

**NATIONAL PLAN
FOR RADIO FREQUENCY SPECTRUM ALLOCATION**

(Prom. SG. 60/2004, suppl. SG. 69/2004, amend. and suppl. SG. 31/2005, amend. and suppl. SG. 16/2006,
amend. and suppl. SG. 76/2011)

FREQUENCY BAND kHz	RADIO SERVICES	USERS
Below 9	Not allocated	
9-14	RADIONAVIGATION Footnote 73	CIVIL NATIONAL SECURITY
14-19.95	FIXED MARITIME MOBILE Footnotes 2, 73	CIVIL NATIONAL SECURITY
19.95-20.05	STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)	CIVIL
20.05-70	FIXED MARITIME MOBILE Footnotes 2, 73	CIVIL NATIONAL SECURITY
70-72	RADIONAVIGATION Footnotes 5, 73	CIVIL NATIONAL SECURITY
72-84	FIXED MARITIME MOBILE RADIONAVIGATION Footnotes 2, 5, 73	CIVIL NATIONAL SECURITY
84-86	RADIONAVIGATION Footnotes 5, 73	CIVIL NATIONAL SECURITY
86-90	MARITIME MOBILE RADIONAVIGATION FIXED Footnotes 2, 6, 73	CIVIL NATIONAL SECURITY
90-110	RADIONAVIGATION Fixed Footnotes 1, 73, 237	CIVIL NATIONAL SECURITY
110-112	FIXED MARITIME MOBILE RADIONAVIGATION Footnotes 1, 73	CIVIL NATIONAL SECURITY
112-115	RADIONAVIGATION Footnotes 5, 73	CIVIL NATIONAL SECURITY

FREQUENCY BAND kHz	RADIO SERVICES	USERS
115-117.6	RADIONAVIGATION Fixed Maritime mobile Footnotes 1, 5, 6, 73	CIVIL NATIONAL SECURITY
117.6-126	FIXED MARITIME MOBILE RADIONAVIGATION Footnotes 1, 5, 6, 73	CIVIL NATIONAL SECURITY
126-129	RADIONAVIGATION Footnotes 5, 73	CIVIL NATIONAL SECURITY
129-130	FIXED MARITIME MOBILE RADIONAVIGATION Footnotes 1, 5, 6, 73	CIVIL NATIONAL SECURITY
130-135.7	FIXED MARITIME MOBILE Footnotes 1, 6, 73	CIVIL NATIONAL SECURITY
135.7-137.8	FIXED MARITIME MOBILE Amateur Footnotes 1, 6, 71, 73	CIVIL NATIONAL SECURITY
137.8-148.5	FIXED MARITIME MOBILE Footnotes 1, 6, 73	CIVIL NATIONAL SECURITY
148.5-255	BROADCASTING Footnotes 1, 7, 8, 73	CIVIL
255-283.5	BROADCASTING AERONAUTICAL RADIONAVIGATION Footnotes 7, 8, 9, 73	CIVIL NATIONAL SECURITY
283.5-315	AERONAUTICAL RADIONAVIGATION MARITIME RADIONAVIGATION (RADIOBEACON) Footnotes 7, 8, 10, 73, 238, 239	CIVIL NATIONAL SECURITY
315-325	AERONAUTICAL RADIONAVIGATION Maritime Radionavigation (radiobeacons) Footnotes 7, 8, 73, 238	CIVIL NATIONAL SECURITY

FREQUENCY BAND kHz	RADIO SERVICES	USERS
325-405	AERONAUTICAL RADIONAVIGATION Footnotes 7, 8, 73	CIVIL NATIONAL SECURITY
405-415	RADIONAVIGATION Footnotes 7, 8, 23, 73	CIVIL NATIONAL SECURITY
415-435	MARITIME MOBILE AERONAUTICAL RADIONAVIGATION Footnotes 7, 8, 73, 240	CIVIL
435-495	MARITIME MOBILE Aeronautical Radionavigation Footnotes 7, 8, 12, 73, 240, 241, 242	CIVIL
495-505	MOBILE (distress and calling) Footnotes 7, 73, 243	CIVIL
505-526.5	MARITIME MOBILE AERONAUTICAL RADIONAVIGATION Footnotes 7, 8, 17, 73, 240, 241	CIVIL
526.5-1606.5	BROADCASTING Footnotes 7, 8, 14, 73	CIVIL
1606.5-1625	FIXED MARITIME MOBILE LAND MOBILE Radiolocation Footnotes 73, 244	CIVIL NATIONAL SECURITY
1625-1635	RADIOLOCATION Footnote 73	CIVIL NATIONAL SECURITY
1635-1800	FIXED MARITIME MOBILE LAND MOBILE Footnotes 15, 73, 244	CIVIL NATIONAL SECURITY
1800-1810	RADIOLOCATION Footnotes 15, 73	CIVIL NATIONAL SECURITY
1810-1850	AMATEUR Footnotes 15, 73	CIVIL
1850-2000	FIXED MOBILE except aeronautical mobile Footnotes 73, 244, 246	CIVIL NATIONAL SECURITY

FREQUENCY BAND kHz	RADIO SERVICES	USERS
2000-2025	FIXED MOBILE except aeronautical mobile (R) Footnotes 73, 244, 246	CIVIL NATIONAL SECURITY
2025-2045	FIXED MOBILE except aeronautical mobile (R) Footnotes 73, 244, 246	CIVIL NATIONAL SECURITY
2045-2160	FIXED MARITIME MOBILE LAND MOBILE Footnotes 73, 244	CIVIL
2160-2170	RADIOLOCATION Footnote 73	CIVIL
2170-2173.5	MARITIME MOBILE Footnotes 16, 73	CIVIL
2173.5-2190.5	MOBILE (distress and calling) Footnotes 32, 65, 73, 105, 247	CIVIL NATIONAL SECURITY
2190.5-2194	MARITIME MOBILE Footnotes 16, 73	CIVIL
2194-2300	FIXED MOBILE except aeronautical mobile (R) Footnotes 73, 244, 246	CIVIL NATIONAL SECURITY
2300-2498	FIXED MOBILE except aeronautical mobile (R) Footnotes 73, 246	CIVIL NATIONAL SECURITY
2498-2501	STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz) Footnote 73	CIVIL
2501-2502	STANDARD FREQUENCY AND TIME SIGNAL Space Research Footnote 73	CIVIL
2502-2625	FIXED MOBILE except aeronautical mobile (R) Footnotes 73, 244, 246	CIVIL NATIONAL SECURITY
2625-2650	MARITIME MOBILE MARITIME RADIONAVIGATION Footnotes 73, 244	CIVIL NATIONAL SECURITY

FREQUENCY BAND kHz	RADIO SERVICES	USERS
2650-2850	FIXED MOBILE except aeronautical mobile (R) Footnotes 73, 244, 246	CIVIL NATIONAL SECURITY
2850-3025	AERONAUTICAL MOBILE (R) Footnotes 8, 19, 21, 73, 105	CIVIL NATIONAL SECURITY
3025-3155	AERONAUTICAL MOBILE (OR) Footnotes 21, 73	CIVIL NATIONAL SECURITY
3155-3200	FIXED MOBILE except aeronautical mobile (R) Footnotes 21, 73	CIVIL NATIONAL SECURITY
3200-3230	FIXED MOBILE except aeronautical mobile (R) Footnotes 21, 73	CIVIL
3230-3400	FIXED MOBILE except aeronautical mobile Footnotes 21, 73	CIVIL NATIONAL SECURITY
3400-3500	AERONAUTICAL MOBILE (R) Footnotes 8, 21, 73	CIVIL NATIONAL SECURITY
3500-3800	AMATEUR FIXED MOBILE except aeronautical mobile Footnotes 21, 73, 244	CIVIL NATIONAL SECURITY
3800-3900	FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE Footnotes 21, 73	CIVIL NATIONAL SECURITY
3900-3950	AERONAUTICAL MOBILE (OR) Footnotes 21, 73	CIVIL
3950-4000	FIXED BROADCASTING Footnotes 21, 73	CIVIL NATIONAL SECURITY
4000-4063	FIXED MARITIME MOBILE Footnotes 73, 248	CIVIL NATIONAL SECURITY
4063-4438	MARITIME MOBILE Footnotes 65, 73, 241, 247, 249, 250, 251	CIVIL

FREQUENCY BAND kHz	RADIO SERVICES	USERS
4438-4650	FIXED MOBILE except aeronautical mobile (R) Footnote 73	CIVIL NATIONAL SECURITY
4650-4700	AERONAUTICAL MOBILE (R) Footnotes 8, 73	CIVIL NATIONAL SECURITY
4700-4750	AERONAUTICAL MOBILE (OR) Footnote 73	CIVIL
4750-4850	FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE Footnote 73	CIVIL NATIONAL SECURITY
4850-4995	FIXED LAND MOBILE Footnote 73	CIVIL NATIONAL SECURITY
4995-5003	STANDARD FREQUENCY AND TIME SIGNAL (5000 kHz)	CIVIL
5003-5005	STANDARD FREQUENCY AND TIME SIGNAL Space Research Footnote 73	CIVIL
5005-5060	FIXED Footnote 73	CIVIL NATIONAL SECURITY
5060-5250	FIXED Mobile except aeronautical mobile Footnote 73	CIVIL NATIONAL SECURITY
5250-5450	FIXED MOBILE except aeronautical mobile Footnote 73	CIVIL NATIONAL SECURITY
5450-5480	FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE Footnotes 29, 73	CIVIL NATIONAL SECURITY
5480-5680	AERONAUTICAL MOBILE (R) Footnotes 8, 19, 29, 73, 105	CIVIL
5680-5730	AERONAUTICAL MOBILE (OR) Footnotes 19, 73, 105	CIVIL

FREQUENCY BAND kHz	RADIO SERVICES	USERS
5730-5900	FIXED LAND MOBILE Footnote 73	CIVIL
5900-5950	BROADCASTING Footnotes 73, 252	CIVIL
5950-6200	BROADCASTING Footnote 73	CIVIL
6200-6525	MARITIME MOBILE Footnotes 29, 65, 73, 247, 249, 251	CIVIL NATIONAL SECURITY
6525-6685	AERONAUTICAL MOBILE (R) Footnotes 8, 29, 73	CIVIL
6685-6765	AERONAUTICAL MOBILE (OR) Footnote 73	CIVIL
6765-7000	FIXED MOBILE except aeronautical mobile (R) Footnotes 67, 73, 253	CIVIL NATIONAL SECURITY
7000-7100	AMATEUR AMATEUR-SATELLITE Footnote 73	CIVIL
7100-7200	AMATEUR Footnote 73	CIVIL
7200-7300	BROADCASTING Footnote 73	CIVIL
7300-7400	BROADCASTING Footnotes 73, 252	CIVIL
7400-7450	BROADCASTING Footnote 73	CIVIL
7450-8100	FIXED MOBILE except aeronautical mobile (R) Footnotes 49, 73	CIVIL NATIONAL SECURITY
8100-8195	FIXED MARITIME MOBILE Footnote 73	CIVIL NATIONAL SECURITY
8195-8815	MARITIME MOBILE Footnotes 54, 65, 73, 105, 247, 251	CIVIL NATIONAL SECURITY
8815-8965	AERONAUTICAL MOBILE (R) Footnotes 8, 73	CIVIL

FREQUENCY BAND kHz	RADIO SERVICES	USERS
8965-9040	AERONAUTICAL MOBILE (OR) Footnote 73	CIVIL NATIONAL SECURITY
9040-9400	FIXED Footnote 73	CIVIL NATIONAL SECURITY
9400-9500	BROADCASTING Footnotes 73, 74, 252	CIVIL
9500-9900	BROADCASTING Footnotes 73, 111	CIVIL
9900-9995	FIXED Footnote 73	CIVIL NATIONAL SECURITY
9995-10003	STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz) Footnote 73, 105	CIVIL
10003-10005	STANDARD FREQUENCY AND TIME SIGNAL Space Research Footnotes 73, 105	CIVIL
10005-10100	AERONAUTICAL MOBILE (R) Footnotes 8, 73, 105	CIVIL
10100-10150	FIXED Amateur Footnote 73	CIVIL NATIONAL SECURITY
10150-11175	FIXED Mobile except aeronautical mobile (R) Footnotes 22, 73	CIVIL NATIONAL SECURITY
11175-11275	AERONAUTICAL MOBILE (OR) Footnote 73	CIVIL
11275-11400	AERONAUTICAL MOBILE (R) Footnotes 8, 73	CIVIL
11400-11600	FIXED Footnote 73	CIVIL NATIONAL SECURITY
11600-11650	BROADCASTING Footnotes 73, 74, 252	CIVIL
11650-12050	BROADCASTING Footnotes 73, 111	CIVIL
12050-12100	BROADCASTING Footnotes 73, 74, 252	CIVIL

FREQUENCY BAND kHz	RADIO SERVICES	USERS
12100-12230	FIXED Footnote 73	CIVIL NATIONAL SECURITY
12230-13200	MARITIME MOBILE Footnotes 54, 65, 73, 247, 251	CIVIL
13200-13260	AERONAUTICAL MOBILE (OR) Footnote 73	CIVIL
13260-13360	AERONAUTICAL MOBILE (R) Footnotes 8, 73	CIVIL
13360-13410	FIXED RADIO ASTRONOMY Footnotes 73, 87	CIVIL NATIONAL SECURITY
13410-13570	FIXED Mobile except aeronautical mobile (R) Footnotes 67, 73	CIVIL NATIONAL SECURITY
13570-13600	BROADCASTING Footnotes 3, 73, 252	CIVIL
13600-13800	BROADCASTING Footnote 73	CIVIL
13800-13870	BROADCASTING Footnotes 3, 73, 252	CIVIL
13870-14000	FIXED Mobile except aeronautical mobile (R) Footnote 73	CIVIL NATIONAL SECURITY
14000-14250	AMATEUR AMATEUR-SATELLITE Footnote 73	CIVIL
14250-14350	AMATEUR Footnote 73	CIVIL
14350-14990	FIXED Mobile except aeronautical mobile (R) Footnote 73	CIVIL NATIONAL SECURITY
14990-15005	STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz) Footnotes 73, 105	CIVIL
15005-15010	STANDARD FREQUENCY AND TIME SIGNAL Space Research Footnote 73	CIVIL

FREQUENCY BAND kHz	RADIO SERVICES	USERS
15010-15100	AERONAUTICAL MOBILE (OR) Footnotes 8, 73	CIVIL
15100-15600	BROADCASTING Footnote 73	CIVIL
15600-15800	BROADCASTING Footnotes 73, 74, 252	CIVIL
15800-16360	FIXED Footnote 73	CIVIL NATIONAL SECURITY
16360-17410	MARITIME MOBILE Footnotes 54, 65, 73, 247, 251	CIVIL
17410-17480	FIXED Footnote 73	NATIONAL SECURITY
17480-17550	BROADCASTING Footnotes 73, 74, 252	CIVIL NATIONAL SECURITY
17550-17900	BROADCASTING Footnote 73	CIVIL
17900-17970	AERONAUTICAL MOBILE (R) Footnotes 8, 73	CIVIL
17970-18030	AERONAUTICAL MOBILE (OR) Footnotes 8, 73	CIVIL
18030-18052	FIXED Footnote 73	CIVIL NATIONAL SECURITY
18052-18068	FIXED Space Research Footnote 73	CIVIL NATIONAL SECURITY
18068-18168	AMATEUR AMATEUR-SATELLITE Footnote 73	CIVIL
18168-18780	FIXED Mobile except aeronautical mobile Footnote 73	CIVIL NATIONAL SECURITY
18780-18900	MARITIME MOBILE Footnote 73	CIVIL
18900-19020	BROADCASTING Footnotes 73, 74, 252	CIVIL
19020-19680	FIXED Footnote 73	NATIONAL SECURITY

FREQUENCY BAND kHz	RADIO SERVICES	USERS
19680-19800	MARITIME MOBILE Footnote 251	CIVIL
19800-19990	FIXED Footnote 73	CIVIL NATIONAL SECURITY
19990-19995	STANDARD FREQUENCY AND TIME SIGNAL Space Research Footnotes 73, 105	CIVIL
19995-20010	STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz) Footnotes 73, 105	CIVIL
20010-21000	FIXED Mobile Footnote 73	CIVIL NATIONAL SECURITY
21000-21450	AMATEUR AMATEUR-SATELLITE Footnote 73	CIVIL
21450-21850	BROADCASTING Footnote 73	CIVIL
21850-21870	FIXED Footnotes 8, 73	CIVIL NATIONAL SECURITY
21870-21924	FIXED Footnotes 8, 73	CIVIL NATIONAL SECURITY
21924-22000	AERONAUTICAL MOBILE (R) Footnotes 8, 73	CIVIL
22000-22855	MARITIME MOBILE Footnotes 73, 251	CIVIL
22855-23000	FIXED Footnote 73	CIVIL NATIONAL SECURITY
23000-23200	FIXED Mobile except aeronautical mobile (R) Footnote 73	CIVIL NATIONAL SECURITY
23200-23350	FIXED AERONAUTICAL MOBILE (OR) Footnotes 25, 73	CIVIL NATIONAL SECURITY
23350-24000	FIXED MOBILE except aeronautical mobile Footnotes 38, 73	CIVIL NATIONAL SECURITY

FREQUENCY BAND kHz	RADIO SERVICES	USERS
24000-24890	FIXED LAND MOBILE Footnote 73	CIVIL NATIONAL SECURITY
24890-24990	AMATEUR AMATEUR-SATELLITE Footnote 73	CIVIL
24990-25005	STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz) Footnote 73	CIVIL
25005-25010	STANDARD FREQUENCY AND TIME SIGNAL Space Research Footnote 73	CIVIL
25010-25070	FIXED MOBILE except aeronautical mobile Footnote 73	CIVIL
25070-25210	MARITIME MOBILE Footnote 73	CIVIL
25210-25550	FIXED MOBILE except aeronautical mobile Footnote 73	CIVIL NATIONAL SECURITY
25550-25670	RADIO ASTRONOMY Footnotes 73, 87	CIVIL
25670-26100	BROADCASTING Footnote 73	CIVIL
26100-26175	MARITIME MOBILE Footnotes 73, 251	CIVIL
26175-27500	FIXED MOBILE except aeronautical mobile Footnotes 27, 67, 73	CIVIL NATIONAL SECURITY
27500-28000	FIXED MOBILE METEOROLOGICAL AIDS Footnote 73	CIVIL NATIONAL SECURITY

FREQUENCY BAND MHz	RADIO SERVICES	USERS
28-29.7	AMATEUR AMATEUR-SATELLITE Footnote 73	CIVIL
29.7-30.005	FIXED MOBILE Footnotes 28, 73	CIVIL NATIONAL SECURITY
30.005-30.01	MOBILE Footnotes 28, 73	CIVIL NATIONAL SECURITY
30.01-37.5	MOBILE Footnotes 28, 29, 30, 73	CIVIL
37.5-38.25	MOBILE except aeronautical mobile Radio Astronomy Footnotes 29, 73, 87	CIVIL NATIONAL SECURITY
38.25-39.986	MOBILE Footnotes 29, 35, 73	CIVIL
39.986-40.02	MOBILE Space Research Footnotes 35, 73	CIVIL
40.02-40.66	MOBILE Footnotes 35, 73	CIVIL
40.66-40.7	MOBILE Footnotes 67, 73	CIVIL
40.7-40.98	MOBILE Footnote 73	CIVIL
40.98-41.015	MOBILE Space Research Footnote 73	CIVIL
41.015- 42	MOBILE Footnote 73	CIVIL
42-44	MOBILE FIXED Footnote 73	NATIONAL SECURITY
44-46.475	MOBILE Footnotes 73, 75	CIVIL
46.475-48.5	LAND MOBILE Footnotes 68, 73, 75	NATIONAL SECURITY

FREQUENCY BAND MHz	RADIO SERVICES	USERS
48.5-50	LAND MOBILE Footnotes 33, 48, 73, 75	CIVIL
50-51	LAND MOBILE Footnotes 33, 63, 73	CIVIL
51-52	LAND MOBILE Footnotes 33, 48, 73	CIVIL
52-54	LAND MOBILE Footnotes 13, 33, 48, 73	CIVIL
54-60	LAND MOBILE Footnotes 31, 33, 48, 73	CIVIL
60-63	LAND MOBILE Footnote 73	NATIONAL SECURITY
63-68	LAND MOBILE Footnotes 48, 73	CIVIL
68-70.45	MOBILE Footnotes 31, 73	CIVIL
70.45-74.8	MOBILE except aeronautical mobile Radio Astronomy Footnotes 30, 31, 73, 87	CIVIL
74.8-75.2	AERONAUTICAL RADIONAVIGATION Footnotes 8, 34, 73	CIVIL
75.2-77.7	MOBILE Footnote 73	CIVIL
77.7-77.8	MOBILE Footnote 73	CIVIL
77.8-84.6	MOBILE Footnotes 30, 73	CIVIL
84.6-85	MOBILE Footnote 73	CIVIL
85-87.5	MOBILE Footnote 73	CIVIL
87.5-108	BROADCASTING Footnotes 40, 73	CIVIL
108-117.975	AERONAUTICAL RADIONAVIGATION Footnotes 8, 73, 76	CIVIL

FREQUENCY BAND MHz	RADIO SERVICES	USERS
117.975-121.45	AERONAUTICAL MOBILE (R) Footnotes 8, 73	CIVIL
121.45-121.55	AERONAUTICAL MOBILE (R) Footnotes 8, 41, 43, 73, 105	CIVIL
121.55-136	AERONAUTICAL MOBILE (R) Footnotes 8, 43, 39, 73	CIVIL
136-137	AERONAUTICAL MOBILE (R) Footnotes 8, 39, 73	CIVIL
137-137.025	AERONAUTICAL MOBILE (OR) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) Space Operation (space-to-Earth) Space Research (space-to-Earth) Footnotes 73, 80, 89, 117, 254	CIVIL
137.025-137.175	AERONAUTICAL MOBILE (OR) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE Mobile-Satellite (space-to-Earth) Space Operation (space-to-Earth) Space Research (space-to-Earth) Footnotes 73, 80, 89, 117, 254	CIVIL
137.175-137.825	AERONAUTICAL MOBILE (OR) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE Mobile satellite (space-to-Earth) Space Operation (space-to-Earth) Space Research (space-to-Earth) Footnotes 73, 80, 89, 117, 254	CIVIL

FREQUENCY BAND MHz	RADIO SERVICES	USERS
137.825-138	AERONAUTICAL MOBILE (OR) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE Mobile-Satellite (space-to-Earth) Space Operation (space-to-Earth) Space Research (space-to-Earth) Footnotes 73, 80, 89, 117, 254	CIVIL
138-143.6	AERONAUTICAL MOBILE (OR) LAND MOBILE Space Research (space-to-Earth) Footnote 73	CIVIL NATIONAL SECURITY
143.6-143.65	AERONAUTICAL MOBILE (OR) LAND MOBILE SPACE RESEARCH (space-to-Earth) Footnote 73	CIVIL NATIONAL SECURITY
143.65-144	AERONAUTICAL MOBILE (OR) LAND MOBILE Footnote 73	CIVIL NATIONAL SECURITY
144-146	AMATEUR AMATEUR-SATELLITE Footnote 73	CIVIL
146-146.8	MOBILE Footnotes 44, 73	CIVIL
146.8-148	MOBILE Footnotes 44, 48, 73	CIVIL
148-148.95	MOBILE-SATELLITE (Earth-to-space) MOBILE Footnotes 24, 42, 48, 73,80	CIVIL
148.95-149.9	MOBILE-SATELLITE (Earth-to-space) MOBILE Footnotes 24, 42, 73, 80	CIVIL NATIONAL SECURITY
149.9-150.05	MOBILE MOBILE-SATELLITE (Earth-to-space) RADIONAVIGATION-SATELLITE Footnotes 24, 56, 73, 80, 122, 223	CIVIL NATIONAL SECURITY

FREQUENCY BAND MHz	RADIO SERVICES	USERS
150.05-151.4	MOBILE except aeronautical mobile RADIO ASTRONOMY Footnotes 30, 48, 73, 87	CIVIL
151.4-153	MOBILE except aeronautical mobile RADIO ASTRONOMY Footnotes 30, 48, 73, 87	CIVIL
153-154	MOBILE except aeronautical mobile (R) Footnotes 30, 48, 66, 73	CIVIL
154-154.5	MOBILE except aeronautical mobile (R) Footnotes 66, 73	CIVIL
154.5-154.65	MOBILE except aeronautical mobile (R) Footnotes 66, 73	CIVIL
154.65-156	MOBILE except aeronautical mobile (R) Footnotes 48, 66, 73	CIVIL
156-156.5125	MOBILE except aeronautical mobile Footnotes 47, 66, 73, 139	CIVIL
156.5125-156.5375	MARITIME MOBILE Footnotes 36, 66, 47, 73, 105	CIVIL
156.5375-156.7625	MOBILE except aeronautical mobile Footnotes 47, 66, 73	CIVIL
156.7625-156.8375	MARITIME MOBILE Footnotes 46, 66, 73, 105	CIVIL
156.8375-158.375	MOBILE except aeronautical mobile Footnotes 30, 37, 47, 48, 66, 73, 139	CIVIL
158.375-160.625	MOBILE except aeronautical mobile Footnotes 66, 73	NATIONAL SECURITY
160.625-162.875	MOBILE except aeronautical mobile Footnotes 37, 47, 48, 66, 73, 139	CIVIL
162.875-174	MOBILE except aeronautical mobile Footnotes 66, 73, 81	NATIONAL SECURITY
174-216	BROADCASTING Footnote 73	CIVIL
216-230	BROADCASTING Footnote 73	CIVIL
230-235	MOBILE Footnote 73	NATIONAL SECURITY

FREQUENCY BAND MHz	RADIO SERVICES	USERS
235-240	MOBILE Footnotes 73, 84	NATIONAL SECURITY
240-242.95	MOBILE Footnotes 73, 84	NATIONAL SECURITY
242.95- 243.055	AERONAUTICAL MOBILE Footnotes 41, 50, 73, 84, 105	CIVIL
243.055-267	MOBILE Footnotes 73, 84	NATIONAL SECURITY
267-272	MOBILE Footnotes 52, 73, 84	NATIONAL SECURITY
272-273	MOBILE Footnotes 73, 84	NATIONAL SECURITY
273-312	MOBILE Footnotes 73, 84	NATIONAL SECURITY
312-315	MOBILE Footnotes 73, 84	NATIONAL SECURITY
315-322	MOBILE Footnotes 73, 84	NATIONAL SECURITY
322-328.6	MOBILE RADIO ASTRONOMY Footnotes 73, 87	NATIONAL SECURITY
328.6-335.4	AERONAUTICAL RADIONAVIGATION Footnotes 8, 72, 73	CIVIL NATIONAL SECURITY
335.4-380	MOBILE Footnotes 73, 84	NATIONAL SECURITY
380-385	MOBILE Footnotes 64, 73, 84	NATIONAL SECURITY
385-387	MOBILE Footnotes 73, 84	NATIONAL SECURITY
387-390	MOBILE Footnotes 73, 84, 254	NATIONAL SECURITY
390-395	MOBILE Footnotes 64, 73, 84	NATIONAL SECURITY
395-399.9	MOBILE Footnotes 73, 84	NATIONAL SECURITY

FREQUENCY BAND MHz	RADIO SERVICES	USERS
399.9-400.05	MOBILE-SATELLITE (Earth-to-space) RADIONAVIGATION-SATELLITE Footnotes 24, 56, 73, 80, 122	CIVIL
400.05-400.15	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz) Footnote 73	CIVIL
400.15-401	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (Earth-to-space) MOBILE-SATELLITE (space-to-Earth) SPACE OPERATION (space-to-Earth) SPACE RESEARCH (space-to-Earth) Footnotes 73, 80, 89, 137, 173, 254	CIVIL
401-402	EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (Earth-to-space) Footnote 73	CIVIL NATIONAL SECURITY
402-403	EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (Earth-to-space) Footnote 73	CIVIL NATIONAL SECURITY
403-406	METEOROLOGICAL AIDS Footnote 73	CIVIL NATIONAL SECURITY
406-406.1	MOBILE-SATELLITE (Earth-to-space) Footnotes 59, 73	CIVIL
406.1-410	LAND MOBILE RADIO ASTRONOMY Footnote 73, 87	CIVIL
410-418	MOBILE except aeronautical mobile Footnote 73	CIVIL
418-420	MOBILE except aeronautical mobile Footnote 73	NATIONAL SECURITY
420-428	MOBILE except aeronautical mobile Radiolocation Footnote 73	CIVIL

FREQUENCY BAND MHz	RADIO SERVICES	USERS
428-430	MOBILE except aeronautical mobile Radiolocation Footnote 73	NATIONAL SECURITY
430-432	AMATEUR RADIOLOCATION Footnote 73	CIVIL NATIONAL SECURITY
432-433.05	AMATEUR RADIOLOCATION Earth exploration-satellite (active) Footnote 73, 79	CIVIL NATIONAL SECURITY
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1668-1668.4	MOBILE-SATELLITE (Earth-to-space) RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile Footnotes 73, 87, 155, 157, 165, 175, 177, 178, 179	CIVIL NATIONAL SECURITY
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1675-1690	METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile Footnotes 73, 155	CIVIL NATIONAL SECURITY
1690-1700	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) Fixed Mobile except aeronautical mobile Footnotes 73, 155, 183	CIVIL NATIONAL SECURITY

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1710-2100	FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) Footnotes 16, 51, 58, 73, 86, 87, 155, 157	CIVIL NATIONAL SECURITY
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2400-2450	FIXED MOBILE Amateur Amateur-Satellite Footnotes 67, 73	CIVIL
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2520-2655	FIXED MOBILE except aeronautical mobile Footnotes 16, 73, 82, 182	CIVIL
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3400-3500	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Amateur Radiolocation Footnotes 7, 73	CIVIL NATIONAL SECURITY
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4500-4800	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Footnotes 73, 193	NATIONAL SECURITY
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5255-5350	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) MOBILE except aeronautical mobile Footnotes 73, 98, 185, 202	CIVIL NATIONAL SECURITY
5350-5450	EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) AERONAUTICAL RADIONAVIGATION RADIOLOCATION Fixed Footnotes 73, 149, 203, 204, 205	CIVIL NATIONAL SECURITY
5450-5460	EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) AERONAUTICAL RADIONAVIGATION RADIOLOCATION Footnotes 73, 149, 203, 204, 205	CIVIL NATIONAL SECURITY
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5470-5570	MARITIME RADIONAVIGATION MOBILE except aeronautical mobile RADIOLOCATION Footnotes 73, 185, 205, 206, 207	CIVIL NATIONAL SECURITY
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5830-5850	FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur Amateur-Satellite Mobile Footnotes 67, 73	CIVIL
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5925-6425	FIXED FIXED-SATELLITE (Earth-to-space) Footnotes 73 , 209	CIVIL NATIONAL SECURITY
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7235-7250	FIXED Space Research (Earth-to-space) Earth Exploration-Satellite (Earth-to-space) Space Operation (Earth-to-space) Footnotes 73, 163, 210	CIVIL
7250-7300	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Footnotes 73, 151	CIVIL NATIONAL SECURITY
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7550-7725	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile Footnote 73	CIVIL NATIONAL SECURITY
7725-7750	FIXED MOBILE Fixed-Satellite (space-to-Earth) Footnote 73	CIVIL NATIONAL SECURITY
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7900-8400	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Footnotes 73 ,151	CIVIL NATIONAL SECURITY
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14.3-14.4	FIXED FIXED-SATELLITE (Earth-to-space) Mobile-Satellite (Earth-to-space) Footnotes 129, 209, 213, 214, 215	CIVIL
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64-65	FIXED INTER-SATELLITE MOBILE except aeronautical mobile Footnotes 73, 224, 231	CIVIL
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FREQUENCY BAND GHz	RADIO SERVICES	USERS
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94-94.1	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) Radio Astronomy Footnote 126	CIVIL NATIONAL SECURITY
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FREQUENCY BAND GHz	RADIO SERVICES	USERS
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120.02-122.25	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE SPACE RESEARCH (passive) Footnotes 67, 73	CIVIL NATIONAL SECURITY
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130-134	EARTH EXPLORATION-SATELLITE (active) FIXED INTER-SATELLITE MOBILE RADIO ASTRONOMY Footnotes 87, 123	CIVIL NATIONAL SECURITY
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141-148.5	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION Footnote 87	CIVIL NATIONAL SECURITY
148.5-151.5	EARTH EXPLORATION-SATELLITE RADIO ASTRONOMY SPACE RESEARCH (passive) Footnotes 88, 127	CIVIL NATIONAL SECURITY
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155.5-158.5	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) Footnote 87	CIVIL NATIONAL SECURITY
158.5-164	FIXED FIXED-SATELLITE MOBILE MOBILE-SATELLITE (space-to-Earth)	CIVIL NATIONAL SECURITY
164-167	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) Footnote 88	CIVIL NATIONAL SECURITY

FREQUENCY BAND GHz	RADIO SERVICES	USERS
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170-174.5	FIXED FIXED-SATELLITE (space-to-Earth) INTER-SATELLITE MOBILE Footnotes 87, 123, 127	CIVIL NATIONAL SECURITY
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182-185	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) Footnote 88	CIVIL NATIONAL SECURITY
185-190	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE SPACE RESEARCH (passive) Footnote 127	CIVIL NATIONAL SECURITY
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FREQUENCY BAND GHz	RADIO SERVICES	USERS
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209-217	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY Footnote 87	CIVIL NATIONAL SECURITY
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231.5-232	FIXED MOBILE Radiolocation	CIVIL NATIONAL SECURITY
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FREQUENCY BAND GHz	RADIO SERVICES	USERS
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238-240	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE RADIOLOCATION RADIONAVIGATION RADIONAVIGATION-SATELLITE	CIVIL NATIONAL SECURITY
240-241	FIXED MOBILE RADIOLOCATION	CIVIL NATIONAL SECURITY
241-248	RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-Satellite Footnotes 67, 73, 87	CIVIL NATIONAL SECURITY
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250-252	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) Footnote 88	CIVIL NATIONAL SECURITY
252-265	FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) RADIO ASTRONOMY RADIONAVIGATION RADIONAVIGATION-SATELLITE Footnotes 87, 121, 127	CIVIL NATIONAL SECURITY
265-275	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY Footnote 87	CIVIL NATIONAL SECURITY

FREQUENCY BAND GHz	RADIO SERVICES	USERS
275-1000	Not allocated Footnote 134	-

FOOTNOTES

In the column titled "RADIO SERVICES" the titles of services on a primary basis have been printed in capital letters, while those on secondary basis are in small print.

Footnote:

- Radio services on a secondary basis shall not cause harmful interference to the services operating on a primary basis, to which frequencies have already been assigned or may later be assigned.
- Radio services on a secondary basis cannot claim protection from harmful interference caused by stations operating on a primary basis, to which frequencies have already been assigned or may later be assigned.
- Radio services on a secondary basis can claim protection from harmful interference caused by other stations operating on a secondary basis, to which frequencies may later be assigned.
- Each frequency band limit is a nominal for a radio channel of the higher frequency range.
- The frequency bands designated for "civil, national security needs" shall be allocated with priority to national security needs, in accordance with the existing allocations, as well as European and worldwide trends.
- Individual frequency bands used for "national security needs" may be used for civil needs, subject to prior coordination between the authorities concerned.
- Individual frequency bands used for civil needs may be used for national security, subject to prior coordination with the Communications Regulation Commission (CRC).
- All quoted Articles, Appendices, Recommendations and Resolutions are from the Radio Regulations of the International Telecommunications Union (ITU).

1. Only classes A1A or F1B, A2C, A3C, F1C or F3C emissions are authorized for stations of the fixed service in the bands allocated to this service between 90-148.5 kHz and for stations of the maritime mobile service in the bands allocated to this service between 110 kHz and 148.5 kHz. Exceptionally, class J2B or J7B emissions are authorized for stations of the maritime mobile service, operating at frequency 110-148.5 kHz.
2. The stations of services to which the frequency bands 14-19.95 kHz and 20.05-70 kHz, 72-84 kHz and 86-90 kHz are allocated may transmit standard frequency and time signals and shall be afforded protection from harmful interference.
3. The frequency 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, on the condition that harmful interference is not caused to the broadcasting service. The use of frequencies in these services shall take place with 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.
4. The use of this band by the aeronautical radionavigation service is limited to airborne weather radars and ground-based radars. In addition, ground-based radar beacons in the aeronautical radionavigation service are permitted in the frequency band 9300-9320 MHz on condition that harmful interference is not caused to the maritime radionavigation service. In the band 9300-9500 MHz, ground-based radars used for meteorological purposes have priority over other radiolocation devices.
5. In the frequency bands 70-86 kHz and 112-130 kHz, pulsed radionavigation systems may be used on condition that they do not cause harmful interference to other services.
6. In this frequency band the maritime mobile service in the Black Sea region has a priority
7. The frequency band 3 400-3 600 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 with no priority for International Mobile Telecommunications (IMT) after 17.11.2010. 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 3 m above ground does not exceed -154.5 dB(W/(m² · 4 kHz)) for more than 20% of time. 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 3 400-3 600 MHz shall not claim more protection from space stations than that provided in Table 21-4 of the Radio Regulations (Edition of 2004).

8. Individual frequencies are used by the national security for the respective aeronautical radio services, subject to prior coordination with the Ministry of Transport, Information Technology and Communications.

9. Individual frequencies in this band are used by the maritime radionavigation service on a secondary basis.

10. In this frequency band, the maritime radionavigation service in the Black Sea region has priority.

11. In the maritime mobile service, the frequencies 457.525 MHz, 457.550 MHz, 457.575 MHz, 467.525 MHz, 467.550 MHz and 467.575 MHz may be used by on-board communication stations. Where needed, equipment designed for 12.5 kHz channel spacing using also the additional frequencies 457.5375 MHz, 457.5625 MHz, 467.5375 MHz and 467.5625 MHz may be introduced for on-board communications. The use of these frequencies in territorial waters may be subject to the national regulations of the administration concerned. The characteristics of the equipment used shall conform to those specified in Recommendation ITU-R M.1174 (see Resolution 341 (WRC-97)).

12. The frequency 465±5 kHz is used as an intermediate frequency in radio receivers for civil needs.

13. The frequencies 52.025 MHz, 52.050 MHz, 52.075 MHz, 52.125 MHz, 52.150 MHz, 52.175 MHz and 52.250 MHz are used for the national security needs till the expiry of the depreciation period of the Ministry of Defence's equipment, without making new assignments.

14. In the frequency band 535-1300 kHz individual frequencies are used by the aeronautical radionavigation service on the condition that they do not cause harmful interference to broadcasting.

15. The frequency band 1690-1830 kHz is used with priority for radionavigation needs.

16. 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.

17. The conditions for the use of the frequency 518 kHz by the maritime mobile service are prescribed in Articles 31 and 52 and in Appendix 13. (WRC-97).

18. In the frequency band 9200-9500 MHz, search and rescue transponders (SART) may be used, in accordance with Art. 31.

19. The carrier frequencies 3023 kHz and 5680 kHz may also be used, in accordance with Article 31 by stations of the maritime mobile service engaged in coordinated search and rescue operations. (WRC-07).

20. The frequency band 446.0-446.1 MHz is used principally for civil needs in the "Citizen Band-CB" with a power limit of 500 mW.

21. The frequency band 3155-3195 kHz is used for the provision of a common worldwide channel for low power wireless hearing aids. Additional channels for these devices may be assigned in the bands between 3155 kHz and 3400 kHz to suit local needs.

The frequencies in the range 3000 kHz to 4000 kHz are suitable for hearing aid devices which are designed to operate over short distances within the limits of the induction field.

22. The frequency 10700 kHz is used as an intermediate frequency in radio receivers.

23. The frequency 410 kHz is designated for radio direction-finding in the maritime radionavigation service. The other radionavigation services to which this frequency band is allocated shall not cause harmful interference to radio direction-finding in the frequency band 406.5-413.5 kHz.

24. The use of the frequency bands 148-150.05 MHz and 399.9-400.05 MHz by the mobile-satellite service

is subject to coordination under No 9.11A. The mobile-satellite service shall not constrain the development and use of the mobile service in the frequency band 148-149.9 MHz and the development and use of the radionavigation-satellite service in the frequency bands 149.9-150.05 MHz and 399.9-400.05 MHz.

25. The use of the frequency bands 21870-21924 kHz and 23200-23350 kHz by the fixed service is limited to provision of services related to aircraft flight safety.

26. (abrog. SG. 76/2011).

27. The frequency band 26960-27410 kHz is used principally for civil needs – the so-called “Citizen Band – CB 27 MHz”.

28. The frequency band 29.7-33 MHz is used for radio communications, operating on the principle of ionospheric reflection or meteor scatter applications.

29. The frequency bands 5500±50 kHz, 6500±50 kHz, 31.25±0.05 MHz, 33.25±0.05 MHz, 38.1±0.25 MHz and 38.9±0.25 MHz are used as intermediate frequencies in television receivers and any emissions in these bands are prohibited. The maximum radiated power in the frequency band 31.25-39.25 MHz shall be 50 W, and for civil needs - 10 W.

30. The frequency bands 30.3-30.5 MHz, 32.150-32.450 MHz, 73.3-74.1 MHz, 79.0-79.7 MHz, 151.025-151.200 MHz, 152.025-152.100 MHz, 152.150-152.200 MHz, 152.250-152.300 MHz, 153.450-153.850 MHz and frequencies 153.900 MHz and 158.100 MHz are used with priority for the national security.

31. The frequency bands 58-60 MHz and 68-73 MHz are used on a secondary basis for the national security needs, outside populated areas and with a power up to 10 W.

32. The carrier frequency 2 182 kHz is an international distress and calling frequency 2182 kHz for radiotelephony. The conditions for the use of the band 2 173.5-2 190.5 kHz are prescribed in Articles 31 and 52.

33. This frequency band is principally used for radio stations with a power up to 10 W, and individual frequencies in the frequency band 52-54 MHz are used by the Unified National Radiation Monitoring System.

34. The frequency 75 MHz is assigned to marker beacons. Assignment of frequencies close to the limits of the guard band to other services which, because of their power or geographical position, might cause harmful interference or otherwise place a constraint on marker beacons shall be refrained. Every effort should be made to improve the characteristics of airborne receivers and to limit the power of transmitting stations close to the limits 74.8 MHz and 75.2 MHz.

35. The frequency band 39.25-40.66 MHz is used for needs of national security on a secondary basis outside populated areas and with a power up to 5 W.

36. In the maritime mobile service the frequency 156.525 MHz shall be used exclusively for digital selective calling for distress, safety and calling in accordance with the provisions of Articles 31 and 52, and Appendices 13 and 18.

37. The frequency bands 157.225-157.275 MHz и 161.725-161.775 MHz are used with priority for needs of national security, subject to prior coordination with the Ministry of Transport, Information Technology and Communications.

38. The use of the band 23350-24000 kHz by the maritime mobile service is limited to inter-ship radiotelegraphy.

39. The frequency band 132-137 MHz may be used also used by the aeronautical mobile (OR) service on a primary basis. In assigning frequencies to stations of this radio service, the frequencies assigned to stations in the aeronautical mobile (R) service shall be taken account.

40. The frequency band 87.5-108 MHz is allocated to the VHF-FM broadcasting service. The allocation of these frequencies is performed in accordance with Technical requirements for operation of the electronic communications networks of the terrestrial broadcasting service and the related equipment adopted by the Communications Regulation Commission

41. The frequency bands 121.45-121.55 MHz and 242.95-243.05 MHz are also allocated to the mobile-satellite service for the reception on board satellites of emissions from emergency position-indicating radiobeacons transmitting at 121.5 MHz and 243 MHz.

42. Stations of the mobile-satellite service in the band 148-149.9 MHz shall not cause harmful interference to, or claim protection from, stations of the mobile services.

43. In this frequency band, the frequency 121.5 MHz is the aeronautical emergency frequency, and the

frequency 123.1 MHz is the aeronautical auxiliary frequency for search and rescue (SAR). Mobile stations of the maritime mobile service may communicate on these frequencies under the conditions laid down in Article 31 and Appendix 13 for distress and safety purposes with stations of the aeronautical mobile service.

44. The use of this frequency band by the national security is limited to the assigned frequency channels until the expiry of the depreciation period of the Ministry of Defence's equipment.

45. The frequency bands 876-880 MHz and 921-925 MHz are used for cellular mobile networks of the mobile service for railway applications (GSM-R) for covering the railway section between Sofia and Kalotina (the boundary) and between Plovdiv and Svilengrad (the boundary). The frequency bands 876-880 MHz and 921-925 MHz are used for covering the railway section between Plovdiv and Svilengrad (the boundary), subject to prior coordination with the Ministry of Transport, Information Technology and Communications.

46. The frequency 156.8 MHz is the international distress, safety and calling frequency for the maritime mobile service. The conditions for the use of this frequency and the band 156.7625-156.8375 MHz are contained in Article 31 and Appendix 18 of the Radio Regulation.

The frequency 156.525 MHz is the international distress, safety and calling frequency for the maritime mobile service using digital selective calling (DSC). The conditions for the use of this frequency and the band 156.4875-156.5625 MHz are contained in Articles 31 and 52, and in Appendix 18 of the Radio Regulation.

The frequency bands 156-156.4875MHz, 156.5625-156.7625 MHz, 156.8375-157.45 MHz, 160.6-160.975 MHz and 161.475-162.05 MHz shall be exclusively used by the maritime mobile service (see Articles 31 and 52, and Appendix 18). Their use by stations of other services shall be subject to prior coordination with the Ministry of Transport, Information Technology and Communications.

Any use of frequencies in these bands by stations of other services to which they are allocated should be avoided in areas where such use might cause harmful interference to the maritime mobile radiocommunication service.

The frequencies 156.8 MHz and 156.525 MHz and the frequency bands in which priority is given to the maritime mobile service may be used for radiocommunications on inland waterways subject to agreement between interested and affected administrations and taking into account current frequency usage and existing agreements.

47. The frequency bands 156-156.7625 MHz, 156.8375-157.45 MHz, 160.625-160.975 MHz and 161.475-162.05 MHz shall be exclusively used by the maritime mobile service (see Articles 31 and 52, and Appendix 13 of Radio Regulation). Their use by stations of other services shall be subject to prior coordination with the Ministry of Transport, Information Technology and Communications.

48. In this band individual frequencies and bands may be used for national security needs subject to prior coordination with the Communications Regulation Commission.

49. Until 29 March 2009, the frequency band 7450-8100 kHz is allocated to the fixed service on a primary basis and to the land mobile service on a secondary basis.

50. The frequency 243 MHz is used by survival craft stations and equipment used for survival purposes.

51. The frequency bands 1710-1785 MHz and 1805-1880 MHz are used for cellular mobile networks of the land mobile service for civil needs.

52. The frequency band 267-272 MHz may be used for space telemetry on a primary basis, subject to agreement obtained under No. 9.21.

53. The use of the frequency bands 1300-1350 MHz, 2700-2900 MHz and 9000-9200 MHz by the aeronautical radionavigation service is restricted to ground-based radars and to associated airborne transponders which radiate only on frequencies in these bands and only when actuated by radars operating in the same band.

54. The conditions for the use of the carrier frequencies 8291 kHz, 12290 kHz and 16420 kHz are prescribed in Articles 31 and 52 and in Appendix 13.

55. The band 3165-3195 MHz is used by the radio astronomy service for civil needs on a secondary basis.

56. The use of the frequency bands 149.9-150.05 MHz and 399.9-400.05 MHz by the mobile-satellite service (Earth-to-space) is limited to the land mobile-satellite service (Earth-to-space) until 1 January 2015. The allocation for the radionavigation-satellite service shall be effective by the same date.

57. The frequency band 5850-6425 MHz is allocated principally for multi-channel trunk radio relay equipment for civil needs.

58. The frequency bands 1900-1980 MHz, 2010-2025 MHz and 2110-2170 MHz are used for Universal Mobile Telecommunications System (UMTS), and the final release of the frequency band 1960-1980 MHz will be completed until the end of 2011.
59. The use of the frequency band 406-406.1 MHz by the mobile-satellite service is limited to low power satellite emergency position indicating radiobeacons (EPIRB) (see also Article 31 and Appendix 13).
60. The frequency band 36.5-37.5 GHz is used by the radio astronomy service for civil needs on a secondary basis.
61. (abrog. SG. 76/2011).
62. The band 14.5-15.35 GHz is also used by the Air Traffic Control for civil needs.
63. The frequency band 50.05-50.20 MHz is used on a secondary basis by equipment with a power of up to 10 W for the needs of the amateur service in observance of the necessary guard bands.
64. The frequency bands 380-382 MHz and 390-392 MHz are used for the segment of the national mobile digital radiocommunication system, TETRA Emergency on the territory of the country. The frequency assignments in the bands 382-385 MHz and 392-395 MHz shall be subject to a prior coordination with the Ministry of Defence.
65. The conditions for use of the international distress frequencies for digital selective calling 2187.5 kHz, 4207.5 kHz, 6312 kHz, 8414.5 kHz, 12577 kHz and 16804.5 kHz are prescribed in Article 31.
66. The frequency band 153-162.050 MHz may be used by the cable distribution systems at a minimum distance of 40 km from the Black Sea and the Danube river coast. The frequency band 162.050-174 MHz may be used by the cable distribution systems for transmission of digital information.
67. The frequency bands 6765-6795 kHz, 433.050-434.790 MHz, 61-61.5 GHz, 122-123 GHz и 244-246 GHz, as well as frequency bands 13553-13567 kHz, 26957-27283 kHz, 40.660-40.700 MHz, 2400-2500 MHz, 5725-5875 MHz, 24-24.25 GHz are designated for industrial, scientific and medical (ISM) applications. The use of the frequency bands from the first group shall be subject to an agreement with other administrations whose radiocommunication services might be affected, in accordance with relevant ITU-R Recommendations. The use of the frequency bands from the second group by the ISM applications is subject to the provisions of No. 15.13, and radiocommunication services, which these frequency bands are allocated to, shall accept the harmful interference, which might be caused by the ISM applications.
68. Individual frequencies in this frequency band are used for civil needs until the expiry of the equipment's depreciation period, but not later than 2010, without making new allocations.
69. The frequency bands 452.700-457.400 MHz and 462.700-467.400 MHz are used by wideband systems for civil needs.
70. In the frequency bands 478-494 MHz, 502-510 MHz, 590-614 MHz, 646-686 MHz, 726-758 MHz, 766-814 MHz and 822-862 MHz some frequency subbands are used for broadcasting in particular districts of the country, subject to prior coordination with the Ministry of Defence.

The following frequency bands can be used for broadcasting services allotments defined by the Plan for introduction of digital terrestrial television broadcasting (DVB-T) in Republic of Bulgaria as follows:

- 478-486 MHz – allotments Varna and Stara Zagora;
- 486-494 MHz – allotment Sofia;
- 502-510 MHz – allotments Blagoevgrad and Plovdiv;
- 590-598 MHz – allotment Sofia;
- 598-606 MHz - allotments Blagoevgrad, Vidin, Stara Zagora, Burgas, Smolian and Kurdjali;
- 606-614 MHz – allotments Burgas and Strandja;
- 646-654 MHz – allotment Sofia-city;
- 662-670 MHz - allotment Kurdjali;
- 726-734 MHz – allotments Sofia, Varna-city and Vidin;
- 742-750 MHz - allotments Burgas, Smolian and Sofia-city;
- 750-758 MHz - allotment Shumen;
- 766-774 MHz – allotments Smolian and Rouse;
- 782-790 MHz – allotments Varna and Kurdjali.

71. The equivalent isotropically radiated power (e.i.r.p.) of the station in amateur service using the frequency band 135.7-137.8 kHz shall not exceed 1 W . These station shall not cause harmful interference to stations

of the radionavigation service operating in Azerbaijan, Mongolia, Kyrgyzstan, Romania and Turkmenistan.

72. The use of the frequency band 328.6-335.4 MHz by the aeronautical radionavigation service is limited to Instrument Landing Systems (glide path) (ILS).

73. The following frequencies and frequency bands are also used for short range devices for civil needs:

9 kHz -30 MHz	Inductive applications
9-600 kHz	Wireless applications in Healthcare
456,9-457,1 kHz	Tracking, Tracing and Data Acquisition
- 516-8516 kHz	Railway applications
984-7484 kHz	Railway applications
6765-6795 kHz	Non-specific Short Range Devices
7,3-23 MHz	Railway applications
12.5-20 MHz	Wireless applications in Healthcare
13.553-13.567 MHz	Non-specific Short Range Devices
26.957-27.283 MHz	Non-specific Short Range Devices
26.995 MHz, 27.045 MHz, 27.095 MHz, 27.145 MHz и 27.195 MHz	Model Control
27.090-27.100 MHz	Railway applications
29.7-47 MHz	Radio microphone applications including aids for the hearing impaired
30-37.5 MHz	Wireless applications in Healthcare
30 MHz-12.4 GHz	Radiodetermination applications (equipment using ultra-wideband technology)
34.995-35.225 MHz	Model Control
40.660-40.700 MHz	Non-specific Short Range Devices
40.665 MHz, 40.675 MHz, 40.685 MHz и 40.695 MHz	Model Control
87.5-108 MHz	Wireless Audio Applications
138.2-138.45 MHz	Non-specific Short Range Devices
174-216 MHz	Radio microphone applications including aids for the hearing impaired
401-406 MHz	Wireless applications in Healthcare
433.050-434.790 MHz	Non-specific Short Range Devices
470-862 MHz	Radio microphone applications including aids for the hearing impaired
863-865 MHz	Wireless Audio Applications, Radio microphone applications including aids for the hearing impaired
863-870 MHz	Non-specific Short Range Devices
865-868 MHz	Radio frequency identification applications (RFID)
868.600-868.700 MHz	Alarms
869.200-869.400 MHz	Alarms
869.650-869.700 MHz	Alarms
1785-1800 MHz	Radio microphone applications including aids for the hearing impaired
1795-1800 MHz	Wireless Audio Applications
2400-2483.5 MHz	Non-specific Short Range Devices, Wireless Access Systems including Radio Local Area Networks (WAS/RLANs), Radiodetermination applications
2446-2454 MHz	Railway applications, Radio frequency identification applications
4500-7000 MHz	Radiodetermination applications
3.1-4.8 GHz	Non-specific Short Range Devices (equipment using ultra-wideband technology)
5150-5350 MHz, 5470-5725 MHz	Wireless Access Systems including Radio Local Area Networks (WAS/RLANs)
5725-5875 MHz	Non-specific Short Range Devices
5795-5815 MHz	Road Transport & Traffic Telematics and Automotive Short Range Radars

5875-5905 MHz	Intelligent Transport Systems
6-9 GHz	Non-specific Short Range Devices (equipment using ultra-wideband technology)
8500-10600 MHz	Radiodetermination applications
13.4-14.0 GHz	Radiodetermination applications
17.1-17.3 GHz	Wireless Access Systems including Radio Local Area Networks (WAS/RLANs), Radiodetermination applications
21.65-26.65 GHz	Road Transport & Traffic Telematics and Automotive Short Range Radars
24.00-24.25 GHz	Non-specific Short Range Devices
24.05-27 GHz	Radiodetermination applications
57-64 GHz	Radiodetermination applications
57-66 GHz	Wireless Access Systems including Radio Local Area Networks (WAS/RLANs)
61-61.5 GHz	Non-specific Short Range Devices
63-64 GHz	Road Transport & Traffic Telematics and Automotive Short Range Radars
75-85 GHz	Radiodetermination applications
76-77 GHz	Road Transport & Traffic Telematics and Automotive Short Range Radars
77-81 GHz	Road Transport & Traffic Telematics and Automotive Short Range Radars
122-123 GHz	Non-specific Short Range Devices
244-246 GHz	Non-specific Short Range Devices

74. The frequency 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, on condition that harmful interference is not caused to the broadcasting service. Usage of frequencies in the fixed service shall be with the minimum power required, taking into account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

75. The frequency bands 46.000-46.200 MHz, 46.600-47.000 MHz, 49.000-49.200 MHz and 49.600-50.000 MHz are used by cordless telephones with radiated power up to 100 mW or a service area up to 100 m for civil needs.

76. The frequency bands 108-117.975 MHz may also be used by the aeronautical mobile (R) service on a primary basis, limited to systems that transmit navigational information in support of air navigation and surveillance functions in accordance with recognized international aviation standards. Such use shall be in accordance with Resolution 413 (WRC 03) and shall not cause harmful interference to nor claim protection from stations operating in the aeronautical radionavigation service which operate in accordance with international aeronautical standards.

77. The frequency bands 880.1-914.9 MHz and 925.1-959.9 MHz are used for cellular mobile networks of the land mobile service for civil needs.

78. This band is intended for Multimedia Wireless Systems (MWS).

79. The use of the frequency band 432-438 MHz by sensors in the Earth exploration-satellite service (active) shall be in accordance with Recommendation ITU R SA.1260-1.

80. The use of the frequency bands 137-138 MHz, 148-150.05 MHz, 399.9-400.05 MHz and 400.15-401 MHz by the mobile-satellite service is limited to non-geostationary-satellite systems.

81. The frequency band 169,4-169,8125 MHz is designated for harmonized use in the Community in accordance with European Commission Decision 2005/928/EC. Its full release will be phased out by the end of 2012.

82. The frequency 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.

83. The frequency bands 24.493-24.521 GHz and 25.501-25.529 GHz are used for national security needs.

84. The frequency 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.

85. In the frequency bands 450-459 MHz and 460-469 MHz individual frequencies shall be used by the Ministry of Defence till the end of 2016.

86. The frequency band 1880-1900 MHz is used shared on the territory of the country by the military radio-electronic systems and the civil radio-subscriber system under DECT standard.

87. In making assignments in the following bands to stations of the radio services, other than the radio astronomy service, all practicable steps shall be taken to protect the radio astronomy service from harmful interference:

13360-13410 kHz,	4950-4990 MHz,	92-94 GHz,
25550-25670 kHz,	4990-5000 MHz,	94.1-100 GHz,
37.5-38.25 MHz,	6650-6675.2 MHz,	102-109.5 GHz,
73-74.6 MHz,	10.6-10.68 GHz,	111.8-114.25 GHz,
150.05-153 MHz,	14.47-14.5 GHz,	128.33-128.59 GHz,
322-328.6 MHz,	22.01-22.21 GHz,	129.23-129.49 GHz,
406.1-410 MHz,	22.21-22.5 GHz,	130-134 GHz,
608-614 MHz,	22.81-22.86 GHz,	136-148.5 GHz,
1330-1400 MHz,	23.07-23.12 GHz,	151.5-158.5 GHz,
1610.6-1613.8 MHz,	31.2-31.3 GHz,	168.59-168.93 GHz,
1660-1670 MHz,	31.5-31.8 GHz,	171.11-171.45 GHz,
1718.8-1722.2 MHz,	36.43-36.5 GHz,	172.31-172.65 GHz,
2655-2690 MHz,	42.5-43.5 GHz,	173.52-173.85 GHz,
3260-3267 MHz,	42.77-42.87 GHz,	195.75-196.15 GHz,
3332-3339 MHz,	43.07-43.17 GHz,	209-226 GHz,
3345.8-3352.5 MHz,	43.37-43.47 GHz,	241-250 GHz,
4825-4835 MHz,	48.94-49.04 GHz,	252-275 GHz.
	76-86 GHz,	

88. All emissions are prohibited in the following bands:

1400-1427 MHz
2690-2700 MHz
10.68-10.7 GHz,
15.35-15.4 GHz,
23.6-24 GHz,
31.3-31.5 GHz,
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.

89. In making assignments to space stations in the mobile-satellite service in the bands 137-138 MHz and 400.15-401 MHz, all practicable steps shall be taken to protect the radio astronomy service in the bands 150.05-153 MHz, 322-328.6 MHz, 406.1-410 MHz and 608-614 MHz from harmful interference from unwanted emissions. The threshold levels of interference detrimental to the radio astronomy service are shown in Table 1 of Recommendation ITU-R RA.769-1. (WRC-97)

90. In the frequency 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.
91. The use of this band by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service.
92. In the frequency band 11.7-12.5 GHz, the fixed service, in accordance with their respective allocations, shall not cause harmful interference to, or claim protection from, broadcasting-satellite stations operating in accordance with Appendix 30. (WRC 03)
93. This band is also allocated to the fixed-satellite service (space-to-Earth) on a primary basis, and its use is limited to non-geostationary systems according to Resolution 538 (WRC-97).
94. The assignments to stations of the broadcasting-satellite service which are in conformity with the appropriate regional Plan of 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. In relation to space services, this band shall be used principally for satellite broadcasting.
95. The use of this band by the aeronautical radionavigation service is limited to Doppler navigation aids.
96. The earth exploration-satellite (active) and space research (active) services operating in the band 13.25-13.4 GHz shall not cause harmful interference to, or constrain the use and development of, the aeronautical radionavigation service.
97. The allocation of the band 13.4–13.75 GHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the band by the space research service are on a secondary basis.
98. The Earth exploration-satellite (active) and space research (active) services in the frequency band 5250-5350 MHz shall not claim protection from the radiolocation service. No. 5.43A does not apply.
99. In the frequency band 13.75-14 GHz, an earth station of a geostationary fixed-satellite service network shall have a minimum antenna diameter of 1.2 m and an earth station of a non geostationary fixed-satellite service system shall have a minimum antenna diameter of 4.5 m. In addition, the equivalent isotropically radiated power (e.i.r.p.), averaged over one second, radiated by a station in the radiolocation or radionavigation services shall not exceed 59 dBW for elevation angles above 2° and 65 dBW at lower angles. When bringing into use an earth station in a geostationary-satellite network in the fixed-satellite service in this band with an antenna size smaller than 4.5 m, shall be ensured that the power flux-density produced by this earth station does not exceed:
- -115 dB(W/(m² • 10 MHz)) for more than 1% of the time produced at 36 m above sea level at the low water mark, as officially recognized by the coastal state;
 - -115 dB(W/(m² • 10 MHz)) for more than 1% of the time produced 3 m above ground at the border of the territory of an administration deploying or planning to deploy land mobile radars in this band, unless prior agreement has been obtained.
- For earth stations within the fixed-satellite service having an antenna diameter greater than or equal to 4.5 m, the equivalent isotropically radiated power (e.i.r.p.) of any emission should be at least 68 dBW and should not exceed 85 dBW.
100. The use of the band 14-14.3 GHz by the radionavigation service shall be such as to provide sufficient protection to space stations of the fixed-satellite service.
101. Spaceborne active sensors operating in the band 17.2-17.3 GHz shall not cause harmful interference to, or constrain the development of, the radiolocation and other services allocated on a primary basis.
102. The use of the frequency band 17.3-18.1 GHz by geostationary-satellite systems in the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. The use of the bands 17.3-18.1 GHz (Earth-to-space) by non-geostationary-satellite systems 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.

103. The band 18.1-18.3 GHz is also allocated to the meteorological-satellite service (space-to-Earth) on a primary basis. Its use is limited to geostationary satellites and shall be in accordance with the provisions of Article 21, Table 21-4.

104. The use of the band 18.1-18.4 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links of geostationary-satellite systems in the broadcasting-satellite service.

105. The carrier frequencies 2182 kHz, 3023 kHz, 5680 kHz, 8364 kHz, 121.5 MHz, 156.525 MHz, 156.8 MHz and 243 MHz may also be used, in accordance with the procedures in force for terrestrial radiocommunication services, for search and rescue operations concerning manned space vehicles. The conditions for the use of the frequencies are prescribed in Article 31.

The same applies to the frequencies 10003 kHz, 14993 kHz and 19993 kHz, but in each of these cases emissions must be confined in a band of ± 3 kHz about the frequency.

106. The use of the band 19.3-19.6 GHz (Earth-to-space) by the FSS is limited to feeder links for non-geostationary-satellite systems in the mobile-satellite service.

107. In the bands 20.1-20.2 GHz and 29.9-30 GHz, networks which are both in the fixed-satellite service and in the mobile-satellite service may include links between earth stations at specified or unspecified points or while in motion, through one or more satellites for point-to-point and point-to-multipoint communications.

108. 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.

109. Use of the frequency band 25.25-27.5 GHz by the inter-satellite service is limited to space research and Earth exploration-satellite applications, and also transmissions of data originating from industrial and medical activities in space.

110. The earth stations in the Earth exploration-satellite service or the space research service shall not claim protection from stations in the fixed and mobile services operated by other administrations. In addition, earth stations in the Earth exploration-satellite service or in the space research service should be operated taking into account Recommendations ITU R SA.1278 and ITU R SA.1625, respectively.

111. 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.

112. The bands 27.500-27.501 GHz and 29.999-30.000 GHz are also allocated to the fixed-satellite service (space-to-Earth) on a primary basis for the beacon transmissions intended for up-link power control. Such space-to-Earth transmissions shall not exceed an equivalent isotropically radiated power (e.i.r.p.) of 10 dBW in the direction of adjacent satellites on the geostationary-satellite orbit. In the band 27.500-27.501 GHz, such space-to-Earth transmissions shall not produce a power flux-density in excess of the values specified in Article 21, Table 21-4 on the Earth's surface.

113. The frequency band 27.5-30 GHz is used by the fixed-satellite service (Earth-to-space) for the provision of feeder links for the broadcasting-satellite service.

114. The frequency band 27.501-29.999 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a secondary basis for beacon transmissions intended for up-link power control.

115. The frequency band 29.95-30 GHz is used for space-to-space links in the earth exploration-satellite service for telemetry, tracking, and control purposes, on a secondary basis.

116. In designing systems for the inter-satellite service in the frequency band 32.3-33 GHz, for the radionavigation service in the band 32-33 GHz, and for the space research service (deep space) in the band 31.8-32.3 GHz, all necessary measures shall be taken to prevent harmful interference between these services, bearing in mind the safety aspects of the radionavigation service (see Recommendation 707).

117. The use of the frequency band 137-138 MHz by the mobile-satellite service is subject to coordination in accordance with the provisions of No 9.11A. (WRC-97).

118. 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. All practicable steps shall be

taken 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.

119. 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 these bands is subject to Resolution 122 (Rev. WRC-07).

120. In the bands 43.5-47 GHz and 66-71 GHz, stations in the land mobile service may be operated subject to not causing harmful interference to the space radiocommunication services to which these bands are allocated.

121. In the frequency bands 43.5-47 GHz, 66-71 GHz, 95-100 GHz, 123-130 GHz, 191.8-200 GHz and 252-265 GHz, satellite links connecting land stations at specified fixed points are also authorized when used in conjunction with the mobile-satellite service or the radionavigation-satellite service.

122. Emissions of the radionavigation-satellite service in the frequency bands 149.9-150.05 MHz and 399.9-400.05 MHz may also be used by receiving earth stations of the space research service.

123. In the bands 55.78-58.2 GHz, 59-64 GHz, 66-71 GHz, 122.25-123 GHz, 130-134 GHz, 167-174.8 GHz and 191.8-200 GHz, stations in the aeronautical mobile service may be operated subject to not causing harmful interference to the inter-satellite service.

124. In the band 78-79 GHz radars located on space stations may be operated on a primary basis in the earth exploration satellite service and in the space research service.

125. In the band 74-76 GHz, stations in the fixed, mobile and broadcasting services shall not cause harmful interference to stations of the fixed-satellite service or stations of the broadcasting-satellite service operating in accordance with the decisions of the appropriate frequency assignment planning conference for the broadcasting-satellite service.

126. The use of the band 94-94.1 GHz by the earth exploration-satellite (active) and space research (active) services is limited to spaceborne cloud radars.

127. The bands 150-151 GHz, 174.42-175.02 GHz, 177-177.4 GHz, 178.2-178.6 GHz, 181-181.46 GHz, 186.2-186.6 GHz and 257.5-258 GHz are also allocated to the radio astronomy service on a secondary basis for spectral line observations.

128. The band 9975-10025 MHz is allocated to the meteorological-satellite service on a secondary basis for use by weather radars.

129. The use of the bands 12.5-12.75 GHz (space-to-Earth), 13.75-14.5 GHz (Earth-to-space), 17.8-18.6 GHz (space-to-Earth), 19.7-20.2 GHz (space-to-Earth), 27.5-28.6 GHz (Earth-to-space), 29.5-30 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.

130. Stations operating in the aeronautical radionavigation service shall limit the effective equivalent isotropically radiated power (e.i.r.p.) in accordance with Recommendation ITU-R S.1340. The minimum coordination distance required to protect the aeronautical radionavigation stations from harmful interference from feeder link earth stations and the maximum effective equivalent isotropically radiated power (e.i.r.p.) transmitted towards the local horizontal plane by a feeder link earth station shall be in accordance with Recommendation ITU-R S.1340.

131. The emissions of the fixed service and the fixed-satellite service in the band 18.6-18.8 GHz are limited to the values given in Nos. 21.5A and 21.16.2, respectively.

132. In order to facilitate interregional coordination between networks in the mobile-satellite and fixed-satellite services, carriers in the mobile-satellite service that are most susceptible to interference shall, to the extent practicable, be located in the higher parts of the bands 19.7-20.2 GHz and 29.5-30 GHz.

133. In the frequency band 59-64 GHz, airborne radars in the radiolocation service may be operated subject

to not causing harmful interference to the inter-satellite service (see No. 5.43).

134. The frequency band 275-1000 GHz may be used by administrations for experimentation with various active and passive services. In this band a need has been identified for the following spectral line measurements for passive services:

- radio astronomy service: 275-323 GHz, 327-371 GHz, 388-424 GHz, 426-442 GHz, 453-510 GHz, 623-711 GHz, 795-909 GHz and 926-945 GHz;
- Earth exploration-satellite service (passive) and space research service (passive): 275-277 GHz, 294-306 GHz, 316-334 GHz, 342-349 GHz, 363-365 GHz, 371-389 GHz, 416-434 GHz, 442-444 GHz, 496-506 GHz, 546-568 GHz, 624-629 GHz, 634-654 GHz, 659-661 GHz, 684-692 GHz, 730-732 GHz, 851-853 GHz and 951-956 GHz.

Future research in this largely unexplored spectral region may yield additional spectral lines and continuum bands of interest to the passive services. Administrations are urged to take all practicable steps to protect these passive services from harmful interference until the date when the allocation table is established in the above-mentioned frequency band.

135. In the frequency bands 1530-1544 MHz and 1626.5-1645.5 MHz, Global Maritime Distress and Safety System (GMDSS) communications shall have priority access and immediate availability for operation in the network over all other mobile satellite communications.

The mobile-satellite systems shall not cause unacceptable interference to, or claim protection from the Global Maritime Distress and Safety System (GMDSS), in compliance with Resolution 222 (WRC-2000).

136. The use of the frequency band 1544-1545 MHz by the mobile-satellite service (space-to-Earth) is limited to distress and safety communications in accordance with Article 31.

137. The frequency band 400.15-401 MHz is also allocated to the space research service in the space-to-space direction for communications with manned space vehicles. In this application, the space research service will not be regarded as a safety service.

138. The use of the frequency bands 862-880 MHz and 915-925 MHz by aeronautical radionavigation service is subject to agreement obtained under No. 9.21 with administrations concerned and limited to ground-based radiobeacons in operation on 27 October 1997 until the end of their lifetime.

139. In the frequency bands 156.075-156.275 MHz, 157.125-157.325 MHz, 160.675-160.875 MHz and 161.725-161.925 MHz, allocated in accordance with Appendix S18, individual frequencies may be used as simplex, subject to prior coordination with the Ministry of Transport, Information Technology and Communications. The stations operating in these bands shall not cause harmful interference to, or claim protection from, the other stations operating in compliance with Article 5 [Rev. Res. 342 (WRC-2000)].

140. In this band, ground-based radars used for meteorological purposes are authorised to operate on a basis of equality with stations of the aeronautical radionavigation service.

141. In this band, the use of the shipborne interrogator-transponder system shall be confined to the band 2930 -2950 MHz.

142. The use of this band by the aeronautical radionavigation service is limited to ground-based radars.

143. In the frequency bands 2900-3100 MHz and 9300-9500 MHz, the response from radar transponders shall not be capable of being confused with the response from radar beacons and shall not cause interference to ship or aeronautical radars in the radionavigation service, having regard, however, to No. 4.9.

144. The use of this band by the aeronautical radionavigation service is reserved exclusively for radio altimeters installed on board aircraft and for the associated transponders on the ground. However, passive sensing in the earth exploration-satellite and space research services may be authorised in this band on a secondary basis (no protection is provided by the radio altimeters).

145. The standard frequency and time signal-satellite service may be authorised to use the frequency 4202 MHz for space-to-Earth transmissions and the frequency 6427 MHz for Earth-to-space transmissions. Such transmissions shall be confined within the limits of 2 MHz of these frequencies, subject to agreement obtained under No. 9.21.

146. The frequency bands 1610-1626.5 MHz and 5000-5150 MHz are also allocated to the aeronautical mobile-satellite (R) service on a primary basis, subject to agreement obtained under No. 9.21.

147. The frequency band 5030-5150 MHz is to be used for the operation of the international standard system (microwave landing system) for precision approach and landing. The requirements of this system shall take precedence over other users of the band 5030-5091 MHz. For the use of the band 5091-5150 MHz, note 195 and Resolution 114 (Rev.WRC-03) apply.

148. The allocation of the band 5250-5255 MHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the band by the space research service are on a secondary basis.
149. The use of the frequency band 5350-5470 MHz by the aeronautical radionavigation service is limited to airborne radars and associated airborne beacons.
150. In the frequency band 5600-5650 MHz, ground-based radars used for meteorological purposes are authorised to operate on a basis of equality with stations of the maritime radionavigation service.
151. The frequency bands 7250-7375 MHz (space-to-Earth) and 7900-8025 MHz (Earth-to-space) are also allocated to the mobile-satellite service on a primary basis, subject to agreement obtained under No. 9.21.
152. The use of this band by the aeronautical radionavigation service is limited to airborne Doppler navigation aids on a centre frequency of 8800 MHz.
153. In the frequency bands 8850-9000 MHz and 9200-9225 MHz, the maritime radionavigation service is limited to shore-based radars.
154. The use of the frequency 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).
155. This frequency bands 1350-1400 MHz, 1427-1452 MHz, 1492-1525 MHz, 1660-1670 MHz, 1675-1710 MHz, 1785-1800 MHz, 2025-2110 MHz and 2200-2290 MHz are also used by the tactical radio relay links for the national security.
156. The frequency bands 1525-1544 MHz, 1545-1559 MHz, 1626.5-1645.5 MHz and 1646.5-1660.5 MHz shall not be used for feeder links of any service but for exceptional circumstances.
157. The use of the frequency 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 and 2483.5-2500 MHz, by the mobile-satellite service is in compliance with Resolutions 212 (Rev.WRC-07) and 225 (Rev.WRC-07).
158. The use of the frequency bands 1525-1559 MHz, 1613.8-1626.5 MHz and 1626.5-1660.5 MHz by the mobile-satellite services is subject to coordination under No. 9.11A.
159. In the frequency bands 1545-1555 MHz and 1646.5-1656.5 MHz, priority shall be given to accommodating the spectrum requirements of the aeronautical mobile-satellite (R) service providing transmission of messages with priority 1 to 6 according to Article 44. The priority regulation in the frequency band shall be subject to the clauses of Resolution 222 (WRC-2000).
160. Transmissions in the band 1545-1555 MHz from terrestrial aeronautical stations directly to aircraft stations, or between aircraft stations, in the aeronautical mobile (R) service are also authorised when such transmissions are used to extend or supplement the satellite-to-aircraft links. Transmissions in the band 1646.5-1656.5 MHz from aircraft stations directly to terrestrial aeronautical stations, or between aircraft stations, in the aeronautical mobile (R) service are also authorised when such transmissions are used to extend or supplement the aircraft-to-satellite links.
161. Use of systems in the radionavigation-satellite service (space-to-space) operating in the bands 1215-1300 MHz and 1559-1610 MHz is not intended to provide safety service applications, and shall not impose any additional constraints on other systems or services.
162. The use of the frequency band 1645.5-1646.5 MHz by the mobile-satellite service (Earth-to-space) and for inter-satellite links is limited to distress and safety communications.
163. In this frequency band, individual telecommunications networks for national security needs may be established after coordination with the Communications Regulation Commission.
164. Stations in the radionavigation-satellite service in the frequency band 1164-1215 MHz shall operate in accordance with the provisions of Resolution 609 and shall not claim protection from stations in the aeronautical radionavigation service in the band 960-1215 MHz. No. 5.43A does not apply. The provisions of No. 21.18 shall apply.
165. All practicable protection should be given in the frequency band 1660.5-1668.4 MHz for future research in radio astronomy, particularly by eliminating air-to-ground transmissions in the meteorological aids service in the frequency band 1664.4-1668.4 MHz.
166. In order not to cause harmful interference to the microwave landing system (MLS) operating above 5030 MHz, the aggregate power flux-density produced at the Earth's surface in the frequency band 5030-

5150 MHz by all the space stations within any radionavigation-satellite service system (space-to-Earth) operating in the frequency band 5010-5030 MHz shall not exceed -124.5 dB(W/m²) in a 150 kHz band. In order not to cause harmful interference to the radio astronomy service in the band 4990-5000 MHz, radionavigation-satellite service systems operating in the band 5010-5030 MHz shall comply with the limits in the band 4990-5000 MHz defined in Resolution 741 (WRC 03).

167. The use of the frequency band 1300-1350 MHz by earth stations in the radionavigation-satellite service and by stations in the radiolocation service shall not cause harmful interference to, nor constrains the operation and development of, the aeronautical-radionavigation service.

168. The use of the band 21.4-22 GHz by the broadcasting-satellite service is subject to the provisions of Resolution 525 (WRC-07).

169. The use of the frequency band 960-1215 MHz by the aeronautical radionavigation service is reserved on a worldwide basis for the operation and development of airborne electronic aids to air navigation and any directly associated ground-based facilities.

170. The use of the frequency bands 1164-1300 MHz, 1559-1610 MHz and 5010-5030 MHz by systems and networks in the radionavigation-satellite service for which complete coordination or notification information, as appropriate, is received by the Radiocommunication Bureau after 1 January 2005 is subject to the application of the provisions of Nos. 9.12, 9.12A and 9.13. Resolution 610 (WRC-03) shall also apply; however, in the case of radionavigation-satellite service (space-to-space) networks and systems, Resolution 610 (WRC-03) shall only apply to transmitting space stations. In accordance with No. 5.329A, for systems and networks in the radionavigation-satellite service (space-to-space) in the bands 1 215-1 300 MHz and 1 559-1 610 MHz, the provisions of Nos. 9.7, 9.12, 9.12A and 9.13 shall only apply with respect to other systems and networks in the radionavigation-satellite service (space-to-space)..

171. The radionavigation-satellite service, operating in the frequency band 1215-1300 MHz shall not cause harmful interference to the radiolocation service. No. 5.43 shall not apply in respect of the radiolocation service. Resolution 608 shall apply.

172. In the frequency band 1215-1260 MHz, active spaceborne sensors in the earth exploration-satellite and space research services shall not cause harmful interference to, claim protection from, or otherwise impose constraints on operation or development of the radiolocation service, the radionavigation-satellite service and other services allocated on a primary basis.

173. The use of the frequency band 400.15-401 MHz by the mobile-satellite service is subject to coordination under No.9.11A. The power flux-density limit indicated in Annex 1 of Appendix 5 shall apply until such time as a competent world radiocommunication conference revises it.

174. The frequency bands 1390-1392 MHz (Earth-to-space) and 1430-1432 MHz (space-to-Earth) is also allocated to the fixed-satellite service on a secondary basis. These allocations are limited to use for feeder links for non-geostationary-satellite networks in the mobile-satellite service with service links below 1 GHz, and Resolution 745 applies.

175. The use of the frequency band 1518-1525 MHz by the mobile-satellite service is subject to coordination under No. 9.11A. In the frequency band 1518-1525 MHz stations in the mobile-satellite service shall not claim protection from the stations in the fixed service. No. 5.43A does not apply. The use of the frequency bands 1518-1525 MHz and 1668-1675 MHz by the mobile-satellite service shall be in accordance with Resolution 225 (Rev. WRC-03).

176. In the frequency band 1559-1610 MHz the fixed service may operate on a secondary basis until 1 January 2015. After that date the allocation for fixed service becomes invalid. In this band all practicable steps shall be taken to protect the radionavigation-satellite service and the aeronautical radionavigation service and not authorize new frequency assignments to fixed-service systems.

177. The use of the frequency band 1668-1675 MHz by the mobile-satellite service is subject to coordination under No. 9.11A.

178. For sharing of the frequency band 1668-1675 MHz between the mobile-satellite service and the fixed, mobile and space research (passive) services, Resolution 744 shall apply (WRC-03).

179. In order to protect the radio astronomy service in the frequency band 1668-1670 MHz, the aggregate power flux-density values produced by mobile earth stations in a network of the mobile-satellite service operating in this band shall not exceed -181 dB(W/m²) in 10 MHz and -194 dB(W/m²) in any 20 kHz at any radio astronomy station recorded in the Master International Frequency Register, for more than 2% of integration periods of 2000 s.

180. In the frequency band 1668.4-1675 MHz new systems in the meteorological service shall not be implemented, and the existing systems in the meteorological service shall be moved in other bands as soon as possible.

181. In the frequency band 1670-1675 MHz, stations in the mobile-satellite service shall not cause harmful interference to, nor constrain the development of, existing earth stations in the meteorological-satellite service notified in accordance with Resolution 670 (WRC 03).

182. In the frequency band 2500-2690 MHz some frequency subbands are used for national security.

183. Earth exploration-satellite service applications, other than the meteorological-satellite service, may also be used in the bands 460-470 MHz and 1690-1710 MHz for space-to-Earth transmissions subject to not causing harmful interference to stations operating in accordance with the Radio Regulations.

184. The use of the frequency bands 1452-1492 MHz and 1525-1535 MHz by the aeronautical mobile service is exclusively for the purposes of aeronautical telemetry within the national territory. The use of the band 1452-1492 MHz is subject to agreement between the administrations concerned.

185. The frequency bands 5150-5350 MHz and 5470-5725 MHz are also used for stations in the mobile, except aeronautical mobile, services in accordance with Resolution 229 (WRC-03) for civil needs. (WRC-07).

186. In the band 9000-9200 MHz, stations operating in the radiolocation service shall not cause harmful interference to, nor claim protection from, systems identified in the note 53 operating in the aeronautical radionavigation service, or radar systems in the maritime radionavigation service operating in this band on a primary basis in the countries listed in No. 5.471.

187. For sharing of the frequency 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.

188. The use of the frequency band 18.1-18.4 GHz is limited to geostationary.

189. In the bands 1350-1400 MHz, 1427-1429 MHz, 1429-1452 MHz, 22.55-23.55 GHz, 30-31 GHz, 31-31.3 GHz, 49.7-50.2 GHz, 50.4-50.9 GHz and 51.4-52.6 GHz, Resolution 750 (WRC-07) applies.

190. (abrog. SG. 76/2011)

191. (abrog. SG. 76/2011)

192. In the frequency band 2900-3100 MHz, stations in the radiolocation service shall not cause harmful interference to, nor claim protection from, radar systems in the radionavigation service.

193. The use of the frequency 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 frequency 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 frequency 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 system 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 system in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks. 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.

194. In the frequency bands 4825-4835 MHz and 4950-4990 MHz, the allocation to the mobile service is restricted to the mobile, except aeronautical mobile, service.

195. The frequency band 5091-5150 MHz is also allocated to the fixed-satellite service (Earth-to-space) on a primary basis. This allocation is limited to feeder links of non-geostationary mobile-satellite systems in the mobile-satellite service and is subject to coordination under No. 9.11A.

In the frequency band 5091-5150 MHz, the following conditions also apply:

- prior to 1 January 2018, the use of the frequency band 5091-5150 MHz by feeder links of non-geostationary-satellite systems in the mobile-satellite service shall be made in accordance with

Resolution 114 (Rev.WRC 03);

- prior to 1 January 2018, the requirements of existing and planned international standard systems for the aeronautical radionavigation service which cannot be met in the frequency band 5000-5091 MHz, shall take precedence over other uses of this band;
- after 1 January 2012, no new assignments shall be made to earth stations providing feeder links of non-geostationary mobile-satellite systems;
- after 1 January 2018, the fixed-satellite service will become secondary to the aeronautical radionavigation service.

196. The allocation to the fixed-satellite service (Earth-to-space) is limited to feeder links of non-geostationary-satellite systems in the mobile-satellite service and is subject to coordination under No. 9.11A.

197. The frequency band 5150-5216 MHz is also allocated to the fixed-satellite service (space-to-Earth) on a primary basis. This allocation is limited to feeder links of non-geostationary-satellite systems in the mobile-satellite service and is subject to provisions of No. 9.11A. The power flux-density at the Earth's surface produced by space stations of the fixed-satellite service operating in the space-to-Earth direction in the band 5150-5216 MHz shall in no case exceed -164 dB(W/m²) in any 4 kHz band for all angles of arrival.

198. The frequency band 5150-5216 MHz is also allocated to the radiodetermination-satellite service (space-to-Earth) on a secondary basis. The use by the radiodetermination-satellite service is limited to feeder links in conjunction with the radiodetermination-satellite service operating in the bands 1610-1626.5 MHz and/or 2483.5-2500 MHz. The total power flux-density at the Earth's surface shall in no case exceed -159 dB(W/m²) in any 4 kHz band for all angles of arrival.

199. Fixed-satellite service networks in the frequency band 5150-5250 MHz shall be coordinated on an equal basis in accordance with No. 9.11A with non-geostationary-radiodetermination-satellite networks brought into use prior to 17 November 1995. Radiodetermination-satellite networks brought into use after 17 November 1995 shall not claim protection from, and shall not cause harmful interference to, stations of the fixed-satellite service.

200. (abrog. SG. 76/2011)

201. In the frequency band 5150-5250 MHz, stations in the mobile service shall not claim protection from earth stations in the fixed-satellite service. No. 5.43A does not apply to the mobile service with respect to fixed-satellite service earth stations.

202. In the frequency band 5250-5350 MHz, stations in the mobile service shall not claim protection from the radiolocation service, the Earth exploration-satellite service (active) and the space research service (active). These services shall not impose on the mobile service more stringent protection criteria, based on system characteristics and interference criteria, than those stated in Recommendations ITU R M.1638 and ITU R SA.1632.

203. In the frequency band 5350-5470 MHz, stations in the radiolocation service shall not cause harmful interference to, nor claim protection from, radar systems in the aeronautical radionavigation service operating in accordance with Footnote 149.

204. The space research service (active) operating in the band 5350-5460 MHz shall not cause harmful interference to, nor claim protection from, other services to which this band is allocated.

205. The Earth exploration-satellite service (active) operating in the band 5350-5570 MHz and space research service (active) operating in the band 5460-5570 MHz shall not cause harmful interference to the aeronautical radionavigation service in the band 5350-5460 MHz, the radionavigation service in the band 5460-5470 MHz and the maritime radionavigation service in the band 5470-5570 MHz.

206. In the frequency band 5470-5725 MHz, stations in the mobile service shall not claim protection from radiodetermination services. Radiodetermination services shall not impose on the mobile service more stringent protection criteria, based on system characteristics and interference criteria, than those stated in Recommendation ITU R M.1638.

207. In the frequency band 5470-5650 MHz, stations in the radiolocation service, except ground-based radars used for meteorological purposes in the band 5600-5650 MHz, shall not cause harmful interference to, nor claim protection from, radar systems in the maritime radionavigation service.

208. In the frequency band 5650-5670 MHz, the amateur-satellite service may operate subject to not causing harmful interference to other services operating in this frequency band (see No. 5.43). Any harmful interference from a station in the amateur-satellite service shall be immediately eliminated in accordance

with the provisions of No.25.11. The use of this band by the amateur-satellite service is limited to the Earth-to-space direction.

209. In the frequency bands 5925-6425 MHz and 14-14.5 GHz, earth stations located on board vessels may communicate with space stations of the fixed-satellite service. Such use shall be in accordance with Resolution 902 (WRC 03).

210. In the frequency band 6425-7075 MHz, passive microwave sensor measurements are carried out over the oceans. In the frequency band 7075-7250 MHz, passive microwave sensor measurements are carried out. In the future planning of bands 6425-7075 MHz and 7075-7250 MHz the needs of the Earth exploration-satellite (passive) and space research (passive) services shall be born in mind.

211. The use of the frequency band 7145-7190 MHz by the space research service (Earth-to-space) is restricted to deep space; no emissions to deep space shall be effected in the frequency band 7190-7235 MHz. Geostationary satellites in the space research service operating in the frequency band 7190-7235 MHz shall not claim protection from existing and future stations of the fixed and mobile services and No. 5.43A does not apply.

212. In the frequency band 13.4-13.75 GHz, the earth exploration-satellite (active) and space research (active) services shall not cause harmful interference to, or constrain the use and development of, the radiolocation service.

213. In the frequency band 14-14.5 GHz, ship earth stations with an equivalent isotropically radiated power (e.i.r.p.) greater than 21 dBW shall operate under the same conditions as earth stations located on board vessels, as provided in Resolution 902 (WRC 03). This footnote shall not apply to ship earth stations for which the complete Appendix 4 information has been received by the Radiocommunication Bureau prior to 5 July 2003.

214. In the frequency band 14-14.5 GHz, aircraft earth stations in the secondary aeronautical mobile-satellite service may also communicate with space stations in the fixed-satellite service. The provisions of Nos. 5.29, 5.30 and 5.31 apply.

215. Aircraft earth stations operating in the aeronautical mobile-satellite service in the band 14-14.5 GHz shall comply with the provisions of Annex 1, Part C of Recommendation ITU R M.1643, with respect to any radio astronomy station performing observations in the 14.47-14.5 GHz band located on the territory of Spain, France, India, Italy, the United Kingdom and South Africa.

216. The following frequency bands are identified for use by high-density applications in the fixed-satellite service:

17,3-17,7 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)
47,5-47,9 GHz	(space-to-Earth)
48,2-48,54 GHz	(space-to-Earth)
49,44-50,2 GHz	(space-to-Earth)
and	
27,5-27,82 GHz	(Earth-to-space)
28,45-28,94 GHz	(Earth-to-space)
29,46-30 GHz	(Earth-to-space)

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 primary basis and does not establish priority among users of these bands. Administrations should take this into account when considering regulatory provisions in relation to these bands. See Resolution 143 (WRC 03).

217. In the frequency band 17.3-17.7 GHz, earth stations of the fixed-satellite service (space-to-Earth) shall not claim protection from the broadcasting-satellite service feeder-link earth stations operating under Appendix 30A, nor put any limitations or restrictions on the locations of the broadcasting-satellite service feeder-link earth stations anywhere within the service area of the feeder link.

218. The use of the frequency band 18.6-18.8 GHz by the fixed-satellite service is limited to geostationary systems and systems with an orbit of apogee greater than 20 000 km.

219. In the frequency bands 20.1-20.2 GHz and 29.9-30 GHz, the provisions of No 4.10 do not apply with respect to the mobile-satellite service.

220. In the frequency band 28.5-30 GHz, the earth exploration-satellite service is limited to the transfer of data between stations and not to the primary collection of information by means of active or passive sensors.

221. The use of the frequency band 29.1-29.5 GHz (Earth-to-space) by the fixed-satellite service is limited to geostationary-satellite systems and feeder links to non-geostationary-satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of No. 9.11A, but not subject to the provisions of No. 22.2, except as indicated in Nos. 5.523C and 5.523E where such use is not subject to the provisions of No. 9.11A and shall continue to be subject to Articles 9 (except No. 9.11A) and 11 procedures, and to the provisions of No. 22.2.

222. Feeder links of non-geostationary networks in the mobile-satellite service and geostationary networks in the fixed-satellite service operating in the frequency band 29.1-29.5 GHz (Earth-to-space) shall employ uplink adaptive power control or other methods of fade compensation, such that the earth station transmissions shall be conducted at the power level required to meet the desired link performance while reducing the level of mutual interference between both networks. These methods shall apply to networks for which Appendix 4 coordination information is considered as having been received by the Bureau after 17 May 1996 and until they are changed by a future competent world radiocommunication conference. Appendix 4 coordination information before this date shall use these techniques to the extent practicable.

223. Recognising that the use of the frequency band 149.9-150.05 MHz by the mobile service may cause harmful interference to the radionavigation-satellite service, such use shall not be authorised in application of No. 4.4.

224. The frequency 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 Resolutions 75 (WRC 2000) and 79 (WRC 2000)). This condition shall be taken 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 frequency bands 39.5-40 GHz and 40.5-42 GHz (see Footnote 216) the potential constraints to high-density applications in the fixed service shall be further taken account.

225. Practical measures shall be taken to minimize the potential interference between stations in the fixed service and airborne stations in the radionavigation service in the frequency band 31.8-33.4 GHz, taking into account the operational needs of the airborne radar systems.

226. In the frequency band 35.5-36.0 GHz, the mean power flux-density at the Earth's surface, generated by any spaceborne sensor in the Earth exploration-satellite service (active) or space research service (active), for any angle greater than 0.8° from the beam centre shall not exceed $-73.3 \text{ dB(W/m}^2\text{)}$ in this band.

227. The equivalent power flux-density (epfd) produced in the frequency 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 frequency band 42-42.5 GHz, shall not exceed the following values at the site of any radio astronomy station for more than 2% of the time:

- $-230 \text{ dB(W/m}^2\text{)}$ in 1 GHz and $-246 \text{ dB(W/m}^2\text{)}$ in any 500 kHz of the frequency band 42.5-43.5 GHz at the site of any radio astronomy station registered as a single-dish telescope; and
- $-209 \text{ dB(W/m}^2\text{)}$ in any 500 kHz of the frequency band 42.5-43.5 GHz at the site of any radio astronomy station registered as a very long baseline interferometry station.

These equivalent power flux-density values shall be evaluated using the methodology given in Recommendation ITU R S.1586 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 radiotelescope (for which a default value of 5° should be adopted in the absence of notified information).

These values shall be applied at any radio astronomy station that either:

- was in operation prior to 5 July 2003 and has been notified to the Radiocommunication 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.

Other radio astronomy stations notified after these dates may seek an agreement with administrations that have authorized the space stations. The limits in this footnote may be exceeded at the site of a radio astronomy station of any country whose administration so agreed.

228. The power flux-density in the frequency 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 frequency band 42-42.5 GHz, shall not exceed the following values at the site of any radio astronomy station:

- $-137 \text{ dB(W/m}^2\text{)}$ in 1 GHz and $-153 \text{ dB(W/m}^2\text{)}$ in any 500 kHz of the frequency band 42.5-43.5 GHz at the site of any radio astronomy station registered as a single-dish telescope; and
- $-116 \text{ dB(W/m}^2\text{)}$ in any 500 kHz of the frequency band 42.5-43.5 GHz at the site of any radio astronomy station registered as a very long baseline interferometry station.

These values shall be applied at the site of any radio astronomy station that either:

- was in operation prior to 5 July 2003 and has been notified to the Radiocommunication 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.

Other radio astronomy stations notified after these dates may seek an agreement with administrations that have authorized the space stations. The limits in this footnote may be exceeded at the site of a radio astronomy station of any country whose administration so agreed.

229. The use of the frequency 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.

230. The power flux-density in the frequency 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 $-151.8 \text{ dB(W/m}^2\text{)}$ in any 500 kHz band at the site of any radio astronomy station.

231. In the frequency bands 52.6-54.25 GHz and 64-65 GHz, radio astronomy observations may be carried out under national arrangements.

232. The use of the frequency bands 55.78-56.9 GHz, 57-58.2 GHz and 59-59.3 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The power flux-density at all altitudes from 0 km to 1000 km above the Earth's surface produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, shall not exceed $-147 \text{ dB(W/m}^2 / 100 \text{ MHz)}$ for all angles of arrival.

233. In the frequency band 55.78-56.26 GHz, in order to protect stations in the Earth exploration-satellite service (passive), the maximum power density delivered by a transmitter to the antenna of a fixed service station is limited to -26 dB(W/MHz) .

234. (abrog. SG. 76/2011)

235. The frequency band 81-81.5 GHz is also allocated to the amateur and amateur-satellite services on a secondary basis.

236. (abrog. SG. 76/2011)

238. The frequency band 283.5-325 kHz in the maritime radionavigation service may be used to transmit supplementary navigational information using narrow-band techniques, on condition that no harmful interference is caused to radiobeacon stations operating in the radionavigation service.

239. The frequency band 285.3-285.7 kHz is also allocated to the maritime radionavigation service (other than radiobeacons) on a primary basis.

240. The use of the bands 415-495 kHz and 505-526.5 kHz by the maritime mobile service is limited to radiotelegraphy.

241. When establishing coast stations in the NAVTEX service on the frequencies 490 kHz, 518 kHz and 4209.5 kHz, it is strongly recommended to coordinate the operating characteristics in accordance with the procedures of the International Maritime Organization (see Resolution 339 (Rev.WRC-97)). (WRC-97)

242. In the maritime mobile service, the frequency 490 kHz is, from the date of full implementation of the GMDSS (see Resolution 331 (Rev.WRC-97)), to be used exclusively for the transmission by coast stations of navigational and meteorological warnings and urgent information to ships, by means of narrow-band direct-printing telegraphy. The conditions for use of the frequency 490 kHz are prescribed in Articles 31 and 52. In using the band 415-495 kHz for the aeronautical radionavigation service shall not cause harmful interference to the frequency 490 kHz. (WRC-97).

243. The conditions for the use of the international distress and calling frequency 500 kHz through Morse radiotelegraphy are prescribed in Articles 31 and 52, and in Appendix 13.

244. Some countries in Region 1 use radiodetermination systems in the frequency bands 1606.5-1625 kHz, 1635-1800 kHz, 1850-2160 kHz, 2194-2300 kHz, 2502-2850 kHz and 3500-3800 kHz, subject to agreement obtained under No 9.21. The radiated mean power of these stations shall not exceed 50 W.

245. (abrog. SG. 76/2011)

246. In making assignments to stations in the fixed and mobile services in the frequency bands 1850-2045 kHz, 2194-2498 kHz, 2502-2625 kHz and 2650-2850 kHz the special requirements of the maritime mobile service shall be born in mind.

247. The conditions for the use of the international distress frequencies 2174.5 kHz, 4177.5 kHz, 6268 kHz, 8376.5 kHz, 12520 kHz and 16695 kHz for narrow-band direct-printing telegraphy are prescribed in Articles 31.

248. The use of the band 4000-4063 kHz by the maritime mobile service is limited to ship stations using radiotelephony (see No. 52.220 and Appendix 17).

249. The conditions for the use of the carrier frequencies 4125 kHz and 6215 kHz are prescribed in Articles 31 and 52 and in Appendix 13.

250. The frequency 4209.5 kHz is used exclusively for the transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of narrow-band direct-printing techniques (NBDP).

251. The frequencies 4210 kHz, 6314 kHz, 8416.5 kHz, 12579 kHz, 16806.5 kHz, 19680.5 kHz, 22376 kHz and 26100.5 kHz are the international frequencies for the transmission of maritime safety information (MSI) (see Appendix 17).

252. 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 as from 1 April 2007 is subject to the application of the procedure of Article 12. The introduction of digitally modulated emissions in accordance with the provisions of Resolution 517 shall be facilitated (Rev.WRC 03).

253. (abrog. SG. 76/2011)

254. In the frequency bands 137-138 MHz, 387-390 MHz, 400.15-401 MHz, 1452-1492 MHz, 1525-1559 MHz, 1559-1610 MHz, 1613.8-1626.5 MHz, 2655-2670 MHz, 2670-2690 MHz and 21.4-22 GHz Resolution 739 (Rev.WRC-07) applies.

The frequency band 7100-7200 kHz is allocated to the broadcasting service until 29 March 2009 on a primary basis.

255. (abrog. SG. 76/2011)