



OPERATING EUROVISION AND EURORADIO

TR 018

FREQUENCY BANDS ALLOCATED TO BROADCASTING

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ЧАСТОТНЫЕ ПОЛОСЫ, ВЫДЕЛЕННЫЕ ДЛЯ ВЕЩАНИЯ

ЭТОТ ДОКУМЕНТ ЗАМЕНЯЕТ BPN 045

ТЕХНИЧЕСКИЙ ОТЧЕТ
ВЕРСИЯ 1.0

ИСТОЧНИК: SM-RAP
АПРЕЛЬ 2013

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Распределение частотных полос для вещания

<i>Комитет EBU</i>	<i>Первый выпуск</i>	<i>Переработка</i>	<i>Переиздание</i>
SM-RAP	(2002) 2013*	(См. историю)	

Ключевые слова: Частотные полосы, Распределение для вещания

Настоящий документ призван дать обзор соответствующих нормативов и применений различных частотных полос, выделенных для вещания. По каждой частотной полосе он включает:

- ссылки на ITU Radio Regulations (RR) в регионе 1 и соответствующие сноски для стран европейской зоны вещания (EBA), согласно RR,
- общеевропейское распределение частот основного использования или интереса в странах СЕРТ и сноски из RR, влияющие на 10 или более стран СЕРТ,
- применение, когда
 - а) существует Решение ECC/ERC, Решение ЕС или Рекомендация ECC/ERC, которые гармонизируют или распределяют частотные полосы, или
 - б) минимум 10 администраций СЕРТ выделили соответствующую частотную полосу для радио согласно EFIS, или
 - с) WGFM принял такое решение (на основании других аспектов).
- Европейские сноски (EU) относятся к данному применению.

Подробности можно найти в Европейской таблице распределения и применения частот в частотном диапазоне от 8.3 kHz до 3000 GHz (ECA TABLE) по адресу:

<http://www.erodocdb.dk/Docs/doc98/official/pdf/ercprep025.pdf>,

или в ECO Frequency Information System [EFIS](http://www.efis.dk/) (<http://www.efis.dk/>).

Данная версия TR 018 включает ссылки на редакцию Radio Regulations 2012 г. и на Европейскую таблицу распределения частот, утвержденную в феврале 2013 г.

Документ составлен в виде удобного справочника. Он не заменяет официальных документов ИТУ/СЕРТ по данной теме, которые следует цитировать, когда нужны какие-либо безусловные источники.

*Данный отчет был впервые опубликован как EBU BPN 045 (с 2002 по 2009 г., 13 обновлений), доступный только членам EBU. Технический комитет EBU в марте 2013 г. согласился сделать содержание BPN 045 доступным общественности. Это было сделано путем публикации настоящего Технического отчета EBU. Ввиду редакторской целесообразности BPN 045 был аннулирован.

История обновлений

Версия	Дата	Описание
ВРN 045 выпуск 1	10.12.2002	Первое издание ВРN по 7-му заседанию группы SMI
ВРN 045 выпуск 2	6.05.2002	Доработка по 8 заседанию группы SMI
ВРN 045 выпуск 3	23.01.2003	Доработка по 9 заседанию группы SMI. Разъяснение позиции EBU для Band II. Доработка вопросов DAB в соответствии с Maastricht 02 Agreement.
ВРN 045 выпуск 4	26.05.2003	Доработка по 10 заседанию группы SMI
ВРN 045 выпуск 5	18.11.2003	Доработка по 11 заседанию группы SMI согласно "EBU Guidelines for the RRC", по результатам WRC-03 и по последнему развитию DRM.
ВРN 045 выпуск 6	7.06.2004	Доработка по 12 заседанию группы SMI: пересмотр вопросов Band I and Band II; включение вопросов, связанных с повесткой WRC-07 (самые приоритетные вопросы).
ВРN 045 выпуск 7	14.01.2005	Доработка по 13 заседанию группы SMI. Доработка по Band I and Band II, Band III and Bands IV/V по результатам RRC-04. Включение новых потенциальных полос для вещания.
ВРN 045 выпуск 8	29.04.2005	Доработка по 14 заседанию группы SMI.
ВРN 045 выпуск 9	5.01.2006	Доработка по 15 заседанию группы SMI. Доработка по L-Band и диапазону TETS.
ВРN 045 выпуск 10	20.06.2006	Доработка по 16 заседанию группы SMI.
ВРN 045 выпуск 11	1.02.2007	Доработка по 17 заседанию группы SMI. Доработка по Band III и Bands IV/V по результатам RRC-06.
ВРN 045 выпуск 12	01.04.2008	Доработка по 20 заседанию группы SMI. Новый формат таблицы частотных полос. Отражение позиции EBU в EBU Guidelines для будущего использования вещательного спектра.
ВРN 045 выпуск 13	21.10.2009	Доработка согласно ITU-R Radio Regulations 2008.
TR 018 выпуск 1.0	09.04.2013	Текущая доработка (может быть ВРN 045 выпуск 14) в соответствии с ITU-R Radio Regulations 2012 и по European Common Allocation table, утвержденной в феврале 2013. Публикация в качестве EBU Technical Report TR 018 выпуск 1.0 (для публичного доступа к содержанию).

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Диапазоны частот	Выделение для Region 1 ITU RR и соответствующие ссылки для стран ЕВА - европейской зоны вещания	Европейское единое распределение	ЕСС/ERC гармонизация	Использование	Европейские ссылки	Примечания по вещательным сервисам, включая стандарты
LF 30 to 300 kHz						
148.5 - 255 kHz	BROADCASTING	BROADCASTING	ERC/REC 70-03 ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения Активные медицинские имплантаты		Частотный план GE75 Внедрение DRM EN 302 245 EN 302 017
255 - 283.5 kHz	BROADCASTING AERONAUTICAL RADIONAVIGATION 5.71	BROADCASTING AERONAUTICAL RADIONAVIGATION	ERC/REC 70-03 ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения Активные медицинские имплантаты Маяки (Aeronautical)		Частотный план GE75 Внедрение DRM EN 302 245 EN 302 017
MF 300 to 3000 kHz						
526.5 - 1606.5 kHz	BROADCASTING 5.87A	BROADCASTING	ERC/REC 70-03 ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения Активные медицинские имплантаты		Частотный план GE75 Внедрение DRM EN 302 245 EN 302 017
2300 - 2498 kHz	FIXED MOBILE исключая Aeronautical Mobile (R) BROADCASTING (TROPICAL BAND) 5.103, 5.113	FIXED MOBILE исключая Aeronautical Mobile (R) 5.103	ERC/REC 70-03	Оборонные системы Индуктивные приложения Морская связь	EU2	
HF 3000 kHz - 30 MHz						
3200 - 3230 kHz	FIXED MOBILE исключая Aeronautical Mobile (R) BROADCASTING (TROPICAL BAND) 5.113, 5.116	FIXED MOBILE исключая Aeronautical Mobile (R) 5.116	ERC/REC 70-03	Оборонные системы Индуктивные приложения Морская связь	EU2	
3230 - 3400 kHz	FIXED MOBILE исключая Aeronautical Mobile (R) BROADCASTING (TROPICAL BAND) 5.113, 5.116	FIXED MOBILE исключая Aeronautical Mobile (R) 5.116	ERC/REC 70-03	Оборонные системы Индуктивные приложения Морская связь	EU2	
3950 - 4000 kHz	FIXED BROADCASTING	FIXED BROADCASTING	ERC/REC 70-03	Аналоговое радиовещание Оборонные системы Индуктивные приложения	EU2	Внедрение DRM EN 302 245 EN 302 017

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4750 - 4850 kHz	AERONAUTICAL MOBILE (OR) FIXED LAND MOBILE BROADCASTING (TROPICAL BAND) 5.113	AERONAUTICAL MOBILE (OR) FIXED LAND MOBILE	ERC/REC 70-03	Аэрокосмическая связь Индуктивные приложения		
4850 - 4995 kHz	FIXED LAND MOBILE BROADCASTING (TROPICAL BAND) 5.113	FIXED LAND MOBILE	ERC/REC 70-03	Оборонные системы Индуктивные приложения	EU2	
5005 - 5060 kHz	FIXED BROADCASTING (TROPICAL BAND) 5.113	FIXED	ERC/REC 70-03	Оборонные системы Индуктивные приложения	EU2	
5900 - 5950 kHz	BROADCASTING 5.134, 5.136	BROADCASTING 5.134, 5.136	ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения		Статья 12 процедур планирования EN 302 245 EN 302 017
5950 - 6200 kHz	BROADCASTING	BROADCASTING	ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения		Статья 12 процедур планирования Внедрение DRM EN 302 245 EN 302 017
7200 - 7300 kHz	BROADCASTING	BROADCASTING	ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения		Статья 12 процедур планирования EN 302 245 EN 302 017
7300 - 7400 kHz	BROADCASTING 5.134, 5.143, 5.143B, 5.143C	BROADCASTING 5.134, 5.143, 5.143B	ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения		Статья 12 процедур планирования Внедрение DRM EN 302 245 EN 302 017
7400 - 7450 kHz	BROADCASTING 5.143B, 5.143C	BROADCASTING 5.143B	ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения		Article 12 planning procedure EN 302 245 EN 302 017
9400 - 9500 kHz	BROADCASTING 5.134, 5.146	BROADCASTING 5.134, 5.146	ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения		Article 12 planning procedure Внедрение DRM EN 302 245 EN 302 017

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9500 - 9900 kHz	BROADCASTING 5.147	BROADCASTING 5.147	ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения		Article 12 planning procedure Внедрение DRM EN 302 245 EN 302 017
11.6 - 11.65 MHz	BROADCASTING 5.134, 5.146	BROADCASTING 5.134, 5.146	ERC/REC 70-03 ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения Железнодорожные приложения		Article 12 planning procedure Внедрение DRM EN 302 245 EN 302 017
11.65 - 12.05 MHz	BROADCASTING 5.147	BROADCASTING 5.147	ERC/REC 70-03 ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения Железнодорожные приложения		Article 12 planning procedure Внедрение DRM EN 302 245 EN 302 017
12.05 - 12.1 MHz	BROADCASTING 5.134, 5.146	BROADCASTING 5.134, 5.146	ERC/REC 70-03 ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения Железнодорожные приложения		Article 12 planning procedure Внедрение DRM EN 302 245 N 302 017
13.57 - 13.6 MHz	BROADCASTING 5.134, 5.151	BROADCASTING 5.134, 5.151	ERC/REC 70-03 ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения Железнодорожные приложения		Article 12 planning procedure Внедрение DRM EN 302 245 EN 302 017
13.6 - 13.8 MHz	BROADCASTING	BROADCASTING	ERC/REC 70-03 ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения Железнодорожные приложения Активные медицинские имплантаты		Article 12 planning procedure Внедрение DRM EN 302 245 EN 302 017
13.8 - 13.87 MHz	BROADCASTING 5.134, 5.151	BROADCASTING 5.134, 5.151	ERC/REC 70-03 ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения Железнодорожные приложения Активные медицинские имплантаты		Article 12 planning procedure Внедрение DRM EN 302 245 EN 302 017
15.1 - 15.6 MHz	BROADCASTING	BROADCASTING	ERC/REC 70-03 ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения Железнодорожные приложения Активные медицинские имплантаты		Article 12 planning procedure Внедрение DRM EN 302 245 EN 302 017

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15.6 - 15.8 MHz	BROADCASTING 5.134, 5.146	BROADCASTING 5.134, 5.146	ERC/REC 70-03 ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения Железнодорожные приложения Активные медицинские имплантаты		Article 12 planning procedure Внедрение DRM EN 302 245 EN 302 017
17.48 - 17.55 MHz	BROADCASTING 5.134, 5.146	BROADCASTING 5.134, 5.146	ERC/REC 70-03 ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения Активные медицинские имплантаты		Article 12 planning procedure Introduction of DRM EN 302 245 EN 302 017
17.55 - 17.9 MHz	BROADCASTING	BROADCASTING	ERC/REC 70-03 ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения Активные медицинские имплантаты		Article 12 planning procedure Introduction of DRM EN 302 245 EN 302 017
18.9 - 19.02 MHz	BROADCASTING 5.134, 5.146	BROADCASTING 5.134, 5.146	ERC/REC 70-03 ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения Активные медицинские имплантаты		Article 12 planning procedure Introduction of DRM EN 302 245 EN 302 017
21.45 - 21.85 MHz	BROADCASTING	BROADCASTING	ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения		Article 12 planning procedure Introduction of DRM EN 302 245 EN 302 017
25.67 - 26.1 MHz	BROADCASTING	BROADCASTING	ERC/REC 70-03	Аналоговое радиовещание Индуктивные приложения		Article 12 planning procedure Introduction of DRM for local services EN 302 245 EN 302 017
41 - 47 MHz	FIXED MOBILE 5.161, 5.162A	MOBILE 5.162A	ERC/REC 70-03	Оборонные системы PMR Wind Profilers Радиомикрофоны	EU1, EU27	Although this Band is not allocated to BS in the RR, it was planned for broadcasting in ST61. Maybe BS did not use the band and a relevant conference allocated the band to other services. Within the band 29.7 - 47.0 MHz. Narrow band audio systems including tour guide systems on a tuning range basis

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Band I						
47 - 61 MHz	BROADCASTING 5.162A, 5.163, 5.164	LAND MOBILE Радиолюбители 5.162A, 5.163, 5.164		Оборонные системы Местный пейджинг PMR Wind profilers Космические исследования/EESS Радиолюбители	EU2, EU3, EU1	ST61revGE06 Agreement
61 - 68 MHz	BROADCASTING 5.162A, 5.164	LAND MOBILE 5.162A, 5.164		Defense systems Wind profilers PMR	EU2, EU3, EU1	ST61revGE06 Agreement
68 - 74.8 MHz	FIXED MOBILE except Aeronautical Mobile 5.149, 5.175, 5.177, 5.179	MOBILE MOBILE except Aeronautical Mobile Radio astronomy 5.149		Defence systems PMR/PAMR	EU1 EU2, EU4, EU27, EU9	In certain countries, parts of the band used by broadcasting services as per relevant footnotes
75.2 - 87.5 MHz	FIXED MOBILE except Aeronautical Mobile 5.175, 5.179, 5.187	MOBILE		Defence systems PMR/PAMR	EU1 EU2, EU27	In certain countries, parts of the band used by broadcasting services as per relevant footnotes
Band II						
87.5 - 100 MHz	BROADCASTING 5.190	BROADCASTING	ERC/REC 70-03	FM радиовещание Беспроводные звуковые приложения		GE84 Agreement ST61revGE06 Agreement WI95revCO07 EN 302 018 EN 301 357
100 - 108 MHz	BROADCASTING 5.194	BROADCASTING	ERC/REC 70-03	FM радиовещание Беспроводные звуковые приложения		GE84 Agreement WI95revCO07 EN 302 018 EN 301 357
Band III						
174 - 216 MHz	BROADCASTING 5.235	BROADCASTING LAND MOBILE 5.235	ERC/REC 70-03 ERC/REC 70-03	T-DAB, DVB-T/T2 Радиомикрофоны и звуковая подслушка Помощь слабослышащим		GE06 Agreement EN 302 296 EN 302 297 EN 302 998 On a tuning range
216 - 223 MHz	BROADCASTING 5.235	BROADCASTING 5.235		T-DAB DVB-T/T2		GE06 Agreement EN 302 077 EN 302 296 EN 302 297 EN 302 998

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223 - 225 MHz	BROADCASTING fixed mobile 5.246, 5.247	BROADCASTING		T-DAB DVB-T/T2		GE06 Agreement EN 302 077 EN 302 296 EN 302 297 EN 302 998
225 - 230 MHz	BROADCASTING fixed mobile 5.246, 5.247	BROADCASTING Land mobile		T-DAB DVB-T	EU10	GE06 Agreement EN 302 077 EN 302 296 EN 302 297 EN 302 998 Band within the military tuning range 225 - 400 MHz. Sharing with defence on a national basis
230 - 235 MHz	FIXED MOBILE 5.247	MOBILE		Оборонные системы T-DAB	EU10 EU27	Harmonised military band WI95revCO07 EN 302 077 T-DAB sharing with defense on a national basis
235 - 240 MHz	FIXED MOBILE 5.254	MOBILE 5.254		Оборонные системы T-DAB	EU10 EU27	Harmonised military band WI95revCO07 EN 302 077 T-DAB sharing with defense on a national basis
Bands IV/V						
470 - 790 MHz	BROADCASTING 5.149, 5.291A, 5.294, 5.296, 5.300, 5.304, 5.306, 5.311A, 5.312, 5.312A	BROADCASTING 5.291A, 5.296, 5.149, 5.306, 5.311A,		DVB-T/T2 PMSE Радиомикрофоны и подслушка Wind profilers Radio astronomy	EU13	GE06 Plan EN 302 296 EN 302 297 EN 302 298 Mobile applications restricted to PMSE including radio microphones On a tuning range

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790 - 862 MHz	FIXED BROADCASTING MOBIL исключая Aeronautical Mobile 5.312, 5.314, 5.315, 5.316, 5.316A, 5.316B, 5.317A, 5.319	BROADCASTING MOBILE исключая aeronautical mobile 5.312, 5.316, 5.16A	ECC/DEC/(09)03 ECC/REC/(11)04	DVB-T/T2 PMSE Радиомикрофоны и подслушка Оборонные системы TRA-ECS	EU2, EU13	Эта полоса запланирована для мобильных систем согласно RR GE06 Plan EN 302 296 EN 302 297 EN 302 298 Radio microphones On a tuning range Tactical links IMT is considered as a part of TRA-ECS
L-Band						
1452 - 1492 MHz	FIXED MOBILE исключая Aeronautical Mobile BROADCASTING BROADCASTING SATELLITE 5.341, 5.342, 5.345, 5.208B	BROADCASTING BROADCASTING SATELLITE Fixed MOBILE исключая Aeronautical Mobile 5.341, 5.342, 5.345	ECC/DEC/(03)02	T-DAB Спутниковое радио		MA02revCO07 Special Arrangement EN 302 077 CEPT studies for allocation to PMSE services ECC Decision on the withdrawal of ECC Decision (03)02 on the use of the satellite part of the 1452 - 1492 MHz готовится: ECC Decision on the harmonised use of the frequency band 1452 - 1492 MHz for Mobile/Fixed Communications Networks Supplemental Downlink (MFCN SDL)
BSS						
2520 - 2655 MHz	BROADCASTING-SATELLITE 5.413, 5.416 FIXED 5.410 MOBILE исключая Aeronautical Mobile 5.384A, 5.339, 5.403, 5.412, 5.417C, 5.417D, 5.418B, 5.418C	FIXED MOBIL исключая Aeronautical Mobile 5.384A 5.339, 5.418B, 5.418C	ECC/DEC/(02)06 ECC/DEC/(05)05 ECC/REC/(11)05 ERC/REC 25-10	Оборонные системы Фиксированная связь TRA-ECS PMSE	EU2 EU15 EU16	I MT part of TRA-ECS PMSE on a tuning range

Диапазоны частот	Выделение для Region 1 ITU RR и соответствующие ссылки для стран ЕВА - европейской зоны вещания	Европейское единое распределение	ECC/ERC гармонизация	Использование	Европейские ссылки	Примечания по вещательным сервисам, включая стандарты
2655 - 2670 MHz	BROADCASTING-SATELLITE 5.208B, 5.413, 5.416 FIXED 5.410 MOBILE except Aeronautical Mobile 5.384A Earth exploration-satellite (passive) Radio astronomy Space research (passive) 5.149, 5.412, 5.420	FIXED MOBILE except Aeronautical Mobile 5.384A Earth exploration-satellite (passive) Radio astronomy Space research (passive) 5.149 5.208B	ECC/DEC/(02)06 ECC/DEC/(05)05 ECC/REC/(11)05 ERC/REC 25-10	Fixed links TRA-ECS PMSE Radio astronomy	EU2 EU15 EU16	IMT part of TRA-ECS On a tuning range Continuum observations
11.7 - 12.5 GHz	BROADCASTING BROADCASTING-SATELLITE FIXED MOBILE except Aeronautical Mobile 5.487, 5.487A, 5.492	BROADCASTING-SATELLITE FIXED MOBILE except Aeronautical Mobile 5.487, 5.487A, 5.492	ERC/DEC/(00)08 ECC/DEC/(06)03 ECC/DEC/(06)02	Broadcasting Satellite receivers HEST LEST	EU28	EN 301 459 EN 301 360 EN 302 340 EN 302 448 In accordance with App 30 of RR. SIT within the band 12.4 - 12.5 GHz
21.4 - 22 GHz	FIXED MOBILE BROADCASTING-SATELLITE 5.208B, 5.530A, 5.530B, 5.530C, 5.530D	BROADCASTING-SATELLITE 5.208B, 5.530A, 5.530B, 5.530C, 5.530D	ECC/DEC/(04)10	Broadcasting Satellite receivers SRR PMSE		EN 301 360 EN 301 459 Wideband High Definition Television Fixed service envisaged in some countries
40.5 - 42.5 GHz	BROADCASTING BROADCASTING-SATELLITE FIXED FIXED SATELLITE (S/E) Mobile 5.547, 5.551F, 5.551H, 5.551I	BROADCASTING BROADCASTING-SATELLITE FIXED 5.547, 5.551H, 5.551I	ECC/DEC/(02)04 ECC/REC/(01)04 ERC/DEC/(99)15 ECC/REC/(01)04 ERC/DEC/(99)15	FSS Earth Stations MWS Fixed		

Перечень частотных полос, которые могут использоваться службами PMSE

Службы **производства программ и специальных событий** (PMSE) в основном работают по распределению для мобильных услуг согласно ITU-R Radio Regulations (RR). Эти службы не нужно учитывать в планировании основных услуг, однако на национальном уровне они могут быть очень важны.

В частности, важность служб PMSE растет, т.к. увеличение числа вещательных программ также означает рост потребности в оборудовании для производства программ. Это контрастирует с тем фактом, что нынешнее использование PMSE в определенных полосах становится более ограниченным, т.к. полосы более плотно распределяются для DVB-T/T2, оставляя меньше места для передач PMSE.

Члены EBU поддерживают расширение диапазонов настройки, чтобы дать больше гибкости службам PMSE в нахождении частот.

Во многих европейских странах растет спрос на частоты для PMSE. Причины этому, среди всего прочего, таковы:

- Предстоящие крупные спортивные события (чемпионат мира по футболу, чемпионаты Европы по футболу, Олимпийские игры, велогонки и т.д.)
- HDTV, требующее больше полосы для передачи, чем стандартное ТВ разрешение
- Частные холдинг-компании, использующие беспроводную передачу видео и звука для наблюдения
- Вещатели, которым нужны эксклюзивно выделенные каналы для PMSE

Многие администрации сейчас иногда сталкиваются с большими трудностями в распределении (даже временном) каналов для спортивных событий и вынуждены применять «творческий» и гибкий подход для выполнения требований поставщиков контента (например, Олимпийские игры в Лондоне 2012 г.).

Такое решение неудовлетворительно в дальней перспективе, поэтому необходимо более постоянное решение.

В следующей таблице перечислены частотные диапазоны для служб PMSE. Следует заметить, что, как показывает опыт, частотный диапазон 2-4 GHz – наиболее подходящий для мобильных приложений. Это также диапазон, где самый большой спрос на видео каналы PMSE, и, естественно, он больше всего заполнен другими основными службами.

Frequency band	RR Region 1 allocation and relevant footnotes for EBA countries	European Common Allocation	Broadcast use
174 - 216 MHz	BROADCASTING 5.235	BROADCASTING LAND MOBILE 5.235	T-DAB DVB-T/T2 Analogue TV Radio microphones on a tuning range basis
470 - 862 MHz	BROADCASTING FIXED 5.149, 5.291A, 5.294, 5.296, 5.300, 5.304, 5.306, 5.311A, 5.312, 5.314, 5.315, 5.316, 5.316A, 5.316B, 5.317A	BROADCASTING MOBILE Mobile Radio astronomy 5.149, 5.291A, 5.296, 5.306, 5.312, 5.316, 5.316A, 5.316B, 5.317A EU2, EU13	Analogue TV DVB-T/T2 PMSE (Audio links and radio microphones) (GE06)
1785 - 1800 MHz	FIXED MOBILE 5.384A, 5.386, 5.387	FIXED MOBILE EU2, EU15	Radio microphones
2025 - 2110 MHz	EARTH EXPLORATION-SATELLITE (E/S) (S/S) FIXED MOBILE 5.391 SPACE OPERATION (E/S) (S/S) SPACE RESEARCH (E/S) (S/S) 5.392	EARTH EXPLORATION-SATELLITE (E/S)(S/S) FIXED MOBILE 5.391 SPACE OPERATION (E/S) (S/S) SPACE RESEARCH (E/S) (S/S) 5.392 EU2 EU15 EU27	PMSE (Video links) (on a tuning range basis)
2200 - 2290 MHz	EARTH EXPLORATION-SATELLITE (S/E)(S/S) FIXED MOBILE 5.391 SPACE OPERATION (S/E) (S/S) SPACE RESEARCH (S/E) (S/S) 5.392	EARTH EXPLORATION-SATELLITE (S/E)(S/S) FIXED MOBILE 5.391 SPACE OPERATION (S/E) (S/S) SPACE RESEARCH (S/E) (S/S) 5.392 EU15 EU27	PMSE (Video links) (on a tuning range basis)
2300 - 2400 MHz	FIXED MOBILE Amateur (Радиолюбители) Radiolocation 5.384A, 5.395	FIXED MOBILE Радиолюбители Radiolocation 5.384A EU2	PMSE (Video links)
2483.5 - 2500 MHz	FIXED MOBILE MOBILE-SATELLITE (S/E) 5.351A RADIO DETERMINATION SATELLITE (S/E) Radiolocation 5.150, 5.398, 5.398A, 5.399, 5.401, 5.402	FIXED MOBILE MOBILE-SATELLITE (S/E) 5.351A 5.150, 5.399, 5.402	PMSE (Video links)
2520 - 2670 MHz	BROADCASTING-SATELLITE 5.413, 5.416 FIXED 5.410 MOBILE исключая Aeronautical Mobile 5.384A, 5.208B, 5.339, 5.403, 5.412, 5.417C, 5.417D, 5.418B, 5.418C, 5.420 5.149	FIXED MOBILE исключая Aeronautical Mobile Earth exploration satellite (passive) Radio astronomy Space research (passive) 5.149, 5.208B, 5.384A 5.339 5.418B 5.418C EU2, EU15, EU16	PMSE (on a tuning range basis until UMTS/IMT2000 is implemented)
3400 - 3500 MHz	FIXED FIXED-SATELLITE (S/E) Mobile 5.430A Radiolocation 5.431	FIXED FIXED-SATELLITE (S/E) MOBILE 5.430A Amateur Radiolocation EU17	For coordinated PMSE applications for occasional use (Video links)
3500 - 3600 MHz	FIXED FIXED-SATELLITE (S/E) Mobile 5.430A Radiolocation	FIXED FIXED-SATELLITE (S/E) MOBILE 5.430A	For coordinated PMSE applications for occasional use (Video links)
4400 - 5000 MHz	FIXED MOBILE FIXED-SATELLITE (S/E) Radio Astronomy/RADIO ASTRONOMY Space Research (passive) 5.149, 5.339, 5.441, 5.442, 5.443	FIXED FIXED SATELLITE (S/E) MOBILE MOBILE except aeronautical mobile RADIO ASTRONOMY Radio Astronomy 5.149, 5.339, 5.441 EU2 EU27 EU20	For coordinated PMSE applications for occasional use (Video links)
10.00 - 10.60 GHz	FIXED MOBILE MOBILE except aeronautical mobile RADIOLOCATION Amateur Amateur-satellite Radiolocation 5.479, 5.481	FIXED MOBILE MOBILE except aeronautical mobile RADIOLOCATION Amateur Amateur-satellite Radiolocation Mobile 5.479, 5.481 EU2 EU17 EU17A EU23	PMSE (Video links)
10.60 - 10.68 GHz	EARTH EXPLORATION SATELLITE (passive) FIXED MOBILE except Aeronautical Mobile RADIO ASTRONOMY SPACE RESEARCH (passive) Radiolocation 5.149, 5.482, 5.482A	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except Aeronautical Mobile RADIO ASTRONOMY SPACE RESEARCH (passive) Radiolocation 5.149, 5.482, 5.482A EU17A	PMSE

TR 018-2013 Frequency Bands Allocated to Broadcasting

Перевод РПТД ВГТРК Апрель 2013

Frequency band	RR Region 1 allocation and relevant footnotes for EBA countries	European Common Allocation	Broadcast use
21.20 - 21.40 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)	Unidirectional temporary fixed or mobile links. Including PMSE
22.00 - 23.60 GHz	FIXED MOBILE MOBILE except Aeronautical Mobile INTER-SATELLITE 5.338A EARTH EXPLORATION SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (E/S) (passive) 5.149, 5.532	FIXED MOBILE MOBILE except Aeronautical Mobile INTER-SATELLITE 5.338A RADIO ASTRONOMY INTER-SATELLITE SPACE RESEARCH (passive) Earth exploration satellite (passive) Mobile 5.149, 5.532 EU17A	PMSE
24.00 - 24.50 GHz	AMATEUR AMATEUR-SATELLITE RADIOLOCATION FIXED INTER-SATELLITE Amateur Earth Exploration-Satellite (active) 5.150	AMATEUR AMATEUR-SATELLITE RADIOLOCATION FIXED MOBILE Amateur Earth Exploration-Satellite (active) Mobile Fixed 5.150 EU2 EU17A	PMSE
47.20 - 50.20 GHz	FIXED FIXED SATELLITE (E/S) (S/E) MOBILE 5.149, 5.340, 5.338A, 5.516B, 5.552, 5.552A, 5.554A, 5.555, 5.555B	FIXED FIXED SATELLITE (E/S) (S/E) MOBILE RADIOASTRONOMY 5.149, 5.338A, 5.340, 5.516B, 5.552, 5.552A, 5.554A, 5.555, 5.555B EU17A	PMSEP

Ссылочные документы:

ERC Report 25	The European table of frequency allocations and utilisations in the frequency range 8.3 kHz to 3000 GHz. European Common Allocation Table (ECA), approved February 2013.
ERC Report 38	Handbook on radio equipment and systems video links for ENG/OB use. Stockholm, May 1995.
ERC Report 42	Handbook on radio equipment and systems radio microphones and simple wideband audio links. Rome, October 1996.
ERC Recommendation 25-10	Frequency ranges for the use of temporary terrestrial audio and video SAP/SAB links (including ENG/OB), February 2003.
ECC Recommendation (02) 09	Protection of aeronautical Radio Navigation Service in the band 2700 - 2900 MHz from interference caused by the operation of digital cordless cameras. Recommendation adopted by WGFM, Edition of 12 June 2003.
ECC Report 02	SAB/SAP (including ENG/OB) spectrum use and future requirements. Lisbon, February 2002.
ECC Report 105	Protection of the Services Ancillary to Programme Making/Services Ancillary to Broadcasting (SAP/SAB) from the Broadcasting Satellite Service (BSS) transmissions in the band 620 - 790 MHz, July 2007.
Report ITU-R BT.2069-5 (2011)	"Spectrum usage and operational characteristics of terrestrial electronic news gathering (ENG) television outside broadcasts (TVOB) and electronic field production (EFP) systems".

Распределение частотных полос для стационарной спутниковой связи (FSS)

Примечание: Согласно ECA.

Примечание: Некоторые частотные полосы, выделенные для стационарной спутниковой связи (FSS), используются для фидерных линий вещательных спутниковых сервисов (BSS).

FSS frequency bands
3.4 - 4.2 GHz
4.5 - 4.8 GHz
5.15 - 5.25 GHz
5.725 - 7.075 GHz
7.25 - 7.75 GHz
7.9 - 8.4 GHz
10.7 - 11.7 GHz
12.5 - 13.25 GHz
13.75 - 14.8 GHz
15.43 - 15.63 GHz
17.3 - 21.2 GHz
24.65 - 25.25 GHz
27.5 - 31 GHz
37.5 - 40.5 GHz
40.5 - 42.5 GHz*
42.5 - 43.5 GHz
43.5 - 45.5 GHz (in CEPT** countries and on a secondary basis)
47.2 - 50.2 GHz
50.4 - 51.4 GHz
71 - 76 GHz
81 - 86 GHz
123 - 130 GHz
158.5 - 164 GHz
167 - 174.5 GHz
209 - 226 GHz
232 - 240 GHz
265 - 275 GHz

* Частотная полоса также выделена для BSS на приоритетной основе

** Примечание переводчика: - CEPT - European Conference of Postal & Telecommunications Administrations

Перечень аббревиатур, использованных в документе

Article 5	RR Article entitled Frequency allocations
Article 12	RR Article entitled Seasonal planning of the HF bands allocated to the broadcasting service between 5900 kHz and 26100 kHz
BS	Broadcasting Service
BSS	Broadcasting Satellite Service
CEPT	European Conference of Postal and Telecommunications Administrations
DRM	Digital Radio Mondiale
DVB-T/T2	Digital Video Broadcasting Terrestrial
EBA	European Broadcasting Area

ECA	European Common Allocation table
EESS	Earth Exploration-Satellite Service
FM	Frequency Modulation
FSS	Fixed Satellite Service
GE75	Geneva 1975 Agreement, Final Acts of the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3)
GE84	Geneva 1984 Agreement, Final Acts of the Regional Administrative Radio Conference for the Planning of the VHF Sound Broadcasting (Region 1 and part of Region 3)
GE85	Geneva 1985 Agreement Final Acts of the Regional Administrative Radio Conference of the Members of the Union in the European Broadcasting Area to Revise Certain Parts of Stockholm Agreement (1961)
GE06	Geneva 2006 Agreement, Final Acts of the Regional Radiocommunication Conference for planning of the digital terrestrial broadcasting service in parts of Regions 1 and 3, in the frequency bands 174 - 230 MHz and 470 - 862 MHz (RRC-06)
HDTV	High Definition Television
HEST	High EIRP Satellite Terminal
HF	High Frequency
IMT	International Mobile Telecommunications
ITU	International Telecommunications Union
LEST	Low EIRP Satellite Terminal
LF	Low Frequency
MA02revC O07	CEPT T-DAB Special Arrangement for T-DAB in the frequency bands 1452 - 1479.5 MHz, Constanța 2007
MF	Medium Frequency
MWS	Multimedia Wireless System
(OR)	Off-route
PMR	Professional Mobile Radio, Private Mobile Radio
PMSE	Programme Making and Special Events
(R)	Route
RR	ITU Radio Regulations. Version 2012
RRC	Regional Radiocommunications Conference
SAB	Services Ancillary to Broadcasting
SAP	Services Ancillary to Programme making
E/S	Earth-to-Space
S/E	Space-to-Earth
S/S	Space-to-Space
SRR	Short Range Radar
ST61	Final Acts of European VHF/UHF Broadcasting Conference, Stockholm 1961
ST61revG E06	Final Acts of the Regional Radiocommunication Conference for the revision of the Stockholm 1961 Agreement (RRC-06-Rev.ST61)
T-DAB	Terrestrial Digital Audio Broadcasting
TFTS	Terrestrial Flight Telecommunications System
TRA-ECS	Terrestrial Radio Applications Capable of Providing Electronic Communications Services
WI95revC O07	CEPT T-DAB Special Arrangement for T-DAB in the bands 47 - 68, 87.5 - 108, 230 - 240 MHz, Constanța 2007
WRC	World Radiocommunications Conference

Приложение 1: Европейские сноски, включенные в European Common Allocation Table (ERC Report 25 Annex 1) - Европейскую общую таблицу распределений

Номер Европейской сноски

Текст Европейской сноски

EU1	Within the frequency band 20 - 108 MHz the common military tuning range is 30 - 87.5 MHz, however, some equipment types use the lower (20 MHz) and upper (108 MHz) limits, regulated on a national basis. The harmonised military bands are: 30.30 - 30.50 MHz; 32.15 - 32.45 MHz; 41.00 - 47.00 MHz; 73.30 - 74.10 MHz; 79.0 - 79.70 MHz. When providing for additional requirements, further blocks of frequencies should be spread out over the whole common military tuning range in order to supply frequencies for frequency hopping equipment and to support a larger force (corps size, three divisions). This should be done by the national frequency management organisation(s) concerned.
EU2	Civil-military sharing.
EU3	CEPT administrations are urged to take all practical steps to clear the band 47 - 68 MHz of assignments to the broadcasting service. The broadcasting assignments according to Stockholm Agreement 1961 shall be protected.
EU4	CEPT administrations are urged to take all practical steps to clear the band 68 - 73 MHz of assignments to the broadcasting service. The broadcasting assignments according to the Final Acts of the Special Regional Conference, Geneva, 1961 shall be protected.
EU9	In a growing number of CEPT countries, parts of the band 70.0 - 70.5 MHz is also allocated to the Amateur service on a secondary basis.
EU10	The mobile service in the harmonised military band 225 - 400 MHz generally comprises land, air maritime and satellite mobile applications.
EU13	CEPT Administrations are urged to take all practical steps to clear the band 645 - 960 MHz of the assignments to the aeronautical radionavigation service.
EU15	In the frequency band 1350 - 2690 MHz tactical radio relay systems should be capable of tuning over the full range of this band. Requirements for tactical radio relay should be met from the following sub-bands: 1350 - 1400 MHz; 1427 - 1452 MHz; 1492 - 1525 MHz; 1660 - 1670 MHz; 1675 - 1710 MHz; 1785 - 1800 MHz; 2025 - 2110 MHz; 2200 - 2290 MHz; 2520 - 2575 MHz; 2615 - 2670 MHz. Tactical radio relay systems may operate in the bands 2520 - 2575 MHz and 2615 - 2670 MHz provided that they shall not cause harmful interference to terrestrial IMT and do not claim protection from them. The common requirement of 2 x 45 MHz for tactical radio relay for cross/near border operations and exercises should be met from 2025 - 2110 MHz and 2200 - 2290 MHz and in particular the bands 2025 - 2070 / 2200 - 2245 MHz.
EU16	On the introduction of IMT, the fixed service will become secondary in appropriate parts of the band.
EU16A	Use of the band by the mobile service is limited to tactical radio relay and SAP/SAB applications.
EU17	In the sub-bands 3400 - 3410 MHz, 5660 - 5670 MHz, 10.36 - 10.37 GHz, 10.45 - 10.46 GHz the amateur service operates on a secondary basis. In making assignments to other services, CEPT administrations are requested wherever possible to maintain these sub-bands in such a way as to facilitate the reception of amateur emissions with minimal power flux densities.
EU17A	Use of the band by the mobile service is limited to SAP/SAB applications.
EU20	This fixed service band is designated for common use by civil and non-civil users. Any user priorities in respect of preferred channels or sub-bands are to be determined after discussions between interested parties.
EU23	In the sub-bands 5660 - 5670 MHz (earth to space), 5830 - 5850 MHz (space to earth) and 10.45 - 10.50 GHz the amateur-satellite additionally operates on a secondary and non-interference basis to other services. In making assignments to other services, CEPT administrations are requested wherever possible to maintain these allocations in such a way as to facilitate the reception of amateur emissions with minimal power flux densities.
EU27	A frequency band that is in general military use in Europe and identified for major military utilisation in the ECA. Such a frequency band forms a basis for military use and planning. The band can be shared between civil and military users according to national requirements and legislation.
EU28	CEPT administrations shall not deploy new fixed service systems in the band 11.7 - 12.5 GHz (ERC/DEC (00) 08).

Приложение 2: Сноски к Статье 5 RR* для стран Региона 1, относящихся к Европейской зоне вещания

Номер	Текст сноски
5.71	<i>Дополнительные выделения:</i> in Tunisia, the band 255 - 283.5 kHz is allocated to the broadcasting service on a primary basis.
5.87A	<i>Дополнительные выделения:</i> in Uzbekistan, the band 526.5 - 1606.5 kHz is also allocated to the radionavigation service on a primary basis. Such use is subject to agreement obtained under No. 9.21 with administrations concerned and limited to ground-based radio beacons in operation on 27 October 1997 until the end of their lifetime. (WRC-97)
5.103	In Region 1, in making assignments to stations in the fixed and mobile services in the bands 1850 - 2045 kHz, 2194 - 2498 kHz, 2502 - 2625 kHz and 2650 - 2850 kHz, administrations should bear in mind the special requirements of the maritime mobile service.
5.113	For the conditions for the use of the bands 2300 - 2495 kHz (2498 kHz in Region 1), 3200 - 3400 kHz, 4750 - 4995 kHz and 5005 - 5060 kHz by the broadcasting service, see Nos. 5.16 to 5.20, 5.21 and 23.3 to 23.10.
5.116	Administrations are urged to authorize the use of the band 3155 - 3195 kHz to provide a common worldwide channel for low-power wireless hearing aids. Additional channels for these devices may be assigned by administrations in the bands between 3155 kHz and 3400 kHz to suit local needs.
5.134	The use of the bands 5900 - 5950 kHz, 7300 - 7350 kHz, 9400 - 9500 kHz, 11600 - 11650 kHz, 12050 - 12100 kHz, 13570 - 13600 kHz, 13800 - 13870 kHz, 15600 - 15800 kHz, 17480 - 17550 kHz and 18900 - 19020 kHz by the broadcasting service is subject to the application of the procedure of Article 12. Administrations are encouraged to use these bands to facilitate the introduction of digitally modulated emissions in accordance with the provisions of Resolution 517 (Rev.WRC-07). (WRC-07)
5.136	<i>Дополнительные выделения</i> Frequencies in the band 5900 - 5950 kHz may be used by stations in the following services, communicating only within the boundary of the country in which they are located: fixed service (in all three Regions), land mobile service (in Region 1), mobile except Aeronautical Mobile (R) service (in Regions 2 and 3), on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the radio regulations. (WRC-07)
5.143	<i>Дополнительные выделения</i> Frequencies in the band 7300 - 7350 kHz may be used by stations in the fixed service and in the land mobile service, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)
5.143B	In Region 1, frequencies in the band 7350 - 7450 kHz may be used by stations in the fixed and land mobile services communicating only within the boundary of the country in which they are located on condition that harmful interference is not caused to the broadcasting service. The total radiated power of each station shall not exceed 24 dBW. (WRC-12)
5.143C	<i>Дополнительные выделения</i> in Algeria, Saudi Arabia, Bahrain, Comoros, Djibouti, Egypt, United Arab Emirates, Iran (Islamic Republic of), Jordan, Kuwait, Libya, Morocco, Mauritania, Niger, Oman, Qatar, the Syrian Arab Republic, Sudan, South Sudan, Tunisia and Yemen, the bands 7350 - 7400 kHz and 7400 - 7450 kHz are also allocated to the fixed service on a primary basis. (WRC-12)
5.146	<i>Дополнительные выделения</i> Frequencies in the bands 9400 - 9500 kHz, 11600 - 11650 kHz, 12050 - 12100 kHz, 15600 - 15800 kHz, 17480 - 17550 kHz and 18900 - 19020 kHz may be used by stations in the fixed service, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies in the fixed service, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)
5.147	On condition that harmful interference is not caused to the broadcasting service, frequencies in the bands 9775 - 9900 kHz, 11650 - 11700 kHz and 11975 - 12050 kHz may be used by stations in the fixed service communicating only within the boundary of the country in which they are located, each station using a total radiated power not exceeding 24 dBW.

*Эта версия TR 018 включает ссылки на ITU Radio Regulations 2012 и European table of frequency allocations 2013

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Номер

Текст сноски

5.149	<p>In making assignments to stations of other services to which the bands:</p> <p>13360 - 13410 kHz, 25550 - 25670 kHz, 37.5 - 38.25 MHz, 73 - 74.6 MHz in Regions 1 & 3, 150.05 - 153 MHz in Region 1, 322 - 328.6 MHz, 406.1 - 410 MHz, 608 - 614 MHz in Regions 1 & 3, 1330 - 1400 MHz, 1610.6 - 1613.8 MHz, 1660 - 1670 MHz, 1718.8 - 1722.2 MHz, 2655 - 2690 MHz, 3260 - 3267 MHz, 3332 - 3339 MHz, 3345.8 - 3352.5 MHz, 4825 - 4835 MHz, 4950 - 4990 MHz,</p>	<p>4990 - 5000 MHz, 6650 - 6675.2 MHz, 10.6 - 10.68 GHz, 14.47 - 14.5 GHz, 22.01 - 22.21 GHz, 22.21 - 22.5 GHz, 22.81 - 22.86 GHz, 23.07 - 23.12 GHz, 31.2 - 31.3 GHz, 31.5 - 31.8 GHz in Regions 1 & 3, 36.43 - 36.5 GHz, 42.5 - 43.5 GHz, 48.94 - 49.04 GHz, 76 - 86 GHz,</p>	<p>92 - 94 GHz, 94.1 - 100 GHz, 102 - 109.5 GHz, 111.8 - 114.25 GHz, 128.33 - 128.59 GHz, 129.23 - 129.49 GHz, 130 - 134 GHz, 136 - 148.5 GHz, 151.5 - 158.5 GHz, 168.59 - 168.93 GHz, 171.11 - 171.45 GHz, 172.31 - 172.65 GHz, 173.52 - 173.85 GHz, 195.75 - 196.15 GHz, 209 - 226 GHz, 241 - 250 GHz, 252 - 275 GHz</p>
<p>are allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space borne or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 4.5 and 4.6 and Article 29). (WRC-07)</p>			
5.150	<p>Нижеследующие полосы:</p> <p>13553 - 13567 kHz 2 6957 - 27283 kHz 40.66 - 40.70 MHz 902 - 928 MHz in Region 2 2400 - 2500 MHz 5725 - 5875 MHz 24 - 24.25 GHz</p>	<p>(centre frequency 13560 kHz), (centre frequency 27120 kHz), (centre frequency 40.68 MHz), (centre frequency 915 MHz), (centre frequency 2450 MHz), (centre frequency 5 800 MHz) (centre frequency 24.125 GHz)</p>	
<p>are also designated for industrial, scientific and medical (ISM) applications. Radiocommunication services operating within these bands must accept harmful interference which may be caused by these applications. ISM equipment operating in these bands is subject to the provisions of No. 15.13.</p>			
5.151	<p>Дополнительные выделения: Frequencies in the bands 13570 - 13600 kHz and 13800 - 13870 kHz may be used by stations in the fixed service and in the mobile except Aeronautical Mobile (R) service, communicating only within the boundary of the country in which they are located, on the condition that harmful interference is not caused to the broadcasting service. When using frequencies in these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)</p>		
5.161	<p>Дополнительные выделения: in Iran (Islamic Republic of) and Japan, the band 41 - 44 MHz is also allocated to the radiolocation service on a secondary basis.</p>		
5.162A	<p>Дополнительные выделения: in Germany, Austria, Belgium, Bosnia and Herzegovina, China, Vatican, Denmark, Spain, Estonia, the Russian Federation, Finland, France, Ireland, Iceland, Italy, Latvia, The Former Yugoslav Republic of Macedonia, Liechtenstein, Lithuania, Luxembourg, Monaco, Montenegro, Norway, the Netherlands, Poland, Portugal, the Czech Rep., the United Kingdom, Serbia, Slovenia, Sweden and Switzerland the band 46 - 68 MHz is also allocated to the radiolocation service on a secondary basis. This use is limited to the operation of wind profiler radars in accordance with Resolution 217 (WRC-97). (WRC-12)</p>		
5.163	<p>Дополнительные выделения: in Armenia, Belarus, the Russian Federation, Georgia, Hungary, Kazakhstan, Latvia, Moldova, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the bands 47 - 48.5 MHz and 56.5 - 58 MHz are also allocated to the fixed and land mobile services on a secondary basis. (WRC-12)</p>		

5.164	<i>Дополнительные выделения:</i> in Albania, Algeria, Germany, Austria, Belgium, Bosnia and Herzegovina, Botswana, Bulgaria, Côte d'Ivoire, Denmark, Spain, Estonia, Finland, France, Gabon, Greece, Ireland, Israel, Italy, Jordan, Lebanon, Libya, Liechtenstein, Lithuania, Luxembourg, Madagascar, Mali, Malta, Morocco, Mauritania, Monaco, Montenegro, Nigeria, Norway, the Netherlands, Poland, Syrian Arab Republic, Slovakia, Czech Rep., Romania, the United Kingdom, Serbia, Slovenia, Sweden, Switzerland, Swaziland, Chad, Togo, Tunisia and Turkey, the band 47 - 68 MHz, in South Africa the band 47 - 50 MHz, and in Latvia the band 48.5 - 56.5 MHz, are also allocated to the land mobile service on a primary basis. However, stations of the land mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations of countries other than those mentioned in connection with the band. (WRC-12)
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5.175	<i>Дополнительные выделения:</i> in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Moldova, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the bands 68 - 73 MHz and 76 - 87.5 MHz are allocated to the broadcasting service on a primary basis. In Latvia and Lithuania, the bands 68 - 73 MHz and 76 - 87.5 MHz are allocated to the broadcasting and mobile, except Aeronautical Mobile, services on a primary basis. The services to which these bands are allocated in other countries and the broadcasting service in the countries listed above are subject to agreements with the neighbouring countries concerned. (WRC-07)
5.177	<i>Дополнительные выделения:</i> in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the band 73 - 74 MHz is also allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. 9.21. (WRC-07)
5.179	<i>Дополнительные выделения:</i> in Armenia, Azerbaijan, Belarus, China, the Russian Federation, Georgia, Kazakhstan, Lithuania, Mongolia, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the bands 74.6 - 74.8 MHz and 75.2 - 75.4 MHz are also allocated to the aeronautical radionavigation service, on a primary basis, for ground-based transmitters only. (WRC-12)
5.187	<i>Дополнительные выделения:</i> in Albania, the band 81 - 87.5 MHz is allocated to the broadcasting service on a primary basis and used in accordance with the decisions contained in the Final Acts of the Special Regional Conference (Geneva, 1960).
5.190	<i>Дополнительные выделения:</i> in Monaco, the band 87.5 - 88 MHz is also allocated to the land mobile service on a primary basis, subject to agreement obtained under No. 9.21. (WRC-97)
5.194	<i>Additional allocation:</i> in Azerbaijan, Kyrgyzstan, Somalia and Turkmenistan, the band 104 - 108 MHz is also allocated to the mobile, except Aeronautical Mobile (R), service on a secondary basis. (WRC-07)
5.208B ₁	In the bands: 137 - 138 MHz, 387 - 390 MHz, 400.15 - 401 MHz, 1452 - 1492 MHz, 1525 - 1610 MHz, 1613.8 - 1626.5 MHz, 2655 - 2690 MHz, 21.4 - 22 GHz, Resolution 739 (Rev.WRC-07) applies. (WRC-07)
5.235	<i>Дополнительные выделения:</i> in Germany, Austria, Belgium, Denmark, Spain, Finland, France, Israel, Italy, Liechtenstein, Malta, Monaco, Norway, the Netherlands, the United Kingdom, Sweden and Switzerland, the band 174 - 223 MHz is also allocated to the land mobile service on a primary basis. However, the stations of the land mobile service shall not cause harmful interference to, or claim protection from, broadcasting stations, existing or planned, in countries other than those listed in this footnote.
5.246	<i>Альтернативные выделения:</i> in Spain, France, Israel and Monaco, the band 223 - 230 MHz is allocated to the broadcasting and land mobile services on a primary basis (see No. 5.33) on the basis that, in the preparation of frequency plans, the broadcasting service shall have prior choice of frequencies; and allocated to the fixed and mobile, except land mobile, services on a secondary basis. However, the stations of the land mobile service shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations in Morocco and Algeria.
5.247	<i>Дополнительные выделения:</i> in Saudi Arabia, Bahrain, the United Arab Emirates, Jordan, Oman, Qatar and Syrian Arab Republic, the band 223 - 235 MHz is also allocated to the aeronautical radionavigation service on a primary basis.
5.254	The bands 235 - 322 MHz and 335.4 - 399.9 MHz may be used by the mobile-satellite service, subject to agreement obtained under No. 9.21, on condition that stations in this service do not cause harmful interference to those of other services operating or planned to be operated in accordance with the Table of Frequency Allocations except for the additional allocation made in footnote No. 5.256A. (WRC-03)

5.291A	<i>Дополнительные выделения:</i> in Germany, Austria, Denmark, Estonia, Finland, Liechtenstein, Norway, Netherlands, the Czech Rep. and Switzerland, the band 470 - 494 MHz is also allocated to the radiolocation service on a secondary basis. This use is limited to the operation of wind profiler radars in accordance with Resolution 217 (WRC-97). (WRC-97)
5.294	<i>Дополнительные выделения:</i> in Saudi Arabia, Cameroon, Côte d'Ivoire, Egypt, Ethiopia, Israel, Kenya, Libya, the Syrian Arab Republic, South Sudan, Chad and Yemen, the band 470 - 582 MHz is also allocated to the fixed service on a secondary basis. (WRC-12)

* This provision was previously numbered No. 5.347A. It was renumbered -to preserve the sequential order.

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5.296	<i>Дополнительные выделения:</i> in Albania, Germany, Saudi Arabia, Austria, Bahrain, Belgium, Benin, Bosnia and Herzegovina, Burkina Faso, Cameroon, Congo (Rep. of the), Côte d'Ivoire, Croatia, Denmark, Djibouti, Egypt, United Arab Emirates, Spain, Estonia, Finland, France, Gabon, Ghana, Iraq, Ireland, Iceland, Israel, Italy, Jordan, Kuwait, Latvia, The Former Yugoslav Republic of Macedonia, Libya, Liechtenstein, Lithuania, Luxembourg, Mali, Malta, Morocco, Moldova, Monaco, Niger, Norway, Oman, the Netherlands, Poland, Portugal, Qatar, the Syrian Arab Republic, Slovakia, the Czech Republic, the United Kingdom, Sudan, Sweden, Switzerland, Swaziland, Chad, Togo, Tunisia and Turkey, the band 470 - 790 MHz, and in Angola, Botswana, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Nigeria, South Africa, Tanzania, Zambia and Zimbabwe, the band 470 - 698 MHz are also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting. Stations of the land mobile service in the countries listed in this footnote shall not cause harmful interference to existing or planned stations operating in accordance with the Table in countries other than those listed in this footnote. (WRC-12)
5.300	<i>Дополнительные выделения:</i> in Saudi Arabia, Cameroon, Egypt, United Arab Emirates, Israel, Jordan, Libya, Oman, Qatar, the Syrian Arab Republic, Sudan and South Sudan, the band 582 - 790 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis. (WRC-12)
5.304	<i>Дополнительные выделения:</i> in the African Broadcasting Area (see Nos. 5.10 to 5.13), the band 606 - 614 MHz is also allocated to the radio astronomy service on a primary basis.
5.306	<i>Дополнительные выделения:</i> in Region 1, except in the African Broadcasting Area (see Nos. 5.10 to 5.13), and in Region 3, the band 608 - 614 MHz is also allocated to the radio astronomy service on a secondary basis.
5.311A	For the frequency band 620 - 790 MHz, см. также Resolution [COM4/1] (WRC-07).
5.312	<i>Дополнительные выделения:</i> in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the band 645 - 862 MHz, in Bulgaria the bands 646 - 686 MHz, 726 - 758 MHz, 766 - 814 MHz and 822 - 862 MHz, in Romania the band 830 - 862 MHz, and in Poland, the band 830 - 860 MHz until 31 December 2012 and the band 860 - 862 MHz until 31 December 2017, are also allocated to the aeronautical radionavigation service on a primary basis. (WRC-12)
5.312A	In Region 1, the use of the band 694 - 790 MHz by the mobile, except aeronautical mobile, service is subject to the provisions of Resolution 232 (WRC-12). См. также Resolution 224 (Rev.WRC-12). (WRC-12)
5.314	<i>Дополнительные выделения:</i> in Austria, Italy, Moldova, Uzbekistan, Kyrgyzstan and the United Kingdom, the band 790 - 862 MHz is also allocated to the land mobile service on a secondary basis. (WRC-12)
5.315	<i>Дополнительные выделения:</i> in Greece, the band 790 - 838 MHz is allocated to the broadcasting service on a primary basis. (WRC-12)
5.316	<i>Дополнительные выделения:</i> in Germany, Saudi Arabia, Bosnia and Herzegovina, Burkina Faso, Cameroon, Côte d'Ivoire, Croatia, Denmark, Egypt, Finland, Greece, Israel, the Libyan Arab Jamahiriya, Jordan, Kenya, The Former Yugoslav Republic of Macedonia, Liechtenstein, Mali, Monaco, Montenegro, Norway, the Netherlands, Portugal, the United Kingdom, the Syrian Arab Republic, Serbia,, Sweden and Switzerland, the band 790 - 830 MHz, and in these same countries and in Spain, France, Gabon and Malta, the band 830 - 862 MHz, are also allocated to the mobile, except Aeronautical Mobile, service on a primary basis. However, stations of the mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, stations of services operating in accordance with the Table in countries other than those mentioned in connection with the band. This allocation is effective until 16 June 2015. (WRC-07)
5.316A	<i>Дополнительные выделения:</i> in Spain, France, Gabon and Malta, the band 790 - 830 MHz, in Albania, Angola, Bahrain, Benin, Botswana, Burundi, Congo (Rep. of the), Egypt, United Arab Emirates, Estonia, Gambia, Ghana, Guinea, Guinea-Bissau, Hungary, Iraq, Kuwait, Lesotho, Latvia, Lebanon, Lithuania, Luxembourg, Malawi, Morocco, Mauritania, Mozambique, Namibia, Niger, Nigeria, Oman, Uganda, Poland, Qatar, Slovakia, Czech Rep., Romania, Rwanda, Senegal, Sudan, South Sudan, South Africa, Swaziland, Tanzania, Chad, Togo, Yemen, Zambia, Zimbabwe and French overseas departments and communities of Region 1, the band 790 - 862 MHz and in Georgia, the band 806 - 862 MHz, are also allocated to the mobile, except aeronautical mobile, service on a primary basis subject to the agreement by the administrations concerned obtained under No. 9.21 and under the GE06 Agreement, as appropriate, including those administrations mentioned in No. 5.312, where appropriate. See Resolutions 224 (Rev.WRC-12) and 749 (Rev.WRC-12). This allocation is effective until 16 June 2015. (WRC-12)

5.316B	In Region 1, the allocation to the mobile, except aeronautical mobile, service on a primary basis in the frequency band 790 - 862 MHz shall come into effect from 17 June 2015 and shall be subject to agreement obtained under No. 9.21 with respect to the aeronautical radionavigation service in countries mentioned in No. 5.312. For countries party to the GE06 Agreement, the use of stations of the mobile service is also subject to the successful application of the procedures of that Agreement. Resolutions 224 (Rev.WRC-12) and 749 (Rev.WRC-12) shall apply, as appropriate. (WRC-12)
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5.317A	Those parts of the band 698 - 960 MHz in Region 2 and the band 790 - 960 MHz in Regions 1 and 3 which are allocated to the mobile service on a primary basis are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) - see Resolutions 224 (Rev.WRC-12) and 749 (Rev.WRC-12), as appropriate. This identification does not preclude the use of these bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-12)
5.319	<i>Дополнительные выделения:</i> in Belarus, the Russian Federation and Ukraine, the bands 806 - 840 MHz (Earth-to-space) and 856 - 890 MHz (space-to-Earth) are also allocated to the mobile-satellite, except Aeronautical Mobile-satellite (R), service. The use of these bands by this service shall not cause harmful interference to, or claim protection from, services in other countries operating in accordance with the Table of Frequency Allocations and is subject to special agreements between the administrations concerned.
5.338A	In the bands 1350 - 1400 MHz, 1427 - 1452 MHz, 22.55 - 23.55 GHz, 30 - 31.3 GHz, 49.7 - 50.2 GHz, 50.4 - 50.9 GHz, 51.4 - 52.6 GHz, 81 - 86 GHz and 92 - 94 GHz, Resolution 750 (Rev.WRC-12) applies. (WRC-12)
5.339	The bands 1370 - 1400 MHz, 2640 - 2655 MHz, 4950 - 4990 MHz and 15.20 - 15.35 GHz are also allocated to the space research (passive) and Earth exploration-satellite (passive) services on a secondary basis.
5.340	All emissions are prohibited in the following bands: 1400 - 1427 MHz, 2690 - 2700 MHz, except those provided for by No. 5.422, 10.68 - 10.7 GHz, except those provided for by No. 5.483, 15.35 - 15.4 GHz, except those provided for by No. 5.511, 23.6 - 24 GHz, 31.3 - 31.5 GHz, 31.5 - 31.8 GHz, in Region 2, 48.94 - 49.04 GHz, from airborne stations 50.2 - 50.4 GHz, 52.6 - 54.25 GHz, 86 - 92 GHz, 100 - 102 GHz, 109.5 - 111.8 GHz, 114.25 - 116 GHz, 148.5 - 151.5 GHz, 164 - 167 GHz, 182 - 185 GHz, 190 - 191.8 GHz, 200 - 209 GHz, 226 - 231.5 GHz, 250 - 252 GHz. (WRC-03)
5.341	In the bands 1400 - 1727 MHz, 101 - 120 GHz and 197 - 220 GHz, passive research is being conducted by some countries in a programme for the search for intentional emissions of extraterrestrial origin.
5.342	<i>Дополнительные выделения:</i> in Armenia, Azerbaijan, Belarus, the Russian Federation, Uzbekistan, Kyrgyzstan and Ukraine, the band 1429 - 1535 MHz, and in Bulgaria the band 1525 - 1535 MHz, are also allocated to the aeronautical mobile service on a primary basis exclusively for the purposes of aeronautical telemetry within the national territory. As of 1 April 2007, the use of the band 1452 - 1492 MHz is subject to agreement between the administrations concerned. (WRC-12)
5.345	Use of the band 1452 - 1492 MHz by the broadcasting-satellite service, and by the broadcasting service, is limited to digital audio broadcasting and is subject to the provisions of Resolution 528 (WARC-92). <i>Note by the Secretariat:</i> This Resolution was revised by WRC-03
5.351A	For the use of the bands 1518 - 1544 MHz, 1545 - 1559 MHz, 1610 - 1626.5 MHz, 1626.5 - 1645.5 MHz, 1646.5 - 1660.5 MHz, 1668 - 1675 MHz, 1980 - 2010 MHz, 2170 - 2200 MHz, 2483.5 - 2500 MHz, 2500 - 2520 MHz and 2670 - 2690 MHz by the mobile-satellite service, see Resolutions 212 (Rev.WRC-07) and 225 (Rev.WRC-07) (<i>Note by the Secretariat:</i> This Resolution was revised by WRC-12). (WRC-07)
5.384A	The bands, or portions of the bands, 1710 - 1885 MHz, 2300 - 2400 MHz and 2500 - 2690 MHz, are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC-07). This identification does not preclude the use of these bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-07).
5.386	<i>Дополнительные выделения:</i> the band 1750 - 1850 MHz is also allocated to the space operation (Earth-to-space) and space research (Earth-to-space) services in Region 2, in Australia, Guam, India, Indonesia and Japan on a primary basis, subject to agreement obtained under No. 9.21, having particular regard to troposcatter systems.

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5.387	<i>Дополнительные выделения:</i> in Belarus, Georgia, Kazakhstan, Kyrgyzstan, Romania, Tajikistan and Turkmenistan, the band 1770 - 1790 MHz is also allocated to the meteorological-satellite service on a primary basis, subject to agreement obtained under No. 9.21. (WRC-12)
5.388A	In Regions 1 and 3, the bands 1885 - 1980 MHz, 2010 - 2025 MHz and 2110 - 2170 MHz and, in Region 2, the bands 1885 - 1980 MHz and 2110 - 2160 MHz may be used by high altitude platform stations as base stations to provide International Mobile Telecommunications (IMT), in accordance with Resolution 221 (Rev.WRC-07). Their use by IMT applications using high altitude platform stations as base stations does not preclude the use of these bands by any station in the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-12)
5.388B	In Algeria, Saudi Arabia, Bahrain, Benin, Burkina Faso, Cameroon, Comoros, Côte d'Ivoire, China, Cuba, Djibouti, Egypt, United Arab Emirates, Eritrea, Ethiopia, Gabon, Ghana, India, Iran (Islamic Republic of), Israel, Jordan, Kenya, Kuwait, Libya, Mali, Morocco, Mauritania, Nigeria, Oman, Uganda, Pakistan, Qatar, the Syrian Arab Republic, Senegal, Singapore, Sudan, South Sudan, Tanzania, Chad, Togo, Tunisia, Yemen, Zambia and Zimbabwe, for the purpose of protecting fixed and mobile services, including IMT mobile stations, in their territories from co-channel interference, a high altitude platform station (HAPS) operating as an IMT base station in neighbouring countries, in the bands referred to in No. 5.388A, shall not exceed a co-channel power flux-density of $-127 \text{ dB(W/(m}^2 \cdot \text{MHz))}$ at the Earth's surface outside a country's borders unless explicit agreement of the affected administration is provided at the time of the notification of HAPS. (WRC-12)
5.391	In making assignments to the mobile service in the bands 2025 - 2110 MHz and 2200 - 2290 MHz, administrations shall not introduce high-density mobile systems, as described in Recommendation ITU-R SA.1154, and shall take that Recommendation into account for the introduction of any other type of mobile system. (WRC-97)
5.392	Administrations are urged to take all practicable measures to ensure that space-to-space transmissions between two or more non-geostationary satellites, in the space research, space operations and Earth exploration satellite services in the bands 2025 - 2110 MHz and 2200 - 2290 MHz, shall not impose any constraints on Earth-to-space, space-to-Earth and other space-to-space transmissions of those services and in those bands between geostationary and non-geostationary satellites.
5.395	In France and Turkey, the use of the band 2310 - 2360 MHz by the Aeronautical Mobile service for telemetry has priority over other uses by the mobile service. (WRC-03)
5.398	In respect of the radiodetermination-satellite service in the band 2483.5 - 2500 MHz, the provisions of No. 4.10 do not apply.
5.398A	Different category of service: In Armenia, Azerbaijan, Belarus, the Russian Federation, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan and Ukraine, the band 2483.5 - 2500 MHz is allocated on a primary basis to the radiolocation service. The radiolocation stations in these countries shall not cause harmful interference to, or claim protection from, stations of the fixed, mobile and mobile-satellite services operating in accordance with the Radio Regulations in the frequency band 2483.5 - 2500 MHz. (WRC-12)
5.399	Except for cases referred to in No. 5.401, stations of the radiodetermination-satellite service operating in the frequency band 2483.5 - 2500 MHz for which notification information is received by the Bureau after 17 February 2012, and the service area of which includes Armenia, Azerbaijan, Belarus, the Russian Federation, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan and Ukraine, shall not cause harmful interference to, and shall not claim protection from stations of the radiolocation service operating in these countries in accordance with No. 5.398A. (WRC-12)
5.401	In Angola, Australia, Bangladesh, Burundi, China, Eritrea, Ethiopia, India, Iran (Islamic Republic of), Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Syrian Arab Republic, Dem. Rep. of the Congo, Sudan, Swaziland, Togo and Zambia, the band 2483.5 - 2500 MHz was already allocated on a primary basis to the radiodetermination-satellite service before WRC-12, subject to agreement obtained under No. 9.21 from countries not listed in this provision. Systems in the radiodetermination-satellite service for which complete coordination information has been received by the Radiocommunication Bureau before 18 February 2012 will retain their regulatory status, as of the date of receipt of the coordination request information. (WRC-12)
5.402	The use of the band 2483.5 - 2500 MHz by the mobile-satellite and the radiodetermination-satellite services is subject to the coordination under No. 9.11A. Administrations are urged to take all practicable steps to prevent harmful interference to the radio astronomy service from emissions in the 2483.5 - 2500 MHz band, especially those caused by second-harmonic radiation that would fall into the 4990 - 5000 MHz band allocated to the radio astronomy service worldwide.
5.403	<i>Subject to agreement obtained under No. 9.21, the band 2520 - 2535 MHz may also be used for the mobile-satellite (space-to-Earth), except aeronautical mobile-satellite, service for operation limited to within national boundaries. The provisions of No. 9.11A apply. (WRC-07)</i>

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5.410	The band 2500 - 2690 MHz may be used for tropospheric scatter systems in Region 1, subject to agreement obtained under No. 9.21. No. 9.21 does not apply to tropospheric scatter links situated entirely outside Region 1. Administrations shall make all practicable efforts to avoid developing new tropospheric scatter systems in this band. When planning new tropospheric scatter radio-relay links in this band, all possible measures shall be taken to avoid directing the antennas of these links towards the geostationary-satellite orbit. (WRC-12)
5.412	<i>Альтернативные выделения:</i> in Kyrgyzstan and Turkmenistan, the band 2500 - 2690 MHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-12)
5.413	In the design of systems in the broadcasting-satellite service in the bands between 2 500 MHz and 2 690 MHz, administrations are urged to take all necessary steps to protect the radio astronomy service in the band 2690 - 2700 MHz.
5.416	The use of the band 2520 - 2670 MHz by the broadcasting-satellite service is limited to national and regional systems for community reception, subject to agreement obtained under No. 9.21. The provisions of No. 9.19 shall be applied by administrations in this band in their bilateral and multilateral negotiations. (WRC-07)
5.417C	Use of the band 2605 - 2630 MHz by non geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. 5.417A is, for which complete Appendix 4 coordination information, or notification information, has been received after 4 July 2003, is subject to the application of the provisions of No. 9.12. (WRC-03)
5.417D	Use of the band 2605 - 2630 MHz by geostationary-satellite networks for which complete Appendix 4 coordination information, or notification information, has been received after 4 July 2003 is subject to the application of the provisions of No. 9.13 with respect to non geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. 5.417A, and No. 22.2 does not apply. (WRC-03)
5.418B	Use of the band 2630 - 2655 MHz by non geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. 5.418, for which complete Appendix 4 coordination information, or notification information, has been received after 2 June 2000, is subject to the application of the provisions of No. 9.12. (WRC-03)
5.418C	Use of the band 2630 - 2655 MHz by geostationary-satellite networks for which complete Appendix 4 coordination information, or notification information, has been received after 2 June 2000 is subject to the application of the provisions of No. 9.13 with respect to non geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. 5.418 and No. 22.2 does not apply. (WRC-03)
5.420	The band 2655 - 2670 MHz may also be used for the mobile-satellite (Earth-to-space), except aeronautical mobile-satellite, service for operation limited to within national boundaries, subject to agreement obtained under No. 9.21. The coordination under No. 9.11A applies. (WRC-07)
5.430A	<i>Different category of service:</i> in Albania, Algeria, Germany, Andorra, Saudi Arabia, Austria, Azerbaijan, Bahrain, Belgium, Benin, Bosnia and Herzegovina, Botswana, Bulgaria, Burkina Faso, Cameroon, Cyprus, Vatican, Congo (Rep. of the), Côte d'Ivoire, Croatia, Denmark, Egypt, Spain, Estonia, Finland, France and French overseas departments and communities in Region 1, Gabon, Georgia, Greece, Guinea, Hungary, Ireland, Iceland, Israel, Italy, Jordan, Kuwait, Lesotho, Latvia, The Former Yugoslav Republic of Macedonia, Liechtenstein, Lithuania, Malawi, Mali, Malta, Morocco, Mauritania, Moldova, Monaco, Mongolia, Montenegro, Mozambique, Namibia, Niger, Norway, Oman, Netherlands, Poland, Portugal, Qatar, the Syrian Arab Republic, the Dem. Rep. of the Congo, Slovakia, Czech Rep., Romania, United Kingdom, San Marino, Senegal, Serbia, Sierra Leone, Slovenia, South Africa, Sweden, Switzerland, Swaziland, Chad, Togo, Tunisia, Turkey, Ukraine, Zambia and Zimbabwe, the band 3400 - 3600 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis subject to agreement obtained under No. 9.21 with other administrations and is identified for International Mobile Telecommunications (IMT). This identification does not preclude the use of this band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. At the stage of coordination the provisions of Nos. 9.17 and 9.18 also apply. Before an administration brings into use a (base or mobile) station of the mobile service in this band, it shall ensure that the power flux-density (pfd) produced at 3m above ground does not exceed 154.5 dB(W/(m ² · 4 kHz)) for more than 20% of time at the border of the territory of any other administration. This limit may be exceeded on the territory of any country whose administration has so agreed. In order to ensure that the pfd limit at the border of the territory of any other administration is met, the calculations and verification shall be made, taking into account all relevant information, with the mutual agreement of both administrations (the administration responsible for the terrestrial station and the administration responsible for the earth station), with the assistance of the Bureau if so requested. In case of disagreement, the calculation and verification of the pfd shall be made by the Bureau, taking into account the information referred to above. Stations of the mobile service in the band 3400 - 3600 MHz shall not claim more protection from space stations than that provided in Table 21-4 of the Radio Regulations (Edition of 2004). This allocation is effective from 17 November 2010. (WRC-12)
5.431	<i>Дополнительные выделения:</i> in Germany, Israel and the United Kingdom, the band 3400 - 3475 MHz is also allocated to the amateur service on a secondary basis. (WRC-03)

Номер	Текст сноски
5.441	The use of the bands 4500 - 4800 MHz (space-to-Earth), 6725 - 7025 MHz (Earth-to-space) by the fixed-satellite service shall be in accordance with the provisions of Appendix 30B. The use of the bands 10.7 - 10.95 GHz (space-to-Earth), 11.2 - 11.45 GHz (space-to-Earth) and 12.75 - 13.25 GHz (Earth-to-space) by geostationary-satellite systems in the fixed-satellite service shall be in accordance with the provisions of Appendix 30B. The use of the bands 10.7 - 10.95 GHz (space-to-Earth), 11.2 - 11.45 GHz (space-to-Earth) and 12.75 - 13.25 GHz (Earth-to-space) by a non-geostationary-satellite system in the fixed-satellite service is subject to application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. 5.43A does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-2000)
5.442	In the bands 4825 - 4835 MHz and 4950 - 4990 MHz, the allocation to the mobile service is restricted to the mobile, except Aeronautical Mobile, service. In Region 2 (except Brazil, Cuba, Guatemala, Paraguay, Uruguay and Venezuela), and in Australia, the band 4825 - 4835 MHz is also allocated to the Aeronautical Mobile service, limited to Aeronautical Mobile telemetry for flight testing by aircraft stations. Such use shall be in accordance with Resolution [COM4/2] (WRC-07) and shall not cause harmful interference to the fixed service. (WRC-07)
5.479	The band 9975 - 10025 MHz is also allocated to the meteorological-satellite service on a secondary basis for use by weather radars.
5.481	<i>Дополнительные выделения:</i> in Germany, Angola, Brazil, China, Costa Rica, Côte d'Ivoire, El Salvador, Ecuador, Spain, Guatemala, Hungary, Japan, Kenya, Morocco, Nigeria, Oman, Uzbekistan, Pakistan, Paraguay, Peru, the Dem. People's Rep. of Korea, Romania, Tanzania, Thailand and Uruguay, the band 10.45 - 10.5 GHz is also allocated to the fixed and mobile services on a primary basis. (WRC-12)
5.482	In the band 10.6 - 10.68 GHz, the power delivered to the antenna of stations of the fixed and mobile, except Aeronautical Mobile, services shall not exceed -3 dBW. This limit may be exceeded, subject to agreement obtained under No. 9.21. However, in Algeria, Saudi Arabia, Armenia, Azerbaijan, Bahrain, Bangladesh, Belarus, Egypt, United Arab Emirates, Georgia, India, Indonesia, Iran (Islamic Republic of), Iraq, Jordan, Libyan Arab Jamahiriya, Kazakhstan, Kuwait, Lebanon, Morocco, Mauritania, Moldova, Nigeria, Oman, Uzbekistan, Pakistan, Philippines, Qatar, Syrian Arab Republic, Kyrgyzstan, Singapore, Tajikistan, Tunisia, Turkmenistan and Viet Nam, this restriction on the fixed and mobile, except Aeronautical Mobile, service is not applicable. (WRC-07)
5.482A	For sharing of the band 10.6 - 10.68 GHz between the Earth exploration-satellite (passive) service and the fixed and mobile, except aeronautical mobile, services, Resolution 751 (WRC-07) applies. (WRC-07)
5.487	In the band 11.7 - 12.5 GHz in Regions 1 and 3, the fixed, fixed-satellite, mobile, except Aeronautical Mobile, and broadcasting services, in accordance with their respective allocations, shall not cause harmful interference to, or claim protection from, broadcasting-satellite stations operating in accordance with the Regions 1 and 3 Plan in Appendix 30. (WRC-03)
5.487A	<i>Дополнительные выделения:</i> in Region 1, the band 11.7 - 12.5 GHz, in Region 2, the band 12.2 - 12.7 GHz and, in Region 3, the band 11.7 - 12.2 GHz, are also allocated to the fixed-satellite service (space-to-Earth) on a primary basis, limited to non-geostationary systems and subject to application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the broadcasting-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. 5.43A does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-03)
5.492	Assignments to stations of the broadcasting-satellite service which are in conformity with the appropriate regional Plan or included in the Regions 1 and 3 List in Appendix 30 may also be used for transmissions in the fixed-satellite service (space-to-Earth), provided that such transmissions do not cause more interference, or require more protection from interference, than the broadcasting-satellite service transmissions operating in conformity with the Plan or the List, as appropriate. (WRC-2000)

Номер	Текст сноски
5.516B	<p>The following bands are identified for use by high-density applications in the fixed-satellite service:</p> <p>17.3 - 17.7 GHz (space-to-Earth) 18.3 - 19.3 GHz (space-to-Earth) 19.7 - 20.2 GHz (space-to-Earth) 39.5 - 40 GHz (space-to-Earth) 40 - 40.5 GHz (space-to-Earth) 40.5 - 42 GHz (space-to-Earth) 47.5 - 47.9 GHz (space-to-Earth) 48.2 - 48.54 GHz (space-to-Earth) 49.44 - 50.2 GHz (space-to-Earth) 27.5 - 27.82 GHz (Earth-to-space) 28.35 - 28.45 GHz (Earth-to-space) 28.45 - 28.94 GHz (Earth-to-space) 28.94 - 29.1 GHz (Earth-to-space) 29.25 - 29.46 GHz (Earth-to-space) 29.46 - 30 GHz (Earth-to-space) 48.2 - 50.2 GHz (Earth-to-space)</p> <p>in Region 1, in Region 2, in all Regions, in Region 1, in all Regions, in Region 2, in Region 1, in Region 1, in Region 1, and in Region 1, in Region 2, in all Regions, in Region 2 and 3, in Region 2, in all Regions, in Region 2.</p>
	<p>This identification does not preclude the use of these bands by other fixed-satellite service applications or by other services to which these bands are allocated on a co-primary basis and does not establish priority in these Radio Regulations among users of the bands. Administrations should take this into account when considering regulatory provisions in relation to these bands. See Resolution 143 (WRC-03). (WRC-03)</p>
5.530A	<p>Unless otherwise agreed between the administrations concerned, any station in the fixed or mobile services of an administration shall not produce a power flux-density in excess of 120.4 dB(W/(m² · MHz)) at 3m above the ground of any point of the territory of any other administration in Regions 1 and 3 for more than 20% of the time. In conducting the calculations, administrations should use the most recent version of Recommendation ITU-R P.452 (see Recommendation ITU-R BO.1898). (WRC-12)</p>
5.530B	<p>In the band 21.4 - 22 GHz, in order to facilitate the development of the broadcasting-satellite service, administrations in Regions 1 and 3 are encouraged not to deploy stations in the mobile service and are encouraged to limit the deployment of stations in the fixed service to point-to-point links. (WRC-12)</p>
5.530C	<p>The use of the band 21.4 - 22 GHz is subject to the provisions of Resolution 755 (WRC-12). (WRC-12)</p>
5.530D	<p>See Resolution 555 (WRC-12). (WRC-12)</p>
5.532	<p>The use of the band 22.21 - 22.5 GHz by the Earth exploration-satellite (passive) and space research (passive) services shall not impose constraints upon the fixed and mobile, except Aeronautical Mobile, services.</p>
5.547	<p>The bands 31.8 - 33.4 GHz, 37 - 40 GHz, 40.5 - 43.5 GHz, 51.4 - 52.6 GHz, 55.78 - 59 GHz and 64 - 66 GHz are available for high-density applications in the fixed service (see Resolution 75 (WRC-2000)). Administrations should take this into account when considering regulatory provisions in relation to these bands. Because of the potential deployment of high-density applications in the fixed-satellite service in the bands 39.5 - 40 GHz and 40.5 - 42 GHz (see No. 5.516B), administrations should further take into account potential constraints to high-density applications in the fixed service, as appropriate. (WRC-07)</p>
5.551F	<p>Different category of service: in Japan, the allocation of the band 41.5 - 42.5 GHz to the mobile service is on a primary basis (see No. 5.33). (WRC-97)</p>
5.551H	<p>The equivalent power flux-density (EPFD) produced in the band 42.5 - 43.5 GHz by all space stations in any non-geostationary-satellite system in the fixed-satellite service (space-to-Earth), or in the broadcasting-satellite service (space-to-Earth) operating in the 42 - 42.5 GHz band, shall not exceed the following values at the site of any radio astronomy station for more than 2% of the time:</p> <ul style="list-style-type: none"> -230 dB(W/m²) in 1 GHz and -246 dB(W/m²) in any 500 kHz of the 42.5 - 43.5 GHz band at the site of any radio astronomy station registered as a single-dish telescope; and -209 dB(W/m²) in any 500 kHz of the 42.5 - 43.5 GHz band at the site of any radio astronomy station registered as a very long baseline interferometry station. <p>These EPFD values shall be evaluated using the methodology given in Recommendation ITU-R S.1586-1 and the reference antenna pattern and the maximum gain of an antenna in the radio astronomy service given in Recommendation ITU-R RA.1631 and shall apply over the whole sky and for elevation angles higher than the minimum operating angle θ_{\min} of the radio telescope (for which a default value of 5° should be adopted in the absence of notified information).</p> <p>These values shall apply at any radio astronomy station that either:</p> <ul style="list-style-type: none"> ▫ was in operation prior to 5 July 2003 and has been notified to the Bureau before 4 January 2004; or ▫ was notified before the date of receipt of the complete Appendix 4 information for coordination or notification, as appropriate, for the space station to which the limits apply. <p>Other radio astronomy stations notified after these dates may seek an agreement with administrations that have authorized the space stations. In Region 2, Resolution 743 (WRC-03) shall apply. The limits in this footnote may be exceeded at the site of a radio astronomy station of any country whose administration so agreed. (WRC-07)</p>

5.551I	<p>The power flux-density in the band 42.5 - 43.5 GHz produced by any geostationary space station in the fixed-satellite service (space-to-Earth), or the broadcasting-satellite service (space-to-Earth) operating in the 42 - 42.5 GHz band, shall not exceed the following values at the site of any radio astronomy station: -137 dB(W/m²) in 1 GHz and -153 dB(W/m²) in any 500 kHz of the 42.5 - 43.5 GHz band at the site of any radio astronomy station registered as a single-dish telescope; and -116 dB(W/m²) in any 500 kHz of the 42.5 - 43.5 GHz band at the site of any radio astronomy station registered as a very long baseline interferometry station. These values shall apply at the site of any radio astronomy station that either</p> <ul style="list-style-type: none"> ▫ was in operation prior to 5 July 2003 and has been notified to the Bureau before 4 January 2004; or ▫ was notified before the date of receipt of the complete Appendix 4 information for coordination or notification, as appropriate, for the space station to which the limits apply. <p>Other radio astronomy stations notified after these dates may seek an agreement with administrations that have authorized the space stations. In Region 2, Resolution 743 (WRC-03) shall apply. The limits in this footnote may be exceeded at the site of a radio astronomy station of any country whose administration so agreed. (WRC-03)</p>
5.552	<p>The allocation of the spectrum for the fixed-satellite service in the bands 42.5 - 43.5 GHz and 47.2 - 50.2 GHz for Earth-to-space transmission is greater than that in the band 37.5 - 39.5 GHz for space-to-Earth transmission in order to accommodate feeder links to broadcasting satellites. Administrations are urged to take all practicable steps to reserve the band 47.2 - 49.2 GHz for feeder links for the broadcasting-satellite service operating in the band 40.5 - 42.5 GHz.</p>
5.552A	<p>The allocation to the fixed service in the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz is designated for use by high altitude platform stations. The use of the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz is subject to the provisions of Resolution 122 (Rev.WRC-07). (WRC-07)</p>
5.554A	<p>The use of the bands 47.5 - 47.9 GHz, 48.2 - 48.54 GHz and 49.44 - 50.2 GHz by the fixed-satellite service (space-to-Earth) is limited to geostationary satellites. (WRC-03)</p>
5.555	<p><i>Дополнительные выделения:</i> the band 48.94 - 49.04 GHz is also allocated to the radio astronomy service on a primary basis. (WRC-2000)</p>
5.555B	<p>The power flux-density in the band 48.94 - 49.04 GHz produced by any geostationary space station in the fixed-satellite service (space-to-Earth) operating in the bands 48.2 - 48.54 GHz and 49.44 - 50.2 GHz shall not exceed -151.8 dB(W/m²) in any 500 kHz band at the site of any radio astronomy station. (WRC-03)</p>