommendations ITU-R BT.656, ITU-R BT.799 and ITU-R BT.1120	In force
BT.1364	02-1998	Format of ancillary data signals carried in digital component studio interfaces	In force
BT.1365	02-1998	24-bit digital audio format as ancillary data signals in HDTV serial interfaces	In force
BT.1366	02-1998	Transmission of time code and control code in the ancillary data space of a digital television stream according to Recommendations ITU-R BT.656, ITU-R BT.799 and ITU-R BT.1120	In force
BT.1367	02-1998	Serial digital fibre transmission system for signals Conforming to Recommendations ITU-R BT.656, ITU-R BT.799 and ITU-R BT.1120	In force
BT.1368-3	04-2002	Planning criteria for digital terrestrial television services in the VHF/UHF bands	In force
BT.1369	02-1998	Basic principles for a worldwide common family of systems for the provision of interactive television services	In force
BT.1377	11-1998	Labelling of video and audio apparatus throughput (processing) delay	In force
BT.1378	11-1998	Basic requirements for multimedia-hypermedia broadcasting	In force
BT.1379-1	04-2001	Safe areas of wide-screen 16:9 and standard 4:3 aspect ratio productions to achieve a common format during a transition period to wide-screen 16:9 broadcasting	In force
BT.1380	11-1998	Standards for bit rate reduction coding systems for SDTV	In force
BT.1381-1	04-2001	Serial digital interface-based transport interface for compressed television signals in networked television production based on Recommendations ITU-R BT.656 and ITU-R BT.1302	In force
BT.1382	11-1998	Assessment of the picture quality of multi-programme services	In force
BT.1434	03-2000	Network independent protocols for interactive systems	In force
BT.1435	03-2000	Digital sound and television broadcasting interaction channel through the PSTN/ISDN	In force
BT.1436	03-2000	Transmission systems for interactive cable television services	In force
BT.1437	03-2000	User requirements for digital coding for multi-programme television transmission	In force
BT.1438	03-2000	Subjective assessment of stereoscopic television pictures	In force
BT.1439	03-2000	Measurement methods applicable in the analogue television studio and the overall analogue television system	In force

BT.1507	10-2000	Interaction channel using digital enhanced cordless telecommunications (DECT) system	In force
BT.1508	10-2000	Interaction channel using global system for mobile communications (GSM)	In force
BT.1532	06-2001	The MPEG-2 recoding data set for the preservation of picture quality in cascade of MPEG-2 codecs *Approved in accordance with Resolution ITU-R 45*	In force
BT.1533	06-2001	Editing information for MPEG-2 video elementary streams for applications in television production *Approved in accordance with Resolution ITU-R 45*	In force
BT.1543	08-2001	1 280 × 720, 16 × 9 progressively-captured image format for production and international programme exchange in the 60 Hz environment	In force
BT.1549	11-2001	Data link protocol for interaction channel	In force
BT.1550	12-2001	MPEG-2 recoding data set for the preservation of picture quality in cascade of MPEG-2 codecs compressed stream format *Approved in accordance with Resolution ITU-R 45*	In force
BT.1551	12-2001	Transport of MPEG-2 recoding data set as ancillary data packets *Approved in accordance with Resolution ITU-R 45*	In force
BT.1562	04-2002	Consistency in the alignment of displays in production rooms and control rooms	In force
BT.1563	04-2002	Data encoding protocol using key-length-value	In force
BT.1564	04-2002	Interaction channel using local multipoint distribution systems	In force
BT.1576	06-2002	Transport of alternate source formats through Recommendation ITU-R BT.1120 *Approved in accordance with Resolution ITU-R 45*	In force
BT.1577	06-2002	Serial digital interface-based transport interface for compressed television signals in networked television production based on Recommendation ITU-R BT.1120 *Approved in accordance with Resolution ITU-R 45*	In force
BT.1578	06-2002	Content package format, elements, and metadata definition for applications in television production utilizing interfaces based on Recommendation ITU-R BT.1381 *Approved in accordance with Resolution ITU-R 45*	In force
BT.1614	01-2003	Video payload identification for digital television interfaces	In force
BT.1616	05-2003	Data stream format for the exchange of DV-based audio, data and compressed video over interfaces complying with Recommendation ITU-R BT.1381	In force
BT.1617	05-2003	Format for transmission of DV compressed video, audio and data over interfaces complying with Recommendation ITU-R BT.1381	In force
BT.1618	05-2003	Data structure for DV-based audio, data and compressed video at data rates of 25 and 50 Mbit/s	In force
BT.1619	05-2003	Vertical ancillary data mapping for serial digital interface	In force
BT.1620	05-2003	Data structure for DV-based audio, data and compressed video at a data rate of 100 Mbit/s	In force

Series F: Fixed service

Number	Approved in	Title	Status
F.106-2	05-1999	The use of diversity for voice-frequency telegraphy on HF radio circuits	In force
F.162-3	03-1992	Use of directional transmitting antennas in the fixed service operating in bands below about 30 MHz	In force
F.240-6	03-1992	Signal-to-interference protection ratios for various classes of emission in the fixed service below about 30 MHz	In force
F.246-3	07-1974	Frequency-shift keying	In force
F.268-1	07-1970	Interconnection at audio frequencies of radio-relay systems for telephony *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.270-2	07-1978	Interconnection at video signal frequencies of radio-relay systems for television *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.275-3	07-1982	Pre-emphasis characteristic for frequency modulation radio-relay systems for telephony using frequency-division multiplex *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.276-2	07-1974	Frequency deviation and the sense of modulation for analogue radio-relay systems for television *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.283-5	06-1990	Radio-frequency channel arrangements for low and medium capacity analogue or digital fixed wireless systems operating in the 2 GHz band	In force
F.290-3	07-1978	Maintenance measurements on radio-relay systems for telephony using frequency-division multiplex *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.302-3	05-1997	Limitation of interference from trans-horizon radio-relay systems	In force
F.305	07-1959	Stand-by arrangements for radio-relay systems for television and telephony *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.306	07-1959	Procedure for the international connection of radio-relay systems with different characteristics *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.335-2	07-1970	Use of radio links in international telephone circuits *Note - Withdrawn on 17/12/99 (CACE/146)*	Withdrawn
F.338-2	07-1970	Bandwidth required at the output of a telegraph or telephone receiver	In force
F.339-6	07-1986	Bandwidths, signal-to-noise ratios and fading allowances in complete systems	In force
F.342-2	07-1970	Automatic error-correcting system for telegraph signals transmitted over radio circuits	In force
F.345	07-1963	Telegraph distortion	In force
F.347	07-1963	Classification of multi-channel radiotelegraph systems for long-range circuits operating at frequencies below about 30 MHz and the designation of the channels in these systems	In force
F.348-4	06-1990	Arrangement of channels in multi-channel single-sideband and independent-sideband transmitters for long-range circuits operating at frequencies below about 30 MHz	In force
F.349-5	05-1999	Frequency stability required for systems operating in the HF fixed service to make the use of automatic frequency control superfluous	In force
F.380-4	07-1986	Interconnection at baseband frequencies of radio-relay systems for telephony using frequency-division multiplex *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.381-2	07-1970	Conditions relating to line regulating and other pilots and to limits for the residues of signals outside the baseband in the interconnection of radio-relay and line systems for telephony	Withdrawn

		Note - Withdrawn on 06/06/03 (RA-03)	
F.382-7	09-1997	Radio-frequency channel arrangements for radio-relay systems operating in the 2 and 4 GHz bands	In force
F.383-7	05-2001	Radio-frequency channel arrangements for high capacity radio-relay systems operating in the lower 6 GHz band	In force
F.384-7	02-1999	Radio-frequency channel arrangements for medium and high capacity analogue or digital radio-relay systems operating in the upper 6 GHz band	In force
F.385-7	05-2001	Radio-frequency channel arrangements for radio-relay systems operating in the 7 GHz band**	In force
F.386-6	02-1999	Radio-frequency channel arrangements for medium and high capacity analogue or digital radio-relay systems operating in the 8 GHz band	In force
F.387-9	05-2002	Radio-frequency channel arrangements for radio-relay systems operating in the 11 GHz band	In force
F.388	07-1963	Radio-frequency channel arrangements for trans-horizon radio-relay systems *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.389-2	07-1974	Preferred characteristics of auxiliary radio-relay systems operating in the 2, 4, 6 or 11 GHz bands *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.390-4	07-1982	Definitions of terms and references concerning hypothetical reference circuits and hypothetical reference digital paths for radio-relay systems	In force
F.391	07-1963	Hypothetical reference circuit for radio-relay systems for telephony using frequency-division multiplex with a capacity of 12 to 60 telephone channels *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.392	07-1963	Hypothetical reference circuit for radio-relay systems for telephony using frequency-division multiplex with a capacity of more than 60 telephone channels	In force
F.393-4	07-1982	Allowable noise power in the hypothetical reference circuit for radio-relay systems for telephony using frequency-division multiplex	In force
F.395-2	07-1978	Noise in the radio portion of circuits to be established over real radio-relay links for FDM telephony *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.396-1	07-1966	Hypothetical reference circuit for trans-horizon radio-relay systems for telephony using frequency-division multiplex *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.397-3	07-1978	Allowable noise power in the hypothetical reference circuit of trans-horizon radio-relay systems for telephony using frequency-division multiplex *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.398-3	07-1974	Measurements of noise in actual traffic over radio-relay systems for telephony using frequency-division multiplex *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.399-3	07-1978	Measurement of noise using a continuous uniform spectrum signal on frequency-division multiplex telephony radio-relay systems *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.400-2	07-1970	Service channels to be provided for the operation and maintenance of radio-relay systems *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.401-2	07-1970	Frequencies and deviations of continuity pilots for frequency modulation radio-relay systems for television and telephony *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.402-2	07-1978	The preferred characteristics of a single sound channel simultaneously transmitted with a television signal on an analogue radio-relay system *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.403-3	07-1978	Intermediate-frequency characteristics for the interconnection of analogue radio-relay systems *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.404-2	07-1970	Frequency deviation for analogue radio-relay systems for telephony using frequency-division multiplex *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.405-1	07-1970	Pre-emphasis characteristics for frequency modulation radio-relay systems for television *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn

F.436-5	05-1999	Arrangement of voice-frequency, frequency-shift telegraph channels over HF radio circuits	In force
F.444-3	07-1982	Preferred characteristics for multi-line switching arrangements of analogue radio-relay systems *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.454-1	07-1978	Pilot carrier level for HF single-sideband and independent-sideband reduced-carrier systems	In force
F.455-2	03-1992	Improved transmission system for HF radiotelephone circuits *Note - Withdrawn on 17/12/99 (CACE/146)*	Withdrawn
F.463-1	07-1978	Limits for the residues of signals outside the baseband of radio-relay systems for television *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.480	07-1974	Semi-automatic operation on HF radiotelephone circuits. Devices for remote connection to an automatic exchange by radiotelephone circuits *Note - Withdrawn on 17/12/99 (CACE/146)*	Withdrawn
F.497-6	02-1999	Radio-frequency channel arrangements for radio-relay systems operating in the 13 GHz frequency band	In force
F.518-1	09-1994	Single-channel simplex ARQ telegraph system	In force
F.519	07-1978	Single-channel duplex ARQ telegraph system	In force
F.520-2	03-1992	Use of high frequency ionospheric channel simulators *Note - Withdrawn on 05/05/00 (RA-2000)*	Withdrawn
F.555-1	05-1997	Permissible noise in the hypothetical reference circuit of radio-relay systems for television	In force
F.556-1	07-1986	Hypothetical reference digital path for radio-relay systems which may form part of an integrated services digital network with a capacity above the second hierarchical level	In force
F.557-4	09-1997	Availability objective for radio-relay systems over a hypothetical reference circuit and a hypothetical reference digital path	In force
F.592-3	02-2002	Vocabulary of terms for the fixed service	In force
F.593	07-1982	Noise in real circuits of multi-channel trans-horizon FM radio-relay systems of less than 2 500 km *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.594-4	09-1997	Error performance objectives of the hypothetical reference digital path for radio-relay systems providing connections at a bit rate below the primary rate and forming part or all of the high grade portion of an integrated services digital network	In force
F.595-8	02-2003	Radio-frequency channel arrangements for fixed wireless systems operating in the 18 GHz frequency band	In force
F.596-1	09-1994	Interconnection of digital radio-relay systems	In force
F.612	07-1986	Measurement of reciprocal mixing in HF communication receivers in the fixed service	In force
F.613	07-1986	The use of ionospheric channel sounding systems operating in the fixed service at frequencies below about 30 MHz	In force
F.634-4	09-1997	Error performance objectives for real digital radio-relay links forming part of the high-grade portion of international digital connections at a bit rate below the primary rate within an integrated services digital network	In force
F.635-6	05-2001	Radio-frequency channel arrangements based on a homogeneous pattern for radio-relay systems operating in the 4 GHz band	In force
F.636-3	09-1994	Radio-frequency channel arrangements for radio-relay systems operating in the 15 GHz band	In force
F.637-3	02-1999	Radio-frequency channel arrangements for fixed wireless systems operating in the 23 GHz band	In force
F.695	06-1990	Availability objectives for real digital radio-relay links forming part of a high-grade circuit within an integrated services digital network	In force
F.696-2	09-1997	Error performance and availability objectives for hypothetical reference digital sections forming part or all of the medium-grade portion of an ISDN connection at a bit rate below the primary rate utilizing digital radio-relay systems	In force
F.697-2	09-1997	Error performance and availability objectives for the local-grade portion at each end of an ISDN connection at a bit rate below the primary rate utilizing	In force

		digital radio-relay systems	
F.698-2	09-1994	Preferred frequency bands for trans-horizon radio-relay systems	In force
F.699-5	05-2000	Reference radiation patterns for line-of-sight radio-relay system antennas for use in coordination studies and interference assessment in the frequency range from 1 GHz to about 70 GHz	In force
F.700-2	09-1994	Error performance and availability measurement algorithm for digital radio-relay links at the system bit-rate interface	In force
F.701-2	09-1997	Radio-frequency channel arrangements for analogue and digital point-to-multipoint radio systems operating in frequency bands in the range 1.350 to 2.690 GHz (1.5, 1.8, 2.0, 2.2, 2.4 and 2.6 GHz)	In force
F.745-1	02-2002	Certain ITU-R Recommendations for analogue radio-relay systems, including those which have been deleted	In force
F.746-7	02-2003	Radio-frequency arrangements for fixed service systems	In force
F.747	03-1992	Radio-frequency channel arrangements for fixed wireless systems operating in the 10 GHz band	In force
F.748-4	05-2001	Radio-frequency arrangements for systems of the fixed service operating in the 25, 26 and 28 GHz bands	In force
F.749-2	05-2001	Radio-frequency channel arrangements for radio-relay systems in the 38 GHz band	In force
F.750-4	05-2000	Architectures and functional aspects of radio-relay systems for synchronous digital hierarchy (SDH)-based network	In force
F.751-2	09-1997	Transmission characteristics and performance requirements of radio-relay systems for SDH-based networks	In force
F.752-1	09-1994	Diversity techniques for radio-relay systems	In force
F.753	03-1992	Preferred methods and characteristics for the supervision and protection of digital radio-relay systems	In force
F.754	03-1992	Radio-relay systems in bands 8 and 9 for the provision of telephone trunk connections in rural areas	In force
F.755-2	05-1999	Point-to-multipoint systems used in the fixed service	In force
F.756	03-1992	TDMA point-to-multipoint systems used as radio concentrators	In force
F.757-3	02-2003	Basic system requirements and performance objectives for fixed wireless access using mobile-derived technologies offering telephony and data communication services	In force
F.758-3	02-2003	Considerations in the development of criteria for sharing between the terrestrial fixed service and other services	In force
F.759	03-1992	The use of frequencies in the band 500 to 3 000 MHz for radio-relay systems	In force
F.760-1	09-1994	Protection of terrestrial line-of-sight radio-relay systems against interference from the broadcasting-satellite service in the bands near 20 GHz	In force
F.761	03-1992	Frequency sharing between the fixed service and passive sensors in the band 18.6 to 18.8 GHz *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
F.762-2	10-1995	Main characteristics of remote control and monitoring systems for HF receiving and transmitting stations	In force
F.763-4	05-1999	Data transmission over HF circuits using phase shift keying or quadrature amplitude modulation	In force
F.764-1	09-1994	Minimum requirements for HF radio systems using a packet transmission protocol	In force
F.1092-1	09-1997	Error performance objectives for constant bit rate digital path at or above the primary rate carried by digital radio-relay systems which may form part of the international portion of a 27 500 km hypothetical reference path *Note - Withdrawn on 25/05/02 (CACE/258) - This Recommendation has been replaced by Rec. ITU-R F.1397*	Withdrawn
F.1093-1	09-1997	Effects of multipath propagation on the design and operation of line-of-sight digital radio-relay systems	In force
F.1094-1	10-1995	Maximum allowable error performance and availability degradations to digital radio-relay systems arising from interference from emissions and radiations from other sources	In force
F.1095	09-1994	A procedure for determining coordination area between radio-relay stations of the fixed service	In force

F.1096	09-1994	Methods of calculating line-of-sight interference into radio-relay systems to account for terrain scattering	In force
F.1097-1	05-2000	Interference mitigation options to enhance compatibility between radar systems and digital radio-relay systems	In force
F.1098-1	10-1995	Radio-frequency channel arrangements for fixed wireless systems in the 1 900-2 300 MHz band	In force
F.1099-3	02-1999	Radio-frequency channel arrangements for high-capacity digital radio-relay systems in the 5 GHz (4 400-5 000 MHz) band	In force
F.1100	09-1994	Radio-frequency channel arrangements for radio-relay systems operating in the 55 GHz band *Note - Withdrawn on 05/05/00 (RA-2000)*	Withdrawn
F.1101	09-1994	Characteristics of digital fixed wireless systems below about 17 GHz	In force
F.1102-1	02-2002	Characteristics of fixed wireless systems operating in frequency bands above about 17 GHz	In force
F.1103	09-1994	Fixed wireless systems operating in bands 8 and 9 for the provision of subscriber telephone connections in rural areas	In force
F.1104	09-1994	Requirements for point-to-multipoint radio systems used in the local grade portion of an ISDN connection	In force
F.1105-1	05-2002	Transportable fixed radiocommunications equipment for relief operations	In force
F.1106	09-1994	Effects of propagation on the design and operation of trans-horizon radio-relay systems	In force
F.1107-1	05-2002	Probabilistic analysis for calculating interference into the fixed service from satellites occupying the geostationary orbit	In force
F.1108-3	05-2002	Determination of the criteria to protect fixed service receivers from the emissions of space stations operating in non-geostationary orbits in shared frequency bands	In force
F.1109	09-1994	ITU-Recommendations relating to systems in the fixed service operating at frequencies below about 30 MHz which are not reprinted *Note - Withdrawn on 17/12/99 (CACE/146)*	Withdrawn
F.1110-3	02-2003	Adaptive radio systems for frequencies below about 30 MHz	In force
F.1111-1	10-1995	Improved Lincompex system for HF radiotelephone circuits	In force
F.1112-1	10-1995	Digitized speech transmissions for systems operating below about 30 MHz	In force
F.1113	09-1994	Radio systems employing meteor-burst propagation	In force
F.1189-1	09-1997	Error performance objectives for constant bit rate digital paths at or above the primary rate carried by digital radio-relay systems which may form part or all of the national portion of a 27 500 km hypothetical reference path *Note - Withdrawn on 25/05/02 (CACE/258) - This Recommendation has been replaced by Rec. ITU-R F.1491*	Withdrawn
F.1190	10-1995	Protection criteria for digital radio-relay systems to ensure compatibility with radar systems in the radiodetermination service	In force
F.1191-2	05-2001	Bandwidths and unwanted emissions of digital fixed service systems	In force
F.1192	10-1995	Traffic capacity of automatically controlled radio systems and networks in the HF fixed service	In force
F.1241	05-1997	Performance degradation due to interference from other services sharing the same frequency bands on a primary basis with digital radio-relay systems operating at or above the primary rate and which may form part of the international portion of a 27 500 km hypothetical reference path	In force
F.1242	05-1997	Radio-frequency channel arrangements for digital radio systems operating in the range 1 350 MHz to 1 530 MHz	In force
F.1243	05-1997	Radio-frequency channel arrangements for digital radio systems operating in the range 2 290-2 670 MHz	In force
F.1244	05-1997	Radio local area networks (RLANs)	In force
F.1245-1	05-2000	Mathematical model of average radiation patterns for line-of-sight point-to-point radio-relay system antennas for use in certain coordination studies and interference assessment in the frequency range from 1 to about 70 GHz	In force
F.1246	05-1997	Reference bandwidth of receiving stations in the fixed service to be used in coordination of frequency assignments with transmitting space stations in the mobile-satellite service in the 1-3 GHz range	In force
F.1247-1	05-2000	Technical and operational characteristics of systems in the fixed service to	In force

		facilitate sharing with the space research, space operation and Earth exploration-satellite services operating in the bands 2 025-2 110 MHz and 2 200-2 290 MHz	
F.1248	05-1997	Limiting interference to satellites in the space science services from the emissions of trans-horizon radio-relay systems in the bands 2 025-2 110 MHz and 2 200-2 290 MHz	In force
F.1249-1	05-2000	Maximum equivalent isotropically radiated power of transmitting stations in the fixed service operating in the frequency band 25.25-27.5 GHz shared with the inter-satellite service	In force
F.1330-1	05-1999	Performance limits for bringing into service of the parts of international plesiochronous digital hierarchy and synchronous digital hierarchy paths and sections implemented by digital radio-relay systems	In force
F.1331	09-1997	Performance degradation due to interference from other services sharing the same frequency bands on a primary basis with analogue radio-relay systems for television	In force
F.1332-1	05-1999	Radio-frequency signal transport through optical fibres	In force
F.1333-1	05-1999	Estimation of the actual elevation angle from a station in the fixed service towards a space station taking into account atmospheric refraction	In force
F.1334	09-1997	Protection criteria for systems in the fixed service sharing the same frequency bands in the 1 to 3 GHz range with the land mobile service	In force
F.1335	09-1997	Technical and operational considerations in the phased transitional approach for bands shared between the mobile-satellite service and the fixed service at 2 GHz	In force
F.1336-1	05-2000	Reference radiation patterns of omnidirectional, sectoral and other antennas in point-to-multipoint systems for use in sharing studies in the frequency range from 1 to about 70 GHz	In force
F.1337	09-1997	Frequency management of adaptive HF radio systems and networks using FMCW oblique-incidence sounding	In force
F.1338	10-1997	Threshold levels to determine the need to coordinate between particular systems in the broadcasting-satellite service (sound) in the geostationary-satellite orbit for space-to-Earth transmissions and the fixed service in the band 1 452-1 492 MHz	In force
F.1397-2	05-2002	Error performance objectives for real digital radio links used in the international portion of a 27 500 km hypothetical reference path at or above the primary rate *This Recommendation replaces Rec. ITU-R F.1092-1*	In force
F.1398	05-1999	Performance degradation due to interference from other services sharing the same frequency bands on a primary basis with digital radio-relay systems operating at or above the primary rate and which may form part of the national portion of a 27 500 km hypothetical reference path	In force
F.1399-1	05-2001	Vocabulary of terms for wireless access	In force
F.1400	05-1999	Performance and availability requirements and objectives for fixed wireless access to public switched telephone network	In force
F.1401	05-1999	Frequency bands for fixed wireless access systems and the identification methodology	In force
F.1402	05-1999	Frequency sharing criteria between a land mobile wireless access system and a fixed wireless access system using the same equipment type as the mobile wireless access system	In force
F.1403	05-1999	Power flux-density criteria in ITU-R Recommendations for protection of systems in the fixed service in frequency bands shared with space stations of various space services	In force
F.1404-1	05-2002	Minimum propagation attenuation due to atmospheric gases for use in frequency sharing studies between systems in the fixed service and systems in the broadcasting-satellite, mobile-satellite and space science services	In force
F.1405	05-1999	Guidance to facilitate coordination and use of frequency bands shared between the fixed service and mobile-satellite service in the frequency range 1-3 GHz	In force
F.1487	05-2000	Testing of HF modems with bandwidths of up to about 12 kHz using ionospheric channel simulators	In force
F.1488	05-2000	Frequency block arrangements for fixed wireless access systems in the range 3 400-3 800 MHz	In force

F.1489	05-2000	A methodology for assessing the level of operational compatibility between fixed wireless access and radiolocation systems when sharing the band 3.4-3.7 GHz	In force
F.1490	05-2000	Generic requirements for fixed wireless access systems	In force
F.1491-2	05-2002	Error performance objectives for real digital radio links used in the national portion of a 27 500 km hypothetical reference path at or above the primary rate *This Recommendation replaces Rec. ITU-R F.1189-1*	In force
F.1492	05-2000	Availability objectives for real digital radio-relay links forming part of international portion constant bit rate digital path at or above the primary rate	In force
F.1493	05-2000	Availability objectives for real digital radio-relay links forming part of national portion constant bit rate digital path at or above the primary rate	In force
F.1494	05-2000	Interference criteria to protect the fixed service from time varying aggregate interference from other services sharing the 10.7-12.75 GHz band on a co-primary basis	In force
F.1495	05-2000	Interference criteria to protect the fixed service from time varying aggregate interference from other services sharing the 17.7-19.3 GHz band on a co-primary basis	In force
F.1496-1	02-2002	Radio-frequency channel arrangements for fixed wireless systems operating in the band 51.4?52.6 GHz	In force
F.1497-1	02-2002	Radio-frequency channel arrangements for fixed wireless systems operating in the band 55.78-59 GHz	In force
F.1498-1	05-2002	Deployment characteristics of fixed service systems in the band 37-40 GHz for use in sharing studies	In force
F.1499	05-2000	Radio transmission systems for fixed broadband wireless access based on cable modem standard	In force
F.1500	05-2000	Preferred characteristics of systems in the fixed service using high altitude platforms operating in the bands 47.2-47.5 GHz and 47.9-48.2 GHz	In force
F.1501	05-2000	Coordination distance for systems in the fixed service (FS) involving high-altitude platform stations (HAPSS) sharing the frequency bands 47.2-47.5 GHz and 47.9-48.2 GHz with other systems in the fixed service	In force
F.1502	05-2000	Protection of the fixed service in the frequency band 8 025-8 400 MHz sharing with geostationary-satellite systems of the Earth exploration-satellite service (space-to-Earth)	In force
F.1509	02-2001	Technical and operational requirements that facilitate sharing between point-to-multipoint systems in the fixed service and the inter-satellite service in the band 25.25-27.5 GHz	In force
F.1518	05-2001	Spectrum requirement methodology for fixed wireless access and mobile wireless access networks using the same type of equipment, when coexisting in the same frequency band	In force
F.1519	05-2001	Guidance on frequency arrangements based on frequency blocks for systems in the fixed service	In force
F.1520-2	02-2003	Radio-frequency arrangements for systems in the fixed service operating in the band 31.8-33.4 GHz	In force
F.1565	05-2002	Performance degradation due to interference from other services sharing the same frequency bands on a co-primary basis with real digital fixed wireless systems used in the international and national portions of a 27 500 km hypothetical reference path at or above the primary rate	In force
F.1566	05-2002	Performance limits for maintenance of digital fixed wireless systems operating in plesiochronous and synchronous digital hierarchy - based international paths and sections	In force
F.1567	05-2002	Radio-frequency channel arrangement for digital fixed wireless systems operating in the frequency band 406.1-450 MHz	In force
F.1568	05-2002	Radio-frequency block arrangements for fixed wireless access systems in the range 10.15-10.3/10.5-10.65 GHz	In force
F.1569	05-2002	Technical and operational characteristics for the fixed service using high altitude platform stations in the bands 27.5-28.35 GHz and 31-31.3 GHz	In force
F.1570-1	02-2003	Impact of uplink transmission in the fixed service using high altitude platform stations in the Earth exploration-satellite service (passive) in the 31.3-31.8 GHz band	In force

F.1571	05-2002	Mitigation techniques for use in reducing the potential for interference between airborne stations in the radionavigation service and stations in the fixed service in the band 31.8-33.4 GHz	In force
F.1605	02-2003	Error performance and availability estimation for synchronous digital hierarchy terrestrial fixed wireless systems	In force
F.1606	02-2003	Interference criteria to protect fixed wireless systems from time varying aggregate interference produced by non-geostationary satellites operating in other services sharing the 37-40 GHz and 40.5-42.5 GHz bands on a co-primary basis	In force
F.1607	02-2003	Interference mitigation techniques for use by high altitude platform stations in the 27.5-28.35 GHz and 31.0-31.3 GHz bands	In force
F.1608	02-2003	Frequency sharing between systems in the fixed service using high altitude platform stations and conventional systems in the fixed service in the bands 47.2-47.5 and 47.9-48.2 GHz	In force
F.1609	02-2003	Interference evaluation from fixed service systems using high altitude platform stations to conventional fixed service systems in the bands 27.5-28.35 GHz and 31.0-31.3 GHz	In force
F.1610	02-2003	Planning, design and implementation of HF fixed service radio systems	In force
F.1611	02-2003	Prediction methods for adaptive HF system planning and operation	In force
F.1612	02-2003	Interference evaluation of the fixed service using high altitude platform stations to protect the radio astronomy service from uplink transmission in high altitude platform station systems in the 31.3-31.8 GHz band	In force
F.1613	02-2003	Operational and deployment requirements for fixed wireless access systems in the fixed service in Region 3 to ensure the protection of systems in the Earth exploration-satellite service (active) and the space research service (active) in the band 5 250-5 350 MHz	In force

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

Number	Approved in	Title	Status
M.218-2	06-1990	Prevention of interference to radio reception on board ships *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
M.219-1	07-1966	Alarm signal for use on the maritime radiotelephony distress frequency of 2 182 kHz *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
M.257-3	10-1995	Sequential Single Frequency selective-calling system for use in the maritime mobile service	In force
M.428-3	06-1990	Direction-finding and/or homing in the 2 MHz band on board ships *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
M.441-1	07-1982	Signal-to-interference ratios and minimum field strengths required in the aeronautical mobile (R) service above 30 MHz	In force
M.476-5	10-1995	Direct-printing telegraph equipment in the maritime mobile service	In force
M.478-5	10-1995	Technical characteristics of equipment and principles governing the allocation of frequency channels between 25 and 3 000 MHz for the FM land mobile service	In force
M.488-1	06-1990	Equivalent powers of double-sideband and single-sideband radiotelephone emissions in the maritime mobile service	In force
M.489-2	10-1995	Technical characteristics of VHF radiotelephone equipment operating in the maritime mobile service in channels spaced by 25 kHz	In force
M.490	07-1974	The introduction of direct-printing telegraph equipment in the maritime mobile service. Equivalence of terms *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
M.491-1	07-1986	Translation between an identity number and identities for direct-printing telegraphy in the maritime mobile service	In force
M.492-6	10-1995	Operational procedures for the use of direct-printing telegraph equipment in the maritime mobile service	In force
M.493-10	05-2000	Digital selective-calling system for use in the maritime mobile service	In force
M.494	07-1974	Technical characteristics of single-sideband equipment in the MF and HF land mobile radiotelephone service *Note - Withdrawn on 20/10/95 (RA-95)*	Withdrawn
M.496-3	03-1992	Limits of power flux-density of radionavigation transmitters to protect space station receivers in the fixed-satellite service in the 14 GHz band	In force
M.539-3	09-1994	Technical and operational characteristics of international radio-paging systems	In force
M.540-2	06-1990	Operational and technical characteristics for an automated direct-printing telegraph system for promulgation of navigational and meteorological warnings and urgent information to ships	In force
M.541-8	10-1997	Operational procedures for the use of digital selective-calling equipment in the maritime mobile service	In force
M.542-1	07-1982	On-board communications by means of portable radiotelephone equipment *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
M.546-2	06-1990	Hypothetical telephone reference circuit in the aeronautical, land and maritime mobile-satellite services	In force
M.547	07-1978	Noise objectives in the hypothetical reference circuit for systems in the maritime mobile-satellite service	In force
M.548	07-1978	Overall transmission characteristics of telephone circuits in the maritime mobile-satellite service	In force
M.549-1	07-1982	Side tone reference equivalent of handset used on board a ship in the maritime mobile-satellite service and in automated VHF/UHF maritime mobile radiotelephone systems	In force

M.550-1	07-1986	Use of echo suppressors in the maritime mobile-satellite service	In force
M.552	07-1978	Quality objectives for 50-baud start-stop telegraph transmission in the maritime mobile-satellite service	In force
M.553	07-1978	Interface requirements for 50-baud start-stop telegraph transmission in the maritime mobile-satellite service	In force
M.584-2	11-1997	Codes and formats for radio paging	In force
M.585-3	06-2003	Assignment and use of maritime mobile service identities	In force
M.586-1	07-1986	Automated VHF/UHF maritime mobile telephone system	In force
M.587-1	07-1986	Coast station identities and initiation of location registration in an automated VHF/UHF maritime mobile telephone system	In force
M.588	07-1982	Characteristics of maritime radio beacons (Region 1)	In force
M.589-3	08-2001	Technical characteristics of methods of data transmission and interference protection for radionavigation services in the frequency bands between 70 and 130 kHz	In force
M.622	07-1986	Technical and operational characteristics of analogue cellular systems for public land mobile telephone use	In force
M.623	07-1986	Data transmission bit rates and modulation techniques in the land mobile service *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
M.624	07-1986	Public land mobile communication systems location registration	In force
M.625-3	10-1995	Direct-printing telegraph equipment employing automatic identification in the maritime mobile service	In force
M.626	07-1986	Evaluation of the quality of digital channels in the maritime mobile service	In force
M.627-1	10-1995	Technical characteristics for HF maritime radio equipment using narrow-band phase-shift keying (NBPSK) telegraphy	In force
M.628-3	09-1994	Technical characteristics for search and rescue radar transponders	In force
M.629	07-1986	Use of the radionavigation service of the frequency bands 2 900-3 100 MHz, 5 470-5 650 MHz, 9 200-9 300 MHz, 9 300-9 500 MHz and 9 500-9 800 MHz	In force
M.630	07-1986	Main characteristics of two frequency shipborne interrogator transponders (SIT) *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
M.631-1	03-1992	Use of hyperbolic maritime radionavigation systems in the band 283.5-315 kHz	In force
M.632-3	02-1997	Transmission characteristics of a satellite emergency position-indicating radio beacon (satellite EPIRB) system operating through geostationary satellites in the 1.6 GHz band	In force
M.633-2	05-2000	Transmission characteristics of a satellite emergency position-indicating radio beacon (satellite EPIRB) system operating through a low polar-orbiting satellite system in the 406 MHz band	In force
M.687-2	02-1997	International Mobile Telecommunications-2000 (IMT-2000)	In force
M.688	06-1990	Technical characteristics for a high frequency direct-printing telegraph system for promulgation of high seas and NAVTEX-type maritime safety information	In force
M.689-2	09-1994	International maritime VHF radiotelephone system with automatic facilities based on DSC signalling format	In force
M.690-1	10-1995	Technical characteristics of emergency position-indicating radio beacons (EPIRBs) operating on the carrier frequencies of 121.5 MHz and 243 MHz	In force
M.691-1	03-1992	Technical characteristics and compatibility criteria of maritime radiolocation systems operating in the medium frequency band and using spread-spectrum techniques *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
M.692	06-1990	Narrow-band direct-printing telegraph equipment using a single-frequency channel *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
M.693	06-1990	Technical characteristics of VHF emergency position-indicating radio beacons using digital selective calling (DSC VHF EPIRB)	In force
M.694	06-1990	Reference radiation pattern for ship earth station antennas	In force
M.816-1	10-1997	Framework for services supported on International Mobile Telecommunications-2000 (IMT-2000)	In force

M.817	03-1992	International Mobile Telecommunications-2000 (IMT-2000). Network architectures	In force
M.818-2	06-2003	Satellite operation within International Mobile Telecommunications-2000 (IMT-2000)	In force
M.819-2	02-1997	International Mobile Telecommunications-2000 (IMT-2000) for developing countries	In force
M.820	03-1992	Use of 9-digit identities for narrow-band direct-printing telegraphy in the maritime mobile service	In force
M.821-1	02-1997	Optional expansion of the digital selective-calling system for use in the maritime mobile service	In force
M.822-1	09-1994	Calling-channel loading for digital selective calling (DSC) for the maritime mobile service	In force
M.823-2	10-1997	Technical characteristics of differential transmissions for Global Navigation Satellite Systems from maritime radio beacons in the frequency band 283.5-315 kHz in Region 1 and 285-325 kHz in Regions 2 and 3	In force
M.824-2	10-1995	Technical parameters of radar beacons (RACONS)	In force
M.825-3	10-1998	Characteristics of a transponder system using digital selective calling techniques for use with vessel traffic services and ship-to-ship identification	In force
M.826	03-1992	Transmission of information for updating electronic chart display and information systems (ECDIS)	In force
M.827	03-1992	Hypothetical reference digital path for systems in the mobile-satellite service using feeder links	In force
M.828-1	09-1994	Definition of availability for communication circuits in the mobile-satellite service (MSS)	In force
M.829-1	09-1994	Frequency sharing in the 1660-1660.5 MHz band between the mobile-satellite service and the radioastronomy service *Note - Withdrawn on 24/10/97 (RA-97)*	Withdrawn
M.830	03-1992	Operational procedures for mobile-satellite networks or systems in the bands 1 530-1 544 MHz and 1 626.5-1 645.5 MHz which are used for distress and safety purposes as specified for GMDSS	In force
M.831	03-1992	Frequency sharing between services in the band 4-30 MHz *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
M.1032	03-1994	Technical and operational characteristics of land mobile systems using multi-channel access techniques without a central controller	In force
M.1033-1	02-1997	Technical and operational characteristics of cordless telephones and cordless telecommunication systems	In force
M.1034-1	02-1997	Requirements for the radio interface(s) for International Mobile Telecommunications-2000 (IMT-2000)	In force
M.1035	03-1994	Framework for the radio interface(s) and radio sub-system functionality for International Mobile Telecommunications-2000 (IMT-2000)	In force
M.8/1023	06-2003	Draft revision of Recommendation ITU-R M.1036-1 - Frequency arrangements for implementation of the terrestrial component of International Mobile Telecommunications-2000 (IMT-2000) in the bands 806-960 MHz, 1 710-2 025 MHz, 2 110-2 200 MHz and 2 500-2 690 MHz	Pre-published
M.1037	03-1994	Bit error performance objectives for aeronautical mobile-satellite (R) service (AMS(R)S) radio link	In force
M.1038	03-1994	Efficient use of the geostationary-satellite orbit and spectrum in the 1-3 GHz frequency range by mobile-satellite systems	In force
M.1039-2	05-2000	Co-frequency sharing between stations in the mobile service below 1 GHz and mobile earth stations of non-geostationary mobile- satellite systems (Earth-space) using frequency division multiple access	In force
M.1040	03-1994	Public mobile telecommunication service with aircraft using the bands 1 670-1 675 MHz and 1 800-1 805 MHz	In force
M.1041-2	06-2003	Future amateur radio systems (FARS)	In force
M.1042-2	06-2003	Disaster communications in the amateur and amateur-satellite services	In force
M.1043-2	06-2003	Use of the amateur and amateur-satellite services in developing countries	In force
M.1044-2	06-2003	Frequency sharing criteria in the amateur and amateur-satellite services	In force
M.1072	09-1994	Interference due to intermodulation products in the land mobile service between 25 and 3 000 MHz	In force

M.1073-1	02-1997	Digital cellular land mobile telecommunication systems	In force
M.1074	09-1994	Integration of public mobile radiocommunication systems	In force
M.1075	09-1994	Leaky feeder systems in the land mobile services	In force
M.1076	09-1994	Wireless communication systems for persons with impaired hearing	In force
M.1077	09-1994	Multi-transmitter radio systems using quasi-synchronous (simulcast) transmission for analogue speech *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
M.1078	09-1994	Security principles for International Mobile Telecommunications-2000 (IMT-2000)	In force
M.1079-2	06-2003	Performance and quality of service requirements for International Mobile Telecommunications-2000 (IMT-2000) access networks	In force
M.1080	09-1994	Digital selective calling system enhancement for multiple equipment installations	In force
M.1081	09-1994	Automatic HF facsimile and data system for maritime mobile users	In force
M.1082-1	10-1997	International maritime MF/HF radiotelephone system with automatic facilities based on DSC signalling format	In force
M.1083	09-1994	Interworking of maritime radiotelephone systems *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
M.1084-4	08-2001	Interim solutions for improved efficiency in the use of the band 156-174 MHz by stations in the maritime mobile service	In force
M.1085-1	02-1997	Technical and operational characteristics of wind profiler radars for bands in the vicinity of 400 MHz	In force
M.1086	09-1994	Determination of the need for coordination between geostationary mobile satellite networks sharing the same frequency bands	In force
M.1087	09-1994	Methods for evaluating sharing between systems in the land mobile service and spread-spectrum low-Earth orbit (LEO) systems in the mobile-satellite service (MSS) below 1 GHz	In force
M.1088	09-1994	Considerations for sharing with systems of other services operating in the bands allocated to the radionavigation satellite service	In force
M.1089-1	07-2002	Technical considerations for the coordination of mobile-satellite systems relating to the aeronautical mobile satellite (R) service (AMS(R)S) in the bands 1 545 to 1 555 MHz and 1 646.5 to 1 656.5 MHz	In force
M.1090	09-1994	Frequency plans for satellite transmission of single channel per carrier (SCPC) carriers using non-linear transponders in the mobile-satellite service	In force
M.1091	09-1994	Reference off-axis radiation patterns for mobile eath station antennas operating in the land mobile-satellite service in the frequency range 1 to 3 GHz	In force
M.1141-1	10-1997	Sharing in the 1-3 GHz frequency range between non-geostationary space stations operating in the mobile-satellite service and the fixed service	In force
M.1142-1	10-1997	Sharing in the 1-3 GHz frequency range between geostationary space stations operating in the mobile-satellite service and the fixed service	In force
M.1143-2	06-2003	System specific methodology for coordination of non-geostationary space stations (space-to-Earth) operating in the mobile-satellite service with the fixed service	In force
M.1167	10-1995	Framework for the satellite component of International Mobile Telecommunications-2000 (IMT-2000)	In force
M.1168	10-1995	Framework of International Mobile Telecommunications-2000 (IMT-2000)	In force
M.1169	10-1995	Hours of service of ship stations	In force
M.1170	10-1995	Morse telegraphy procedures in the maritime mobile service	In force
M.1171	10-1995	Radiotelephony procedures in the maritime mobile service	In force
M.1172	10-1995	Miscellaneous abbreviations and signals to be used for radiocommunications in the maritime mobile service	In force
M.1173	10-1995	Technical characteristics of single-sideband transmitters used in the maritime mobile service for radiotelephony in the bands between 1 606.5 kHz (1 605 kHz Region 2) and 4 000 kHz and between 4 000 kHz and 27 500 kHz	In force
M.1174-1	10-1998	Technical characteristics of equipment used for on-board vessel communications in the bands between 450 and 470 MHz	In force
M.1175	10-1995	Automatic receiving equipment for radiotelegraph and radiotelephone alarm	In force

		signals	
M.1176	10-1995	Technical parameters of radar target enhancers	In force
M.1177-2	05-2000	Techniques for measurement of unwanted emissions of radar systems	In force
M.1178	10-1995	Use of the maritime radionavigation band 283.5-315 kHz (Region 1) and 285-325 kHz (Regions 2 and 3)	In force
M.1179	10-1995	Procedures for determining the interference coupling mechanisms and mitigation options for systems operating in bands adjacent to and in harmonic relationship with radar stations in the radiodetermination service	In force
M.1180	10-1995	Availability of communication circuits in the aeronautical mobile-satellite (R) services (AMS(R)S)	In force
M.1181	10-1995	Minimum performance objectives for narrow-band digital channels using geostationary satellites to serve transportable and vehicular mobile earth stations in the 1-3 GHz range, not forming part of the ISDN	In force
M.1182-1	06-2003	Integration of terrestrial and satellite mobile communication systems	In force
M.1183	10-1995	Permissible levels of interference in a digital channel of a geostationary network in mobile-satellite service in 1-3 GHz caused by other networks of this service and fixed-satellite service	In force
M.1184-2	06-2003	Technical characteristics of mobile satellite systems in the frequency bands below 3 GHz for use in developing criteria for sharing between the mobile-satellite service (MSS) and other services	In force
M.1185-1	10-1997	Method for determining coordination distance between ground based mobile earth stations and terrrestrial stations operating in the 148.0-149.9 MHz band	In force
M.1186	10-1995	Technical considerations for the coordination between mobile-satellite service (MSS) networks utilizing code division multiple access (CDMA) and other spread spectrum techniques in the 1-3 GHz band	In force
M.1187	10-1995	A method for the calculation of the potentially affected region for a mobile-satellite service (MSS) network in the 1-3 GHz range using circular orbits	In force
M.1188	10-1995	Impact of propagation on the design of non-GSO mobile-satellite systems not employing satellite diversity which provide service to handheld equipment	In force
M.1221	02-1997	Technical and operational requirements for cellular multimode mobile radio stations	In force
M.1222	02-1997	Transmission of data messages on shared private land mobile radio channels	In force
M.1223	02-1997	Evaluation of security mechanisms for IMT-2000	In force
M.1224	02-1997	Vocabulary of terms for International Mobile Telecommunications-2000 (IMT-2000)	In force
M.1225	02-1997	Guidelines for evaluation of radio transmission technologies for IMT-2000	In force
M.1226	02-1997	Technical and operational characteristics of wind profiler radars in bands in the vicinity of 50 MHz	In force
M.1227-2	08-2001	Technical and operational characteristics of wind profiler radars in bands in the vicinity of 1 000 MHz	In force
M.1228	02-1997	Methodology for determining performance objectives for narrow-band channels in mobile satellite systems using geostationary satellites not forming part of the ISDN	In force
M.1229	02-1997	Performance objectives for the digital aeronautical mobile-satellite service (AMSS) channels operating in the bands 1 525 to 1 559 MHz and 1 626.5 to 1 660.5 MHz not forming part of the ISDN	In force
M.1230	02-1997	Performance objectives for space-to-Earth links operating in the mobile-satellite service with non-geostationary satellites in the 137-138 MHz band	In force
M.1231	02-1997	Interference criteria for space-to-Earth links operating in the mobile-satellite service with non-geostationary satellites in the 137-138 MHz band	In force
M.1232	02-1997	Sharing criteria for space-to-Earth links operating in the mobile-satellite service with non-geostationary satellites in the 137-138 MHz band	In force
M.1233	02-1997	Technical considerations for sharing satellite network resources between the mobile-satellite service (MSS) (other than the aeronautical mobile-satellite (R) service (AMS(R)S)) and AMS(R)S	In force
M.1234	02-1997	Permissible level of interference in a digital channel of a geostationary satellite network in the aeronautical mobile-satellite (R) service (AMS(R)S) in the bands 1 545 to 1 555 MHz and 1 646.5 to 1 656.5 MHz and its	In force

		associated feeder links caused by other networks of this service and the fixed-satellite service	
M.1307	10-1997	Automatic determination of location and guidance in the land mobile services	In force
M.1308	10-1997	Evolution of land mobile systems towards IMT-2000	In force
M.1309	10-1997	Digitally coded speech in the land mobile service	In force
M.1310	10-1997	Transport information and control systems (TICS) - Objectives and requirements	In force
M.1311	10-1997	Framework for modularity and radio commonality within IMT-2000	In force
M.1312	10-1997	A long-term solution for improved efficiency in the use of the band 156-174 MHz by stations in the maritime mobile service	In force
M.1313-1	05-2000	Technical characteristics of maritime radionavigation radars	In force
M.1314	10-1997	Reduction of spurious emissions of radar systems operating in the 3 GHz and 5 GHz bands	In force
M.1315	10-1997	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	In force
M.1316	10-1997	Principles and a methodology for frequency sharing in the 1 610.6-1 613.8 and 1 660-1 660.5 MHz bands between the mobile-satellite service (Earth-to-space) and the radio astronomy service	In force
M.1317	10-1997	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)	In force
M.1318	10-1997	Interference protection evaluation model for the radionavigation-satellite service in the 1 559-1 610 MHz band	In force
M.1319-2	06-2003	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 (MSSs) satellite system operating in the 2 GHz range on the performance of line-of-sight fixed service receivers	In force
M.1343	11-1997	Essential technical requirements of mobile Earth stations for global non-geostationary mobile-satellite service systems in the band 1-3 GHz	In force
M.1371-1	08-2001	Technical characteristics for a universal shipborne automatic identification system using time division multiple access in the VHF maritime mobile band	In force
M.1372-1	06-2003	Efficient use of the radio spectrum by radar stations in the radiodetermination service	In force
M.1388	01-1999	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	In force
M.1389	01-1999	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	In force
M.1390	01-1999	Methodology for the calculation of IMT-2000 terrestrial spectrum requirements	In force
M.1391	01-1999	Methodology for the calculation of IMT-2000 satellite spectrum requirements	In force
M.1450-2	06-2003	Characteristics of broadband radio local area networks	In force
M.1451	05-2000	Transport information and control systems: functionalities	In force
M.1452	05-2000	Transport information and control systems - Low power short-range vehicular radar equipment at 60 GHz and 76 GHz	In force
M.1453-1	07-2002	Transport information and control systems - Dedicated short range communications at 5.8 GHz	In force
M.1454	05-2000	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 mobile-satellite service in the frequency band 5 150-5 250 MHz	In force
M.1455-2	08-2001	Key characteristics for the International Mobile Telecommunications-2000 (IMT-2000) radio interfaces	In force
M.1456	05-2000	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	In force

M.8/BL/18	04-2003	Draft revision of Recommendation ITU-R M.1457-1 - Detailed specifications of the radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)	Pre-published. Available only in MS WORD
M.1458	05-2000	Use of the frequency bands between 2.8-22 MHz by the aeronautical mobile (R) service for data transmission using class of emission J2D	In force
M.1459	05-2000	Protection criteria for telemetry systems in the aeronautical mobile service and mitigation techniques to facilitate sharing with geostationary broadcasting-satellite and mobile-satellite services in the frequency bands 1 452-1 525 MHz and 2 310-2 360 MHz	In force
M.1460	05-2000	Technical and operational characteristics and protection criteria of radiodetermination and meteorological radars in the 2 900-3 100 MHz band	In force
M.8/1012	06-2003	Draft revision of Recommendation ITU-R M.1461 - Procedures for determining the potential for interference between radars operating in the radiodetermination service and systems in other services	Pre-published
M.1462	05-2000	Characteristics of and protection criteria for radars operating in the radiolocation service in the frequency range 420-450 MHz	In force
M.1463	05-2000	Characteristics of and protection criteria for radars operating in the radiodetermination service in the frequency band 1 215-1 400 MHz	In force
M.8/1019	06-2003	Draft revision of Recommendation ITU-R M.1464 - Characteristics of radiolocation radars, and characteristics and protection criteria for aeronautical radionavigation and meteorological radars in the radiodetermination service operating in the frequency band 2 700-2 900 MHz	Pre-published
M.1465	05-2000	Characteristics of and protection criteria for radars operating in the radiodetermination service in the frequency band 3 100-3 700 MHz	In force
M.1466	05-2000	Characteristics of, and protection criteria for radars operating in the radionavigation service in the frequency band 31.8-33.4 GHz	In force
M.1467	05-2000	Prediction of A2 and NAVTEX ranges and protection of A2 global maritime distress and safety system distress watch channel	In force
M.1468	05-2000	Technical characteristics and sharing scenarios of satellite systems offering multiple services	In force
M.1469	05-2000	Methodology for evaluating potentia 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	In force
M.1470	05-2000	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	In force
M.1471	05-2000	Guidance to facilitate coordination and use of frequency bands shared between the mobile-satellite service and the fixed service in the frequency range 1-3 GHz	In force
M.1472	05-2000	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	In force
M.1473	05-2000	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	In force
M.1474	05-2000	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	In force
M.1475	05-2000	Methodology for derivation of performance objectives of non-geostationary mobile-satellite service systems operating in the 1-3 GHz band not using satellite diversity	In force
M.1476	05-2000	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	In force
M.1477	05-2000	Technical and performance characteristics of current and planned radionavigation-satellite service (space-to-Earth) and aeronautical	In force

		radionavigation service receivers to be considered in interference studies in the band 1 559-1 610 MHz	
M.1478	05-2000	Protection criteria for Cospas-Sarsat search and rescue processors in the band 406-406.1 MHz	In force
M.1479	05-2000	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	In force
M.1480	05-2000	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	In force
M.1544	08-2001	Minimum qualifications of radio amateurs	In force
M.1545	08-2001	Measurement uncertainty as it applies to test limits for the terrestrial component of International Mobile Telecommunications-2000	In force
M.1579	07-2002	Global circulation of IMT-2000 terminals	In force
M.1580	07-2002	Generic unwanted emission characteristics of base stations using the terrestrial radio interfaces of IMT-2000	In force
M.1581	07-2002	Generic unwanted emission characteristics of mobile stations using the terrestrial radio interfaces of IMT-2000	In force
M.1582	07-2002	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)	In force
M.1583	07-2002	Interference calculations between non-geostationary mobile-satellite service or radionavigation-satellite service systems and radio astronomy telescope sites	In force
M.1584	07-2002	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	In force
M.1634	06-2003	Interference protection of terrestrial mobile service systems using Monte Carlo simulation with application to frequency sharing	In force
M.1635	06-2003	General methodology for assessing the potential for interference between IMT-2000 or systems beyond IMT-2000 and other services	In force
M.1636	06-2003	Basic reference models and performance parameters of Internet Protocol packet network transmission in the mobile-satellite service	In force
M.1637	06-2003	Global cross-border circulation of radiocommunication equipment in emergency and disaster relief situations	In force
M.1638	06-2003	Characteristics of and protection criteria for sharing studies for radiolocation, aeronautical radionavigation and meteorological radars operating in the frequency bands between 5 250 and 5 850 MHz	In force
M.1639	06-2003	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	In force
M.1640	06-2003	Characteristics of, and protection criteria for radars operating in the radiodetermination service in the frequency band 33.4-36 GHz	In force
M.8/1015	06-2003	Draft new recommendation ITU-R M. [IMT.HAPSINT] [Doc. 8/106] - 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 within the boundary of an administration	Pre-published
M.1642	06-2003	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	In force
M.1643	06-2003	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)	In force

M.8/1020	06-2003	Draft new Recommendation ITU-R M.[RAD.CHARZ] [Doc. 8/98] - 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	Pre-published
M.1646	06-2003	Parameters to be used in co-frequency sharing and pfd threshold studies between terrestrial IMT-2000 and broadcasting-satellite service (sound) in the 2 630-2 655 MHz band	In force
M.8/1024	06-2003	Draft new Recommendation ITU-R M.[Method Nwa Spectrum [Doc. 8/150]] - A method for assessing the required spectrum for broadband nomadic wireless access systems including radio local area networks1 using the 5 GHz band	Pre-published
M.1652	06-2003	Dynamic frequency selection (DFS)1 in wireless access systems including radio local area networks for the purpose of protecting the radiodetermination service in the 5 GHz band	In force
M.8/1005	06-2003	Draft new Recommendation ITU-R M.[Was 5 GHz Expansion-EESS [Doc. 8/153]] - Operational and deployment requirements for wireless access systems (WAS) including radio local area networks (RLANs) 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	Pre-published
M.8/1026	06-2003	Draft new Recommendation ITU-R M.[IMT.BSSMETH] - A methodology to assess interference from BSS (sound into terrestrial IMT-2000 systems intending to usethe band 2 630-2 655 MHz	Pre-published

Series P: Radiowave propagation

Number	Approved in	Title	Status
P.310-9	08-1994	Definitions of terms relating to propagation in non-ionized media	In force
P.311-11	04-2003	Acquisition, presentation and analysis of data in studies of tropospheric propagation	In force
P.313-9	07-1999	Exchange of information for short-term forecasts and transmission of ionospheric disturbance warnings	In force
P.341-5	10-1999	The concept of transmission loss for radio links	In force
P.368-7	03-1992	Ground-wave propagation curves for frequencies between 10 kHz and 30 MHz	In force
P.369-6	08-1994	Reference atmosphere for refraction *Note - Withdrawn on 24/10/97 (RA-97) - This Recommendation has been replaced by Rec. ITU-R P.453-6*	Withdrawn
P.370-7	10-1995	VHF and UHF propagation curves for the frequency range from 30 MHz to 1 000 MHz. Broadcasting services *Note - Withdrawn on 22/10/01 (CACE/233)*	Withdrawn
P.371-8	07-1999	Choice of indices for long-term ionospheric predictions	In force
P.372-8	04-2003	Radio noise	In force
P.373-7	10-1995	Definitions of maximum and minimum transmission frequencies	In force
P.434-6	10-1995	ITU-R reference ionospheric characteristics and methods of basic MUF, operational MUF and ray-path prediction *Note - Withdrawn on 24/10/97 (RA-97) - This Recommendation has been replaced by Rec. ITU-R P.1239 and ITU-R P.1240*	Withdrawn
P.452-11	04-2003	Prediction procedure for the evaluation of microwave interference between stations on the surface of the Earth at frequencies above about 0.7 GHz	In force
P.453-9	04-2003	The radio refractive index: its formula and refractivity data	In force
P.525-2	08-1994	Calculation of free-space attenuation	In force
P.526-8	04-2003	Propagation by diffraction	In force
P.527-3	03-1992	Electrical characteristics of the surface of the Earth	In force
P.528-2	07-1986	Propagation curves for aeronautical mobile and radionavigation services using the VHF, UHF and SHF bands	In force
P.529-3	10-1999	Prediction methods for the terrestrial land mobile service in the VHF and UHF bands *Note - Withdrawn on 22/10/01 (CACE/233)*	Withdrawn
P.530-10	11-2001	Propagation data and prediction methods required for the design of terrestrial line-of-sight systems	In force
P.531-7	04-2003	Ionospheric propagation data and prediction methods required for the design of satellite services and systems	In force
P.532-1	03-1992	Ionospheric effects and operational considerations associated with artificial modification of the ionosphere and the radio-wave channel	In force
P.533-7	02-2001	HF propagation prediction method	In force
P.534-4	10-1999	Method for calculating sporadic-E field strength	In force
P.581-2	06-1990	The concept of "worst month"	In force
P.616	07-1986	Propagation data for terrestrial maritime mobile services operating at frequencies above 30 MHz *Note - Withdrawn on 22/10/01 (CACE/233)*	Withdrawn
P.617-1	03-1992	Propagation prediction techniques and data required for the design of trans-horizon radio-relay systems	In force
P.618-8	04-2003	Propagation data and prediction methods required for the design of Earth-space telecommunication systems	In force

P.619-1	03-1992	Propagation data required for the evaluation of interference between stations in space and those on the surface of the Earth	In force
P.620-5	04-2003	Propagation data required for the evaluation of coordination distances in the frequency range 100 MHz to 105 GHz	In force
P.676-5	02-2001	Attenuation by atmospheric gases	In force
P.678-1	03-1992	Characterization of the natural variability of propagation phenomena	In force
P.679-3	02-2001	Propagation data required for the design of broadcasting-satellite systems	In force
P.680-3	10-1999	Propagation data required for the design of Earth-space maritime mobile telecommunication systems	In force
P.681-6	04-2003	Propagation data required for the design of Earth-space land mobile telecommunication systems	In force
P.682-1	03-1992	Propagation data required for the design of Earth-space aeronautical mobile telecommunication systems	In force
P.684-3	04-2003	Prediction of field strength at frequencies below about 150 kHz	In force
P.832-2	07-1999	World Atlas of Ground Conductivities	In force
P.833-4	04-2003	Attenuation in vegetation	In force
P.834-4	04-2003	Effects of tropospheric refraction on radiowave propagation	In force
P.835-3	10-1999	Reference standard atmospheres	In force
P.836-3	11-2001	Water vapour: surface density and total columnar content	In force
P.837-4	04-2003	Characteristics of precipitation for propagation modelling	In force
P.838-2	04-2003	Specific attenuation model for rain for use in prediction methods	In force
P.839-3	02-2001	Rain height model for prediction methods	In force
P.840-3	10-1999	Attenuation due to clouds and fog	In force
P.841-3	04-2003	Conversion of annual statistics to worst-month statistics	In force
P.842-2	07-1999	Computation of reliability and compatibility of HF radio systems	In force
P.843-1	08-1997	Communication by meteor-burst propagation	In force
P.844-1	08-1994	Ionospheric factors affecting frequency sharing in the VHF and UHF bands (30 MHz-3 GHz)	In force
P.845-3	08-1997	HF field-strength measurement	In force
P.846-1	10-1995	Measurements of ionospheric and related characteristics	In force
P.1057-1	02-2001	Probability distributions relevant to radiowave propagation modelling	In force
P.1058-2	10-1999	Digital topographic databases for propagation studies	In force
P.1060	08-1994	Propagation factors affecting frequency sharing in HF terrestrial systems	In force
P.1144-3	11-2001	Guide to the application of the propagation methods of Radiocommunication Study Group 3	In force
P.1145	10-1995	Propagation data for the terrestrial land mobile service in the VHF and UHF bands	Withdrawn
P.1146	10-1995	The prediction of field strength for land mobile and terrestrial broadcasting services in the frequency range from 1 to 3 GHz *Note - Withdrawn on 22/10/01 (CACE/233)*	Withdrawn
P.1147-2	04-2003	Prediction of sky-wave field strength at frequencies between about 150 and 1 700 kHz	In force
P.1148-1	05-1997	Standardized procedure for comparing predicted and observed HF sky-wave signal intensities and the presentation of such comparisons	In force
P.1238-3	04-2003	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	In force
P.1239	05-1997	ITU-R Reference ionospheric characteristics *Note - This Recommendation replaces Rec. ITU-R P.434-6*	In force
P.1240	05-1997	ITU-R Methods of basic MUF, operational MUF and ray-path prediction *Note - This Recommendation replaces Rec. ITU-R P.434-6*	In force
P.1321	08-1997	Propagation factors affecting systems using digital modulation techniques at LF and MF	In force
P.1322	08-1997	Radiometric estimation of atmospheric attenuation	In force
P.1406	07-1999	Propagation effects relating to terrestrial land mobile service in the VHF and UHF bands	In force

P.1407-1	04-2003	Multipath propagation and parameterization of its characteristics	In force
P.1409	10-1999	Propagation data and prediction methods required for the design of systems using high altitude platform stations at about 47 GHz	In force
P.1410-2	04-2003	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	In force
P.1411-2	04-2003	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	In force
P.1412	10-1999	Propagation data for the evaluation of coordination between Earth stations working in the bidirectionally allocated frequency bands	In force
P.1510	02-2001	Annual mean surface temperature	In force
P.1511	02-2001	Topography for Earth-to-space propagation modelling	In force
P.1546-1	04-2003	Method for point-to-area predictions for terrestrial services in the frequency range 30 MHz to 3 000 MHz	In force
P.1621	04-2003	Propagation data required for the design of Earth-space systems operating between 20 THz and 375 THz	In force
P.1622	04-2003	Prediction methods required for the design of Earth-space systems operating between 20 THz and 375 THz	In force
P.1623	04-2003	Prediction method of fade dynamics on Earth-space paths	In force

Series RA: Radioastronomy

Number	Approved in	Title	Status
RA.7/1006	06-2003	Draft revision of Recommendation ITU-R RA.314-9 - Preferred frequency bands for radio astronomical measurements	Pre-published
RA.7/BL/25	05-2003	Revision of Recommendation ITU-R RA.479-4 - Protection of frequencies for radioastronomical measurements in the shielded zone of the Moon	Pre-published
RA.7/1007	06-2003	Draft revision of Recommendation ITU-R RA.517-2 - Protection of the radio astronomy services from transmitters operating in adjacent bands	Pre-published
RA.7/1008	06-2003	Draft revision of Recommendation ITU-R RA.611-2 - Protection of the radio astronomy service from spurious emissions	Pre-published
RA.7/BL/15	05-2003	Draft revision of Recommendation ITU-R RA.769-1 - Protection criteria used for radio astronomical measurements	Pre-published
RA.1031-1	10-1995	Protection of the radioastronomy service in frequency bands shared with other services	In force
RA.1237-1	06-2003	Protection of the radio astronomy service from unwanted emissions resulting from applications of wideband digital modulation	In force
RA.1272-1	02-2002	Protection of radio astronomy measurements above 60 GHz from ground based interference	In force
RA.1417	10-1999	A radio-quiet zone in the vicinity of the L2 Sun-Earth Lagrange point	In force
RA.7/BL/14	05-2003	Draft revision of Recommendation ITU-R RA.1513 - 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	Pre-published
RA.1630	05-2003	Technical and operational characteristics of ground-based astronomy systems for use in sharing studies with active services between 10 THz and 1 000 THz	In force
RA.1631	05-2003	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	In force

Series S: Fixed-satellite service

Number	Approved in	Title	Status
S.352-4	07-1982	Hypothetical reference circuit for systems using analogue transmission in the fixed-satellite service	In force
S.353-8	09-1994	Allowable noise power in the hypothetical reference circuit for frequency-division multiplex telephony in the fixed-satellite service	In force
S.354-2	07-1974	Video bandwidth and permissible noise level in the hypothetical reference circuit for the fixed-satellite service	In force
S.446-4	04-1993	Carrier energy dispersal for systems employing angle modulation by analogue signals or digital modulation in the fixed-satellite service	In force
S.464-2	03-1992	Pre-emphasis characteristics for frequency-modulation systems for frequency-division multiplex telephony in the fixed-satellite service	In force
S.465-5	04-1993	Reference earth-station radiation pattern for use in coordination and interference assessment in the frequency range from 2 to about 30 GHz	In force
S.466-6	03-1992	Maximum permissible level of interference in a telephone channel of a geostationary-satellite network in the fixed-satellite service employing frequency modulation with frequency-division multiplex, caused by other networks of this service	In force
S.481-2	07-1986	Measurement of noise in actual traffic for systems in the fixed-satellite service for telephony using frequency-division multiplex	In force
S.482-2	07-1986	Measurement of performance by means of a signal of a uniform spectrum for systems using frequency-division multiplex telephony in the fixed-satellite service	In force
S.483-3	05-1997	Maximum permissible level of interference in a television channel of a geostationary-satellite network in the fixed-satellite service employing frequency modulation, caused by other networks of this service	In force
S.484-3	03-1992	Station-keeping in longitude of geostationary satellites in the fixed-satellite service	In force
S.521-4	01-2000	Hypothetical reference digital paths for systems using digital transmission in the fixed-satellite service	In force
S.522-5	09-1994	Allowable bit error ratios at the output of the hypothetical reference digital path for systems in the fixed-satellite service using pulse-code modulation for telephony	In force
S.523-4	03-1992	Maximum permissible levels of interference in a geostationary-satellite network in the fixed-satellite service using 8-bit PCM encoded telephony, caused by other networks of this service	In force
S.524-7	02-2001	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, 14 GHz and 30 GHz frequency bands	In force
S.579-5	06-2001	Availability objectives for a hypothetical reference circuit and a hypothetical reference digital path when used for telephony using pulse code modulation, or as part of an integrated services digital network hypothetical reference connection, in the fixed?satellite service	In force
S.580-5	09-1994	Radiation diagrams for use as design objectives for antennas of earth stations operating with geostationary satellites	In force
S.614-3	09-1994	Allowable error performance for a hypothetical reference digital path in the fixed-satellite service operating below 15 GHz when forming part of an international connection in an integrated services digital network	In force
S.670-1	03-1992	Flexibility in the positioning of satellites as a design objective	In force
S.671-3	09-1994	Necessary protection ratios for narrow-band single channel-per-carrier transmissions interfered with by analogue television carriers	In force
S.672-4	09-1997	Satellite antenna radiation pattern for use as a design objective in the fixed-satellite service employing geostationary satellites	In force

S.673-2	03-2002	Terms and definitions relating to space radiocommunications	In force
S.725	03-1992	Technical characteristics for very small aperture terminals (VSATs)	In force
S.726-1	04-1993	Maximum permissible level of spurious emissions from very small aperture terminals (VSATs)	In force
S.727-1	03-2002	Cross-polarization isolation from very small aperture terminals (VSATs)	In force
S.728-1	10-1995	Maximum permissible level of off-axis e.i.r.p. density from very small aperture terminals (VSATs)	In force
S.729	03-1992	Control and monitoring function of very small aperture terminals (VSATs)	In force
S.730	03-1992	Compensation of the effects of switching discontinuities for voice band data and of doppler frequency-shifts in the fixed-satellite service	In force
S.731	03-1992	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	In force
S.732	03-1992	Method for statistical processing of earth-station antenna side-lobe peaks	In force
S.733-2	01-2000	Determination of the G/T ratio for Earth stations operating in the fixed-satellite service	In force
S.734	03-1992	The application of interference cancellers in the fixed-satellite service	In force
S.735-1	04-1993	Maximum permissible levels of interference in a geostationary-satellite network for an HRDP when forming part of the ISDN in the fixed-satellite service caused by other networks of this service below 15 GHz	In force
S.736-3	05-1997	Estimation of polarization discrimination in calculations of interference between geostationary-satellite networks in the fixed-satellite service	In force
S.737	03-1992	Relationship of technical coordination methods within the fixed-satellite service	In force
S.738	03-1992	Procedure for determining if coordination is required between geostationary-satellite networks sharing the same frequency bands	In force
S.739	03-1992	Additional methods for determining if detailed coordination is necessary between geostationary-satellite networks in the fixed-satellite service sharing the same frequency bands	In force
S.740	03-1992	Technical coordination methods for fixed-satellite networks	In force
S.741-2	09-1994	Carrier-to-interference calculations between networks in the fixed- satellite service	In force
S.742-1	04-1993	Spectrum utilization methodologies	In force
S.743-1	09-1994	The coordination between satellite networks using slightly inclined geostationary-satellite orbits (GSOs) and between such networks and satellite networks using non-inclined GSO satellites	In force
S.744	03-1992	Orbit/spectrum improvement measures for satellite networks having more than one service in one or more frequency bands	In force
S.1001	04-1993	Use of systems in the fixed-satellite service in the event of natural disasters and similar emergencies for warning and relief operations	In force
S.1002	04-1993	Orbit management techniques for the fixed-satellite service	In force
S.1003	04-1993	Environmental protection of the geostationary orbit	In force
S.1061	09-1994	Utilization of fade countermeasures strategies and techniques in the fixed-satellite service	In force
S.1062-2	11-1999	Allowable error performance for a hypothetical reference digital path operating at or above the primary rate	In force
S.1063	09-1994	Criteria for sharing between BSS feeder links and other Earth-to-space or space-to-Earth links of the FSS	In force
S.1064-1	10-1995	Pointing accuracy as a design objective for earthward antennas on board geostationary satellites in the fixed-satellite service	In force
S.1065	09-1994	Power flux-density values to facilitate the application of RR Article 14 for the FSS in Region 2 in relation to the BSS in the band 11.7-12.2 GHz	In force
S.1066	09-1994	Ways of reducing the interference from the broadcasting-satellite service of one Region into the fixed-satellite service of another Region around 12 GHz	In force
S.1067	09-1994	Ways of reducing the interference from the broadcasting-satellite service into the fixed-satellite service in adjacent frequency bands around 12 GHz	In force
S.1068	09-1994	Fixed-satellite and radiolocation/radionavigation services sharing in the band 13.75-14 GHz	In force

S.1069	09-1994	Compatibility between the fixed-satellite service and the space science services in the band 13.75-14 GHz	In force
S.1149-1	05-1997	Network architecture and equipment functional aspects of digital satellite systems in the fixed-satellite service forming part of synchronous digital hierarchy transport networks	In force
S.1150	10-1995	Technical criteria to be used in examinations relating to the probability of harmful interference between frequency assignments in the fixed-satellite service as required in No. S11.32A.1 of the Radio Regulations	In force
S.1151	10-1995	Sharing between the inter-satellite service involving geostationary satellites in the fixed-satellite service and the radionavigation service at 33 GHz	In force
S.1250	05-1997	Network management architecture for digital satellite systems forming part of SDH transport networks in the fixed-satellite service	In force
S.1251	07-1997	Network management - Performance management object class definitions for satellite systems network elements forming part of SFH transport networks in the fixed-satellite service	In force
S.1252	05-1997	Network management - Payload configuration object class definitions for satellite system network elements forming part of SDH transport networks in the fixed-satellite service	In force
S.1253	05-1997	Technical options to facilitate coordination of fixed-satellite service networks in certain orbital arc segments and frequency bands	In force
S.1254	05-1997	Best practices to facilitate the coordination process of fixed-satellite service satellite networks	In force
S.1255	05-1997	Use of adaptive uplink power control to mitigate codirectional interference between geostationary satellite orbit/fixed-satellite service (GSO/FSS) networks and feeder links of non-geostationary satellite orbit/mobile satellite service (non-GSO/MSS) networks and between GSO/FSS networks and non-GSO/FSS networks	In force
S.1256	05-1997	Methodology for determining the maximum aggregate power flux-density at the geostationary-satellite orbit in the band 6 700-7 075 MHz from feeder links of non-geostationary satellite systems in the mobile-satellite service in the space-to-Earth direction	In force
S.1257-3	03-2002	Analytical method to calculate short-term visibility and interference statistics for non-geostationary satellite orbit satellites as seen from a point on the Earth's surface	In force
S.1323-2	09-2002	Maximum permissible levels of interference in a satellite network (GSO/FSS; non-GSO/FSS; non-GSO/MSS feeder links) in the fixed-satellite service caused by other codirectional FSS networks below 30 GHz	In force
S.1324	09-1997	Analytical method for estimating interference between non-geostationary mobile-satellite feeder links and geostationary fixed-satellite networks operating co-frequency and codirectionally	In force
S.1325-2	06-2001	Simulation methodologies for determining statistics of short-term interference between co-frequency, codirectional non-geostationary-satellite orbit fixed-satellite service systems and other non-geostationary-satellite orbit fixed-satellite service systems or geostationary-satellite orbit fixed-satellite service networks	In force
S.1326	09-1997	Feasibility of sharing between the inter-satellite service and the fixed-satellite service in the frequency band 50.4-51.4 GHz	In force
S.1327	09-1997	Requirements and suitable bands for operation of the inter-satellite service within the range 50.2-71 GHz	In force
S.1328-4	09-2002	Satellite system characteristics to be considered in frequency sharing analyses within the fixed-satellite service	In force
S.1329	09-1997	Frequency sharing of the bands 19.7-20.2 GHz and 29.5-30.0 GHz between systems in the mobile-satellite service and systems in the fixed-satellite service	In force
S.1339-1	11-1999	Sharing between spaceborne passive sensors of the Earth exploration-satellite service and inter-satellite links of geostationary-satellite networks in the range 54.25 to 59.3 GHz	In force
S.1340	10-1997	Sharing between feeder links for the mobile-satellite service and the aeronautical radionavigation service in the Earth-to-space direction in the band 15.4-15.7 GHz	In force
S.1341	10-1997	Sharing between feeder links for the mobile-satellite service and the aeronautical radionavigation service in the space-to-Earth direction in the	In force

		band 15.4-15.7 GHz and the protection of the radio astronomy service in the band 15.35-15.4 GHz	
S.1342	10-1997	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 non-geostationary mobile-satellite service stations providing feeder uplink services	In force
S.1418	11-1999	Method for calculating single entry carrier-to-interference ratios for links in inter-satellite service using geostationary orbit	In force
S.1419	11-1999	Interference mitigation techniques to facilitate coordination between non-geostationary-satellite orbit mobile-satellite service feeder links and geostationary-satellite orbit fixed-satellite service networks in the bands 19.3-19.7 GHz and 29.1-29.5 GHz	In force
S.1420	11-1999	Performance for broadband integrated services digital network asynchronous transfer mode via satellite	In force
S.1424	01-2000	Availability objectives for a hypothetical reference digital path when used for the transmission of B-ISDN asynchronous transfer mode in the fixed-satellite service by geostationary orbit satellite systems using frequencies below 15 GHz	In force
S.1425	01-2000	Transmission considerations for digital carriers using higher levels of modulation on satellite circuits	In force
S.1426	01-2000	Aggregate power flux-density limits, at the FSS satellite orbit for radio local area network (RLAN) transmitters operating in the 5 150-5 250 MHz band sharing frequencies with the FSS (RR No. S5.447A)	In force
S.1427	01-2000	Methodology and criterion to assess interference from radio local area (RLAN) transmitters to non-GSO MSS feeder links in the band 5 150-5 250 MHz	In force
S.1428-1	02-2001	Reference FSS earth-station radiation patterns for use in interference assessment involving non-GSO satellites in frequency bands between 10.7 GHz and 30 GHz	In force
S.1429	01-2000	Error performance objectives due to internetwork interference between GSO and non-GSO FSS systems for hypothetical reference digital paths operating at or above the primary rate carried by systems using frequencies below 15 GHz	In force
S.1430	01-2000	Determination of the coordination area for Earth stations operating with non-geostationary space stations with respect to Earth stations operating in the reverse direction in frequency bands allocated bidirectionally to the fixed-satellite service	In force
S.1431	01-2000	Methods to enhance sharing between non-GSO FSS systems (except MSS feeder links) in the frequency bands between 10-30 GHz	In force
S.1432	01-2000	Apportionment of the allowable error performance degradations to fixed satellite service (FSS) hypothetical reference digital paths arising from time invariant interference for systems operating below 15 GHz	In force
S.1433	01-2000	Uplink and inter-satellite equivalent power flux-density radiated by non-GSO FSS Systems	In force
S.1503	05-2000	Functional description to be used in developing software tools for determining conformity of non-geotationary-satellite orbit fixed-satellite system networks with limits contained in Article S22 of the Radio Regulations *Note - Identical to Rec. UIT-R BO.1503*	In force
S.1512	02-2001	Measurement procedure for determining non-geostationary satellite orbit satellite equivalent isotropically radiated power and antenna discrimination	In force
S.1521	06-2001	Allowable error performance for a hypothetical reference digital path based on synchronous digital hierarchy	In force
S.1522	06-2001	Impact of loss of synchronization and timing recovery on availability in hypothetical reference digital paths	In force
S.1523	06-2001	Methodology for performing parametric evaluation studies of interference sensitivity for geostationary-satellite orbit fixed-satellite service systems sharing spectrum in bands above 10 GHz	In force
S.1524	06-2001	Coordination identification between geostationary-satellite orbit fixed-satellite service networks	In force
S.1525-1	09-2002	Impact of interference from the Sun into a geostationary-satellite orbit fixed-satellite service link	In force
S.1526-1	09-2002	Methodology to assess the interference environment in relation to Nos. 9.12,	In force

		9.12A and 9.13 of the Radio Regulations when non-geostationary-satellite orbit fixed-satellite service systems are involved	
S.1527	06-2001	Procedure for the identification of non-geostationary-satellite orbit satellites causing interference into an operating geostationary?satellite orbit earth station	In force
S.1528	06-2001	Satellite antenna radiation patterns for non-geostationary orbit satellite antennas operating in the fixed-satellite service below 30 GHz	In force
S.1529	06-2001	Analytical method for determining the statistics of interference between non-geostationary-satellite orbit fixed-satellite service systems and other non-geostationary-satellite orbit fixed-satellite service systems or geostationary-satellite orbit fixed-satellite service networks	In force
S.1553	03-2002	A possible method to account for environmental and other effects on satellite antenna patterns	In force
S.1554	03-2002	Methodology for determining the overall accuracy of epfddown measurements	In force
S.1555	03-2002	Aggregate interference levels between closely spaced dual circularly and dual linearly polarized geostationary-satellite networks in the fixed-satellite service operating in the 6/4 GHz frequency bands	In force
S.1556	03-2002	Methodology to determine the epfddown level corresponding to the loss of synchronization in geostationary fixed satellite service networks caused by interference from non-geostationary-satellite systems	In force
S.1557	03-2002	Operational requirements and characteristics of fixed-satellite service systems operating in the 50/40 GHz bands for use in sharing studies between the fixed-satellite service and the fixed service	In force
S.1558	03-2002	Methodologies for measuring epfddown caused by a non-geostationary-satellite orbit space station to verify compliance with operational epfdown limits	In force
S.1559	03-2002	Methodology for computing the geographical distribution of maximum downlink equivalent power flux-density levels generated by non-geostationary fixed-satellite service systems using circular orbits	In force
S.1560	03-2002	Methodology for the calculation of the worst-case interference levels from a particular type of non-geostationary fixed-satellite service system using highly-elliptical orbits into geostationary fixed-satellite service satellite networks operating in the 4/6 GHz frequency bands	In force
S.1586	09-2002	Calculation of unwanted emission levels produced by a non-geostationary fixed-satellite service system at radio astronomy sites	In force
S.1587	09-2002	Provisional technical characteristics of earth stations on board vessels operating in the frequency bands 5 925-6 425 MHz and 14-14.5 GHz which are allocated to the fixed-satellite service	In force
S.1588	09-2002	Methodologies for calculating aggregate downlink equivalent power flux-density produced by multiple non-geostationary fixed-satellite service systems into a geostationary fixed-satellite service network	In force
S.1589	09-2002	Continuous curves of epfddown versus geostationary fixed-satellite service earth station antenna diameter and epfdup versus geostationary fixed-satellite service space station antenna beamwidth to indicate the protection afforded by systems complying with the limits to antennas with diameters other than those in Article 22 of the Radio Regulations	In force
S.1590	09-2002	Technical and operational characteristics of satellites operating in the range 20-375 THz	In force
S.1591	09-2002	Sharing of inter-satellite link bands around 23, 32.5 and 64.5 GHz between non-geostationary/geostationary inter-satellite links and geostationary/geostationary inter-satellite links	In force
S.1592	09-2002	Methodology to assess compliance of non-geostationary fixed-satellite service satellite systems in circular orbits with the additional operational limits on downlink equivalent power flux-density in Article 22 of the Radio Regulations	In force
S.1593	09-2002	Methodology for frequency sharing between certain types of homogeneous highly-elliptical orbit non-geostationary fixed-satellite service systems in the 4/6 GHz and 11/14 GHz frequency bands	In force
S.1594	09-2002	Technical characteristics of high density fixed-satellite service earth stations transmitting towards geostationary fixed-satellite service space stations in the 30 GHz range	In force

S.1595	09-2002	Interference mitigation techniques to facilitate coordination between non-geostationary fixed-satellite service systems in highly elliptical orbit and non-geostationary fixed-satellite service systems in low and medium Earth orbit	In force

Series SA: Space applications and meteorology

Number	Approved in	Title	Status
SA.362-2	07-1982	Frequencies technically suitable for meteorological satellites *Note - Withdrawn on 24/10/97 (RA-97)*	Withdrawn
SA.363-5	03-1994	Space operation systems	In force
SA.364-5	03-1992	Preferred frequencies and bandwidths for manned and unmanned near-Earth research satellites	In force
SA.509-2	02-1998	Space research earth station and radio astronomy reference antenna radiation pattern for use in interference calculations, including coordination procedures	In force
SA.510-2	10-1997	Feasibility of frequency sharing between the space research service and other services in bands near 14 and 15 GHz - Potential interference from data relay satellite systems	In force
SA.513-1	07-1986	Preferred frequency bands for spacecraft transmitters used as beacons *Note - Withdrawn on 24/10/97 (RA-97)*	Withdrawn
SA.514-3	10-1997	Interference criteria for command and data transmission systems operating in the Earth exploration-satellite and meteorological-satellite services	In force
SA.515-4	05-2003	Frequency bands and bandwidths used for satellite passive sensing	In force
SA.516-1	03-1994	Feasibility of sharing between active sensors used on Earth exploration and meteorological satellites and the radiolocation service	In force
SA.577-5	06-1997	Preferred frequencies and necessary bandwidths for spaceborne active remote sensors	In force
SA.578	07-1982	Protection criteria and sharing considerations relating to deep-space research *Note - Withdrawn on 24/10/97 (RA-97)*	Withdrawn
SA.609-1	03-1992	Protection criteria for telecommunication links for manned and unmanned near-Earth research satellites	In force
SA.1012	03-1994	Preferred frequency bands for deep-space research in the 1-40 GHz range	In force
SA.1013	03-1994	Preferred frequency bands for deep-space research in the 40-120 GHz range	In force
SA.1014	03-1994	Telecommunication requirements for manned and unmanned deep-space research	In force
SA.1015	03-1994	Bandwidth requirements for deep-space research	In force
SA.1016	03-1994	Sharing considerations relating to deep-space research	In force
SA.1017	03-1994	Preferred method for calculating link performance in the space research service	In force
SA.1018	03-1994	Hypothetical reference system for systems comprising data relay satellites in the geostationary orbit and user spacecraft in low Earth-orbits	In force
SA.1019	03-1994	Preferred frequency bands and transmission directions for data relay satellite systems	In force
SA.1020	03-1994	Hypothetical reference system for the Earth exploration-satellite and meteorologial satellite services	In force
SA.1021	03-1994	Methodology for determining performance objectives for systems in the Earth exploration-satellite and meteorological-satellite services	In force
SA.1022-1	10-1999	Methodology for determining interference criteria for systems in the Earth exploration-satellite and meteorological-satellite services	In force
SA.1023	03-1994	Methodology for determining sharing and coordination criteria for systems in the Earth exploration-satellite and meteorological-satellite services	In force
SA.1024-1	06-1997	Necessary bandwidths and preferred frequency bands for data transmission from Earth exploration satellites (not including meteorological satellites)	In force
SA.1025-3	10-1999	Performance criteria for space-to-Earth data transmission systems operating in the Earth exploration-satellite and meteorological-satellite services using	In force

		satellites in low-Earth orbit	
SA.1026-3	10-1999	Interference criteria for space-to-Earth data transmission systems operating in the Earth exploration-satellite and meteorological-satellite services using satellites in low-Earth orbit	In force
SA.1027-3	10-1999	Sharing and coordination criteria for space-to-Earth data transmission systems in the Earth exploration-satellite and meteorological-satellite services using satellites in low-Earth orbit	In force
SA.1028-2	05-2003	Performance criteria for satellite passive remote sensing	In force
SA.1029-2	05-2003	Interference criteria for satellite passive remote sensing	In force
SA.1030	03-1994	Telecommunication requirements of satellite systems for geodesy and geodynamics	In force
SA.1071	07-1994	Use of the 13.75 to 14.0 GHz band by the space science services and the fixed satellite service	In force
SA.1154	10-1995	Provisions to protect the space research (SR), space operations (SO) and earth exploration?satellite services (EES) and to facilitate sharing with the mobile service in the 2 025-2 110 MHz and 2 200-2 290 MHz bands	In force
SA.1155	10-1995	Protection criteria related to the operation of data relay satellite systems	In force
SA.1156	10-1995	Methods of calculating low-orbit satellite visibility statistics	In force
SA.1157	10-1995	Protection criteria for deep-space research	In force
SA.1158-3	05-2003	Feasibility of frequency sharing in the 1 670-1 710 MHz band between the meteorological-satellite service (space-to-Earth) and the mobile-satellite service (Earth-to-space)	In force
SA.1159-2	10-1999	Performance criteria for data dissemination and direct data readout systems in the Earth exploration-satellite service and meteorological-satellite services using satellites in geostationary orbit	In force
SA.1160-2	10-1999	interference criteria for data dissemination and direct data readout systems in the earth exploration-satellite and meteorological-satellite services using satellites in the geostationary orbit	In force
SA.1161-1	10-1999	Sharing and coordination criteria for data dissemination and direct data readout systems in the Earth exploration-satellite and meteorological-satellite services using satellites in geostationary orbit	In force
SA.1162-2	05-2003	Performance criteria for service links in data collection and platform location systems in the Earth exploration- and meteorological-satellite services	In force
SA.1163-2	10-1999	Interference criteria for service links in data collection systems in the Earth exploration-satellite and meteorological-satellite services	In force
SA.1164-2	10-1999	Sharing and coordination criteria for service links in data collection systems in the Earth exploration-satellite and meteorological-satellite services	In force
SA.1165-1	06-1997	Technical characteristics and performance criteria for radiosonde systems in the meteorological aids service	In force
SA.1166-2	10-1999	Performance and interference criteria for active spaceborne sensors	In force
SA.1236	02-1997	Frequency sharing between space research service extra-vehicular activity (EVA) links and fixed and mobile service links in the 410-420 MHz band	In force
SA.1258-1	10-1999	Sharing of the frequency band 401-403 MHz between the meteorological-satellite service, Earth exploration-satellite service and meteorological Aids service	In force
SA.1259	06-1997	Feasibility of sharing between spaceborne passive sensors and the fixed service from 50 to 60 GHz	In force
SA.7/BL/22	05-2003	Draft revision to Recommendation ITU-R SA.1260 - Feasibility of sharing between active spaceborne sensors and other services in the range 420-470 MHz	Pre-published
SA.1261	06-1997	Feasibility of sharing between spaceborne cloud radars and other services in the range of 92-95 GHz	In force
SA.1262	06-1997	Sharing and coordination criteria for meteorological aids in the 400.15-406 MHz and 1 668.4-1 700 MHz bands	In force
SA.1263	06-1997	Interference criteria for meteorological aids operated in the 400.15-406 MHz and 1 668.4-1 700 MHz bands	In force
SA.1264-1	05-2003	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	In force
SA.1273	10-1997	Power flux-density levels from the space research, space operation and Earth	In force

		exploration-satellite services at the surface of the Earth required to protect the fixed service in the bands 2 025-2 110 MHz and 2 200-2 290 MHz	
SA.1274	10-1997	Criteria for data relay satellite networks to facilitate sharing with systems in the fixed service in the bands 2 025-2 110 MHz and 2 200-2 290 MHz	In force
SA.1275-1	05-2003	Orbital locations of data relay satellites to be protected from the emissions of fixed service systems operating in the band 2 200-2 290 MHz	In force
SA.1276-1	05-2003	Orbital locations of data relay satellites to be protected from the emissions of fixed service systems operating in the band 25.25-27.5 GHz	In force
SA.1277	10-1997	Sharing in the 8 025-8 400 MHz frequency band between the Earth exploration-satellite service and the fixed, fixed-satellite, meteorological-satellite and mobile services in Regions 1, 2 and 3	In force
SA.1278	10-1997	Feasibility of sharing between the Earth exploration-satellite service (space-to-Earth) and the fixed, inter-satellite, and mobile services in the band 25.5-27.0 GHz	In force
SA.1279	10-1997	Spectrum sharing between spaceborne passive sensors and inter-satellite links in the range 50.2-59.3 GHz	In force
SA.1280	10-1997	Selection of active spaceborne sensor emission characteristics to mitigate the potential for interference to terrestrial radars operating in frequency bands 1-10 GHz	In force
SA.1281	10-1997	Protection of stations in the radiolocation service from emissions from active spaceborne sensors in the band 13.4-13.75 GHz	In force
SA.1282	10-1997	Feasibility of sharing between wind profiler radars and active spaceborne sensors in the vicinity of 1 260 MHz	In force
SA.1344	02-1998	Preferred frequency bands and bandwidths for the transmission of space VLBI data	In force
SA.1345	02-1998	Methods for predicting radiation patterns of large antennas used for space research and radio astronomy	In force
SA.1346	02-1998	Sharing between the meteorological aids service and medicalI implant communication systems (MICS) operating in the mobile service in the frequency band 401-406 MHz	In force
SA.1347	02-1998	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	In force
SA.1396	04-1999	Protection criteria for the space research service in the 37-38 and 40-40.5 GHz bands	In force
SA.1414	10-1999	Characteristics of data relay satellite systems	In force
SA.1415	10-1999	Sharing between inter-satellite service systems in the frequency band 25.25-27.5 GHz	In force
SA.1416	10-1999	Sharing between spaceborne passive sensors and the inter-satellite service operating near 118 and 183 GHz	In force
SA.1449	05-2000	Feasibility of sharing between the fixed-satellite service (FSS) (space-to-Earth)and the Earth exploration-satellite (passive) and space research (passive) services in the band 18.6-18.8 GHz	In force
SA.1624	05-2003	Sharing between the Earth exploration?satellite (passive) and airborne altimeters in the aeronautical radionavigation service in the band 4 200-4 400 MHz	In force
SA.1625	05-2003	Feasibility of sharing between the space research service (space-to-Earth) and the fixed, inter-satellite, and mobile services in the band 25.5-27 GHz	In force
SA.1626	05-2003	Feasibility of sharing between the space research service (space-to-Earth) and the fixed and mobile services in the band 14.8-15.35 GHz	In force
SA.1627	05-2003	Telecommunication requirements and characteristics of EESS and MetSat service systems for data collection and platform location	In force
SA.1628	05-2003	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	In force
SA.1629	05-2003	Sharing between command links in the space research and space operation services with the fixed, mobile and mobile-satellite services in the frequency band 257-262 MHz	In force
SA.7/1005	06-2003	Draft new Recommendation ITU-R SA.[Doc. 7/46] - 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	Pre-published

service

Series SF: Frequency sharing and coordination between fixed-satellite and fixed service systems

Number	Approved in	Title	Status
SF.355-4	03-1992	Frequency sharing between systems in the fixed-satellite service and radio-relay systems in the same frequency bands	In force
SF.356-4	07-1978	Maximum allowable values of interference from line-of-sight radio-relay systems in a telephone channel of a system in the fixed-satellite service employing frequency modulation, when the same frequency bands are shared by both systems	In force
SF.357-4	05-1997	Maximum allowable values of interference in a telephone channel of an analogue angle-modulated radio-relay system sharing the same frequency bands as systems in the fixed-satellite service	In force
SF.358-5	10-1995	Maximum permissible values of power flux-density at the surface of the Earth produced by satellites in the fixed-satellite service using the same frequency bands above 1 GHz as line-of-sight radio-relay systems	In force
SF.406-8	04-1993	Maximum equivalent isotropically radiated power of radio-relay system transmitters operating in the frequency bands shared with the fixed-satellite service	In force
SF.558-2	07-1986	Maximum allowable values of interference from terrestrial radio links to systems in the fixed-satellite service employing 8-bit PCM encoded telephony and sharing the same frequency bands	In force
SF.615-1	05-1997	Maximum allowable values of interference from the fixed-satellite service into terrestrial radio-relay systems which may form part of an ISDN and share the same frequency band below 15 GHz *Note - Withdrawn on 07/02/03 (CACE/281) - This Recommendation has been replaced by Rec. ITU-R F.1565*	Withdrawn
SF.674-2	05-2002	Determination of the impact on the fixed service operating in the 11.7-12.2 GHz band when geostationary fixed-satellite service networks in Region 2 exceed power flux-density thresholds in Resolution 77 (WRC-2000)	In force
SF.675-3	08-1994	Calculation of the maximum power density (averaged over 4 kHz) of an angle-modulated carrier	In force
SF.765-1	02-2003	Intersection of radio-relay antenna beams with orbits used by space stations in the fixed-satellite service	In force
SF.766	03-1992	Methods for determining the effects of interference on the performance and the availability of terrestrial radio-relay systems and systems in the fixed-satellite service	In force
SF.1004	04-1993	Maximum equivalent isotropically radiated power transmitted towards the horizon by earth stations of the fixed-satellite service sharing frequency bands with the fixed service	In force
SF.1005	04-1993	Sharing between the fixed service and the fixed-satellite service with bidirectional usage in bands above 10 GHz currently unidirectionally allocated	In force
SF.1006	04-1993	Determination of the interference potential between earth stations of the fixed-satellite service and stations in the fixed service	In force
SF.1008-1	10-1995	Possible use by space stations in the fixed-satellite service of orbits slightly inclined with respect to the geostationary-satellite orbit in bands shared with the fixed service	In force
SF.1193	10-1995	Carrier-to-interference calculations between earth stations in the fixed-satellite service and radio-relay systems	In force
SF.1320	08-1997	Maximum allowable values of power flux-density at the surface of the Earth produced by non-geostationary satellites in the fixed-satellite service used in feeder links for the mobile-satellite service and sharing the same frequency bands with radio-relay systems	In force
SF.1395	03-1999	Minimum propagation attenuation due to atmospheric gases for use in frequency sharing studies between the fixed-satellite service and the fixed service	In force

SF.1481-1	02-2002	Frequency sharing between systems in the fixed service using high-altitude platform stations and satellite systems in the geostationary orbit in the fixed-satellite service in the bands 47.2-47.5 and 47.9-48.2 GHz	In force
SF.1482	05-2000	Maximum allowable values of power flux-density (pfd) produced at the Earth's surface by non-GSO satellites in the fixed-satellite service (FSS) operating in the 10.7-12.75 GHz band	In force
SF.1483	05-2000	Maximum allowable values of power flux-density (pfd) produced at the Earth's surface by non-GSO satellites in the fixed-satellite service (FSS) operating in the 17.7-19.3 GHz band	In force
SF.1484-1	05-2002	Maximum allowable values of power flux-density at the surface of the Earth produced by non-geostationary satellites in the fixed-satellite service operating in the 37.5-42.5 GHz band to protect the fixed service	In force
SF.1485	05-2000	Determination of the coordination area for earth stations operating with non-geostationary space stations in the fixed-satellite service in frequency bands shared with the fixed service	In force
SF.1486	05-2000	Sharing methodology between fixed wireless access systems in the fixed service and very small aperture terminals in the fixed-satellite service in the 3 400-3 700 MHz band	In force
SF.1572	05-2002	Methodology to evaluate the impact of space-to-Earth interference from the fixed-satellite service to the fixed service in frequency bands where precipitation is the predominant fade mechanism	In force
SF.1573	05-2002	Maximum allowable values of power flux-density at the surface of the Earth by geostationary satellites in the fixed-satellite service operating in the 37.5-42.5 GHz band to protect the fixed service	In force
SF.1585	09-2002	Example approach for determination of the composite area within which interference to fixed service stations from earth stations on board vessels when operating in motion near a coastline would need to be evaluated	In force
SF.1601	02-2003	A methodology for interference evaluation from the downlink of the fixed service using high altitude platform stations to the uplink of the fixed-satellite service using the geostationnary satellites within the band 27.5-28.35 GHz	In force
SF.1602	02-2003	Methodology for determining power flux-density statistics for use in sharing studies between fixed wireless systems and multiple fixed-satellite service satellites	In force
SF.4/1005-9/1006	06-2003	Draft new Recommendation ITU-R SF.[Doc. 4/91-9/150] - Use of frequencies by earth stations on board vessels transmitting in certain bands allocated to the fixed-satellite service	Pre-published
SF.4/1006-9/1007	06-2003	Draft new Recommendation ITU-R SF.[Doc. 4/92-9/151] - Guidance for determination of interference from earth stations on vessels (ESVs) to stations in the fixed service when the ESV is within the minimum distance	Pre-published
SF.4/1007-9/1008	06-2003	Draft new Recommendation ITU-R SF.[Doc. 4/95-9/154] - The minimum distance from the coastline1 beyond which in-motion earth stations located on board vessels would not cause unacceptable interference to the fixed service in the bands 5 925-6 425 MHz and 14-14.5 GHz	Pre-published

Series SM: Spectrum management

Number	Approved in	Title	Status
SM.182-4	03-1992	Automatic monitoring of occupancy of the radio-frequency spectrum	In force
SM.239-2	07-1978	Spurious emissions from sound and television broadcast receivers *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
SM.326-7	11-1998	Determination and measurement of the power of amplitude-modulated radio transmitters	In force
SM.328-10	12-1999	Spectra and bandwidth of emissions	In force
SM.329-10	02-2003	Unwanted emissions in the spurious domain	In force
SM.331-4	07-1978	Noise and sensitivity of receivers	In force
SM.332-4	07-1978	Selectivity of receivers	In force
SM.337-4	10-1997	Frequency and distance separations	In force
SM.377-3	07-1994	Accuracy of frequency measurements at stations for international monitoring	In force
SM.378-6	10-1995	Field-strength measurements at monitoring stations	In force
SM.433-5	03-1992	Methods for the measurement of radio interference and the determination of tolerable levels of interference *Note - Withdrawn on 06/06/03 (RA-03)*	Withdrawn
SM.443-2	10-1995	Bandwidth measurement at monitoring stations	In force
SM.508	07-1978	Use of radio-noise data in spectrum utilization studies *Note - Withdrawn on 24/10/97 (RA-97)*	Withdrawn
SM.575	07-1982	Protection of fixed monitoring stations against radio-frequency interference	In force
SM.667	06-1990	National spectrum management data	In force
SM.668-1	03-1997	Electronic exchange of information for spectrum management purposes	In force
SM.669-1	07-1994	Protection ratios for spectrum sharing investigations	In force
SM.851-1	04-1993	Sharing between the broadcasting service and the fixed and/or mobile services in the VHF and UHF bands	In force
SM.852	03-1992	Sensitivity of radio receivers for class of emissions F3E	In force
SM.853-1	10-1997	Necessary bandwidth	In force
SM.854-1	02-2003	Direction finding and location determination at monitoring stations of signals below 30 MHz	In force
SM.855-1	10-1997	Multi-service telecommunication systems	In force
SM.856-1	03-1997	New spectrally efficient techniques and systems	In force
SM.1009-1	10-1995	Compatibility between the sound-broadcasting service in the band of about 87-108 MHz and the aeronautical services in the band 108-137 MHz	In force
SM.1045-1	07-1997	Frequency tolerance of transmitters	In force
SM.1046-1	10-1997	Definition of spectrum use and efficiency of a radio system	In force
SM.1047-1	07-2001	National spectrum management	In force
SM.1048	07-1994	Design guidelines for a basic automated spectrum management system (BASMS)	In force
SM.1049-1	10-1995	A method of spectrum management to be used for aiding frequency assignment for terrestrial services in border areas	In force
SM.1050-1	02-2003	Tasks of a monitoring service	In force
SM.1051-2	07-1997	Priority of identifying and eliminating harmful interference in the band 406-406.1 MHz	In force
SM.1052	07-1994	Automatic identification of radio stations	In force
SM.1053	07-1994	Methods of improving HF direction-finding accuracy at fixed stations	In force
SM.1054	07-1994	Monitoring of radio emissions from spacecraft at monitoring stations	In force

SM.1055	07-1994	The use of spread spectrum techniques	In force
SM.1056	07-1994	Limitation of radiation from industrial, scientific and medical (ISM) equipment	In force
SM.1131	10-1995	Factors to consider in allocating spectrum on a worldwide basis	In force
SM.1132-2	07-2001	General principles and methods for sharing between radiocommunication services or between radio stations	In force
SM.1133	10-1995	Spectrum utilization of broadly defined services	In force
SM.1134	10-1995	Intermodulation interference calculations in the land-mobile service	In force
SM.1135	10-1995	SINPO and SINPFEMO codes	In force
SM.1138	10-1995	Determination of necessary bandwidths including examples for their calculation and associated examples for the designation of emissions	In force
SM.1139	10-1995	International monitoring system	In force
SM.1140	10-1995	Test procedures for measuring aeronautical receiver characteristics used for determining compatibility between the sound-broadcasting service in the band of about 87-108 MHz and the aeronautical services in the band 108-118 MHz	In force
SM.1235	03-1997	Performance functions for digital modulation systems in an interference environment	In force
SM.1265-1	07-2001	National alternative allocation methods	In force
SM.1266	07-1997	Adaptive MF/HF systems	In force
SM.1267	07-1997	Collection and publication of monitoring data to assist frequency assignment for geostationary satellite systems	In force
SM.1268-1	01-1999	Method of measuring the maximum frequency deviation of FM broadcast emissions at monitoring stations	In force
SM.1269	07-1997	Classification of direction finding bearings	In force
SM.1270	07-1997	Additional information for monitoring purposes related to classification and designation of emission	In force
SM.1271	10-1997	Efficient spectrum utilization using probabilistic methods	In force
SM.1370-1	07-2001	Design guidelines for developing advanced automated spectrum management systems	In force
SM.1392-1	04-2000	Essential requirements for a spectrum monitoring station for developing countries	In force
SM.1393	01-1999	Common formats for the exchange of information between monitoring stations	In force
SM.1394	01-1999	Common format for Memorandum of Understanding between the agreeing countries regarding cooperation in spectrum monitoring matters	In force
SM.1/BL/16	04-2003	Draft revision of Recommendation ITU-R SM.1413 - Radiocommunication Data Dictionary for notification and coordination purposes	Pre-published. Available only in MS WORD
SM.1446	04-2000	Definition and measurement of intermodulation products in transmitter using frequency, phase, or complex modulation techniques	In force
SM.1447	04-2000	Monitoring of the radio coverage of land mobile networks to verify compliance with a given licence	In force
SM.1448	05-2000	Determination of the coordination area around an earth station in the frequency bands between 100 MHz and 105 GHz	In force
SM.1448 Corrigendum 1	05-2000	Corrigendum to Rec. ITU-R.SM.1448	In force
SM.1535	07-2001	The protection of safety services from unwanted emissions	In force
SM.1536	07-2001	Frequency channel occupancy measurements	In force
SM.1537	07-2001	Automation and integration of spectrum monitoring systems with automated spectrum management	In force
SM.1538-1	02-2003	Technical and operating parameters and spectrum requirements for short-range radiocommunication devices	In force
SM.1539-1	11-2002	Variation of the boundary between the out-of-band and spurious domains required for the application of Recommendations ITU-R SM.1541 and ITU-R SM.329	In force
SM.1540	07-2001	Unwanted emissions in the out-of-band domain falling into adjacent allocated bands	In force

SM.1541-1	11-2002	Unwanted emissions in the out-of-band domain	In force
SM.1542	07-2001	The protection of passive services from unwanted emissions	In force
SM.1598	10-2002	Methods of radio direction finding and location on time division multiple access and code division multiple access signals	In force
SM.1599	10-2002	Determination of the geographical and frequency distribution of the spectrum utilization factor for frequency planning purposes	In force
SM.1600	11-2002	Technical identification of digital signals	In force
SM.1603	02-2003	Spectrum redeployment as a method of national spectrum management	In force
SM.1604	02-2003	Guidelines for an upgraded spectrum management system for developing countries	In force
SM.1/1005	06-2003	Draft new Recommendation ITU-R SM.[band by band] - Compatibility analysis between a passive service and an active service allocated in adjacent and nearby bands	Pre-published. Available only in MS WORD

Series SNG: Satellite news gathering

Number	Approved in	Title	Status
SNG.722-1	03-1992	Uniform technical standards (analogue) for satellite news gathering (SNG)	In force
SNG.770-1	09-1994	Uniform operational procedures for satellite news gathering (SNG)	In force
SNG.771-1	04-1993	Auxiliary coordination satellite circuits for SNG terminals	In force
SNG.1007-1	10-1995	Uniform technical standards (digital) for satellite news gathering (SNG)	In force
SNG.1070	09-1994	An automatic transmitter identification system (ATIS) for analogue-modulation transmissions for satellite news gathering and outside broadcasts	In force
SNG.1152	10-1995	Use of digital transmission techniques for Satellite News Gathering (SNG) (sound)	In force
SNG.1421	11-1999	Common operating parameters to ensure interoperability for transmission of digital television news gathering	In force
SNG.1561	03-2002	Digital transmission of high-definition television for satellite news gathering and outside broadcasting	In force

Series TF: Time signals and frequency standards emissions

Number	Approved in	Title	Status
TF.374-5	04-1999	Precise frequency and time-signal transmissions	In force
TF.375-2	07-1982	Standard-frequency and time-signal emissions in additional frequency bands *Note - Withdrawn on 24/10/97 (RA-97)*	Withdrawn
TF.376-1	07-1966	Avoidance of external interference with emissions of the standard-frequency service in the bands allocated to that service *Note - Withdrawn on 24/10/97 (RA-97)*	Withdrawn
TF.457-2	10-1997	Use of the modified Julian date by the standard-frequency and time-signal services	In force
TF.458-3	02-1998	International comparisons of atomic time scales	In force
TF.460-6	02-2002	Standard-frequency and time-signal emissions	In force
TF.485-2	06-1990	Use of time scales in the field of standard-frequency and time services *Note - Withdrawn on 24/10/97 (RA-97)*	Withdrawn
TF.486-2	02-1998	Use of UTC frequency as reference in standard frequency and time signal emissions	In force
TF.535-2	02-1998	Use of the term UTC	In force
TF.536-2	05-2003	Time-scale notations	In force
TF.537	07-1978	Reduction of mutual interference between emissions of the standard-frequency and time-signal service on the allocated frequencies in bands 6 and 7 *Note - Withdrawn on 24/10/97 (RA-97)*	Withdrawn
TF.538-3	03-1994	Measures for random instabilities in frequency and time (phase)	In force
TF.582-2	02-1998	Time and frequency reference signal dissemination and coordination using satellite methods	In force
TF.583-6	05-2003	Time codes	In force
TF.685	06-1990	International synchronization of UTC time scale *Note - Withdrawn on 24/10/97 (RA-97)*	Withdrawn
TF.686-2	02-2002	Glossary and definitions of time and frequency terms	In force
TF.767-2	03-2001	Use of global navigation satellite systems for high-accuracy time transfer	In force
TF.768-6	05-2003	Standard frequencies and time signals	In force
TF.1010-1	10-1997	Relativistic effects in a coordinate time system in the vicinity of the Earth	In force
TF.1011-1	10-1997	Systems, techniques and services for time and frequency transfer	In force
TF.1153-2	05-2003	The operational use of two-way satellite time and frequency transfer employing PN codes	In force
TF.1552	02-2002	Time scales for use by standard-frequency and time-signal services	In force

Series V: Vocabulary and related subjects

Number	Approved in	Title	Status
V.430-3	06-1990	Use of the international system of units (SI)	In force
V.431-7	05-2000	Nomenclature of the frequency and wavelength bands used in telecommunications	In force
V.461-5	04-1993	Graphical symbols and rules for the preparation of documentation in telecommunications	In force
V.573-4	05-2000	Radiocommunication vocabulary	In force
V.574-4	05-2000	Use of the decibel and the neper in telecommunications	In force
V.607-3	05-2000	Terms and symbols for information quantities in telecommunications	In force
V.608-2	04-1993	Letter symbols for telecommunications *Note - Withdrawn (06/06/03) (RA-03)*	Withdrawn
V.662-3	05-2000	Terms and definitions	In force
V.663-1	06-1990	Use of certain terms linked with physical quantities	In force
V.664	07-1986	Adoption of the CCITT Specification and Description Language (SDL) *Note - Withdrawn (RA-2000)*	Withdrawn
V.665-2	05-2000	Traffic intensity unit	In force
V.666-2	04-1993	Abbreviations and initials used in telecommunications	In force