

Lao

QUESTIONNAIRE - PART II
(To be completed by Administrations only)

General Questions on National Spectrum Management

Describe succinctly the problems that your administration is currently experiencing in national spectrum management (for example subject areas in national spectrum management).

Country **LAO PDR**

Focal point **Frequency Management Division**

The following general questions on national spectrum management are based in part on the functional requirements of spectrum management described in the handbook on "National Spectrum Management." If you need additional space to answer the questions please continue on a separate sheet of paper.

1. Do you have a national law governing spectrum management? DECREE
 - Last date this law was changed or modified? NONE
 - Are any actions planned to change this law? YES

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

2. Have you published regulations and procedures for national spectrum management (e.g. radio services, license requirements etc.)? YES

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

3. Do you have a national radio frequency spectrum allocation table? YES

PLS SEE ATTACHED FILE (FRETABLE1 – FRETABLE5)

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

4. Do you have technical specifications for national spectrum use? NO
 Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

5. Do you have a need for any spectrum redeployment* ? YES

* The term "redemption" is used here to refer to a process of national scope in which an assessment is conducted 1) to determine if portions of spectrum can be identified that are in limited use; and 2) to determine if such spectrum segments can be reallocated for use in delivering radiocommunication services that have expanding spectrum requirements.

- If so, do you have a strategy for achieving this redeployment in respective frequency bands and for given radiocommunication services? NO

- Please define the established strategy and describe the nature of the consultation, if any, with users regarding the potential costs resulting from the planned redeployment.

6. What is the total cost of national spectrum management functions performed by your Government (expressed in Swiss francs)? 35.000 USD

- What is the source of the funding required to accomplish these spectrum management functions?

NA

7. Do you have a method for establishing spectrum users' fees? NO

- If so, please give a brief description of the method used in establishing those fees.

8. Do you maintain centralized databases for spectrum management? YES

- What is the approximate size of your database (expressed in number of records)? 3000

- Do you have a computerized data base management system (DBMS)? YES

- What DBMS system do you use?
 FREQMAN(FIJI)

- Are these frequency assignment records available to public? NO

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

9. Do you notify frequency assignments to the ITU? NO

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

INTRODUCTION FROM ITU HOW TO NOTIFY

10. Do you have a policy and planning function for national spectrum management (i.e. a national strategy for future use of the spectrum)? NO

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

WE ARE IN THE PROCESS OF DRAFTING POLICY AND PLANNING FUNCTION

11. Do you perform technical analyses of frequency assignment requests? NO

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

INTRODUCTION FROM ITU

12. Do you perform radio monitoring? YES

- number of fixed monitoring stations 538

- facilities available at fixed monitoring stations
 - monitoring up to 1000 MHz
 - direction finding up to 30 MHz

- number of mobile monitoring stations 0
- facilities available at mobile monitoring stations
 - monitoring up to 999 MHz
 - direction finding up to 30 MHz

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

INTRODUCTION OF VARIOUS METHODS FOR MOONITONING SYSTEM

13. Do you perform technical analyses of radio frequency interference complaints? NO

- Do you have an established consultation process, involving Government and non-government organization, for resolving these complaints? NO

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

14. What computers and operating systems are in use for national spectrum management?

Type of computers OLIVETTI 80386

Operating system(s) MS-DOS 5.00

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

DOES NOT WORKING PROPERLY. NEED ASSISTANCE FROM ITU.

15. Number of technical/professional staff in national spectrum management? 5
16. Number of support staff in national spectrum management? 5
17. Describe your country's spectrum management structure (Please enclose a copy of organization chart). PLEASE SEE ATTACHED FILE (DPTSTRUCTURE)

18. Do you use the ITU-R Handbooks and Reports on:

- a) National Spectrum Management, version 1995 ? **NO**
- b) Spectrum Monitoring¹, version 1995? **NO**
- c) Computer-aided Techniques for Spectrum Management, version 1999? **NO**
- d) HF Broadcasting System Design, version 1999? **NO**
- e) Report SM.2012, Economic Aspects of Spectrum Management, version 1997²? **NO**
- f) Windows Basic Automated Spectrum Management System (WinBASMS) Software Version 1997, Manual Version 1997 **YES**

What additional information/handbooks do you need from the ITU?

THE ABOVE MISSING HANDBOOKS ARE NEEDED.

*To be returned no later than 31 January 2000 to:
ITU-D Study Groups Secretariat
Telecommunication Development Bureau
Fax: +41 22 730 54 84
E-Mail: devsg1@itu.int*

THANK YOU FOR YOUR COOPERATION

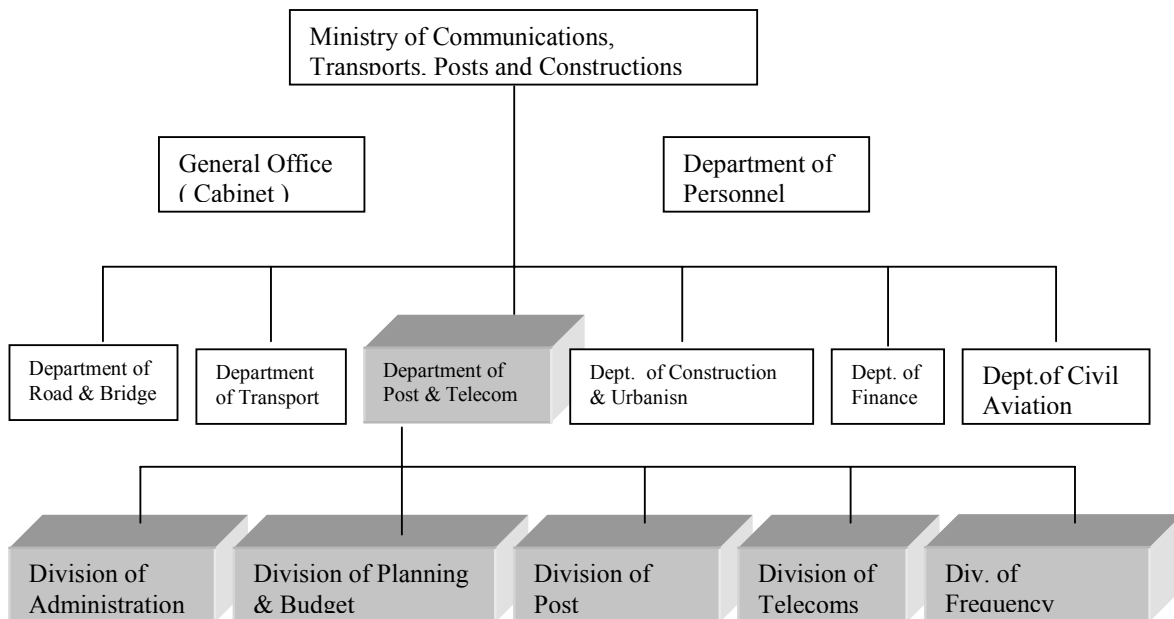
¹ The Spectrum Monitoring Handbook is currently being updated, therefore, you are urged to contact Mr Jan Verduijn (NL), the designated Rapporteur from ITU-R Study Group 1, Working Party 1C if you have any comments that you wish included in a future version of this Handbook.

² This Report SM.2012 was updated during the ITU-R Study Group 1 meeting in August 1999. This new version is expected to be available in the three working languages by January 2000.

The M.C.T.P.C

The Ministry of CTPC is responsible for Communications, Transports, Posts and Constructions and consists of seven departments including the Cabinet of the Ministry. The abbreviation of the Ministry's name is no longer consistent with the functions of some of its departments. The MCTPC is responsible for policy making and regulation of the telecommunications sector (and other sectors). The Department of Posts and Telecommunications (DPT) within the MCTPC supervises the telecommunications sector.

MCTPC's ORGANIZATIONAL STRUCTURE



The Department of Posts and Telecommunication (DPT) consists of five divisions. The Telecom Services Provider is Lao-Telecom Company (LTC) and Entreprise des Telecommunications Lao (ETL). The Department is led by one Director General and one Deputy Director General .Each Division typically has a Division and Deputy Division Head. Including the Division Heads, the five divisions have staff of nineteen engineers, technicians and administrators.

The Division of Telecoms (TD) and the Frequency Management Division (FMD) are the divisions responsible for the telecom sector. The tasks of the Department and Division and respective staff are laid out by the Director of the Department and by internal regulations approved by the Minister. However, in practice, many other agencies currently are involved in telecoms issues which are supposedly the responsibility of the MCTPC. Moreover, the Ministry does not have sufficient staff and resources,

including facilities and equipment, to perform all tasks and duties that are described below.

OFFICIAL TASKS AND JOB DESCRIPTIONS(MINISTER, DG and DDG)

The Minister represents the Ministry at the governmental level. He also has the authority to give final approval on most issues and decisions to be made within the Ministry. Finally, he provides direction on policy and other matters in consultation with the Director General and the Deputy Director General of the the DPT. The DG and DDG are directly supervising the DPT and they act as the link with the Minister. The DDG supports the DG and acts on his behalf if the DG is not in the country or on other business. In addition, the DDG is in charge of various projects such as the GMS, CSC and Laost

OFFICIAL TASKS AND JOB DESCRIPTIONS(FREQUENCY MANAGEMENT DIVISION-FMD)

The Head of the FMD has the following tasks : give general directives to subordinate; draft regulation on frequency management; promote and monitors the application of regulation on frequency management; frequency allocation and revocation of frequency causing harmful interference; notification of frequency to ITU-R and frequency co-ordination; and relations with ITU-R (IFRB). *In practice, insufficient equipments and tools are available to perform the monitoring of spectrum use.*

Tasks of the Deputy : prepare import permission of radio equipment and license to authorised users; billing customers for allocated frequency; assist division head on frequency co-ordination and notification and manage the monitoring system; record the allocated frequencies; follow up the weekly circular letters of ITU (IFRB).

Tasks of Technicians: monitor the allocated frequencies and search for free of use frequencies and unauthorised frequencies; inspection of radio stations causing harmful interference and adjust them; and monitoring and measuring the frequency causing harmful interference. *In practice, insufficient equipment and tools are available to perform this task.*

The paragraphs above outline the official tasks and job descriptions for the two key divisions within the Ministry. It should be noted that for various reasons, including lack of training and resources and facilities, the involvement of other agencies in the telecom sector, many of the official tasks and responsibilities are not actually being carried out. For example, monitoring the use of spectrum is difficult due to lack of equipment, numbering is done by LTC and policy making does not entirely reside within the MCTPC.

NATIONAL FREQUENCY ALLOCATION TABLE FOR LAO PDR.

**kHz
9 - 315**

National Frequency Allocations to Services	Notes
9 - 14 RADIONAVIGATION	
14 - 19.95 FIXED; MARITIME MOBILE	448
19.95 - 20.05 STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)	
20.05 - 70 FIXED; MARITIME MOBILE	448
70 - 72 RADIONAVIGATION	Fixed; Maritime Mobile 448, 451
72 - 84 FIXED; MARITIME MOBILE; RADIONAVIGATION	448, 451
84 - 86 RADIONAVIGATION	Fixed; Maritime Mobile 448, 451
86 - 90 FIXED; MARITIME MOBILE; RADIONAVIGATION	448, 451
90 - 110 RADIONAVIGATION	Fixed 454
110 - 112 FIXED; MARITIME MOBILE; RADIONAVIGATION	451, 454
112- 117.6 RADIONAVIGATION	Fixed; Maritime Mobile 451, 454
117.6 - 126 FIXED; MARITIME MOBILE; RADIONAVIGATION	451, 454
126- 129 RADIONAVIGATION	Fixed; Maritime Mobile 451, 454
129 - 160 FIXED; MARITIME MOBILE; RADIONAVIGATION	451, 454
160 - 190 FIXED, Aeronautical Radionavigation	
190 - 200 AERONAUTICAL RADIONAVIGATION	
200 - 285 AERONAUTICAL RADIONAVIGATION Aeronautical mobile	
285 - 315 MARITIME RADIONAVIGATION (radiobeacons); /AERONAUTICAL RADIONAVIGATION/	466

kHz
315 -2505

National Frequency Allocations to Services	Notes
315 - 325 AERONAUTICAL RADIONAVIGATION MARITIME RADIONAVIGATION (radiobeacons)	466
325 - 405 AERONAUTICAL RADIONAVIGATION Aeronautical Mobile	
405 - 415 RADIONAVIGATION; Aeronautical Mobile	468
415 - 495 MARITIME MOBILE Aeronautical Radionavigation	469, 470, 471, 472A
495 - 505 MOBILE (distress and calling)	472
505 - 526.5 MARITIME MOBILE /AERONAUTICAL RADIONAVIGATION/ Aeronautical Mobile	Land Mobile 471, 474
526.5 - 535 BROADCASTING	Mobile 479
535 - 1606.5 BROADCASTING	
1606.5 - 1800 RADIOLOCATON, RADIONAVIGATION	FIXED, MOBILE 482
1800 - 2000 AMATEUR, RADIONAVIGATION Radiolocation	FIXED MOBILE except aeronautical mobile 489
2000 - 2065 FIXED, MOBILE	
2065 - 2107 MARITIME MOBILE	498
2107 - 2107 FIXED, MOBILE	
2107 - 2173.5 MARITIME MOBILE	
2173.5 - 2190.5 MOBILE (distress and calling)	500, 500A, 500B, 501
2190.5 - 2194 MARITIME MOBILE	
2194 - 2300 FIXED, MOBILE	
2300 - 2459 BROADCASTING	FIXED, MOBILE 503
2459 - 2505 STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz)	Space Research

kHz
2505 - 5680

National Frequency Allocations to Services	Notes
2505 - 2850 FIXED, MOBILE	
2850 - 3025 AERONAUTICAL MOBILE (R)*	501, 505
3025 - 3155 AERONAUTICAL MOBILE (OR)**	
3155 - 3200 FIXED, MOBILE except aeronaut. mobile (R)	506, 507
3200 - 3400 BROADCASTING; FIXED; MOBILE	(mobile: except aeronautical mobile) 503, 506
3400 - 3500 AERONAUTICAL MOBILE (R)	
3500 - 3600 AMATEUR	FIXED, MOBILE 510
3600 - 3900 FIXED, MOBILE	AMATEUR 510
3900 - 3950 AERONAUTICAL MOBILE	BROADCASTING
3950 - 4000 BROADCASTING	FIXED 516
4000 - 4063 FIXED, MARITIME MOBILE	516, 517
4063 - 4438 MARITIME MOBILE	500A, 500B, 518, 519, 520, 520A, 520B
4438 - 4650 FIXED, MOBILE except aeronautical mobile	
4650 - 4700 AERONAUTICAL MOBILE(R)	
4700 - 4750 AERONAUTICAL MOBILE	
4750 - 4995 BROADCASTING	FIXED, LAND MOBILE 503
4995 - 5005 STANDARD FREQUENCY AND TIME SIGNAL (5000 kHz)	Space Research
5005 - 5060 BROADCASTING	FIXED 503
5060 - 5250 FIXED	Mobile except aeronautical mobile
5250 - 5450 FIXED, MOBILE except aeronautical mobile	
5450 - 5480 FIXED; LAND MOBILE AERONAUTICAL MOBILE (OR)	
5480 - 5680 AERONAUTICAL MOBILE (R)	501, 505

* Here and below (R) means: "on route".

** Here and below (OR) means: "out of route".

kHz
5680 - 10100

National Frequency Allocations to Services	Notes
5680 - 5730 AERONAUTICAL MOBILE (OR)	501, 505
5730 - 5900 FIXED	Mobile except aeronautical mobile (R)
5900 - 5950 BROADCASTING	521A(W-92), 521B(W-92), 512C(W-92)
5950 - 6200 BROADCASTING	
6200 - 6525 MARITIME MOBILE	500A, 500B, 520, 520B, 522
6525 - 6685 AERONAUTICAL MOBILE (R)	
6685 - 6765 AERONAUTICAL MOBILE (OR)	
6765 - 7000 FIXED	Land mobile (ISM applications in the band 6765 - 6795 kHz in accordance with 524)
7000 - 7100 AMATEUR, AMATEUR-SATELLITE	510
7100 - 7300 BROADCASTING	
7300 - 7350 BROADCASTING	521A(W-92), 521B(W-92), 528A(W-92)
7350 - 8100 FIXED	Land Mobile 529
8100 - 8195 FIXED, MARITIME MOBILE	
8195 - 8815 MARITIME MOBILE	500A, 500B, 501, 520B, 529A
8815 - 8965 AERONAUTICAL MOBILE (R)	
8965 - 9040 AERONAUTICAL MOBILE (OR)	
9040 - 9400 FIXED	
9400 - 9500 BROADCASTING	521A(W-92), 521B(W-92), 529B(W-92)
9500 - 9900 BROADCASTING	530, 531
9900 - 9995 FIXED	
9995 - 10005 STANDARD FREQUENCY AND TIME SIGNAL (10000 kHz)	
10005 - 10100 AERONAUTICAL MOBILE (R)	501

kHz
10100 - 15010

National Frequency Allocations to Services	Notes
10100 - 10150 FIXED	Amateur 510
10150 - 11175 FIXED	Mobile except aeronaut. mobile (R)
11175 - 11275 AERONAUTICAL MOBILE (OR)	
11275 - 11400 AERONAUTICAL MOBILE (R)	
11400 - 11600 FIXED	
11600 - 11650 BROADCASTING	521A(W-92), 521B(W-92), 529B(W-92)
11650 - 12050 BROADCASTING	530, 531
12050 - 12100 BROADCASTING	521A(W-92), 521B(W-92), 529B(W-92)
12100 - 12230 FIXED	
12230 - 13200 MARITIME MOBILE	500A, 500B, 520B, 529A, 532
13200 - 13260 AERONAUTICAL MOBILE(OR)	
13260 - 13360 AERONAUTICAL MOBILE(R)	
13360 - 13410 FIXED, RADIO ASTRONOMY	533
13410 - 13570 FIXED	Mobile except aeronaut. mobile (R) (ISM applications in the band 13553 - 13567 kHz in accordance with 534)
13570 - 13600 BROADCASTING	521A(W-92), 521B(W-92), 534A(W-92)
13600 - 13800 BROADCASTING	531
13800 - 13870 BROADCASTING	521A(W-92), 521B(W-92), 534A(W-92)
13870 - 14000 FIXED	Mobile except aeronaut. mobile (R)
14000 - 14250 AMATEUR, AMATEUR-SATELLITE	510
14250 - 14350 AMATEUR	510, 535
14350 - 14990 FIXED	Mobile except aeronaut. mobile (R)
14990 - 15010 STANDARD FREQUENCY AND TIME SIGNAL (15000 kHz)	501

kHz
15010 - 21850

National Frequency Allocations to Services	Notes
15010 - 15100 AERONAUTICAL MOBILE (OR)	
15100 - 15600 BROADCASTING	531
15600 - 15800 BROADCASTING	521A(W-92), 521B(W-92), 529B(W-92)
15800 - 16360 FIXED	536
16360 - 17410 MARITIME MOBILE	500A, 500B, 501, 520B, 529A 532
17410 - 17480 FIXED	
17480 - 17550 BROADCASTING	521A(W-92), 521B(W-92), 529B(W-92)
17550 - 17900 BROADCASTING	531
17900 - 17970 AERONAUTICAL MOBILE (R)	
17970 - 18030 AERONAUTICAL MOBILE (OR)	
18030 - 18068 FIXED	Space Research
18068 - 18168 AMATEUR, AMATEUR-SATELLITE	510, 537
18168 - 18780 FIXED	Mobile except aeronautical mobile
18780 - 18900 MARITIME MOBILE	532
18900 - 19020 BROADCASTING	521A(W-92), 521B(W-92), 529B(W-92)
19020 - 19680 FIXED	
19680 - 19800 MARITIME MOBILE	520B, 532
19800 - 19990 FIXED	
19990 - 20010 STANDARD FREQUENCY AND TIME SIGNAL (20000 kHz)	501
20010 - 21000 FIXED	Mobile
21000 - 21450 AMATEUR, AMATEUR-SATELLITE	510
21450 - 21850 BROADCASTING	531

kHz
21850 - 30005

National Frequency Allocations to Services	Notes
21850 - 21870 FIXED	
21870 - 21924 AERONAUTICAL FIXED	
21924 - 22000 AERONAUTICAL MOBILE (R)	
22000 - 22855 MARITIME MOBILE	520B, 532
22855 - 23200 FIXED	Mobile except aeronaut. mobile (R)
23200 - 23350 AERONAUTICAL FIXED AERONAUTICAL MOBILE (OR)	
23350 - 24000 FIXED, MOBILE except aeronautical mobile	541
24000 - 24890 FIXED, LAND MOBILE	
24890 - 24990 AMATEUR, AMATEUR-SATELLITE	510, 543
24990 - 25010 STANDARD FREQUENCY AND TIME SIGNAL (25000 kHz)	
25010 - 25070 FIXED, MOBILE except aeronautical mobile	
25070 - 25210 MARITIME MOBILE	544
25210 - 25550 FIXED, MOBILE except aeronautical mobile	
25550 - 25670 RADIO ASTRONOMY	545
25670 - 26100 BROADCASTING	
26100 - 26175 MARITIME MOBILE	520B, 544
26175 - 27500 FIXED, MOBILE except aeronautical mobile	(Citizen Band Radio, ISM applications in the band 26957 - 27283 kHz in accordance with 546)
27500 - 28000 METEOROLOGICAL AIDS FIXED, MOBILE	(Citizen Band Radio)
28000 - 29700 AMATEUR, AMATEUR-SATELLITE	
29700 - 30005 FIXED, MOBILE	

MHz
30.005 - 144

National Frequency Allocations to Services	Notes
30.005 - 30.01 FIXED, MOBILE	SPACE OPERATION SPACE RESEARCH
30.01 - 40.02 FIXED, MOBILE	Radio Astronomy Space Research, 547
40.02 - 40.98 FIXED, MOBILE	(ISM applications in the band 40.66 - 40.70 MHz in accordance with 548)
40.98 - 47 FIXED, MOBILE	Space Research
47 -68 BROADCASTING	AMATEUR (50 - 54 MHz), 557, 558 FIXED, MOBILE (54 - 68 MHz)
68 - 74.8 FIXED, MOBILE	566, 568, 572
74.8 - 75.2 AERONAUTICAL RADIONAVIGATION	572
75.2 - 87 FIXED, MOBILE	572, 574, 577
87 -108 BROADCASTING	FIXED, MOBILE (87 - 100 MHz) 585
108 - 117.975 AERONAUTICAL RADIONAVIGATION	
117.975 - 136 AERONAUTICAL MOBILE (R)	501, 591, 592, 593
136 - 137 AERONAUTICAL MOBILE (R)	Fixed, Mobile except aeronautical mobile (R), 591, 595
137 - 137.025 METEOROLOGICAL-SATELLITE (s-E)* MOBILE-SATELLITE (s-E) Fixed, Mobile except aeronaut. mobile (R)	(137 - 144 MHz basic channelling plan) SPACE OPERATION (s-E) SPACE RESEARCH (s-E) 596, 599A(W-92), 599B(W-92)
137.025 - 137.175 METEOROLOGICAL-SATELLITE (s-E) Mobile-Satellite (s-E) Fixed, Mobile except aeronaut. mobile (R)	(137 - 144 MHz basic channelling plan) SPACE OPERATION (s-E) SPACE RESEARCH (s-E) 596, 599A(W-92), 599B(W-92)
137.175- 137.825 METEOROLOGICAL-SATELLITE (s-E) MOBILE-SATELLITE (s-E) Fixed, Mobile except aeronaut. mobile (R)	(137 - 144 MHz basic channelling plan) SPACE OPERATION (s-E) SPACE RESEARCH (s-E) 596, 599A(W-92), 599B(W-92)
137.825 - 138 METEOROLOGICAL-SATELLITE (s-E) Mobile-Satellite (s-E) Fixed, Mobile except aeronaut. mobile (R)	(137 - 144 MHz basic channelling plan) SPACE OPERATION (s-E) SPACE RESEARCH (s-E) 596, 599A(W-92), 599B(W-92)
138 - 144 FIXED, MOBILE	(137 - 144 MHz basic channelling plan) Space Research (s-E); 603

* Here and below (s-E) means: space-to-Earth links.

MHz
144 - 390

National Frequency Allocations to Services	Notes
144 - 146 AMATEUR, AMATEUR-SATELLITE	510, 606
146 - 148 FIXED, MOBILE	(146 - 174 MHz basic channelling plan) AMATEUR
148 - 149.9 FIXED, MOBILE MOBILE-SATELLITE (E-s)*	(146 - 174 MHz basic channelling plan) 608, 608A(W-92), 608C(W-92), 599B(W-92)
149.9 - 150.05 RADIONAVIGATION-SATELLITE LAND MOBILE-SATELLITE (E-s)	608B(W-92), 609, 609A, 609B(W-92), 599B(W-92)
150.05 - 156.7625 FIXED, MOBILE	(146 - 174 MHz basic channelling plan) 613, 613A
156.7625 - 156.8375 MARITIME MOBILE (distress and calling)	(146 - 174 MHz basic channelling plan) 501, 613, 613A
156.8375 - 174 FIXED, MOBILE	(146 - 174 MHz basic channelling plan) 613, 616, 617
174 - 223 BROADCASTING	FIXED, MOBILE 619, 626
223 - 230 BROADCASTING AERONAUTICAL RADIONAVIGATION	FIXED, MOBILE, Radiolocation 637
230 - 235 FIXED, MOBILE AERONAUTICAL RADIONAVIGATION	637
235 - 267 FIXED, MOBILE	501, 592, 641, 642
267 - 272 FIXED, MOBILE	Space operation (s-E) 641, 643
272 - 273 FIXED, MOBILE	SPACE OPERATION (s-E) 641
273 - 312 FIXED, MOBILE	641
312 - 315 FIXED; MOBILE; Mobile-Satellite (E-s)	641, 641A(W-92)
315 - 322 FIXED, MOBILE	641
322 - 328.6 FIXED, MOBILE, RADIO ASTRONOMY	644
328.6 - 335.4 AERONAUTICAL RADIONAVIGATION	645
335.4 - 387 FIXED, MOBILE	641
387 - 390 FIXED; MOBILE; Mobile-Satellite (s-E)	641, 641A(W-92)

* Here and below (E-s) means: Earth-to-space links.

MHz
390 - 470

National Frequency Allocations to Services	Notes
390 - 399.9 FIXED, MOBILE	641
399.9 - 400.05 RADIONAVIGATION-SATELLITE	609, 645B
400.05 - 400.15 STANDARD FREQUENCY AND TIME SIGNAL (400.1 MHz)	646, 647
400.15 - 401 METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (s-E) MOBILE-SATELLITE (s-E)	SPACE RESEARCH (s-E) Space operation (s-E) 647, 647B(W-92)
401 - 402 METEOROLOGICAL AIDS Fixed, Meteorological-Satellite (E-s) Mobile except aeronautical mobile	(401 - 470 MHz basic channelling plan) SPACE OPERATION (s-E) Earth Exploration-Satellite (E-s)
402 - 403 METEOROLOGICAL AIDS Fixed, Meteorological-Satellite (E-s) Mobile except aeronautical mobile	(401 - 470 MHz basic channelling plan) Earth Exploration-Satellite (E-s)
403 - 406 METEOROLOGICAL AIDS Fixed, Mobile except aeronautical mobile	(401 - 470 MHz basic channelling plan)
406 - 406.1 MOBILE-SATELLITE (E-s)	(401 - 470 MHz basic channelling plan) 649, 649A
406.1 - 410 FIXED, MOBILE except aeronautical mobile	(401 - 470 MHz basic channelling plan) RADIO ASTRONOMY 650
410 - 420 FIXED, MOBILE except aeronautical mobile	(401 - 470 MHz basic channelling plan) Space Research (s-s)* 651A(W-92)
420 - 430 FIXED, MOBILE except aeronautical mobile Radiolocation	(401 - 470 MHz basic channelling plan) 653
430 - 440 RADIOLOCATION Mobile except aeronautical mobile	(401 - 470 MHz basic channelling plan) 653, 658, 664
440 - 450 FIXED, MOBILE except aeronautical mobile Radiolocation	(401 - 470 MHz basic channelling plan) 653, 668
450 - 460 FIXED, MOBILE	(401 - 470 MHz basic channelling plan) 653, 668, 669
460 - 470 FIXED, MOBILE Meteorological-Satellite (s-E)	(401 - 470 MHz basic channelling plan) 669, 671, 672

* Here and below (s-s) means: space-to-space links.

MHz
470 - 1530

National Frequency Allocations to Services	Notes
470 - 478 FIXED, MOBILE	BROADCASTING 673
478 - 574 BROADCASTING	FIXED, MOBILE 673
574 - 585 FIXED, MOBILE	BROADCASTING
585 - 610 FIXED, MOBILE, RADIONAVIGATION	BROADCASTING 688, 689
610 - 824 FIXED, MOBILE	BROADCASTING 688, 689, 693, 701
824 - 960 MOBILE	FIXED, BROADCASTING Radiolocation (890-942 MHz) 689, 693, 701
960 - 1215 AERONAUTICAL RADIONAVIGATION	709
1215 - 1240 RADIOLOCATION RADIONAVIGATION-SATELLITE (s-E)	710, 711, 712, 713
1240 - 1260 RADIOLOCATION RADIONAVIGATION-SATELLITE (s-E) Amateur	710, 711, 713
1260 - 1300 RADIOLOCATION Amateur	664, 711, 713
1300 - 1350 AERONAUTICAL RADIONAVIGATION Radiolocation	717, 718
1350 - 1400 RADIOLOCATION	718, 720
1400 -1427 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)	721, 722
1427 - 1429 FIXED, MOBILE except aeronautical mobile	SPACE OPERATION (E-s)
1429 - 1452 FIXED, MOBILE	
1452 - 1492 BROADCASTING SATELLITE BROADCASTING	FIXED, MOBILE 722A(W-92)
1492 - 1525 FIXED, MOBILE	
1525 - 1530 FIXED, MOBILE-SATELLITE (s-E) Mobile	SPACE OPERATION (s-E) Earth Exploration-Satellite 726A(W-92), 726D(W-92)