NATIONAL TABLE OF FREQUENCY ALLOCATIONS

2024 Edition

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FOREWORD

I am pleased to present this National Table of Frequency Allocations (TOFA), a critical regulatory tool in the execution of the Communications Authority of Kenya (CA)'s mandate with respect to the management of the frequency spectrum resources.

Frequency spectrum resources are key to the provision of various wireless communications services, and therefore not only at the centre of what we do, but also in the attainment of the broader Government Digital Transformation Agenda.

Our role is to plan and efficiently allocate this scarce resource and ensure they are optimally used in the realization of our connectivity needs.

This edition of the TOFA is the outcome of extensive deliberations that began at the national, regional and global level culminating in the 2023 World Radiocommunication Conference (WRC-23) where experts agreed on how the world shall utilize this finite resource.

As Kenya's designated representative to the International Telecommunication Union (ITU), the UN specialized agency for Information and Communications Technologies, the Authority spearheaded a broad-based approach that consolidated our national interests through a National Preparatory Committee (NPC), which brought together other actors within the ICT space at the national level.

I wish to thank everyone who participated in and enriched this process. This TOFA shall be a primary reference document for any interested party in matters frequency spectrum resources within the Republic of Kenya.

I invite our stakeholders to regularly interact with this document, even as we seek to exploit the frequency spectrum resources for our country's socio-economic development.

The Authority shall endeavour to provide revised editions of the TOFA as far as practically possible, taking account of any changes in the use of the frequency bands or following recommendations of subsequent WRCs.

David Mugonyi, EBS
DIRECTOR GENERAL/CEO

PREFACE

The Authority under the Kenya Information and Communications Act, 1998 and its attendant Regulations, is responsible for the management of Kenya's radio frequency resource to facilitate the deployment of efficient radio-communication technologies and services.

In the execution of the said mandate, the Authority regularly reviews existing spectrum uses as well as strategic planning for the future use of the radio spectrum to support the realization of the country's socio-economic development. In that regard, the Authority reviews the frequency uses every four years following outcomes of the ITU World Radiocommunication Conferences (WRCs).

The WRCs review and, if necessary, revise the Radio Regulations. The Radio Regulations provide an agreed framework of rights, obligations and procedures applicable between countries in their many uses of the Radio Frequency Spectrum. These Regulations also contain the international Table of Frequency Allocations indicating the allocation of radio frequencies to specific radiocommunication services.

This edition of the TOFA details the use of various frequency bands based on the revision of the ITU-R Radio Regulations pursuant to the World Radiocommunications Conference, 2023 (WRC-23).

The TOFA provides a guide to all spectrum users providing radiocommunications services in the country. It however does not confer any rights to the use of spectrum, which must be authorised in accordance with the existing legal framework.

In exercise of its sovereign rights, the Republic of Kenya reserves the right to structure its National Table of Frequency Allocations to suit the national requirements. Further, whenever a condition for use of a frequency or a frequency band is not expressly stipulated in this document, the pertinent provisions of the current ITU Radio Regulations shall apply

List of Abbreviations

BSS	Broadcasting Satellite Service
DECT	Digital European Cordless Telecommunication system
DSC	Digital Selective Calling
DAB	Digital Audio Broadcasting
FWA	Fixed Wireless Access
FSS	Fixed Satellite Service
GMDSS	Global Maritime Distress and safety System
GSM	Global System for Mobile Telecommunication
HAPS	High Altitude Platform Stations
HFBC	High frequency broadcasting in band 5.9 –26.1 MHz
ILS	Instrument Landing System
IMT	International Mobile Telecommunications
ISM	Industrial, Scientific and Medical applications
ITU-R	International Telecommunication Union, Radiocommunication sector
GE84	Frequency Plan for FM sound broadcasting in the ITU Region 1 and Region 3
GE89	Frequency Plan for analogue V/UHF Television broadcasting
GMPCS	Global mobile personal communication system
MSI	Maritime Safety Information
MSS	Mobile satellite service
RR	ITU Radio Regulations
TDD	Time Division Duplex
WRC	World Radiocommunications Conference
RRC-06	Regional Radiocommunications Conference for planning of digital terrestrial broadcasting in frequency bands 174-230 MHz and 470-862 MHz in ITU region 1 and parts of region 3

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CHAPTER ONE

1.1. FREQUENCY BANDS

1.1.1. The radio spectrum is by international agreement sub-divided into nine frequency bands, which are designated accordingly as shown in 1.1.2. As the unit of frequency is hertz (Hz), frequencies shall be expressed:

- in Kilohertz (kHz), up to and including 3000 kHz.
- in Megahertz (MHz), above 3 MHz, up to and including 3000 MHz.
- in Gigahertz (GHz), above 3 GHz, up to and including 3000 GHz.

1.1.2. Nomenclature of Frequency Bands

• VLF (Very Low Frequency)	:	3	to 30 kHz
• LF (Low Frequency)	:	30	to 300 kHz
• MF (Medium Frequency)	:	300	to 3000 kHz
• HF (High Frequency)	:	3	to 30 MHz
• VHF (Very High Frequency)	:	30	to 300 MHz
• UHF (Ultra High Frequency)	:	300	to 3000 MHz
• SHF (Super High Frequency)	:	3	to 30 GHz
• EHF (Extra High Frequency)	:	30	to 300 GHz
• (No Symbol designated)	:	300	to 3000 GHz

1.1.3. The following prefixes shall be used to designate frequencies

kHz (Kilohertz) = 1,000 Hz
MHz (Megahertz) = 1,000,000 Hz
GHz (Gigahertz) = 1,000,000,000 Hz

1.2. TERMS AND DEFINITIONS

For the purposes of this document, the following terms shall have the meaning defined below.

Section I: General Terms.

1.2.1. Administration: Any governmental department or service responsible for discharging the obligations undertaken in the Constitution of the International Telecommunications Union, in the Convention of the International Telecommunications Union and in the Administrative regulations.

1.2.2. Telecommunication: Any transmission, *emission* or reception of signs, writing, images and sounds or intelligence of any nature by wire, *radio*, optical or other electromagnetic systems.

1.2.3. Radio: A general term applied to the use of *radio waves*.

1.2.4. Radio waves or Hertzian Waves: Electromagnetic waves of frequencies arbitrarily lower than 3000 GHz, propagated in space without artificial guide.

1.2.5. Radiocommunication: Telecommunications by means of *radio waves*.

1.2.6. Terrestrial Radiocommunication: Any *radiocommunication* other than *space radiocommunication* or *radio astronomy*.

1.2.7. Space Radiocommunication: Any *radiocommunication* involving the use of one or more *space stations* or the use of one or more *reflecting satellites* or other objects in space.

1.2.8. Radiodetermination: The determination of the position, velocity and/or other characteristics of an object, or the obtaining of information relating to these parameters, by means of the propagation properties of *radio waves*.

1.2.9. Radionavigation: *Radiodetermination* used for the purposes of navigation, including obstruction warning.

1.2.10. Radiolocation: *Radiodetermination* used for purposes other than those of *radionavigation*.

1.2.11. Radio direction-finding: *Radiodetermination* using the reception of the *radio waves* for the purpose of determining the direction of a *station* or object.

1.2.12. Radio Astronomy: Astronomy based on the reception of *radio waves* of cosmic origin.

1.2.13. Co-ordinated Universal Time (UTC): Time scale, based on the second (SI), as described in Resolution **655** *(Rev.WRC-23).*

1.2.14. Industrial, Scientific and Medical (ISM) Applications (of radio frequency energy): Operation of **equipment** or appliances designed to generate and use locally radio frequency energy for industrial, scientific, medical, domestic or similar purposes, excluding applications in the field of *telecommunications*.

Section II: Specific Terms Related to Frequency Spectrum Management.

1.2.15. Allocation (of a frequency band): Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space *radiocommunication services* or the *radio astronomy service* under specified conditions. This term shall also be applied to the frequency band concerned.

1.2.16. Allotment (of a radio frequency or radio frequency channel): Entry of a designated frequency channel in an agreed plan, adopted by a competent conference, for use by one or more *administrations* for a terrestrial or space *radiocommunication service* in one or more identified countries or geographical areas and under specified conditions.

1.2.17. Assignment (of a radio frequency or radio frequency): Authorisation given by an administration, in this case CA, for a radio *station* to use a radio frequency or radio frequency channel under specified conditions.

Section III: Radio Services.

1.2.18. Radiocommunication Service: A service as defined in this section involving the transmission, *emission* and/or reception of radio waves for specific *telecommunication* purposes. (In these Regulations, unless otherwise stated, any radiocommunication service relates to terrestrial radiocommunication).

1.2.19. Fixed Service: A *radiocommunication service* between specified fixed points.

1.2.20. Fixed--Satellite Service: A *radiocommunication service* between *earth stations* at given positions, when one or more *satellites* are used; the given position may be a specified fixed point within specified areas; in some cases this service includes satellite-to---satellite links, which may also be operated in the *inter--satellite service*; the fixed-satellite service may also include *feeder links* for other *space radiocommunication services.*

1.2.21. Inter-Satellite- Service: A *radiocommunication service* providing links between artificial *satellites*.

1.2.22. Aeronautical Mobile Satellite- Service: A *mobile satellite- service* in which *mobile earth stations* are located on board aircraft; *survival craft stations* and *emergency position indicating- radio beacon stations* may also participate in this service.

1.2.23. Aeronautical mobile satellite- (R) service: An *aeronautical mobile satellite- service* reserved for communications relating to safety and regularity of flights, primarily along national or international civil air routes(R=Route).

1.2.24. Aeronautical mobile satellite- (OR) Service: An aeronautical mobile satellite- service intended for communication, including those relating to flight co-ordination, primarily outside national and international civil air routes. (OR= Off Route)

1.2.25. Broadcasting Service: A *radiocommunication service* in which the transmissions are intended for direct reception by the general public. This service may include sound transmissions, *television* transmissions or other types of transmission.

1.2.26. Broadcasting--Satellite Service: A radiocommunication service in which signals transmitted or retransmitted by space stations are intended for direct reception by the general public. In the broadcasting-satellite- service, the term "direct reception" shall encompass both individual reception and community reception.

1.2.27. Radiodetermination Service: A *radiocommunication service* for the purpose of *radiodetermination*.

1.2.28. Radiodetermination--Satellite Service: A *radiocommunication service* for the purpose of *radiodetermination* involving the use of one or more *space stations*. This service may also include *feeder links* necessary for it's own operation.

1.2.29. Radionavigation Service: A *radiodetermination service* for the purpose of *radionavigation*.

1.2.30. Radionavigation Satellite Service:- A *radiodetermination-satellite service* used for the purpose of *radionavigation*. This service may also include *feeder links* necessary for it's operation.

1.2.31. Maritime Radionavigation Service: A *radionavigation service* intended for the benefit and for the safe operation of ships.

1.2.32. Maritime Radionavigation--Satellite Service: A *radionavigation satellite service* in which *earth stations* are located on board ships.

1.2.33. Aeronautical Radionavigation Service: A *radionavigation service* intended for the benefit and for the safe operation of aircraft.

1.2.34. Aeronautical Radionavigation-Satellite- Service: A *radionavigation satellite service* in which *earth stations* are located on board aircraft.

1.2.35. Radiolocation Service: A *radiodetermination service* for the purpose of *radiolocation*.

1.2.36. Radiolocation-Satellite Service: A *radiodetermination-satellite service* used for the purpose of *radiolocation*. This service may also include the feeder links necessary for its operation

1.2.37. Meteorological Aids Service: A *radiocommunication service* used for meteorological, including hydrological observations and exploration.

1.2.38. Meteorological Satellite- Service: An *earth exploration satellite- service* for meteorological purposes.

1.2.39. Earth Exploration Satellite- Service: A *radiocommunication service* between *earth stations* and one or more *space stations*, which may include links between *space stations*, in which:

- information relating to the characteristics of the earth and its natural phenomena, including data relating to the state of the environment, is obtained from *active sensors* or *passive sensors* on earth *satellites*;
- similar information is collected from airborne or earth based platforms;
- such information may be distributed to *earth stations* within the system concerned;
- platform interrogation may be included.

This service may also include *feeder links* necessary for it's operation.

1.2.40. Standard Frequency and Time Signal Service: A *radiocommunication service* for scientific, technical and other purposes, providing the transmission of specified frequencies, time signals, or both, of stated high precision, intended for general reception.

1.2.41. Standard Frequency and Time Signal-Satellite- Service: A *radiocommunication service* using *space stations* on earth *satellites* for the same purposes as those of the *Standard Frequency and Time Signal service*. This service may also include *feeder links* necessary for it's operation.

1.2.42. Space Research Service: A *radiocommunication service* in which *spacecraft* or other objects in space are used for scientific or technological research purposes.

1.2.43. Amateur Service: A *radiocommunication service* for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.

1.2.44. Amateur-Satellite- Service: A *radiocommunication service* using *space stations* on earth *satellites* for the same purposes as those of the *amateur service*.

1.2.45. Radio Astronomy Service: A service involving the use of *radio astronomy*.

1.2.46. Safety Service: Any *radiocommunication service* used permanently or temporarily for the safeguarding of human life and property.

1.2.47. Special Service: A *radiocommunication service*, not otherwise defined in this Section, carried on exclusively for specific needs of general utility, and not open to *public correspondence.*

1.2.48. Radiolocation Satellite service*:* A *radiodetermination service* used for the purpose of *radiolocation*

1.2.49. Space Operation Service*: A radiocommunication service* concerned exclusively with the operation of *spacecraft,* in particular *space tracking, space telemetry* and *space telecommand.* These functions will normally be provided within the service in which the *space station* is operating.

1.2.50. Mobile service*: A radiocommunication service* between *mobile* and *land* stations or between *mobile stations*

1.2.51. Mobile Satellite service*:* A *radiocommunications service*

- between *mobile earth stations* and one or more *space stations,* or between *space stations* used by this service; or
- between *mobile earth stations* by means of one or more *space stations.*

This service may also include *feeder* links necessary for its operation.

1.2.52. Land Mobile Service*:* A *mobile service* between *base stations* and *land mobile stations,* or between *land mobile stations.*

1.2.53. Land Mobile-Satellite Service: A *mobile-satellite service* in which *mobile earth stations* are located on land.

1.2.54. Maritime Mobile Service: A *mobile service* between *coast stations* and *ship stations*, or between associated *on-board communication stations; survival craft stations* and *emergency position-indicating radiobeacon stations* may also participate in this service.

1.2.55. Maritime Mobile-Satellite Service: A *mobile-satellite service* in which *mobile earth stations* are located on board ships*; survival craft stations* and *emergency position-indicating radio-beacon stations* may also participate in this service.

1.2.56. Port Operations Service: A *maritime mobile service* in or near a port, between *coast stations* and *ship stations*, or between *ship stations*, in which messages are restricted to those relating to the operational handling, movement and safety of ships, and in emergency, to safety of persons. Messages which are of a *public correspondence* nature shall be excluded from this service.

1.2.57. Ship Movement Service: A *safety service* in the *maritime mobile service* other than a *port operations service*, between *coast stations* and *ship stations*, or between *ship stations*, in which messages are restricted to those relating to the movement of ships. Messages which are of a *public correspondence* nature shall be excluded from this service.

1.2.58. Aeronautical mobile Service: A *mobile service* between *aeronautical stations* and *aircraft stations*, or between *aircraft stations*, in which *survival craft stations* may participate; *emergency position-indicating radio-beacon stations* may also participate in this service on designated distress and emergency frequencies.

1.2.59. Aeronautical mobile (R) Service: An *aeronautical mobile service* reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes (R=Route)

1.2.60. Aeronautical mobile (OR) Service: An *aeronautical mobile service* intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes (OR=off-route)

Section IV: Radio Stations and Systems

1.2.61. Station: One or more transmitters or receivers or a combination of transmitters and receivers, including the accessory equipment, necessary at one location for carrying on a *radiocommunication service*, or the *radio astronomy service*. Each station shall be classified by the service in which it operates permanently or temporarily.

1.2.62. Terrestrial Station: A station effecting *terrestrial radiocommunication.* (In *this document, unless otherwise stated, any station is a terrestrial station).*

1.2.63. Earth Station: A *station* located either on the Earth's surface or within the major portion of the Earth's atmosphere and intended for communication:

- with one or more *space stations*; or
- with one or more *stations* of the same kind by means of one or more reflecting *satellites* or other objects in space.

1.2.64. Space Station: A *station* located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the Earth's atmosphere.

1.2.65. Survival Craft Station: A *mobile station* in the *maritime mobile service* or the *aeronautical mobile service* intended solely for survival purposes and located on any life-boat, life-raft or other survival equipment.

1.2.66. Fixed Station: A *station* in the *fixed service*.

1.2.67. Aeronautical Fixed Station: A *station* in the *aeronautical fixed service.*

1.2.68. Mobile Station: A *station* in the *mobile service* intended to be used while in motion or during halts at unspecified points.

1.2.69. Mobile Earth Station: An *earth station* in the *mobile satellite- service* intended to be used while in motion or during halts at unspecified points.

1.2.70. Land Station: A *station* in the *mobile service* not intended to be used while in motion.

1.2.71. Land Earth Station: An *earth station* in the *fixed satellite- service* or, in some cases, in the *mobile satellite- service*, located at a specified fixed point or within a specified area on land to provide a *feeder link* for the *mobile satellite- service*.

1.2.72. Base Station: A *land station* in the *land mobile service*.

1.2.73. Base Earth Station: An *earth station* in the *fixed--satellite service* or, in some cases, in the *land mobile-satellite- service*, located at a specified fixed point or within a specified area on land to provide a *feeder link* for the *land mobile satellite- service.*

1.2.74. Land Mobile Station: A *mobile station* in the *land mobile service* capable of surface movement within the geographical limits of a country or continent.

1.2.75. Land Mobile Earth Station: A *mobile earth station* in the *land mobile-s-atellite service* capable of surface movement within the geographical limits of a country or continent.

1.2.76. Coast Station: A *land station* in the *maritime mobile service*.

1.2.77. Coast Earth Station: An *earth station* in the *fixed--satellite service* or, in some cases, in the *maritime mobile--satellite service*, located at a specified fixed point on land to provide a *feeder link* for the *maritime mobile-satellite- service*.

1.2.78. Ship Station: A *mobile station* in the *maritime mobile service* located on board a vessel which is not permanently moored, other than a *survival craft station*.

1.2.79. Ship Earth Station: A *mobile earth station* in the *maritime-satellite- service* located on board a ship.

1.2.80. On--Board Communication Station: A low--powered *mobile station* in the *maritime mobile service* intended for use for internal communications on board a ship, or between a ship and its lifeboats and life--rafts during life-boat drills or operations, or for communication within a group of vessels being towed or pushed, as well as for line handling or mooring instructions.

1.2.81. Port Station: A *coast station* in the *port operations service*.

1.2.82. Aeronautical Station: A *land station* in the *aeronautical mobile service*. In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea.

1.2.83. Aeronautical Earth Station: An *earth station* in the *fixed satellite- service*, or, in some cases, in the *aeronautical mobile-satellite- service*, located at a specified fixed point on land to provide a *feeder link* for the *aeronautical mobile satellite- service.*

1.2.84. Aircraft Station: A *mobile station* in the *aeronautical mobile service*, other than a *survival craft station*, located on board an aircraft.

1.2.85. Aircraft Earth Station: A *mobile earth station* in the *aeronautical mobile satellite- service* located on board an aircraft.

1.2.86. Broadcasting Station: A *station* in the *broadcasting service*.

1.2.87. Radiodetermination Station: A *station* in the *radiodetermination service*.

1.2.88. Radionavigation Mobile Station: A *station* in the *radionavigation service* intended to be used while in motion or during halts at unspecified points.

1.2.89. Radionavigation Land Station: A *station* in *radionavigation service* not intended to be used while in motion.

1.2.90. Radiolocation Mobile Station: A *station* in the *radiolocation service* intended to be used while in motion or during halts at unspecified points.

1.2.91. Radiolocation Land Station: A *station* in the *radiolocation service* not intended to be used while in motion.

1.2.92. Radio Direction-Finding- Station: A *radiodetermination station* using *radio direction finding*.

1.2.93. Radio beacon Station: A *station* in the *radionavigation service* the *emissions* of which are intended to enable a *mobile station* to determine its bearing or direction in relation to the radio beacon station.

1.2.94. Emergency Position Indicating- Radio beacon Station: A *station* in the *mobile service* the *emissions* of which are intended to facilitate search and rescue operations.

1.2.95. Satellite Emergency Position Indicating- Radio beacon: An *earth station* in the *mobile satellite- service* the *emissions* of which are intended to facilitate search and rescue operations.

1.2.96. Standard Frequency and Time Signal Station: A *station* in the *standard frequency and time signal service*.

1.2.97. Amateur Station: A *station* in the *amateur service*.

1.2.98. Radio Astronomy Station: A *station* in the *radio astronomy service.*

1.2.99. Experimental Station: A *station* utilising *radio waves* in experiments with a view to the development of science or technique. This definition does not include amateur stations.

1.2.100. Ship's Emergency Transmitter: A ship's transmitter to be used exclusively on a distress frequency for distress, urgency or safety purposes.

1.2.101. Radar: A *radiodetermination* system based on the comparison of reference signals with radio signals reflected, or retransmitted, from the position to be determined.

1.2.102. Primary Radar: A *radiodetermination* system based on the comparison of reference signals with radio signals reflected from the position to be determined.

1.2.103. Secondary Radar: A *radiodetermination* system based on the comparison of reference signals with radio signals retransmitted from the position to be determined.

1.2.104. Radar Beacon (RACON): A transmitter receiver- associated with a fixed navigational mark which, when triggered by a *radar*, automatically returns a distinctive signal which can appear on the display of the triggering *radar*, providing range, bearing and identification information.

1.2.105. Instrument Landing System (ILS): A *radionavigation* system which provides aircraft with horizontal and vertical guidance just before and during landing and, at certain fixed points, indicates the distance to the reference point of landing.

1.2.106. Instrument Landing System Localizer: A system of horizontal guidance embodied in the instrument landing system which indicates the horizontal deviation of the aircraft from its optimum path of descent along the axis of the runway.

1.2.107. Instrument Landing System Glide Path: A system of vertical guidance embodied in the *instrument landing system* which indicates the vertical deviation of the aircraft from it's optimum path of descent.

1.2.108. Marker Beacon: A transmitter in the *aeronautical radio navigation- service* that radiates vertically a distinctive pattern for providing position information to aircraft.

1.2.109. Radio Altimeter: A *radionavigation* equipment, on board an aircraft or spacecraft, used to determine the height of the aircraft or the spacecraft above the Earth's surface.

1.2.110. Radiosonde: An automatic radio transmitter in the *meteorological aids service* usually carried on an aircraft, free balloon, kite or parachute, and which transmits meteorological data.

1.2.111. Meteorological Aids Land Station: A *station* in the *meteorological aids service* not intended to be used while in motion.

1.2.112. Meteorological Aids Mobile Station: A *station* in the *meteorological aids service* intended to be used while in motion or during halts at unspecified points.

1.2.113. Space System: Any group of co-operating *earth stations* and/or *space stations* employing *space radiocommunication* for specific purposes.

1.2.114. Satellite System: A *space system* using one or more artificial earth *satellites*.

1.2.115. Satellite Network: A *satellite system* or a part of a satellite system consisting of only one *satellite* and the co-operating *earth stations*.

1.2.116. Satellite Link: A *radio* link between a *transmitting earth station* and a *receiving earth station* through one *satellite*. A satellite link comprises one uplink and one downlink.

1.2.117. Multi-Satellite- Link: A *radio* link between a *transmitting earth station* and a *receiving earth station* through two or more *satellites* without any intermediate *earth station*. A multi-satellite *link comprises one uplink, one or more* satellite-to-satellite *links and one downlink*.

1.2.118. Feeder Link: A *radio* link from an *earth station* at either a specified fixed point or at any fixed point within specified areas to a *space station*, or vice versa-, conveying information for a *space radiocommunication service* other than for the *fixed satellite- service*.

1.2.119. Adaptive system: A radiocommunications system which varies its radio characteristics according to channel quality.

1.2.120. High Altitude Platform Station: A *station* located on an object at an altitude of 20 to 50 km and at a specified, nominal, fixed point relative to the Earth

Section V: Operational Terms.

1.2.121. Public Correspondence: Any *telecommunication* which the offices and *stations* must, by reason of their being at the disposal of the public, accept for transmission.

1.2.122. Telegraphy: A form of *telecommunication* in which the transmitted information is intended to be recorded on arrival as a graphic document; the transmitted information may sometimes be presented in an alternative form or may be stored for subsequent use.

1.2.123. Telegram: Written matter intended to be transmitted by *telegraphy* for delivery to the addressee. This term also includes *radio telegrams* unless otherwise specified. In this definition the term *telegraphy* has the same general meaning as defined in the Convention

1.2.124. Radiotelegram: A *telegram*, originating in or intended for a *mobile station* or a *mobile earth station* transmitted on all or part of its route over the *radiocommunication* channels of the *mobile service* or of the *mobile satellite- service*.

1.2.125. Radiotelex Call: A telex call, originating in or intended for a *mobile station* or a *mobile earth station*, transmitted on all or part of its route over the *radiocommunication* channels of the *mobile service* or the *mobile satellite- service*.

1.2.126. Frequency- Shift Telegraphy: *Telegraphy* by frequency modulation in which the telegraph signal shifts the frequency of the carrier between predetermined values.

1.2.127. Facsimile: A form of *telegraphy* for the transmission of fixed images, with or without half-tones, with a view to their reproduction in a permanent form.

1.2.128. Telephony: A form of *telecommunication* primarily intended for the exchange of information in the form of speech.

1.2.129. Radiotelephone call: A telephone call, originating in or intended for a *mobile station* or a *mobile earth station*, transmitted on all or part of its route over the *radiocommunication* channels of the *mobile service* or of the *mobile-satellite service*.

1.2.130. Simplex Operation: Operating method in which transmission is made possible alternately in each direction of a *telecommunication* channel, for example, by means of manual control. In general, simplex operation may use either one or two frequencies.

1.2.131. Duplex Operation: Operating method in which transmission is possible simultaneously in both directions of a *telecommunication* channel. In general, duplex operation and semi-duplex operation require two frequencies in radiocommunication.

1.2.132. Semi-Duplex- Operation: A method, which is *simplex operation* at one end of the circuit and *duplex operation* at the other.

1.2.133. Television: A form of *telecommunication* for the transmission of transient images of fixed or moving objects.

1.2.134. Individual Reception (in the broadcasting--satellite Service): The reception of *emissions* from a *space stations* in the *broadcasting-satellite service* by simple domestic installations and in particular those possessing small antennae.

1.2.135. Community Reception (in the broadcasting--satellite Service): The reception of *emissions* from a *space station* in the *broadcasting-satellite service* by receiving equipment, which in some cases may be complex and have antennae larger than those used for individual reception, and intended for use:

- by a group of the general public at one location, or,
- through a distribution system covering a limited area.

1.2.136. Telemetry: The use of *telecommunication* for automatically indicating or recording measurements at a distance from the measuring instrument.

1.2.137. Radiotelemetry: *Telemetry* by means of radio *waves*.

1.2.138. Space Telemetry: The use of *telemetry* for the transmission from a *space station* of results of measurements made in a *spacecraft*, including those relating to the functioning of the spacecraft.

1.2.139. Telecommand: The use of *telecommunication* for the transmission of signals to initiate, modify or terminate functions of equipment at a distance.

1.2.140. Space Telecommand: The use of *radiocommunication* for the transmission of signals to a space station to initiate, modify or terminate functions of equipment on an associated space object, including the *space station*.

1.2.141. Space Tracking: Determination of the *orbit*, velocity or instantaneous position of an object in space by means of *radiodetermination*, excluding *primary radar,* for the purpose of following the movement of the object.

Section VI: Characteristics of emissions and Radio Equipment.

1.2.142. Radiation: The outward flow of energy from any source in the form of *radio waves*.

1.2.143. Emission: *Radiation* produced, or the production of *radiation*, by a radio transmitting *station*.
For example, the energy radiated by the local oscillator of a radio receiver would not be an emission but a radiation.

1.2.144. Class of Emission: The set of characteristics of *emission*, designated by standard symbols e.g. type of modulation of the main carrier, modulating signal, type of information to be transmitted, and also, if appropriate, any additional signal characteristics.

1.2.145. Single-Sideband- Emission: An amplitude modulation *emission* with one sideband only.

1.2.146. Full Carrier Single Sideband Emission: A *single--sideband emission* without reduction of the carrier.

1.2.147. Reduced Carrier Single--Sideband Emission: A *single-sideband emission* in which the degree of carrier suppression enables the carrier to be reconstituted and to be used for demodulation.

1.2.148. Suppressed Carrier Single Sideband Emission: A *single side - band emission* in which the carrier is virtually suppressed and not intended to be used for demodulation.

1.2.149. Out-of-band Emission: *Emission* on a frequency or frequencies immediately outside the *necessary bandwidth*, which results from the modulation process, but excluding *spurious emissions*.

1.2.150. Spurious Emission: *Emission* on a frequency or frequencies, which are outside the *necessary bandwidth* and the level of which may be reduced without affecting the corresponding transmission of information. Spurious *emissions* include harmonic *emissions*, parasitic emissions, intermodulation products and frequency conversion products, but exclude *out-of-band emissions*.

1.2.151. Assigned Frequency Band: The frequency band within which the *emission* of a station is authorised; the width of the band equals the *necessary bandwidth* plus twice the absolute value of the *frequency tolerance*. Where *space stations* are concerned, the assigned frequency band includes twice the maximum Doppler shift that may occur in relation to any point of the Earth's surface.

1.2.152. Unwanted Emissions: Consist of *spurious emissions* and *out-of---band emissions*.

1.2.153. Spurious domain (of an emission): The frequency range beyond the out-of-band domain in which spurious emissions generally predominate.

1.2.154. Out-of-band domain (of an emission): The frequency range, immediately outside the necessary bandwidth but excluding the *spurious domain,* in which *out-of-band emissions* generally predominate. Out-of-band emissions, defined based on their source, occur in the *out-of-band domain* and, to a lesser extent, in the *spurious domain*. *Spurious emissions* likewise may occur in the out-of-band domain as well as in the *spurious domain.*

1.2.155. Assigned Frequency: The centre of the frequency band assigned to a *station*.

1.2.156. Characteristic Frequency: A frequency which can be easily identified and measured in a given *emission*. A carrier frequency may, for example, be designated as the characteristic frequency.

1.2.157. Reference Frequency: A frequency having a fixed and specified position with respect to the *assigned frequency*. The displacement of this frequency with respect to the assigned frequency has the same absolute value and sign that the displacement of the *characteristic frequency* has with respect to the centre of the frequency band occupied by the *emission*.

1.2.158. Frequency Tolerance: The maximum permissible departure by the centre frequency of the frequency band occupied by an *emission* from the *assigned frequency* or, by the *characteristic frequency* of an *emission* from the reference frequency. The frequency tolerance is expressed in parts in 10^6 or in hertz.

1.2.159. Necessary Bandwidth: For a given class of *emission*, the width of the frequency band which is just sufficient to ensure the transmission of information at the rate and with the quality required under specified conditions.

1.2.160. Occupied Bandwidth: The width of a frequency band such that, below the lower and above the upper frequency limits, the *mean powers* emitted are each equal to a specified percentage ß/2 of the total *mean power*

of a given *emission*. Unless otherwise specified in an ITU-R Recommendation for the appropriate class of emission, the value of ß/2 should be taken as 0.5%.

1.2.161. Right-Hand (clockwise) Polarised Wave: An elliptically or circularly-polarised wave, in which the electric field vector, observed in any fixed plane, normal to the direction of propagation, whilst looking in the direction of propagation, rotates with time in a right-hand or clockwise direction.

1.2.162. Left-Hand (anticlockwise) Polarised Wave: An elliptically or circularly-polarised wave, in which the electric field vector, observed in any fixed plane, normal to the direction of propagation, whilst looking in the direction of propagation, rotates with time in a Left-Hand or anticlockwise direction.

1.2.163. Power: Whenever the power of a radio transmitter etc. is referred to it shall be expressed in one of the following forms, according to the class of *emission*, using the arbitrary symbols indicated:

- *peak envelope power* (PX or *p*X);
- *mean power* (PY or *p*Y);
- *carrier power* (PZ or *p*Z);

For different *classes of emission*, the relationship between *peak envelope power*, *mean power* and *carrier power*, under the conditions of normal operation and of no modulation, are contained in ITU-R Recommendations which may be used as a guide.

For use in formulae, the symbol ***p*** denotes power expressed in watts and the symbol ***p*** denotes power expressed in decibels relative to reference level.

1.2.164. Peak Envelope Power (of radio transmitter): The average power supplied to the antenna transmission line by a transmitter during one radio frequency cycle at the crest of the modulation envelope taken under normal operating conditions.

1.2.165. Mean Power (of a radio transmitter): The average power supplied to the antenna transmission line by a transmitter during an interval of time sufficiently long compared with the lowest frequency encountered in the modulation taken under normal operating conditions.

1.2.166. Carrier Power (of a radio transmitter): The average power supplied to the antenna transmission line by a transmitter during one radio frequency cycle taken under the condition of no modulation.

1.2.167. Gain of an Antenna: The ratio, usually expressed in decibels, of the power required at the input of a loss free reference antenna to the power supplied to the input of a given antenna produce, in a given direction, the same field strength or the same power -fluxdensity at the same field distance. When not specified otherwise, the gain refers to the direction of maximum radiation. -The gain may be considered for a specified polarisation.

Depending on the choice of the reference antenna a distinction is made between:

- absolute or isotropic gain (G_i), when the reference antenna is an isotropic antenna isolated in space ;
- gain relative to a half-wave dipole (G_d), when the reference antenna is a halfwave dipole isolated in space whose equatorial plane contains- the given direction;
- gain relative to a short vertical antenna (G_v), when the reference antenna is linear conductor, much shorter than one quarter of the wavelength, normal to the surface of a perfectly conducting plane which contains the given direction.

1.2.168. Equivalent Isotropically Radiated Power (e.i.r.p): The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna (*absolute or isotropic gain*).

1.2.169. Effective Radiated Power (e.r.p) (in a given direction): The power supplied to the antenna and its *gain relative to a half wave dipole* in a given direction.

1.2.170. Effective Monopole Radiated Power (e.m.r.p) (in a given direction): The product of the power supplied to the antenna and its *gain relative to a short vertical antenna* in a given direction.

1.2.171. Tropospheric Scatter: The propagation of *radio waves* by scattering as a result of irregularities or discontinuities in the physical properties of the troposphere.

1.2.172. Ionospheric Scatter: The propagation of *radio waves* by scattering as a result of irregularities or discontinuities in the ionisation of the ionosphere.

Section VII: Frequency Sharing

1.2.173. Interference: The effect of unwanted energy due to one or a combination of *emissions, radiations*, or inductions upon reception in a *radiocommunication* system, manifested by any performance degradation, misinterpretation, or loss of information which could be extracted in the absence of such unwanted energy.

1.2.174. Permissible Interference: Observed or predicted *interference* which complies with quantitative *interference* and sharing criteria contained in Radio Regulations or in ITU-R Recommendations or in special agreements as provided for in these Regulations. The terms "permissible interference" and "accepted interference" are used in the co-ordination of frequency assignments between administrations.

1.2.175. Accepted Interference: *Interference* at higher level than that defined as *permissible interference* and which has been agreed upon between two or more administrations without prejudice to other administrations.

1.2.176. Harmful Interference: *Interference* which endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs, or repeatedly interrupts a *radiocommunication service* operating in accordance with the Radio Regulations.

1.2.177. Protection Ratio (R.F.): The minimum value of the wanted-to-unwanted signal ratio, usually expressed in decibels, at the receiver input, determined under specified conditions such that a specified reception quality of the wanted signal is achieved at the receiver output.

1.2.178. Co-ordination Area: When determining the need for coordination, the area surrounding an *earth station* sharing the same frequency band with *terrestrial stations*,or surrounding a transmitting *earth station* sharing the same bi-directionally allocated frequency band with receiving *earth stations*, beyond which the level of *permissible interference* will not be exceeded and coordination is therefore not required.

1.2.179. Co-ordination Contour: The line enclosing the *co-ordination area*.

1.2.180. Co-ordination Distance: When determining the need for coordination, the distance on a given azimuth from an *earth station* sharing the same frequency band with *terrestrial stations*, or from a transmitting *earth station* sharing the same bi-directionally allocated frequency band with receiving *earth stations*, beyond which the level of *permissible interference* will not be exceeded and coordination is therefore not required.

1.2.181. Equivalent Satellite Link Noise Temperature: The noise temperature referred to the output of the receiving antenna of the *earth station* corresponding to the radio frequency noise power which produces the total observed noise at the output of the *satellite link* excluding noise due to *interference* coming from *satellite links* using other *satellites* and from terrestrial systems.

1.2.182. Effective boresight area (of a steerable satellite beam): An area on the surface of the earth within which the boresight of a *steerable satellite beam* is intended to be pointed. There may be more than one unconnected effective boresight area to which a single *steerable satellite beam* is intended to be pointed

1.2.183. Effective antenna gain contour (of a steerable satellite beam): An envelope of antenna gain contours resulting from moving the boresight of a *steerable satellite beam* along the limits of the *effective boresight area*.

Section VIII: Technical Terms Relating to Space.

1.2.184. Deep Space: Space at distances from the earth approximately equal to, or greater than 2×10^6 Km.

1.2.185. Spacecraft: A man-made vehicle, which is intended to go beyond the major portion of the Earth's atmosphere.

1.2.186. Satellite: A body which revolves around another body of preponderant mass and which has a motion primarily and permanently determined by the force of attraction of that other body.

1.2.187. Active Satellite: A satellite carrying a *station* intended to transmit or retransmit *radiocommunication* signals.

1.2.188. Reflecting Satellite: A *satellite* intended to reflect *radiocommunication* signals.

1.2.189. Active Sensor: A measuring instrument in the *earth exploration-satellite service* or in the *space research service* by means of which information is obtained by transmission and reception of *radio waves*.

1.2.190. Passive Sensor: A measuring instrument in the *earth exploration-satellite service* or in the *space research service* by means of which information is obtained by reception of *radio waves* of natural origin.

1.2.191. Orbit: The path, relative to a specified frame of reference, described by the centre of mass of a *satellite* or other object in space subjected primarily to natural forces, mainly the force of gravity.

1.2.192. Inclination of an orbit (of an earth satellite): The angle determined by the plane containing the orbit and the plane of the Earth's equator measured in degrees between 0° and. 180° and in counter-clockwise direction from the earth's equatorial plane at the ascending node of the *orbit*.

1.2.193. Period (of a satellite): The time elapsing between two consecutive passages of a *satellite* through a characteristic point on its *orbit*.

1.2.194. Altitude of the Apogee or of the Perigee: The altitude of the apogee or perigee above a specified reference surface serving to represent the surface of the Earth.

1.2.195. Geosynchronous Satellite: An earth *satellite* whose period of revolution is equal to the period of rotation of the Earth about its axis.

1.2.196. Geostationary Satellite: A *geosynchronous satellite* whose circular and direct *orbit* lies in the plane of the Earth's equator and which thus remains fixed relative to the Earth; by extension, a *geosynchronous satellite* which remains approximately fixed relative to the Earth.

1.2.197. Geostationary-satellite orbit: The *orbit* of a *geosynchronous satellite* whose circular and direct *orbit* lies in the plane of the Earth's equator.

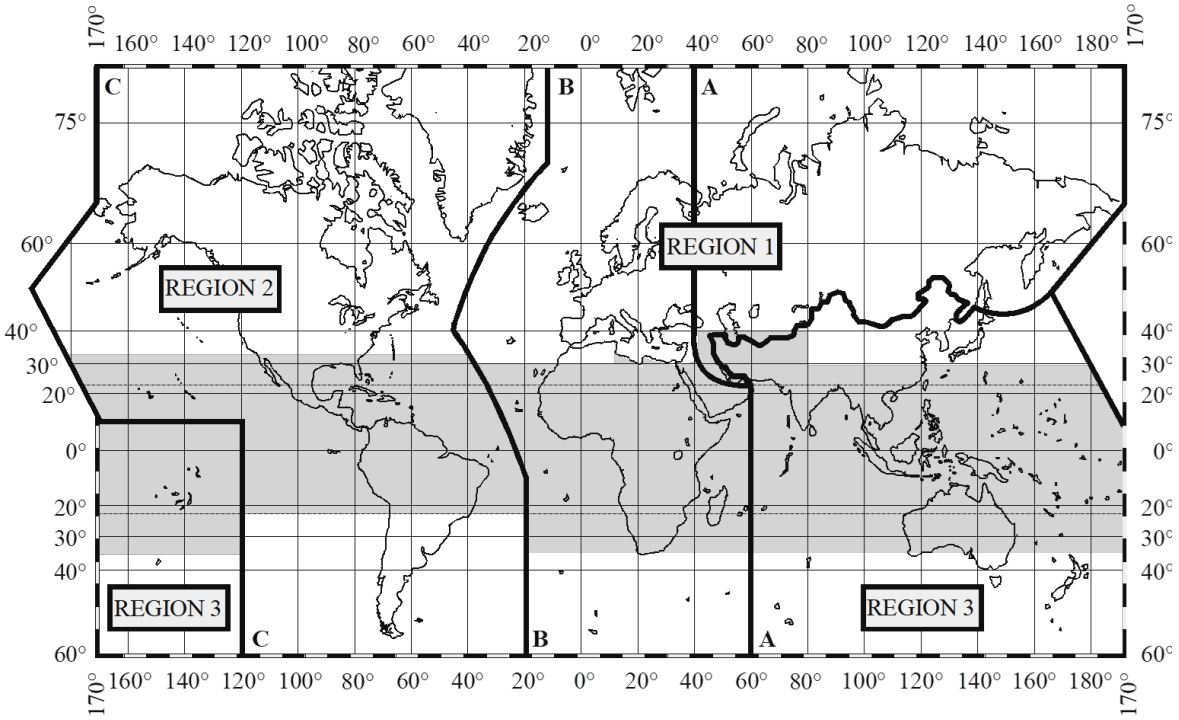
1.2.198. Steerable satellite beam: A *satellite* antenna beam that can be re-pointed

CHAPTER TWO

2. ITU REGIONS AND AREAS

For the allocation of frequencies, the World has been divided into three **Regions** as shown in the map below and described in sections 2.1 to 2.4.

For the purposes of easier planning and co-ordination of those specific services in sub-regions with common or unique requirements, the three Regions are divided into **Areas** as described in section 2.5.



The shaded part represents the Tropical Zones as defined in Nos. **S5.16** to **S5.20** and **S5.21.**

S5-01

It should be noted that where the words "regions" or "regional" are without a capital "R" in this document, they do not relate to the three Regions here defined for purposes of frequency allocation.

2.1. Region 1:

Region 1 includes the area limited on the east by line A (lines A, B and C are defined below) and on the west by line B, excluding any of the territory of Turkey and Union of Soviet Socialist Republics lying outside of these limits, the territory of the Mongolian People's Republic, and the area to the north of USSR which lies between lines A and C. Kenya is located in Region 1.

2.2. Region 2:

Region 2 includes the area limited on the east by line B and on the west by line C.

2.3. Region 3:

Region 3 includes the area limited on the east by line C and on the west by line A, except the territory Armenia, Azerbaijan, the Russian Federation, Georgia, Kazakhstan, Mongolia, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan, Turkey and Ukraine and the area to the north of Russian Federation. It also includes that part of the territory of the Islamic Republic of Iran lying outside of those limits.

2.4. The lines A, B and C are defined as follows:

2.4.1. Line A extends from the North Pole along meridian 40 degrees East of Greenwich to parallel 40 degrees North; thence by great circle arc to the intersection of meridian 60 degrees East and the Tropic of Cancer; thence along the meridian 60 degrees East to the South Pole.

2.4.2. Line B extends from the North Pole along meridian 10 degrees West of Greenwich to its intersection with parallel 72 degrees North; thence by great circle arc to the intersection of meridian 50 degrees West and parallel 40 degrees North; thence by great circle arc to the intersection of meridian 20 degrees West and parallel 10 degrees South; thence along meridian 20 degrees West to the South Pole.

2.4.3. Line C extends from the North Pole by great circle the intersection of parallel 65 degrees 30 degrees North with the international boundary in Bering Strait; thence by great circle arc to the intersection of meridian 165 degrees East of Greenwich and parallel 50 degrees North; thence by great circle arc to the intersection of meridian 170 degrees West and parallel 10 degrees North; thence along parallel 10 degrees North to its intersection with meridian 120 degrees West; thence along meridian 120 degrees West to the south Pole.

2.5. For the purposes of these Regulations, the terms **"**African Broadcasting Area", "European Broadcasting Area", "European Maritime Area", and "Tropical Zone" shall have the following definitions:-

2.5.1. The "**African Broadcasting Area**" means:

a) African countries, parts of countries, territories and groups of territories situated between the parallels 40° South and 30° North;
b) islands in the Indian Ocean west of meridian 60° East of Greenwich, situated between the parallel 40° South and the great circle arc joining the points 45° East, 11° 30''North and 60° East, 15° North;
c) islands in the Atlantic Ocean east of line B defined in No. **2.4.2** of these Regulations, situated between the parallels 40° South and 30° North.

2.5.2. The "**European Broadcasting Area**" is bounded on the west by the western boundary of Region 1, on the east by the meridian 40° East of Greenwich and on the south by the parallel 30° North so as to include the northern part of Saudi Arabia and that part of those countries bordering the Mediterranean within these limits. In addition, Iraq, Jordan and that part of the territory of Syria, Turkey and Ukraine lying outside the above limits are included in the European Broadcasting Area.

2.5.3. The "**European Maritime Area**" is bounded to the north by a line extending along parallel 72° North from its intersection with meridian 55° East of Greenwich to its intersection with meridian 5° West, then along meridian 5° West to its intersection with parallel 67° North, thence along parallel 67° North to its intersection with meridian 32° West; to the west by a line extending along meridian 32° West to its intersection with parallel 30° North; to the south by a line extending along parallel 30° North to its intersection with meridian 43° East; to the east by a line extending along meridian 43° East to its

intersection with parallel 60° North, thence along parallel 60° North to its intersection with meridian 55° East and thence along meridian 55° East to its intersection with parallel 72° North.

2.5.4. The "**Tropical Zone**" (see map) is defined as:

a) the whole of that area in Region 2 between the Tropics of Cancer and Capricorn;

b) the whole of that area in Regions 1 and 3 contained between the parallels 30° North and 35° South with the addition of:

i) The area contained between the meridians 40° East and 80° East of Greenwich and the parallels 30° North and 40° North;

ii) that part of Libya north of parallel 30° North.

c) In Region 2, the Tropical Zone may be extended to parallel 33° North, subject to special agreements between the countries concerned in that Region.

CHAPTER THREE

3. NATIONAL TABLE OF FREQUENCY ALLOCATIONS

The purpose of this publication is to provide information on allocation of frequency bands to various radiocommunications services.

3.1. Categories of Services and Allocations

3.1.1. Where, in a box of Section II of this Chapter, a band is indicated as allocated to more than one service, such services are listed in the following order:

a. Services the names of which are printed in "capitals" (example: FIXED); these services are called "primary" services.

b. Services the names of which are printed in "small / normal characters" (example: Mobile); these services are called "secondary" services.

c. Additional remarks shall be printed in normal characters (Example: MOBILE except aeronautical mobile).

3.1.2. Stations of a secondary service:

a. shall not cause harmful interference to stations of primary service to which frequencies are already assigned or to which frequencies may be assigned at a later date.

b. Cannot claim protection from harmful interference from stations of a primary service to which frequencies are already assigned or may be assigned at a later date.

c. Can claim protection, however, from harmful interference from stations of the same or other secondary service(s) to which frequencies may be assigned at a later date.

3.1.3. Whenever no regulatory footnote has been associated with a particular frequency band, the relevant footnote(s) in the current ITU Table of Frequency Allocations shall apply.

3.1.4. Throughout this publication, whenever there is a mention of a specific *Article, Appendix or Resolution,* detailed information of the same can be found in the ITU Radio Regulations.

3.1.5. The structure of the table is as follows: -

3.1.5.1. Column 1

Denotes the frequency band in kHz, MHz or GHz

3.1.5.2. Column 2

Indicates the type of service allocated to the band. The services are defined in chapter 1 of this publication. Entries in uppercase (capital letters) denote primary services whereas entries in lowercase denote secondary services. The footnotes (prefixed by 'K') are the footnotes applicable to the services and frequency bands and only footnotes relevant to ITU Region 1 and Kenya are included. Even though the ITU numbering of footnotes has not been adopted in this publication, every care has been taken to ensure all provisions in the ITU footnotes

that are applicable to Kenya have been reflected in the footnotes prefixed by 'K' in each frequency band.

3.1.5.3. Column 3

Indicates general comments about the usage of the frequency band in some selected cases.

3.2. Kenya's Table of Frequency Allocations

8.3- 72 kHz

FREQUENCY BAND (kHz)	ALLOCATION TO SERVICES	REMARKS
Below 8.3	(Not allocated) *K1, K2*	The band below 8.3 kHz is not allocated
8.3 – 9	METAIDS	Meteorological Aids
9 – 11.3	METAIDS RADIONAVIGATION	Meteorological Aids radionavigation
11.3 - 14	RADIONAVIGATION	radionavigation
14 - 19.95	FIXED *K3*	Fixed
	MARITIME MOBILE *K4*	Coast radiotelegraphy
19.95 – 20.05	STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)	Standard frequency and time signal reception
20.05 – 70	FIXED *K3*	Fixed
	MARITIME MOBILE *K3, K4*	Coast radiotelegraphy
70 – 72	RADIONAVIGATION *K5*	radionavigation

72 - 110 kHz

FREQUENCY BAND (kHz)	ALLOCATION TO SERVICES	REMARKS
72 - 84	FIXED *K3*	Fixed
	MARITIME MOBILE *K3, K4*	coast radiotelegraphy
	RADIONAVIGATION *K3, K5*	radionavigation
84 - 86	RADIONAVIGATION *K5*	radionavigation
86 – 90	FIXED *K3*	Fixed
	MARITIME MOBILE *K3, K4*	coast radiotelegraphy
	RADIONAVIGATION *K3*	radionavigation
90 – 110	RADIONAVIGATION *K6*	radionavigation
	Fixed *K10*	Fixed

110 – 130 kHz

FREQUENCY BAND (kHz)	ALLOCATION TO SERVICES	REMARKS
110 – 112	FIXED *K10*	Fixed
	MARITIME MOBILE *K11*	Maritime Mobile
	RADIONAVIGATION	Radionavigation
112 – 115	RADIONAVIGATION *K5*	Radionavigation
115 – 117.6	RADIONAVIGATION *K5*	Radionavigation
	Fixed *K10*	Fixed
	Maritime mobile *K11*	Maritime Mobile
117.6 – 126	FIXED *K10*	Fixed
	MARITIME MOBILE *K11*	Maritime Mobile
	RADIONAVIGATION *K5*	Radionavigation
126 – 129	RADIONAVIGATION *K5*	Radionavigation
129 – 130	FIXED *K10*	Fixed
	MARITIME MOBILE *K11*	Maritime Mobile

	RADIONAVIGATION *K5*	Radionavigation

130 - 315 kHz.

FREQUENCY BAND (kHz)	ALLOCATION TO SERVICES	REMARKS
130 – 135.7	MARITIME MOBILE *K11*	Maritime Mobile
	FIXED *K10*	Fixed
135.7-137.8	FIXED *K10*	Fixed
	MARITIME MOBILE *K11*	Maritime Mobile
	Amateur K7	Amateur on secondary basis
137.8-148.5	FIXED *K10*	Fixed
	MARITIME MOBILE *K11*	Maritime Mobile
148.5 – 200	BROADCASTING *K18*	Low Frequency (LF) sound broadcasting (GE75 Plan)
200 – 283.5	AERONAUTICAL RADIONAVIGATION *K12*	Radiobeacons
283.5 – 315	AERONAUTICAL RADIONAVIGATION *K14*	Radiobeacons
	MARITIME RADIONAVIGATION *K13, K14*	Radiobeacons

315 - 495 kHz

FREQUENCY BAND (kHz)	ALLOCATION TO SERVICES	REMARKS
315 – 325	AERONAUTICAL RADIONAVIGATION	Radiobeacons
	Maritime radionavigation *K13*	Maritime Radiabeacons
325 – 405	AERONAUTICAL RADIONAVIGATION	Radiobeacons
405 – 415	RADIONAVIGATION *K15*	Radiobeacons
415 – 435	AERONAUTICAL RADIONAVIGATION *K16*	Aeronautical Radionavigation
	MARITIME MOBILE *K19*	Use limited to radiotelegraphy and may also be used for the NAVDAT system
435 – 495	MARITIME MOBILE *K19, K20, K16*	Use limited to radiotelegraphy and may also be used for the NAVDAT system
	Aeronautical Radionavigation, *K16*	Aeronautical Radionavigation
	Amateur	Amateur

495 - 1635 kHz.

FREQUENCY BAND (kHz)	ALLOCATION TO SERVICES	REMARKS
495 – 505	MARITME MOBILE *K8, K7, K8A*	The use of this band is limited to radiotelegraphy

505 - 526.5	MARITIME MOBILE *K17, K19, K20*	Use limited to radiotelegraphy and may also be used for the NAVDAT system
	AERONAUTICAL RADIONAVIGATION	Aeronautical radio navigation (510-526.5 KHz)
526.5 – 1606.5	BROADCASTING *K18*	Medium Wave sound broadcasting (GE75 Plan)
1606.5 – 1625	MARITIME MOBILE *K21, K22*	Maritime Mobile
	FIXED *K22*	Fixed
	LAND MOBILE *K22*	Land Mobile
1625 – 1635	RADIOLOCATION	Radiolocation

1635 - 2025 kHz.

FREQUENCY BAND (kHz)	**ALLOCATION TO SERVICES**	**REMARKS**
1635 –1800	MARITIME MOBILE *K21, K22*	Maritime Mobile
	FIXED *K22*	Fixed
	LAND MOBILE *K22*	Land Mobile
1800 – 1810	RADIOLOCATION	Radiolocation
1810 – 1850	AMATEUR	Amateur (160 meter band)
1850 – 2000	FIXED *K22, K23*	Fixed
	MOBILE except aeronautical mobile *K22, K23*	Mobile
2000 – 2025	FIXED *K22, K23*	Fixed
	MOBILE except aeronautical mobile (R) *K22, K23*	Mobile

2025 – 2194 kHz

FREQUENCY BAND (kHz)	**ALLOCATION TO SERVICES**	**REMARKS**
2025-2045	FIXED *K22,K23*	Fixed
	MOBILE except aeronautical mobile (R) *K22, K23*	Mobile
	Meteorological aids	Oceanographic buoy stations
2045 – 2160	MARITIME MOBILE *K22*	Maritime Mobile
	FIXED *K22*	Fixed
	LAND MOBILE *K22*	Land Mobile
2160 – 2170	RADIOLOCATION	Radiolocation
2170 – 2173.5	MARITIME MOBILE	Maritime Mobile
2173.5 – 2190.5	MOBILE (distress and calling) *K24, K25 K27, K28*	International distress & calling frequencies, GMDSS
2190.5 – 2194	MARITIME MOBILE	Maritime Mobile

2194 – 2650 kHz

FREQUENCY BAND (kHz)	**ALLOCATION TO SERVICES**	**REMARKS**
2194 – 2300	FIXED *K22, K23*	Fixed

	MOBILE (except aeronautical mobile(R) *K22, K23*	Mobile
2300 – 2498	BROADCASTING *K29*	Sound broadcasting in tropical zone
	FIXED	Fixed
	MOBILE (except aeronautical mobile(R)).	Mobile
2498 – 2502	STANDARD FREQUENCY & TIME SIGNAL (2500 KHz) K26	Standard frequency and time signal reception
2502 – 2625	FIXED *K22, K23*	Fixed
	MOBILE (except aeronautical mobile) *K22, K23*	Mobile
2625 – 2650	MARITIME MOBILE *K22*	Maritime Mobile
	MARITIME RADIONAVIGATION *K22*	Maritime radionavigation

2650 - 3500 kHz

FREQUENCY BAND (kHz)	**ALLOCATION TO SERVICES**	**REMARKS**
2650 – 2850	FIXED *K22, K23*	Fixed
	MOBILE (except aeronautical mobile) (R) *K22, K23*	Mobile
2850 – 3025	AERONAUTICAL MOBILE (R) *K27, K31*	Aeronautical mobile
3025 – 3155	AERONAUTICAL MOBILE (OR)	Allotment plan in Appendix 26 of RRs
3155 – 3200	FIXED *K32*	Low power hearing aids
	MOBILE (except aeronautical mobile (R)) *K32*	Mobile
3200 – 3400	BROADCASTING *K29, K32*	Sound broadcasting in tropical zone
	FIXED	Fixed
	MOBILE except aeronautical	Mobile
3400 – 3500	AERONAUTICAL MOBILE (R)	Aeronautical mobile

3500 - 4063 kHz

FREQUENCY BAND (kHz)	**ALLOCATION TO SERVICES**	**REMARKS**
3500 – 3800	AMATEUR	Amateur (80 meter band)
	FIXED	Fixed
	MOBILE except aeronautical mobile	Mobile
3800 – 3900	FIXED	Fixed
	AERONAUTICAL MOBILE (OR)	Aeronautical Mobile-off route
	LAND MOBILE	Land Mobile
3900 – 3950	AERONAUTICAL MOBILE (OR)	Aeronautical mobile-off route (Appendix 26 of RRs)
3950 – 4000	BROADCASTING	Sound broadcasting in tropical zone
	FIXED	Fixed
4000 – 4063	FIXED	Fixed
	MARITIME MOBILE *K33*	Maritime mobile

4063 - 5005 kHz.

FREQUENCY BAND (kHz)	ALLOCATION TO SERVICES	REMARKS
4063 – 4438	MARITIME MOBILE *K8A, K21, K24, K28, K34, K35, K36*	Maritime mobile
4438 – 4650	FIXED	Fixed
	MOBILE except aeronautical mobile (R)	Mobile
	Radiolocation	Radiolocation
4650 – 4700	AERONAUTICAL MOBILE (R)	Aeronautical mobile
4700 – 4750	AERONAUTICAL MOBILE (OR)	Aeronautical mobile
4750 – 4850	BROADCASTING, FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE, *K29*	Sound broadcasting in tropical zone
4850 - 4995	BROADCASTING, FIXED LAND MOBILE, *K29*	Sound broadcasting in tropical zone
4995 – 5005	STANDARD FREQUENCY & TIME SIGNAL (5000 KHz) *K26*	Standard frequency and time signal

5005 – 5730 kHz

FREQUENCY BAND (kHz)	ALLOCATION TO SERVICES	REMARKS
5005 – 5060	BROADCASTING FIXED *K29*	Sound broadcasting in tropical zone
5060 – 5250	FIXED Mobile except aeronautical mobile	Fixed
5250 - 5275	FIXED MOBILE except aeronautical mobile Radiolocation	Fixed, Mobile and Radiolocation
5275 - 5450	FIXED MOBILE except aeronautical mobile Amateur *K36A*	Fixed and Mobile Amateur
5450 – 5480	FIXED	Fixed
	AERONAUTICAL MOBILE (OR)	Aeronautical Mobile-off route
	LAND MOBILE	Land Mobile
5480 – 5680	AERONAUTICAL MOBILE (R) *K27, K31*	Aeronautical mobile
5680 – 5730	AERONAUTICAL MOBILE (OR) *K27, K31*	Aeronautical mobile

5730 - 7100 kHz

FREQUENCY BAND (kHz)	ALLOCATION TO SERVICES	REMARKS
5730 – 5900	FIXED	Fixed
	LAND MOBILE	Land mobile
5900 – 6200	BROADCASTING *K37, K38, K30*	Short wave sound broadcasting
6200 - 6525	MARITIME MOBILE *K24, K28, K34, K36, K36B, K39*	Maritime mobile
6525 –6685	AERONAUTICAL MOBILE(R)	Aeronautical mobile
6685– 6765	AERONAUTICAL MOBILE (OR)	Aeronautical mobile

6765 – 7000	FIXED *K40, K41*	Fixed ISM
7000 – 7100	AMATEUR, AMATEUR-SATELLITE *K42*	Amateur (40 meter band)
	FIXED *K42*	Fixed (Band 7000-7050 MHz)

7100 - 7450 kHz

FREQUENCY BAND (kHz)	**ALLOCATION TO SERVICES**	**REMARKS**
7100 – 7200	BROADCASTING *K43*	Short wave sound broadcasting
7200-7450	BROADCASTING *K30, K37, K46*	Short wave sound broadcasting
	Land Mobile	Land mobile

7450 -9400 kHz

FREQUENCY BAND (kHz)	**ALLOCATION TO SERVICES**	**REMARKS**
7450 – 8100	FIXED *K47*	Fixed
	Land Mobile K47	Land Mobile
8 100 – 8195	FIXED	Fixed
	MARITIME MOBILE	Maritime mobile
8 195 – 8 815	MARITIME MOBILE *K24, K27, K28, K36, K36B, K48*	Maritime mobile
8 815 – 8965	AERONAUTICAL MOBILE (R)	Aeronautical mobile
8965 – 9 040	AERONAUTICAL MOBILE (OR)	Aeronautical mobile
9 040 – 9 400	FIXED	Fixed
	Radiolocation	Radiolocation

9400 – 11275 kHz

FREQUENCY BAND (kHz)	**ALLOCATION TO SERVICES**	**REMARKS**
9 400 – 9 900	BROADCASTING *K37, K49, K50, K30*	Short wave sound broadcasting
9 900 – 9 995	FIXED	Fixed to be used only within national boundaries
9 995 – 10 005	STANDARD FREQ. & TIME SIGNALS (10 MHz) *K27*	Standard frequency and time signal reception
10 005 – 10 100	AERONAUTICAL MOBILE(R) *K27*	Aeronautical mobile
10 100 – 10 150	FIXED	Fixed
	Amateur	Amateur (30 meter band), User licence required
10 150 – 11 175	FIXED	Fixed
11 175 – 11 275	AERONAUTICAL MOBILE (OR)	Aeronautical mobile

11275 - 13870kHz

FREQUENCY BAND (kHz)	ALLOCATION TO SERVICES	REMARKS
11 275 - 11 400	AERONAUTICAL MOBILE-(R)	Aeronautical mobile
11 400 - 11 600	FIXED	Fixed
11 600 - 12 100	BROADCASTING *K37, K49, K50, K30*	Short wave sound broadcasting
12 100 - 12 230	FIXED	Fixed
12 230 - 13 200	MARITIME MOBILE *K24, K28, K36, K36B, K48*	Maritime mobile
13 200 - 13 260	AERONATICAL MOBILE (OR)	Aeronautical mobile
13 260 - 13 360	AERONAUTICAL MOBILE(R)	Aeronautical mobile
13 360 - 13 570	FIXED *K51, K53*	Fixed
	Radiolocation	Radiolocation
13 570 - 13 870	BROADCASTING *K37, K55, K30*	Short wave sound broadcasting

13870 - 17410 kHz

FREQUENCY BAND (kHz)	ALLOCATION TO SERVICES	REMARKS
13 870 - 14 000	FIXED	Fixed
14 000 - 14 350	AMATEUR	Amateur (20 meter band)
	AMATEUR SATELLITE	Amateur satellite
14 350 - 14 990	FIXED	Fixed
14 990 - 15 010	STANDARD FREQUENCY & TIME SIGNALS K26,K27	Standard freq. and time signal *(15MHz)*
15 010 - 15 100	AERONAUTICAL MOBILE (OR)	Aeronautical mobile-off route
15 100 - 15 800	BROADCASTING *K37, K49, K30*	Short wave sound broadcasting
15 800 - 16 360	FIXED	Fixed
	Radiolocation	Radiolocation
16 360 - 17 410	MARITIME MOBILE *K24, K28, K36, K36B, K48*	Maritime mobile

17410 – 18900 kHz

FREQUENCY BAND (kHz)	ALLOCATION TO SERVICES	REMARKS
17 410 – 17 480	FIXED	Fixed
17 480 – 17 900	BROADCASTING *K37, K49 K30*	Short wave sound broadcasting
17 900 – 17970	AERONAUTICAL MOBILE (R)	Aeronautical mobile-route
17 970 – 18 030	AERONAUTICAL MOBILE (OR)	Aeronautical mobile-off route
18 030 – 18 068	FIXED	Fixed
18 068 – 18 168	AMATEUR AMATEUR-SATELLITE	Amateur (17 meter band) User licence required
18 168 – 18 780	FIXED	Fixed
18 780 – 18 900	MARITIME MOBILE	Maritime mobile

18900 – 21924 kHz

FREQUENCY BAND (kHz)	ALLOCATION TO SERVICES	REMARKS
18 900 - 19 020	BROADCASTING *K37, K49, K30*	Short wave sound broadcasting
19 020 - 19 680	FIXED	Fixed
19 680 - 19 800	MARITIME MOBILE *K36*	Maritime mobile
19 800 - 19 990	FIXED	Fixed
19 990 - 20 010	STANDARD TIME & FREQUENCY SIGNAL *K26, K27*	Standard frequency and time signal (20MHz)
20 010 – 21 000	FIXED Mobile	Fixed
21 000 – 21 450	AMATEUR AMATEUR-SATELLITE	Amateur (15 meter band) User licence required
21 450 – 21 850	BROADCASTING *K30*	Short wave sound broadcasting
21 850- 21 924	FIXED *K55*	Fixed

21924 - 25010 kHz

FREQUENCY BAND IN kHz	ALLOCATION TO SERVICES	REMARKS
21 924 – 22 000	AERONAUTICAL MOBILE(R)	Aeronautical mobile
22 000 – 22 855	MARITIME MOBILE *K36, K36B*	Maritime mobile
22 855 – 23200	FIXED	Fixed
23 200 – 23350	FIXED *K56*	Fixed
	AERONAUTICAL MOBILE (OR)	Aeronautical mobile-off route
23 350- 24890	FIXED	Fixed
	LAND MOBILE	Land mobile
	MOBILE except aeronautical mobile *K57*	Mobile
	Radiolocation	Radiolocation
24 890 - 24990	AMATEUR	Amateur (12 meter band) User licence required
	AMATEUR SATELLITE	Amateur satellite
24 990- 25 010	STANDARD FREQ. & TIME SIGNAL (25 MHz) *K26*	Standard frequency & time signal reception

25010 - 27500 kHz

FREQUENCY BAND IN kHz	ALLOCATION TO SERVICES	REMARKS
25 010 – 25 070	FIXED	Fixed
	MOBILE except aeronautical mobile	Mobile
25 070- 25 210	MARITIME MOBILE	Maritime mobile
25 210 – 25 550	FIXED	Fixed
	MOBILE except aeronautical mobile	Mobile
25 550 – 25 670	RADIO ASTRONOMY *K51*	Radio Astronomy
25 670 – 26 100	BROADCASTING *K30*	Short wave sound broadcasting
26 100 – 26 175	MARITIME MOBILE *K36*	Maritime mobile
26 175 – 27 500	FIXED *K52*	Fixed
	MOBILE except aeronautical mobile *K52, K53*	Low power devices, ISM

	Radiolocation	Radiolocation

27500 – 32650 kHz

FREQUENCY BAND IN kHz	ALLOCATION TO SERVICES	REMARKS
27500 – 28 000	METEOROLOGICAL AIDS	Meteorological aids
	FIXED	Fixed
	MOBILE	Onsite low power paging
28 000 – 29 700	AMATEUR	Amateur (10 meter band) User licence required
	AMATEUR SATELLITE	Amateur satellite
29 700 – 30 005	FIXED	Fixed
	MOBILE	mobile
30005- 30010	FIXED *K59*	Fixed
	MOBILE *K59*	Mobile
	SPACE OPERATION (Satellite Identification)	Satellite identification
	SPACE RESEARCH	Space Research
30010 – 32650	FIXED *K59*	Fixed
	MOBILE *K59*	Mobile

32.65 – 40.98 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
32.65-35.6	FIXED *K59*	Fixed
	MOBILE *K59*	Mobile
35.6 – 37.25	FIXED *K59*	Fixed
	MOBILE	Mobile
37.25 – 38.25	FIXED *K58*, *K59*	Fixed
	MOBILE *K58*,*K59*	Mobile
38.25 – 40	FIXED *K59*	Fixed
	MOBILE *K59*	Mobile
	Radiolocation	Radiolocation
40 – 40.02	FIXED *K51*, *K59*	Fixed ISM
	MOBILE K51, *K59*	Mobile ISM
	Earth exploration – satellite (active) *K59A*	Earth exploration
	Space research	Spaceborne radar sounders
40.02 – 40.98	FIXED	Fixed
	MOBILE	Mobile
	Earth exploration-satellite (active) *K59A*	Earth exploration

40.98 – 68.0 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
40.98 – 47	FIXED *K59*	Fixed
	MOBILE *K59*	Land Mobile Low power cordless telephony

	Radiolocation	Radiolocation
	Earth exploration-satellite (active) *K59A*	Earth exploration
	Space research	Spaceborne radar sounders
47 - 68	BROADCASTING *K60*	Broadcasting
	AMATEUR *K60A*	Amateur service
	Fixed *K63*	Low power cordless telephony
	Earth exploration-satellite (active) *K59A*	Earth exploration

68 – 76.7 MHz

FREQUENCY BAND (MHz)	**ALLOCATION TO SERVICES**	**REMARKS**
68 - 69	MOBILE	Land mobile
69 - 70	MOBILE	Government use
70- 73.6	MOBILE *K58*	Land mobile
73.6 - 74.8	MOBILE *K58*	Land Mobile Government use
74.8 - 75.2	AERONAUTICAL RADIONAVIGATION *K64*	Instrument Landing Markers
75.2 - 76.1	MOBILE	Land Mobile
76.1 - 76.3	MOBILE	Land Mobile
76.3 - 76.7	MOBILE	Land mobile

76.7 - 87.5 MHz

FREQUENCY BAND (MHz)	**ALLOCATION TO SERVICES**	**REMARKS**
76.7 – 77.1	MOBILE	Land Mobile
77.1 – 77.4	MOBILE	Land Mobile
77.4 – 78.4	MOBILE	Land Mobile Government use
78.4 – 80.6	MOBILE	Land mobile
80.6 – 80.9	MOBILE	Land mobile
80.9 – 81.3	MOBILE	Land Mobile
81.3 – 81.75	FIXED	Land mobile
81.75 – 82	MOBILE	Land mobile
82 – 83	MOBILE	Land Mobile Government Use
83 – 87.5	MOBILE	Land mobile

87.5 – 137 MHz

FREQUENCY BAND (MHz)	**ALLOCATION TO SERVICES**	**REMARKS**
87.5 – 108	BROADCASTING *K65*	FM sound broadcasting (GE84 Plan)
108 – 117.925	AERONAUTICAL RADIONAVIGATION *K66, K67*	Aeronautical radionavigation
	AERONAUTICAL MOBILE (R)	Aeronautical Mobile
117.925 – 131	AERONAUTICAL- MOBILE (R) *K27, K68, K70 K71, K71A*	Aeronautical Mobile

	AERONAUTICAL MOBILE-SATELLITE (R) *K27, K68, K70, K71, K71A*	Aeronautical Mobile-Satellite
131– 136	AERONAUTICAL MOBILE (OR) *K68, K69, K71, K71A*	Aeronautical Mobile
	AERONAUTICAL MOBILE-SATELLITE (R) *K27, K68, K70, K71, K71A*	Aeronautical Mobile-Satellite
136- 137	AERONAUTICAL MOBILE (OR) K71, K71A	Aeronautical Mobile
	AERONAUTICAL MOBILE-SATELLITE (R) *K27, K68, K70, K71, K71A*	Aeronautical Mobile-Satellite

137 – 147 MHz

FREQUENCY BAND (MHz)	**ALLOCATION TO SERVICES**	**REMARKS**
137- 138	SPACE OPERATION *K73, K73A* SPACE RESEARCH *K72 , K73*	NGSO short-duration mission systems Space research downlink Mobile satellite service downlink
	METEOROLOGICAL SATELLITE (space-Earth) *K72, K73*	Meteorological satellite downlink
	MOBILE-SATELLITE (space-to-Earth)	
138- 144	FIXED *K74, K75*	New fixed links prohibited
	MOBILE *K74, K75*	Public trunked radio
144- 146	AMATEUR	Amateur (2 meter band) User licence required
146- 147	FIXED	Fixed New fixed links prohibited
	MOBILE	Government use

147 - 154.5 MHz

FREQUENCY BAND (MHz)	**ALLOCATION TO SERVICES**	**REMARKS**
147- 148	FIXED *K76*	New fixed links prohibited
	MOBILE *K76, K77*	Land Mobile
148 - 149.9	FIXED *K77*	Fixed Wide Area Paging
	MOBILE *K76, K77*	Land Mobile Wide Area Paging
	MOBILE-SATELLITE (Earth-to-space) *K77, K77A, K79* SPACE OPERATION (Earth-to-space), *K79A*	Mobile satellite serviceNGSO systems with short-duration missions
149.9- 150.05	MOBILE SATELLITE (Earth-to-space) *K78, K79*	Mobile satellite service
	RADIONAVIGATION SATELLITE *K80, K81*	Radionavigation satellite
150.05 - 150.6	FIXED	Government use New fixed links prohibited
	MOBILE except aeronautical mobile	Government use

	RADIO ASTRONOMY	Radio astronomy service

150.6 – 156.025 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
150.6 - 151.6	FIXED	Fixed New fixed links prohibited
	MOBILE except aeronautical mobile (R)	Government use
	RADIO ASTRONOMY	Radio astronomy service
151.6 - 153	FIXED	Fixed - New fixed links prohibited
	MOBILE except aeronautical mobile (R)	Land Mobile
	RADIO ASTRONOMY	Radio astronomy service
153- 154	FIXED	Fixed
	MOBILE except aeronautical mobile (R)	Land Mobile
	Meteorological aids	Meteorological aids
154 - 155.2	FIXED	Government use - New fixed links prohibited
	MOBILE	Government use
155.2 - 156.025	FIXED	Fixed New fixed links prohibited
	MOBILE	Government use

156.025 – 157.425 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
156.025 - 156.4875	MOBILE *K81, K82, K83, K84*	Maritime mobile Land Mobile (inland)
156.4875 - 156.5625	MARITIME MOBILE (Distress and Calling via DSC) *K81, K84, K85*	Maritime mobile international distress, safety & calling frequencies
156.5625 - 156.7625	FIXED MOBILE except aeronautical mobile (R)	Maritime mobile
156.7625- 156.7875	MARITIME MOBILE Mobile-satellite (Earth-to-space) *K86, K87*	Maritime mobile
156.7875-156.8125	MARITIME MOBILE (distress and calling) *K86*	Maritime mobile international distress, safety & calling frequencies

156.8125 - 162.025 MHz

FREQUENCY BAND IN MHz	ALLOCATION TO SERVICES	REMARKS
156.8125 - 157.8	MARITIME MOBILE Mobile-satellite Service (Earth-to-space) *K87, K87A*	Maritime mobile
157.8 - 158.8	MOBILE except aeronautical mobile	Land Mobile Government and Local authorities
158.8 - 159.8	MOBILE except aeronautical mobile	Land Mobile

159.8 - 160.625	FIXED	Fixed New fixed links prohibited
	MOBILE except aeronautical mobile	Government use
160.625 - 162.0375	FIXED MOBILE except aeronautical mobile Maritime mobile-satellite (Earth-to-space) Mobile-satellite (Earth-to-space) *K84, K86, K87, K87B*	Fixed Mobile Maritime Mobile-satellite Maritime mobile The bands 161.9625-161.9875 and 162.0125-161.0375 MHz are also allocated to mobile-satellite service for AIS

162.0375 – 174 MHz

FREQUENCY BAND (MHz)	**ALLOCATION TO SERVICES**	**REMARKS**
162.0375 - 174	FIXED MOBILE except aeronautical mobile *K82, K86, K87*	Fixed Mobile Maritime mobile - The bands 161.9625-161.9875 and 162.0125-161.0375 MHz are also allocated to mobile-satellite service for AIS

174 - 290 MHz

FREQUENCY BAND (MHz)	**ALLOCATION TO SERVICES**	**REMARKS**
174 – 230	BROADCASTING *K61*	VHF Television broadcasting Band III Digital Terrestrial Sound and Television Broadcasting
230 – 242.95	FIXED *K88*	Fixed
242.95 – 243.05	MOBILE *K89*	Emergency search and Rescue
243.05 - 290	FIXED *K88*	Fixed links

290 – 387 MHz

FREQUENCY BAND IN MHz	**ALLOCATION TO SERVICES**	**REMARKS**
290 - 328.6	FIXED *K51, K88*	Fixed links
328.6 – 335.4	AERONAUTICAL RADIONAVIGATION *K90*	Instrument landing systems
335.4 – 345	FIXED K88	Fixed Wireless Access New fixed links prohibited
345 - 360	FIXED *K88*	Fixed Wireless Access New fixed links prohibited
360 - 377	FIXED *K88*	Fixed Wireless Access New fixed links prohibited
377 - 380	FIXED MOBILE *K88*	Fixed Wireless Access (TDD)

380 - 387	FIXED *K88*	Fixed links Fixed Wireless Access

387 – 406.0 MHz

FREQUENCY BAND IN MHz	ALLOCATION TO SERVICES	REMARKS
387 - 390	FIXED MOBILE *K88*	Public safety & emergency network
390 - 397	FIXED *K91, K88*	Public safety & emergency network
397 – 399.9	FIXED MOBILE *K88*	Public safety and emergency network
399.9 – 400.05	MOBILE SATELLITE (Earth – space) *K78, K79, K91A*	Little LEOs, earth stations in the mobile-satellite service
	RADIONAVIGATION SATELLITE *K80, K81*	Radionavigation satellite
400.05 - 400.15	STANDARD FREQUENCY & TIME SIGNALS *K92*	Standard time and frequency signals reception (400.1 MHz)
400.15 – 406	METEOROLOGICAL AIDS METEOROLOGICAL SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) EARTH EXPLORATION-SATELLITE (Earth-to-space) Space operation (space-to-Earth)	Meteorological aids Meteorological satellite Mobile satellite Space operation

406.0 – 430 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
406.0 – 406.1	MOBILE-SATELLITE (Earth-space) *K93*	Low power EPIRBs for Search and Rescue
406.1 – 410	FIXED *K51*	Fixed links-Government use
	MOBILE except aeronautical mobile K51	Government use
	RADIO ASTRONOMY *K93A*	Radio Astronomy
410 - 430	MOBILE except aeronautical mobile *K94*	Land Mobile (Trunked Radio)
	FIXED *K94*	Fixed New fixed links prohibited

430 – 455 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
430-450	MOBILE except aeronautical mobile *K95, K96*	Land Mobile Low power private radio (PMR 446)
	FIXED *K95*	Fixed
	Amateur K96	Amateur User licence required

450 – 470	MOBILE *K97*	Band identified for IMT Resolution 224 (Rev.WRC-19)
	FIXED *K98*	Fixed links, FWA onsite paging, wide area paging, land mobile, radio alarms prohibited

470 – 694 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
470 – 694	BROADCASTING *K62, K100*	UHF digital terrestrial Television broadcasting (Bands IV & V) Channels 36-48
	Mobile *K99*	Land mobile – Limited to applications ancillary to broadcasting and programme making

694 – 960 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
694 – 790	MOBILE except aeronautical mobile *K101, K101A*	IMT services high-altitude platform stations as International Mobile Telecommunications (IMT) base stations (HIBS)
790 - 862	FIXED *K101*	Fixed
	MOBILE except aeronautical mobile *K101A, K102, K103*	IMT services high-altitude platform stations as International Mobile Telecommunications (IMT) base stations (HIBS)
862 - 960	FIXED *K101*	Fixed
	MOBILE except aeronautical mobile *K101A, K102, K103*	IMT services high-altitude platform stations as International Mobile Telecommunications (IMT) base stations (HIBS)

960 - 1350 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
960 – 1164	AERONAUTICAL RADIONAVIGATION *K105*	Distance measuring equipment
	AERONAUTICAL MOBILE (R) *K104, K104A*	Aeronautical Mobile Aeronautical mobile-satellite (R) service (E-S)

1164 – 1215	AERONAUTICAL RADIONAVIGATION *K105, K106*	Aeronautical radionavigation,
	RADIONAVIGATION SATELLITE *K106, K107*	Radionavigation satellite
1215 – 1300	EARTH EXPLORATION-SATELLITE *K11A*	Earth exploration
	RADIONAVIGATION-SATELLITE *K51, K107, K109 K110, K112, K113, K111A*	Radionavigation
	RADIOLOCATION *K51, K110, K111A*	Radiolocation
	SPACE RESEARCH (active) *K111A*	Space research
	Amateur *K111A*	Amateur
1300 – 1350	AERONAUTICAL RADIONAVIGATION *K108, K112*	Radio navigation, Radar

1350 - 1427 MHz

FREQUENCY BAND (MHz)	**ALLOCATION TO SERVICES**	**REMARKS**
1350 – 1400	FIXED *K51*	Fixed Point-point links Channel plan ITU-R F.1242
	MOBILE *K51*	Mobile
	RADIOLOCATION *K51*	Radiolocation
1400- 1427	SPACE SERVICES *K113*	All emissions prohibited

1427 – 1429 MHz

FREQUENCY BAND IN MHz	**ALLOCATION TO SERVICES**	**REMARKS**
1427 – 1429	FIXED	Point to point infrastructure links. Channel plan ITU-R F.1242 Rural point-multi point telephony - Channel plan ITU-R F.701
	MOBILE except aeronautical mobile *K113A*	Mobile Band identified for IMT services
	SPACE OPERATIONS	Space operations (Earth-to-Space)

1429 - 1525 MHz

FREQUENCY BAND IN MHz	**ALLOCATION TO SERVICES**	**REMARKS**
1429- 1525	FIXED *K116*	Fixed /FWA prohibited in band 1452-1492 MHz
	MOBILE except aeronautical Mobile *K114B*	In Kenya the band 1429-1518 MHz is identified for IMT
	BROADCASTING *K114, K115, K116*	Satellite and terrestrial DAB (1452-1492 MHz) not allowed

	MOBILE SATELLITE (space-Earth) *K117*	Mobile satellite service Limited to 1518-1525 MHz

1525 – 1535 MHz

FREQUENCY BAND IN MHz	ALLOCATION TO SERVICES	REMARKS
1525- 1530	FIXED *K116*	Fixed: point-point Channel plan ITU-R F.1242
	MARITIME MOBILE-SATELLITE (space - Earth) *K1119, K120, K139, K116, K118*	Maritime mobile
	SPACE OPERATION *K119, K116*	Space operation
1530- 1535	SPACE OPERATION (space-Earth) *K119, K116*	Space operation
	MOBILE-SATELLITE (space- Earth) *K119, K120, K140, K116, K118*	Maritime mobile satellite downlink, Inmarsat
	LAND MOBILE SATELLITE *K119, K120, K140, K116, K118*	Mobile satellite

1535 - 1610 MHz

FREQUENCY BAND MHz	ALLOCATION TO SERVICES	REMARKS
1535 – 1544	MOBILE- SATELLITE (space-Earth) *K119, K120, K140 K116 K118*	Maritime mobile satellite downlink, Inmarsat
1544- 1545	MOBILE-SATELLITE (space-Earth) *K122, K140, K116, K118*	Mobile satellite GMDSS
1545 – 1555	AERONAUTICAL MOBILE-SATELLITE *K119, K121, K140, K116, K118*	Aeronautical mobile satellite
1555 – 1559	LAND MOBILE-SATELLITE *K119, K140, K116, K118*	Mobile satellite
1559– 1610	AERONAUTICAL RADIONAVIGATION *K111, K107*	GPS, Galileo, Glonass
	RADIONAVIGATION SATELLITE (space-Earth, space-space) *K111, K107*	Radionavigation satellite service

1610 – 1631.5 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
1610.0 - 1610.6	MOBILE-SATELLITE (E-s) *K123, K140*	GMPCS/Emerging MSS systems
	AERONAUTICAL RADIONAVIGATION *K125*	Aeronautical Radionavigation
1610.6 - 1613.8	MOBILE SATELLITE (E-s) *K126, K140, K123*	GMPCS/Emerging MSS systems
	RADIO ASTRONOMY *K127*	Radio Astronomy

	AERONAUTICAL RADIONAVIGATION *K125, K126*	Aeronautical Radionavigation
1613.8 - 1626.5	MOBILE-SATELLITE (E-s) *K124, K124A, K126, K140, K116*	GMPCS/Emerging MSS systems
	MARITIME MOBILESATELLITE (space-to-Earth) *K128*	Maritime mobile earth stations
	AERONAUTICAL RADIONAVIGATION Mobile-satellite (space-to-Earth) *K116, K125, K126, K127*	Aeronautical Radionavigation
1626.5 - 1631.5	MARITIME MOBILE-SATELLITE *K119, K120, K118*	Maritime mobile earth stations receiving in the frequency band 1 621.35-1 626.5 MHz

1631.5–1660.5 MHz

FREQUENCY BAND (MHz)	**ALLOCATION TO SERVICES**	**REMARKS**
1631.5 - 1636.5	MARITIME MOBILE-SATELLITE *K119, K120, K140 K118*	Maritime mobile
	LAND MOBILE-SATELLITE *K120, K140, K118*	Mobile satellite
1636.5 - 1645.5	MARITIME MOBILE-SATELLITE *K119, K120, K140, K118*	Maritime mobile
1645.5 - 1646.5	MOBILE-SATELLITE *K119, K128, K140, K118*	Mobile satellite
1646.5 - 1656.5	AERONAUTICAL MOBILE-SATELLITE (R) *K119, K121, K129, K140, K118*	Aeronautical mobile satellite
1656.5 – 1660	LAND MOBILE-SATELLITE *K119, K140, K118*	Mobile satellite
1660- 1660.5	LAND MOBILE SATELLITE (Earth-to-space) *K130, K140, K118*	Mobile satellite
	RADIO ASTRONOMY *K130*	Radio Astronomy

1660.5 - 1675 MHz

FREQUENCY BAND (MHz)	**ALLOCATION TO SERVICES**	**REMARKS**
1660.5- 1668.4	RADIO ASTRONOMY *K131*	Emissions prohibited
	SPACE RESEARCH (passive) *K131*	Emissions prohibited
1668.4 – 1670	METEOROLOGICAL AIDS *K134*	Meteorological aids
	FIXED *K134*	Fixed
	MOBILE SATELLITE (Earth-space) *K132, K134*	Mobile satellite
1670- 1675	METEOROLOGICAL AIDS *K134*	Meteorological aids
	METEOROLOGICAL SATELLITE (space-Earth) *K134*	Meteorological satellite (downlink)
	FIXED *K134*	Fixed

	MOBILE SATELLITE (Earth-space) *K132, K134*	Mobile satellite

1675 - 1700 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
1675- 1690	METEOROLOGICAL AIDS	Meteorological satellite downlink
	METEOROLOGICAL SATELLITE (space-Earth)	Meteorological satellite downlink
	FIXED	Fixed
	MOBILE	Mobile
1690- 1700	METEOROLOGICAL AIDS METEOROLOGICAL SATELLITE (space-Earth) *K135*	Meteorological satellite downlink
	FIXED *K135*	Fixed
	MOBILE *K135*	Mobile

1700 - 1920 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
1700- 1710	FIXED	Fixed links
	METEOROLOGICAL SATELLITE	Meteorological satellite downlink
	MOBILE	Mobile
1710.00 – 1920	FIXED	Fixed Wireless Access
	MOBILE *K136, K137, K138, K139, K140*	Public cellular mobile / IMT-terrestrial systems Cordless PABX (DECT) in band 1880-1900 MHz

1920 – 2025 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
1920-1980	FIXED *K136, K138*	Fixed Links (New fixed links prohibited)
	MOBILE *K136, K138, K139, K140*	Mobile- IMT terrestrial systems
1980 - 2010	FIXED *K139*	(New fixed links prohibited) Fixed wireless Access
	MOBILE *K138*	Mobile- IMT terrestrial systems
	MOBILE SATELLITE (Earth-space) *K140, K139, K143*	Satellite component of IMT-uplink
2010-2025	FIXED *K138*	Fixed links (New fixed links prohibited) HAPs
	MOBILE *K136, K138, K139, K140*	Mobile (IMT terrestrial systems)

2025 – 2200 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
2025-2110	FIXED	Point to point links Channel Plan ITU-R F.1098
	MOBILE *K138, K142*	Mobile
	SPACE RESEARCH (Earth-space) *K143*	Space research / operations & telemetry / telecommand
2110-2170	FIXED *K136*	Point to point links (New fixed links prohibited) HAPs
	MOBILE *K136, K138, K139, K140*	Mobile (IMT)
2170-2200	FIXED K136	Point-point links (New fixed links prohibited)
	MOBILE SATELLITE (space - Earth) *K136, K140, K143*	Mobile satellite downlink (satellite component of IMT)

2200 - 2500 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
2200 - 2300	FIXED	Point –point links Channel plan ITU-R F.1098
	MOBILE *K142*	Mobile
	SPACE RESEARCH *K143*	Space research, space operations and earth exploration
2 300 - 2 500	FIXED *K52, K162*	Point-point links (New fixed links prohibited)
	MOBILE	Mobile- Not available in near future
	MOBILE SATELLITE (space-Earth) *K124A*	GMPCS /emerging MSS systems

2500 - 2690 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
2 500 – 2670	FIXED	Fixed Links (Govt. use) Channel Plan ITU-R F.1243
	MOBILE *K137*	Mobile IMT systems
	MOBILE SATELLITE (Space-Earth) *K140, K141B*	Mobile Satellite
2 670 - 2 690	FIXED	Point-to-point links
	MOBILE *K137*	Mobile IMT systems
	MOBILE-SATELLITE (Earth-space) *K140, K144, K141B*	Mobile satellite-satellite component IMT2000

2690 – 3400 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
2 690 - 2 700	EARTH EXPLORATION- SATELLITE *K145*	All emissions prohibited
	RADIO ASTRONOMY *K145*	All emissions prohibited
	SPACE RESEARCH *K145*	All emissions prohibited
2 700 - 2 900	AERONAUTICAL RADIONAVIGATION *K146*	Meteorological Radars Navigational systems
2 900 – 3 100	RADIONAVIGATION *K147, K149*	Radar systems
	RADIOLOCATION *K148*	Radiolocation
3 100 – 3 300	RADIOLOCATION *K51*	Radiolocation
3 300 –3 400	*MOBILEK152*	Band identified for IMT

3400 – 4400 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
3400 – 3600	FIXED	Fixed links prohibited
	FIXED-SATELLITE (space –Earth)	Satellite downlink
	MOBILE except aeronautical Mobile *K152A*	Mobile Band identified for IMT
3600 - 3800	FIXED	Fixed links prohibited
	FIXED-SATELLITE (space – Earth)	Satellite downlink
	MOBILE except aeronautical Mobile *K152B, K152C*	Mobile Band identified for IMT
3800-4200	FIXED Mobile	fixed links prohibited Mobile
	FIXED-SATELLITE (space –Earth)	Satellite downlink
4 200 – 4400	AERONAUTICAL RADIONAVIGATION *K153*	Aeronautical radionavigation
	AERONAUTICAL MOBILE (R) *K153A*	Aeronautical mobile

4400 – 4990 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
4 400 – 4500	FIXED	Fixed links (New fixed links are prohibited). Channel plan ITU-R F.1099 Fixed Wireless Access
	MOBILE	Mobile
4 500 – 4800	FIXED	Point-to-point infrastructure links. Channel plan ITU-R F.1099

	FIXED-SATELLITE (space-Earth) *K154*	Satellite downlink National allotment as per Appendix 30B
	MOBILE	Mobile
4 800 – 4990	FIXED	Government use (New fixed links prohibited)
	MOBILE	Mobile

4990– 5725 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
4 990 – 5000	FIXED *K155*	Fixed links Channel plan ITU-R F.1099
	MOBILE *K155*	Mobile
	RADIO ASTRONOMY *K155*	Radio Astronomy
5 000 - 5 010	AERONAUTICAL RADIONAVIGATION *K126*	Aeronautical radionavigation
	RADIONAVIGATION SATELLITE (Earth-space) *K126*	Radionavigation satellite uplink
5 010 - 5 030	AERONAUTICAL RADIONAVIGATION *K126*	Aeronautical radionavigation
	RADIONAVIGATION SATELLITE (space -Earth), (space-space) *K107, K126, K159*	Radionav satellite downlink & inter-satellite links
	AERONAUTICAL MOBILE-SATELLITE (R)	Aeronautical mobile satellite
5 030 – 5 150	AERONAUTICAL RADIONAVIGATION *K156, K157, K126*	Microwave landing systems
	AERONAUTICAL MOBILE-SATELLITE (R)	Aeronautical mobile satellite
	AERONAUTICAL MOBILE (R) *K157A*	5 091-5 150 MHz limited to surface applications at airports
	FIXED-SATELLITE (Earth-to-space)	Fixed satellite services

5150– 5725 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
5 150 - 5 250	AERONAUTICAL RADIONAVIGATION *K160*	Aeronautical Radionavigation
	FIXED-SATELLITE (Earth- space) *K160*	Fixed satellite
	MOBILE *K161, K163, K162*	Wireless Access Systems (WAS)
5 250 - 5 350	RADIOLOCATION *K164, K162*	Radiolocation
	FIXED MOBILE *K161, K164*	Wireless Access Systems (WAS)

5350– 5650 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
5 350 - 5 460	AERONAUTICAL RADIONAVIGATION *K165*	Radiolocation
	RADIOLOCATION *K166, K165*	Radiolocation

5 460 - 5 470	RADIONAVIGATION *K165*	Radionavigation
	RADIOLOCATION *K166*	Radiolocation
5 470 – 5650	MARITIME RADIONAVIGATION *K170*	Met. Radars Maritime radars
	FIXED MOBILE *K161, K162*	Wireless Access Systems (WAS)
	RADIOLOCATION *K167*	Radiolocation

5650 - 5850 MHz

FREQUENCY BAND (MHz)	**ALLOCATION TO SERVICES**	**REMARKS**
5 650 – 5725	RADIOLOCATION	Radiolocation
	MOBILE *K168, K169*	Mobile
	FIXED *K168, K162*	Fixed
5 725 – 5850	FIXED-SATELLITE (Earth-space) *K52, K168*	Fixed satellite uplink
	MOBILE *K52, K168*	
	FIXED *K52, K168, K162*	Fixed wireless systems (Limited to 5725-5800 MHz)
	RADIOLOCATION *K52*	Radiolocation

5850 – 7075 MHz

5 850 – 7075	FIXED *K171*	Point-point links Channel plan ITU-R F.383 and ITU-R F.384 Wireless Access Systems (5925-6425 MHz) in line with SRD Guidelines
	FIXED-SATELLITE (Earth-space) *K154, K172, K173, K174, K175,*	Satellite uplinks - National allotment for FSS uplink as per Appendix 30B
	MOBILE *K171A*	Mobile

7075 – 7450 MHz

FREQUENCY BAND (MHz)	**ALLOCATION TO SERVICES**	**REMARKS**
7 075 – 7250	FIXED *K171, K176*	Point-to –point fixed links (Channel plan ITU-R F. 385)
	MOBILE *K171A, K176*	Mobile
	EARTH EXPLORATION-SATELLITE (Earth-to-space) *K176A*	Earth exploration satellite services
7 250 – 7450	FIXED *K177*	Point-point links (Channel plan ITU-R F. 385)
	FIXED-SATELLITE (space- Earth) *K177*	Fixed Satellite downlinks
	MOBILE except aeronautical mobile *K177*	Mobile
	MARITIME MOBILE-SATELLITE (space-to-Earth) *K178A*	Maritime mobile satellite

7450 – 7750 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
7 450 – 7550	FIXED	Fixed links (Channel plan ITU-R F. 385)
	FIXED-SATELLITE (space –Earth)	Fixed satellite
	METEOROLOGICAL-SATELLITE (space – Earth) *K178*	Meteorological satellite
	MOBILE except aeronautical mobile	Mobile
	MARITIME MOBILE-SATELLITE (space-to- Earth) *K178A*	Maritime mobile satellite
7 550 – 7750	FIXED	Fixed links (Channel plan ITU-R F.385)
	FIXED-SATELLITE (space -Earth)	Fixed satellite
	MOBILE except aeronautical mobile	Mobile
	MARITIME MOBILE-SATELLITE (space-to- Earth) *K178A*	Maritime mobile satellite

7750- 8215 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
7 750- 7900	FIXED	Point-to-point links (Channel plan ITU-R F. 386)
	METEOROLOGICAL-SATELLITE (space –Earth)	Mobile Satellite Service for non-GSO Metsat systems
7 900 – 8175	FIXED	Point-point links (Channel plan ITU-R F. 386)
	FIXED-SATELLITE (Earth-space)	Fixed satellite
	MOBILE *K177, K179*	Mobile
8175 – 8215	FIXED	Point-point links (Channel plan ITU-R F. 386)
	FIXED-SATELLITE (Earth-space)	Fixed Satellite uplink
	METEOROLOGICAL-SATELLITE (space – Earth)	Meteorological satellite
	MOBILE *K179*	Mobile

8215 – 8750 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
8215 – 8400	FIXED	Point-point links (Channel plan ITU-R F. 386)
	FIXED-SATELLITE (Earth-space)	Satellite uplink
	MOBILE *K179*	Mobile
8 400 – 8500	FIXED	Point-point links (Channel plan ITU-R F. 386)

	MOBILE	Mobile
	SPACE RESEARCH *K180*	Space research
	RADIOLOCATION	Government use
	MOBILE *K181*	Government use
	MOBILE *K181*	Government use

8750 - 9500 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
8 750 – 8850	RADIOLOCATION	Radiolocation
	AERONAUTICAL- RADIONAVIGATION *K182*	Navigational aids
8 850 – 9000	RADIOLOCATION	Radiolocation
	MARITIME- RADIONAVIGATION *K183*	Radars
9 000 – 9200	AERONAUTICAL-RADIONAVIGATION *K186*	Aeronautical radionavigation
9 200 – 9300	RADIOLOCATION *K184*	Radiolocation
	MARITIME-RADIONAVIGATION *K183, K184*	Radars
	EARTH EXPLORATION-SATELLITE (active) *K184A*	Earth exploration-satellite service (active)
9 300 – 9500	RADIONAVIGATION *K184, K151, K185, K186*	Weather/meteorological radars

9500 – 10 450 MHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
9500 – 9800	RADIOLOCATION	Radiolocation
	RADIONAVIGATION	Radionavigation
9 800 - 10 000	RADIOLOCATION *K187*	Radiolocation
	EARTH EXPLORATION-SATELLITE (active) *K184A*	Earth exploration-satellite service (active)
10 000- 10 450	FIXED *K187*	Fixed links (new fixed links prohibited) Fixed Wireless Access (Channel plan ITU-R F.1568)
	MOBILE *K187*	Mobile
	RADIOLOCATION K187	Radiolocation
	EARTH EXPLORATION-SATELLITE (active) *K184A*	Earth exploration-satellite service (active)

10.45 – 10.68 GHz

FREQUENCY BAND (MHz)	ALLOCATION TO SERVICES	REMARKS
10.45 - 10.5	RADIOLOCATION	Radiolocation

	FIXED *K188*	Fixed-simplex
	MOBILE *K188*	Mobile-simplex
10.5 - 10.6	FIXED	Fixed (New fixed links prohibited) Fixed Wireless Access (Channel Plan ITU-R F. 1568)
	MOBILE	Mobile
10.6 – 10.68	EARTH EXPLORATION-SATELLITE *K190*	Earth exploration satellite
	MOBILE *K189*	Mobile-simplex
	RADIO ASTRONOMY SPACE RESEARCH	Radio Astronomy Space Research
	FIXED K189	Fixed Wireless Access (Channel plan ITU-R F. 1568)

10.68 – 11.7 GHz

FREQUENCY BAND IN GHz	**ALLOCATION TO SERVICES**	**REMARKS**
10.68 – 10.7	EARTH EXPLORATION SATELLITE *K191*	All emissions prohibited
	RADIO ASTRONOMY *K191*	All emissions prohibited
	SPACE RESEARCH *K191*	All emissions prohibited
10.7 – 11.7	FIXED	Point-point Links (Channel plan ITU-R F.387)
	FIXED-SATELLITE (space – Earth) (Earth – space) *K154, K192*	National allotment for fixed satellite downlink-Appendix 30B. Uplinks are limited to feeder links for BSS (Gateway & user downlink)

11.7 – 13.25 GHz

FREQUENCY BAND (GHz)	**ALLOCATION TO SERVICES**	**REMARKS**
11.7 - 12.5	FIXED *K194, K195, K196*	Point-point links (Channel plan ITU-R F.746)
	BROADCASTING *K194, K195, K196*	Broadcasting
	BROADCASTING-SATELLITE *K194, K195, K196*	National allotment for BSS downlink-Appendix 30 (Gateway downlink)
12.5 - 12.75	FIXED-SATELLITE (space -Earth), (Earth-space) *K193*	Fixed satellite
12.75 - 13.25	FIXED	Point-point links
	FIXED-SATELLITE (Earth-space) *K154, K195A*	National allotment for FSS uplink
	MOBILE	Mobile

13.25 - 14.3 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
13.25 - 13.4	AERONAUTICAL RADIONAVIGATION *K197*	Navigational aids
	EARTH EXPLORATION-SATELLITE (active)	Earth exploration-satellite (active)
	SPACE RESEARCH (active)	Space research
13.4 - 13.75	RADIOLOCATION	Radiolocation
	FIXED-SATELLITE (space-to-Earth)	Fixed satellite services
	EARTH EXPLORATION-SATELLITE (active)	Earth exploration-satellite (active)
	SPACE RESEARCH (active) *K197A*	Space research
	Standard frequency and time signal-satellite (Earth-to-space)	Standard frequency and time signal-satellite
13.75 – 14.0	FIXED-SATELLITE (Earth-space) *K193, K198*	Satellite uplinks (Gateway)
	RADIOLOCATION *K198*	Radiolocation
14.0 –14.3	FIXED-SATELLITE (Earth-space) *K193, K199, K175, K200, K201*	Satellite uplinks (User uplink)
	RADIONAVIGATION *K202, K200*	Radionavigation
	Mobile satellite (Earth-space) *K1201, K200*	Mobile satellite uplink

14.3 – 15.35 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
14.3 - 14.5	FIXED	Fixed Links (Channel plan ITU-R F 746)
	FIXED-SATELLITE (Earth-space) *K199, K193, K175, K200, K201*	Satellite uplinks (Gateway uplink)
	Mobile satellite *K205, K200*	Mobile satellite
14.5 – 15.35	FIXED *K203*	Point-point infrastructure links (cellular base station approach links) (channelisation plan ITU-R F. 636)
	SPACE RESEARCH *K203A*	Space research

15.35 – 15.7 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
15.35 – 15.4	EARTH EXPLORATION SATELLITE (passive) *K204*	All emissions prohibited
	SPACE RESEARCH (passive) *K204*	All emissions prohibited
	RADIO ASTRONOMY *K204*	All emissions prohibited
15.4 - 15.43	AERONAUTICAL RADIONAVIGATION *K205*	Aeronautical radionavigation

	RADIOLOCATION	Radiolocation
	Aeronautical mobile (OR) *K206A*	Aeronautical mobile (OR)
15.43-15.63	AERONAUTICAL RADIONAVIGATION *K206*	Aeronautical radionavigation
	FIXED SATELLITE (Earth-space) *K207, K206*	Fixed satellite
	RADIOLOCATION	Radiolocation
	Aeronautical mobile (OR) *K206A*	Aeronautical mobile (OR)
15.63-15.7	AERONAUTICAL RADIONAVIGATION *K205*	Aeronautical radionavigation
	RADIOLOCATION	Radiolocation
	Aeronautical mobile (OR) *K206A*	Aeronautical mobile (OR)

15.7 – 18.1 GHz

FREQUENCY BAND (GHz)	**ALLOCATION TO SERVICES**	**REMARKS**
15.7-17.3	RADIOLOCATION	Radiolocation
	MOBILE *K208*	Mobile
	FIXED *K208*	Fixed
17.3-17.7	FIXED SATELLITE (Earth-Space) (space-Earth) *K211, K209, K210*	Feeder link plans for broadcasting satellite (Appendix 30A)
17.7-18.1	FIXED	Fixed links (Channel plan ITU-R F.595)
	FIXED SATELLITE (Earth – space) *K211* (space –Earth) *K193, K211A, K211B*	Feeder link plans for broadcasting satellite (Appendix 30A) & ESIM
	MOBILE	Mobile

18.1 – 18.8 GHz

FREQUENCY BAND (GHz)	**ALLOCATION TO SERVICES**	**REMARKS**
18.1-18.4	FIXED *K213*	Point-point links (Channel plan as per ITU-R F.595)
	FIXED SATELLITE (space-Earth) *K193, K212, K213, K211A K211B (Earth -to-space)*	BSS feeder links
	MOBILE *K213*	Mobile
	INTER-SATELLITE *K213A*	Inter-satellite links
18.4-18.6	FIXED	Point-point links (Channel plan as per ITU-R F.595)
	FIXED SATELLITE (space-Earth) *K193, K211A, K211B*	Fixed satellite Gateway downlink
	MOBILE	Mobile
	INTER-SATELLITE *K213A*	Inter-satellite links
18.6-18.8	FIXED *K214*	Point-point links (Channel plan as per ITU-R F.595)

	FIXED SATELLITE *K214, K215, K211A*	Fixed satellite
	EARTH EXPLORATION SATELLITE (passive)	Earth exploration satellite

18.8 – 21.4 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
18.8-19.7	FIXED	Point-point links - (Channel plan ITU-R F.595)
	FIXED SATELLITE *K216, K217, K218, K219, K220, K211A, K211B*	Fixed satellite Gateway downlink
	MOBILE	Mobile
	INTER-SATELLITE *K213A, K219B*	Inter-satellite links
19.7-20.1	FIXED SATELLITE (space-Earth) *K193, K210, K211B, K211C*	Fixed satellite User downlink
	INTER-SATELLITE *K213A*	Inter-satellite links
20.1-21.2	FIXED SATELLITE (space-Earth) *K193 K221, K222, K223, K224, K210, K211B, K211C*	Fixed satellite
	MOBILE SATELLITE (space-Earth) *K221, K222, K223, K224, K224A*	Mobile satellite
	INTER-SATELLITE *K213A*	Inter-satellite links
21.2-21.4	FIXED	Fixed links-simplex (Channel plan ITU-R F.637)
	MOBILE	Mobile

21.4 - 22.5 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
21.4-22.0	FIXED	Point-point links (Channel plan ITU-R F.637)
	MOBILE	Mobile
	BROADCASTING SATELLITE *K225*	High definition TV
22.0-22.21	FIXED	Point-point links (Channel plan ITU-R F.637)
	MOBILE except aeronautical mobile (R) *K226A, K226B, K226C, K226D, K226E*	Mobile
22.21-22.5	FIXED *K226*	Point-point links (Channel plan ITU-R F.637)
	MOBILE except aeronautical mobile *K226*	Mobile

22.5 – 24.25 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
22.5-23.6	FIXED	Fixed links (Channel plan ITU-R F.637)
	MOBILE	Mobile
	SPACE RESEARCH SERVICES(Earth to Space)	SRS
23.6-24	EARTH EXPLORATION SATELLITE (passive) *K227*	All emissions prohibited
	RADIO ASTRONOMY *K227*	All emissions prohibited
	SPACE RESEARCH (passive) *K227*	All emissions prohibited
24 – 24.05	AMATEUR *K52*	Amateur - User licence required
24.05 – 24.25	RADIOLOCATION *K52*	Radiolocation ISM

24.25 – 25.5 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
24.25 – 24.45	FIXED	Fixed Wireless Access (Channel plan ITU-R F.748)
	MOBILE except aeronautical Mobile *K227A*	Identified for IMT
24.45 –24.75	FIXED	Fixed Wireless Access (Channel plan ITU-R F.748)
	INTER-SATELLITE	Inter-satellite links
	FIXED SATELLITE (Earth-space)	24.65-25.25 GHz –FSS (E-s) limited to earth stations using a minimum antenna diameter of 4.5 m.
	MOBILE except aeronautical Mobile *K227A*	Identified for IMT
24.75- 25.25	FIXED	Fixed wireless access Fixed links (Channel plan ITU-R F.748)
	MOBILE except aeronautical Mobile *K227A*	Identified for IMT
25.25- 25.5	FIXED	Fixed links (Channel plan ITU-R F.748)
	INTER-SATELLITE *K228*	Space Research and earth exploration applications
	MOBILE *K227A*	Mobile – Identified for IMT

25.5 - 27.5 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
25.5 – 27.0	FIXED	Fixed Wireless Access Fixed links (Channel plan ITU-R F.748)
	EARTH EXPLORATION SATELLITE (space-Earth) *K229, K230*	Earth exploration satellite
	INTER-SATELLITE *K228*	Space Research and earth exploration applications
	MOBILE *K227A*	Mobile – Identified for IMT
27.0 – 27.5	FIXED	Point-point links (Channel plan ITU-R F.748)
	INTER-SATELLITE *K228*	Space Research and earth exploration applications
	MOBILE *K227A*	Mobile – Identified for IMT

27.5 – 29.9 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
27.5 – 29.5	FIXED *K231, K232*	Fixed links, (broadband) (Channel plan ITU-R F.748)
	FIXED SATELLITE (Earth – space) *K231, K232, K193, K216, K233, K220, K218, K234, K235, K210, K211A, K211B*	Fixed satellite Gateway Uplink
	MOBILE *K231, K232*	Mobile
	INTER-SATELLITE *K213A*	Inter-satellite links
29.5-29.9	FIXED SATELLITE (Earth-space) *K231, K210, K211B, K211C*	Fixed satellite User uplink
	INTER-SATELLITE *K213A*	Inter-satellite links

29.9 – 31.5 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
29.9-31.0	FIXED SATELLITE (Earth-space) *K193, K233, K221, K222, K231, K232, K210, K211B, K211C, K224A*	Fixed satellite
	MOBILE SATELLITE (Earth-space) *K221, K222, K231, K232*	Mobile satellite
	INTER-SATELLITE *K213A*	Inter-satellite links
31.0-31.3	FIXED *K51, K236A*	Fixed (Channel plan ITU-R F.746) HAPS
	MOBILE *K51*	Mobile
31.3-31.5	EARTH EXPLORATION SATELLITE (passive) *K236*	All emissions prohibited

	RADIO ASTRONOMY *K236*	All emissions prohibited
	SPACE RESEARCH (passive) *K236*	All emissions prohibited

31.5 – 33 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
31.5-31.8	EARTH EXPLORATION SATELLITE (passive)	Earth exploration satellite
	RADIO ASTRONOMY	Radio astronomy
	SPACE RESEARCH (passive)	Space research
	Fixed *K51*	Fixed
31.8 – 32	FIXED *K237, K238*	Fixed links (Channel plan ITU-R F.1520)
	RADIONAVIGATION *K237*	Radionavigation
32 - 33	FIXED *K237, K238*	Fixed (Channel plan ITU-R F.1520)
	INTER-SATELLITE *K237, K239*	Inter-satellite links
	RADIONAVIGATION *K237, K239*	Radionavigation

33 – 36 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
33 - 33.4	FIXED *K237, K238*	Fixed (Channel plan ITU-R F.1520)
	RADIONAVIGATION *K237*	Radionavigation
33.4 –35.2	RADIOLOCATION	Radiolocation
	SPACE RESEARCH (deep space) (Earth – space)	Space reasearch
35.2-35.5	METEOROLOGICAL AIDS	Meteorological aids
	RADIOLOCATION	Radiolocation
35.5-36	METEOROLOGICAL AIDS K240	Meteorological aids
	RADIOLOCATION *K240*	Radiolocation
	SPACE RESEARCH (active) *K240*	Space research (active)
	EARTH EXPLORATION SATELLITE (active) K240	Earth exploration satellite

36 - 40.5 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
36-37.0	FIXED *K51, K237*	Fixed (Channel plan ITU-R F.749)
	MOBILE *K51, K237*	Mobile
37 – 37.5	FIXED *K51, K237*	Fixed (Channel plan ITU-R F.749)

	MOBILE except aeronautical mobile *K51, K237, K237A*	Mobile- Identified for IMT
37.5-39.5	FIXED *K237 K240B*	New fixed links not allowed, 38 -39.5 GHz - HAPs may be allowed
	MOBILE *K237, K237A*	Mobile - Identified for IMT
	FIXED SATELLITE *K237, K237B, K240A*	Fixed satellite,
39.5-40.5	FIXED *K237*	Fixed (Channel plan ITU-R F.749) New fixed links not allowed
	MOBILE *K237, K237A*	Mobile - Identified for IMT
	FIXED SATELLITE (space-Earth) *K237, K210, K240A K240C*	Fixed satellite
	MOBILE-SATELLITE (space-Earth) *K237, K240C*	Mobile satellite

40.5 – 43.5 GHz

FREQUENCY BAND (GHz)	**ALLOCATION TO SERVICES**	**REMARKS**
40.5-42.5	FIXED *K237*	Fixed, Fixed Wireless Access Fixed links not allowed
	FIXED SATELLITE (space-Earth) *K237, K241 K240A*	Fixed satellite
	BROADCASTING *K237*	Broadcasting
	BROADCASTING-SATELLITE *K237, K241 K242*	Broadcasting satellite
	MOBILE *K237A*	Mobile - Identified for IMT
42.5 – 43.5	FIXED *K51, K237*	Fixed FWA (broadband) FWA not allowed
	FIXED SATELLITE (Earth-space) *K237, K51, K243, K241, K242*	Fixed satellite
	MOBILE K237, *K51, K237A*	Mobile - Identified for IMT
	RADIO ASTRONOMY *K237, K241*	Radio Astronomy

43.5 – 50.2 GHz

FREQUENCY BAND (GHz)	**ALLOCATION TO SERVICES**	**REMARKS**
43.5-47	MOBILE *K244, K245*	Mobile
	MOBILE SATELLITE *K244*	Mobile satellite
	RADIONAVIGATION *K244*	Radionavigation
	RADIONAVIGATION SATELLITE *K244*	Radionavigation satellite
47-47.2	AMATEUR	Amateur User licence required
	AMATEUR SATELLITE	Amateur satellite
47.2 - 48.2	FIXED *K51, K248, K249*	Fixed HAPs

	FIXED SATELLITE (Earth-space) (space-Earth) *K51 K2343, K248, K249, K210, K246, K247, K240A*	Fixed satellite – New FSS not allowed
	MOBILE *K51, K248, K249, K249A*	Mobile- 47.2-48.2 GHz identified for IMT
48.2-50.2	FIXED *K51, K248, K249*	Fixed HAPs
	FIXED SATELLITE (Earth-space) (space-Earth) *K51, K2343, K248, K249, K210, K246, K247, K240A*	Fixed satellite
	MOBILE *K51, K248, K249*	Mobile

50.2 – 54.25 GHz

FREQUENCY BAND (GHz)	**ALLOCATION TO SERVICES**	**REMARKS**
50.2 - 50.4	EARTH EXPLORATION SATELLITE (passive) *K250*	Earth exploration satellite
	SPACE RESEARCH (passive) *K250*	Space research
50.4 - 51.4	FIXED	Fixed
	FIXED SATELLITE (Earth-space) *K240A*	Fixed satellite
	MOBILE	Mobile
51.4 - 52.4	FIXED *K237, K251*	Fixed (Channel plan ITU-R F.1496)
	MOBILE *K237, K251*	Mobile
	FIXED SATELLITE (Earth-space) *K240A, K251A*	FSS limited to gateway earth stations with a min. antenna diameter of 2.4 m
52.4 – 52.6	FIXED *K237, K251*	Fixed (Channel plan ITU-R F.1496)
	MOBILE *K237, K251*	Mobile
52.6-54.25	EARTH EXPLORATION SATELLITE (passive) *K250, K251*	All emissions prohibited
	SPACE RESEARCH (passive) *K250, K251*	All emissions prohibited

54.25 – 58.2 GHz

FREQUENCY BAND GHz	**ALLOCATION TO SERVICES**	**REMARKS**
54.25-55.78	EARTH EXPLORATION SATELLITE (passive)	Earth exploration satellite
	SPACE RESEARCH (passive)	Space research
	INTER-SATELLITE *K252*	Inter-satellite links
55.78-58.2	EARTH EXPLORATION SATELLITE (passive) *K237*	Earth exploration satellite
	FIXED *K237, K255*	Fixed (Channel plan ITU-R F.1497)

	MOBILE *K237, K253*	Mobile
	SPACE RESEARCH (passive) *K237*	Space research
	INTER-SATELLITE *K237, K252, K254*	Inter-satellite

58.2 – 59.3 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
58.2 – 59	EARTH EXPLORATION SATELLITE *K237*, *K251*	Earth exploration satellite
	FIXED *K237, K251*	Fixed (Channel plan ITU-R F.1497)
	MOBILE *K237, K251*	Mobile
	SPACE RESEARCH (passive) *K237, K251*	Space Research
59 - 59.3	EARTH EXPLORATION SATELLITE (passive)	Earth exploration satellite
	FIXED	Fixed
	MOBILE *K253*	Mobile
	RADIOLOCATION *K256*	Radiolocation
	SPACE RESEARCH (passive)	Space Research
	INTER SATELLITE *K252*	Inter-satellite links

59.3 – 71GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
59.3-66	INTER SATELLITE *K237 K39, K251*	Inter-satellite links
	FIXED *K237, K40, K251*	Fixed
	MOBILE *K237, K251, K40, K253*	Mobile
66 – 71	MOBILE *K244, K245, K241, K256A*	Mobile – The band 66 – 71 GHz is Identified for IMT
	INTER SATELLITE *K244*	Inter-satellite links
	MOBILE SATELLITE *K244*	Mobile satellite
	RADIONAVIGATION	Radionavigation
	RADIONAVIGATION-SATELLITE *K244*	Radionavigation satellite

71 – 76 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
71 – 74	FIXED	Fixed
	FIXED SATELLITE (space – Earth)	Fixed satellite
	MOBILE	Mobile
	MOBILE SATELLITE (space – Earth)	Mobile satellite
74-76	FIXED *K257*	Fixed
	FIXED SATELLITE (space-Earth) *K257*	Fixed satellite
	MOBILE *K257*	Mobile

	BROADCASTING *K257*	Broadcasting
	BROADCASTING SATELLITE *K257*	Broadcasting satellite

76 – 84 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
76 - 77.5	RADIO ASTRONOMY *K51*	Radio Astronomy
	RADIOLOCATION *K51*	short range automotive radar (76-77 GHz)
77.5 - 78	AMATEUR *K51*	Amateur
	RADIOLOCATION *K51*	short range automotive radar (77.5-78 GHz)
78 - 79	RADIOLOCATION *K51, K258*	short range automotive radar (77-81 GHz)
79 - 81	RADIO ASTRONOMY *K51*	Radio Astronomy
	RADIOLOCATION *K51*	short range automotive radar(77-81 GHz)
81 - 84	FIXED *K51, K259*	Fixed
	FIXED SATELLITE (Earth – space) *K51, 259*	Fixed satellite
	MOBILE *K51, K259*	Mobile
	MOBILE SATELLITE (Earth – space) *K51, K259*	Mobile satellite
	RADIO ASTRONOMY *K51, K259*	Radio Astronomy

84 – 92 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
84 - 86	FIXED *K51*	Fixed
	FIXED SATELLITE (Earth – space) *K51*	Fixed satellite
	MOBILE *K51*	Mobile
	RADIO ASTRONOMY *K51*	Radio Astronomy
86 - 92	EARTH EXPLORATION SATELLITE (passive) *K250*	All emissions prohibited
	RADIO ASTRONOMY *K250*	All emissions prohibited
	SPACE RESEARCH (passive) *K250*	All emissions prohibited

92 – 94.1 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
92-94	FIXED *K51*	Fixed
	MOBILE *K51*	Mobile
	RADIO ASTRONOMY *K51*	Radio Astronomy
	RADIOLOCATION *K51*	Radiolocation

94-94.1	EARTH EXPLORATION SATELLITE (active) *K260, K261*	Earth exploration satellite
	RADIO ASTRONOMY *K260, K261*	Radio astronomy
	SPACE RESEARCH (active) *K260, K261*	Space research

94.1 – 100 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
94.1-95	FIXED *K51*	Fixed
	MOBILE *K51*	Mobile
	RADIO ASTRONOMY *K51*	Radio Astronomy
	RADIOLOCATION *K51*	Radiolocation
95-100	FIXED *K51, K244*	Fixed
	MOBILE *K51, K244*	Mobile
	RADIO ASTRONOMY *K51, K244*	Radio Astronomy
	RADIOLOCATION *K51*	Radiolocation
	RADIONAVIGATION *K51, K244*	Radionavigation
	RADIONAVIGATION SATELLITE *K51, K244*	Radionavigation satellite

100 - 109.5 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
100-102	EARTH EXPLORATION SATELLITE (passive) *K250*	All emissions prohibited
	RADIO ASTRONOMY *K250*	All emissions prohibited
	SPACE RESEARCH (passive) *K250*	All emissions prohibited
102-105	FIXED *K51*	Fixed
	MOBILE *K51*	Mobile
	RADIO ASTRONOMY *K51*	Radio Astronomy
105-109.5	FIXED *K51*	Fixed
	MOBILE *K51*	Mobile
	SPACE RESEARCH (passive) *K51, K262*	Space Research
	RADIO ASTRONOMY *K51*	Radio astronomy

109.5 – 116 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
109.5-111.8	EARTH EXPLORATION SATELLITE (passive) *K250*	All emissions prohibited

	RADIO ASTRONOMY *K250*	All emissions prohibited
	SPACE RESEARCH (passive) *K250*	All emissions prohibited
111.8-114.25	FIXED *K51*	Fixed
	MOBILE *K51*	Mobile
	RADIO ASTRONOMY *K51*	Radio Astronomy
	SPACE RESEARCH (passive) *K51, K262*	Space Research
114.25-116	EARTH EXPLORATION SATELLITE (passive) *K250*	All emissions prohibited
	RADIO ASTRONOMY *K244*	All emissions prohibited
	SPACE RESEARCH (passive) *K250*	All emissions prohibited

116 - 123 GHz

FREQUENCY BAND (GHz)	**ALLOCATION TO SERVICES**	**REMARKS**
116-119.98	EARTH EXPLORATION SATELLITE (passive)	Earth exploration satellite
	INTER SATELLITE *K263*	Inter-satellite links
	SPACE RESEARCH (passive)	Space Research
119.98-122.25	EARTH EXPLORATION SATELLITE (passive)	Earth exploration satellite
	INTER-SATELLITE *K263*	Inter-satellite links
	SPACE RESEARCH (passive)	Space Research
122.25-123	FIXED	Fixed ISM
	INTER-SATELLITE	Inter-satellite Links
	MOBILE *K253*	Mobile

123 - 134 GHz

FREQUENCY BAND (GHz)	**ALLOCATION TO SERVICES**	**REMARKS**
123-130	FIXED SATELLITE (space-Earth) *K51, K244*	Fixed satellite
	MOBILE SATELLITE (space-Earth) *K51, K244*	Mobile satellite
	RADIONAVIGATION *K51, K244*	Radionavigation
	RADIONAVIGATION SATELLITE *K51, K244*	Radionavigation satellite
130-134	EARTH EXPLORATION SATELLITE *K51, K261, K264*	Earth exploration satellite
	FIXED *K51, K264*	Fixed
	INTER-SATELLITE *K50, K2661*	Inter-satellite links
	MOBILE *K51, K253, K261*	Mobile

	RADIO ASTRONOMY *K51, K261*	Radio Astronomy

134 – 151.5 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
134-136	AMATEUR	Amateur
136-141	RADIO ASTRONOMY *K51*	Radio Astronomy
	RADIOLOCATION *K51*	Radiolocation
141-148.5	FIXED *K51*	Fixed
	MOBILE *K51*	Mobile
	RADIO ASTRONOMY *K51*	Radio Astronomy
	RADIOLOCATION *K51*	Radiolocation
148.5-151.5	EARTH EXPLORATION SATELLITE (passive) *K250*	Earth exploration satellite
	RADIO ASTRONOMY *K250*	Radio astronomy
	SPACE RESEARCH (passive) *K250*	Space research

151.5 – 158.5 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
151.5-155.5	FIXED *K51*	Fixed
	MOBILE *K51*	Mobile
	RADIO ASTRONOMY *K51*	Radio Astronomy
	RADIOLOCATION *K51*	Radiolocation
155.5-158.5	EARTH EXPLORATION SATELLITE (passive) *K51, K266*	Earth exploration satellite
	FIXED *K51, K266*	Fixed
	MOBILE *K51, K266*	Mobile
	RADIO ASTRONOMY *K51, K266*	Radio astronomy
	SPACE RESEARCH (passive) *K51*	Space Research

158.5 – 167 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
158.5-164	FIXED	Fixed
	FIXED SATELLITE (space-Earth)	Fixed satellite
	MOBILE	Mobile
	MOBILE SATELLITE (space-earth)	Mobile satellite

164-167	EARTH EXPLORATION SATELLITE (passive) *K250*	All emissions prohibited
	RADIO ASTRONOMY *K250*	All emissions prohibited
	SPACE RESEARCH (passive) *K250*	All emissions prohibited

167 – 182 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
167-174.5	FIXED *K51*	Fixed
	FIXED SATELLITE (space-Earth) *K51*	Fixed satellite
	MOBILE *K51, K253*	Mobile
	INTER-SATELLITE *K51*	Inter-satellite links
174.5-174.8	FIXED	Fixed
	INTER-SATELLITE	Inter-satellite links
	MOBILE *K253*	Mobile
174.8-182	EARTH EXPLORATION SATELLITE (passive)	Earth exploration satellite
	INTER-SATELLITE *K267*	Inter-satellite links
	SPACE RESEARCH (passive)	Space research

182 – 191.8 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
182-185	EARTH EXPLORATION SATELLITE (passive) *K250*	All emissions prohibited
	RADIO ASTRONOMY *K250*	All emissions prohibited
	SPACE RESEARCH (passive) *K250*	All emissions prohibited
185-190	EARTH EXPLORATION SATELLITE (passive)	Earth exploration satellite
	INTER-SATELLITE *K267*	Inter-satellite links
	SPACE RESEARCH (passive)	Space research
190-191.8	EARTH EXPLORATION SATELLITE (passive) *K250*	All emissions prohibited
	SPACE RESEARCH (passive) *K250*	All emissions prohibited

191.8 – 209 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
191.8-200	FIXED *K51, K244*	Fixed
	INTERSATELLITE *K51, K244*	Inter-satellite links
	MOBILE *K51, K253, K244*	Mobile

	MOBILE SATELLITE *K51, K244*	Mobile
	RADIONAVIGATION *K51, K244*	Radionavigation
	RADIONAVIGATION SATELLITE *K511, K244*	Radionavigation satellite
200-209	EARTH EXPLORATION SATELLITE (passive) *K250, K268*	All emissions prohibited
	RADIO ASTRONOMY *K250, K268*	All emissions prohibited
	SPACE RESEARCH (passive) *K250, K268*	All emissions prohibited

209 – 226 GHz

FREQUENCY BAND (GHz)	**ALLOCATION TO SERVICES**	**REMARKS**
209-217	FIXED *K51*	Fixed
	FIXED SATELLITE (Earth-space) *K51*	Fixed satellite
	MOBILE *K51*	Mobile
	RADIO ASTRONOMY *K51*	Radio Astronomy
217-226	FIXED *K51*	Fixed
	FIXED SATELLITE (Earth-space) *K51*	Fixed satellite
	MOBILE *K51*	Mobile
	RADIO ASTRONOMY *K51*	Radio Astronomy
	SPACE RESEARCH (passive) *K51, K29*	Space Research

226 - 235 GHz

FREQUENCY BAND (GHz)	**ALLOCATION TO SERVICES**	**REMARKS**
226-231.5	EARTH EXPLORATION SATELLITE (passive) *K250*	All emissions prohibited
	RADIO ASTRONOMY *K250*	All emissions prohibited
	SPACE RESEARCH (passive) *K250*	All emissions prohibited
231.5-232	FIXED	Fixed
	MOBILE	Mobile
232-235	FIXED	Fixed
	FIXED SATELLITE (space-Earth)	Fixed satellite
	MOBILE	Mobile

235 – 240 GHz

FREQUENCY BAND (GHz)	**ALLOCATION TO SERVICES**	**REMARKS**
235-238	EARTH EXPLORATION SATELLITE (passive) *K268, K269, K265*	Earth exploration satellite
	FIXED SATELLITE (space-Earth) *K268, K269*	Fixed satellite

	SPACE RESEARCH (passive) *K268, K269*	Space research
	MOBILE *K268, K269*	
	FIXED *K268, K269*	
238-239.2	FIXED	Fixed
	FIXED SATELLITE (space-Earth)	Fixed satellite
	MOBILE	Mobile
	RADIOLOCATION	Radiolocation
	RADIONAVIGATION	Radionavigation
	RADIONAVIGATION SATELLITE	Radionavigation satellite
239.2-240	EARTH EXPLORATION-SATELLITE (passive)	Earth exploration-satellite
	FIXED SATELLITE (space-Earth)	Fixed satellite
	RADIOLOCATION	Radiolocation
	RADIONAVIGATION	Radionavigation
	RADIONAVIGATION SATELLITE	Radionavigation satellite

240 – 250 GHz

FREQUENCY BAND (GHz)	**ALLOCATION TO SERVICES**	**REMARKS**
240-241	EARTH EXPLORATION-SATELLITE (passive)	Earth exploration-satellite
	RADIOLOCATION	Radiolocation
241-242.2	EARTH EXPLORATION-SATELLITE (passive) *K51*	Earth exploration-satellite
	RADIO ASTRONOMY *K51*	Radio Astronomy
	RADIOLOCATION *K51*	Radiolocation
	Amateur *K51*	Amateur
	Amateur-Satellite *K51*	Amateur-Satellite
242.2-244.2	RADIO ASTRONOMY K51, *K40*	Radio Astronomy
	RADIOLOCATION K51, *K40*	Radiolocation
	Amateur K51, *K40*	Amateur
	Amateur-Satellite *K40, K51*	Amateur-Satellite
244.2-247.2	EARTH EXPLORATION-SATELLITE (passive) *K40, K51*	Earth exploration-satellite
	RADIO ASTRONOMY *K51, K40*	Radio Astronomy
	RADIOLOCATION *K51, K40*	Radiolocation
	Amateur *K51, K40*	Amateur
	Amateur-Satellite *K40, K51*	Amateur-Satellite

247.2-248	RADIO ASTRONOMY *K51*	Radio Astronomy
	RADIOLOCATION *K51*	Radiolocation
	Amateur *K51*	Amateur
	Amateur-Satellite *K51*	Amateur-Satellite
248-250	AMATEUR *K51*	Amateur
	AMATEUR SATELLITE *K51*	Amateur satellite
	Radio Astronomy *K51*	Radio Astronomy

250 – 265 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
250-252	EARTH EXPLORATION SATELLITE (passive) *K250, K268*	All emissions prohibited
	RADIO ASTRONOMY *K250, K268*	All emissions prohibited
	SPACE RESEARCH (passive) *K250, K268*	All emissions prohibited
252-265	FIXED K51 K244	Fixed
	MOBILE K51 K244	Mobile
	MOBILE SATELLITE (Earth-space) *K51*	Mobile satellite
	RADIO ASTRONOMY *K51 K244*	Radio Astronomy
	RADIONAVIGATION *K51 K244*	Radionavigation
	RADIONAVIGATION SATELLITE *K51 K244*	Radionavigation satellite

265 – 1000 GHz

FREQUENCY BAND (GHz)	ALLOCATION TO SERVICES	REMARKS
265-275	FIXED K51 K268	Fixed
	FIXED SATELLITE (Earth-space) K51 K268	Fixed satellite
	MOBILE	Mobile
	RADIO ASTRONOMY K51 K268	Radio Astronomy
275-3000	(Not Allocated) K270 K271	Land mobile and fixed service applications Measurements for radio astronomy and experimentation

3.3. Footnotes to Kenya's Table of Frequency Allocations

K1 While authorising the use of frequencies below 8.3 kHz, users shall ensure that no harmful interference is caused to the services to which the bands above 8.3 kHz are allocated.

K2 In conducting scientific research activities using frequencies below 8.3 kHz, co-ordination shall be made with other administrations in order that such research may be afforded all practicable protection from harmful interference.

K3 The stations of services to which the bands 14 - 19.95 kHz, 20.05 -70 kHz bands 72 - 84k and 86 - 90 kHz are allocated may transmit Standard Frequency & Time signals. Such stations shall be afforded protection from all harmful interference.

K4 The use of the bands 14 - 19.95 kHz, 20.05 - 70 kHz, 72 - 84 kHz and 86 - 90 kHz by the maritime mobile service is limited to coast radiotelegraph stations (A1A and F1B only). Exceptionally, the use of class J2B or J7B emissions is authorised subject to the necessary bandwidth not exceeding that normally used for class A1A or F1B emissions in the band concerned.

K5 In the bands 70 - 86 kHz and 112- 130 kHz, pulsed radionavigation systems may be used on condition that they do not cause harmful interference to the other services to which these bands are allocated.

K6 Administrations which operate stations in the radionavigation service in the band 90-110 kHz are urged to co-ordinate technical and operating characteristics in such a way as to avoid harmful interference to the services provided by these stations.

K7 Stations in the amateur service using frequencies in the band 135.7-137.8 kHz shall not exceed a maximum radiated power of 1 W (e.i.r.p) and shall not cause harmful interference to stations of radionavigation service operating in countries listed in No. 5.67B.

K8 The use of the band 495-505 kHz is limited to radiotelegraphy and is used for the international NAVDAT system as described in the most recent version of Recommendation ITU-R M.2010. NAVDAT transmitting stations are limited to coast stations. (WRC-19)

K8A When establishing coast stations in the NAVDAT system on the frequencies 500 kHz and 4 226 kHz, the conditions for the use of the frequencies 500 kHz and 4 226 kHz are prescribed in the Radio Regulations. Administrations are strongly recommended to coordinate the NAVDAT systems operating characteristics in accordance with the procedures of the International Maritime Organization (IMO).

K9 Administrations authorizing the use of frequencies in the band 495-505 kHz by services other than the maritime mobile services shall ensure that no harmful interference is caused to the maritime mobile service in this band or to the services having allocations in the adjacent bands, noting in particular the conditions of use of the frequencies 490 kHz and 518 kHz, as prescribed in article 31 and 52.

K10 Only classes A1A or F1B, A2C, A3C, F1C or F3C emissions are authorised for stations of the fixed service in the bands allocated to this service between 90 kHz and 148.5 kHz.

K11 Only classes A1A or F1B, A2C, A3C, F1C or F3C emissions are authorised 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 may also be authorised in the bands between 110 kHz and 148.5 kHz for stations of the maritime mobile service.

K12 As an *alternative allocation*, the band 200–283.5kHz is allocated to aeronautical radionavigation service on a primary basis in Kenya.

K13 The band 283.5-325 kHz in the maritime radionavigation service may be used to transmit supplementary navigation information using narrowband techniques, on condition that no harmful interference is caused to radiobeacon stations operating in the radionavigation service.

K14 The band 285.3-285.7 kHz is additionally allocated to maritime radionavigation services (other than radiobeacons) on primary basis.

K15 The frequency 410 kHz is designated for direction finding- in the maritime radionavigation service. The other radionavigation services to which the band 405 415- kHz is allocated shall not cause harmful interference to radio directionfinding- in the band 406.5-413.5 kHz.

K16 In the maritime mobile service, the frequency 490 kHz is, 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, practical steps should be taken to ensure that no harmful interference is caused to the frequency 490 kHz.

K17 The conditions for the use of frequency 518 kHz by the maritime mobile service are prescribed in Articles 31 and 52

K18 The bands 148.5 – 283.5 kHz and 526.5 - 1606.5 kHz are allocated to Low Frequency (LF) and Medium Frequency (MF) Sound Broadcasting Service respectively, subject to the Geneva 1975 (GE75) Plan established by the Regional Administrative LF/MF Broadcasting Conference for planning of LF/MF broadcasting service in the ITU Regions 1 & 3.

K19 The use of bands 415-495 kHz and 505 – 526.5 kHz are limited to radiotelegraphy and may also be used for the NAVDAT system in accordance with the most recent version of Recommendation ITU-R M.2010, subject to agreement between interested and affected administrations. NAVDAT transmitting stations are limited to coast stations.

K20 When establishing coast stations in the NAVTEX service on the frequencies 490 KHz, 518 kHz and 4209.5 kHz, Kenya will coordinate the operating characteristics in accordance with the procedures of International Maritime Organisation (see Resolution 339)).

K21 The service area of the maritime mobile stations in Region 1 shall be limited to that provided by ground wave propagation in the band 1605-1705 kHz because of use of this band by broadcasting stations in Region 2.

K22 Some countries of Region 1 who use radio determination systems in 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 Article 9.21, shall limit the mean radiated power to no more than 50W.

K23 In making assignments to stations in the fixed and mobile services in the bands 1850-2045, 2194-2498,2502-2625 and 2650-2850 kHz, administrations should bear in mind the special requirements of maritime mobile service.

K24 The frequencies 2 174.5 kHz, 4 177.5 kHz, 6 268 kHz, 8 376.5 kHz, 12 520 kHz and 16 695 kHz are used for the automatic connection system (ACS), as described in the most recent version of Recommendation ITU-R M.541..

K25 The carrier frequency 2182 kHz is an international distress and calling frequency for radiotelephony. The conditions for the use of the band 2173.5-2190.5 kHz are prescribed in Articles 31 and 52.

K26 Space research may operate in the bands 2501-2502, 5003-5005, 15005-15010, 19990-19995, and 25005-25010 kHz on secondary basis.

K27 The carrier frequencies 2 182 kHz, 3 023 kHz, 5 680 kHz, 8 364 kHz, and the frequencies 121.5 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 these frequencies are prescribed in Article 31. The same applies to frequencies 10003, 14993 and 19993 KHz, but in each of these cases, emissions must be confined in a band of ± 3KHz about the frequency.

K28 The frequencies 2 187.5 kHz, 4 207.5 kHz, 6 312 kHz, 8 414.5 kHz, 12577 kHz and 16 804.5 kHz are international distress frequencies for digital selective calling. The conditions for the use of these frequencies are prescribed in Article 31.

K29 The frequency bands 2300-2498 kHz, 3200- 3400 kHz, 4750-4995 kHz and 5005-5060 kHz by the broadcasting service are reserved for use in the Tropical Zone. The broadcasting service shall have priority over other services which it shares the bands. The conditions for the use of these bands are defined in Article 23.3-23.10.

K30 The use of the frequency band by high frequency broadcasting (HFBC) shall be in conformity with Article 12, and subject to the provisions of the seasonal planning schedule for the HFBC in the band 5900 – 26100 kHz.

K31 The carrier (reference) frequencies 3023 and 5680 kHz, may be used in accordance with Article 31 by stations of the maritime mobile service engaged in coordinated search and rescue services.

K32 The band 3 155-3 195 kHz shall be used to provide 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 3 400 kHz. It should be noted that 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 induction field.

K33 The use of the band 4000-4063 kHz by the maritime mobile service is limited to ship stations using radiotelephony (see also Article 52.220 and Appendix 17).

K34 The conditions of use of carrier frequencies 4125 kHz and 6215 kHz are prescribed in Articles 31 and 52.

K35 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.

K36 The frequencies 4 210 kHz, 6 314 kHz, 8 416.5 kHz, 12 579 kHz, 16 806.5 kHz,19 680.5 kHz, 22 376 kHz and 26 100.5 kHz are the international frequencies for the transmission of maritime safety information (MSI) (see Appendices 15 and 17 of the Radio Regulations).

K36A Stations in the amateur service using the frequency band 5 351.5-5 366.5 kHz shall not exceed a maximum radiated power of 15 W (e.i.r.p.).

K36B The frequencies 6 337.5 kHz, 8 443 kHz, 12 663.5 kHz, 16 909.5 kHz and 22 450.5 kHz are the regional frequencies for the transmission of MSI by means of the NAVDAT system (see Appendices 15 and 17 of the Radio Regulations).

K37 The use of frequency bands 5900-5950 kHz, 7300-7350 kHz, 9400-9500 kHz, 11600-11650 kHz, 12050-12100 kHz, 13570-13600 kHz, 13800-13870 kHz, 15600-15800 kHz, 17480-17550 kHz, and 18900-19020 kHz by the broadcasting service is subject to application of the procedure of article 12. These bands will facilitate the introduction of digitally modulated emissions in accordance with the provisions of Resolution 517

K38 The band 5900-5950 kHz is allocated to Fixed services (Land mobile) on primary basis. Fixed stations may be used within the frequency band for communication within national boundaries provided they do not cause harmful interference to broadcasting service. When using frequencies for these services, Kenya will use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

K39 On condition that harmful interference is not caused to the maritime mobile service, the bands 6200-6213.5 kHz and 6220.5- 6525 kHz may be used exceptionally by stations in the fixed service, communicating only within the boundary of the country in which they are located, with a mean power not exceeding 50 W. At the time of notification of these frequencies, the attention of the ITU Radio Regulatory Board will be drawn to the above conditions.

K40 The frequency bands 6 765-6 795 kHz, 433.05 - 434.79 MHz, 61-61.5 GHz, 122-123 GHz, and 244-246 GHz may be designated for industrial, scientific and medical (ISM) applications subject to specific authorisation by the Authority. In applying this provision, due regard to the latest relevant ITU-R Recommendations shall be taken.

K41 Until 29 March 2009, the band 6 765-7 000 kHz is allocated to the fixed service on a primary basis and to the land mobile service on a secondary basis. After this date, this band is allocated to the fixed and the mobile except aeronautical mobile (R) services on a primary basis.

K42 The band 7 000-7 050 kHz is additionally allocated to the fixed service on a primary basis.

K43 In Regions 1 and 3, the band 7 100-7 200 kHz is allocated to the broadcasting service until 29th March 2009 on a primary basis.

K44 In Kenya, the use of the band 7100-7200 kHz by the Amateur service is on secondary basis. The maximum ERP is limited to 100W.

K45 Frequencies in the band 7 300-7 350 kHz may be used by stations in the fixed service and in the land mobile service, communicating only within the Kenyan boundaries, on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, these services will use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

K46 In Region 1, the band 7 350-7 450 kHz is allocated, until 29th March 2009, to the fixed service on a primary basis and to the land mobile service on secondary basis. After 29 March 2009, on condition that harmful interference is not caused to the broadcasting service, the frequencies in the band 7 350-7 450 kHz may be used by stations in the fixed and land mobile services communicating only within the boundary of the country in which they are located, each station using a total radiated power that shall not exceed 24 dBW.

K47 Until 29th March 2009, the band 7 450-8 100 kHz is allocated to the fixed service on a primary basis and to the land mobile service on secondary basis.

K48 The conditions for the use of the carrier frequencies 8291 kHz, 12290 kHz and 16420 kHz are prescribed in Articles 31 and 52.

K49 Frequencies in the bands 9 400-9 500 kHz, 11 600-11 650 kHz, 12 050-12 100 kHz, 15 600-15 800 kHz, 17 480-17 550 kHz and 18 900-19 020 kHz may be used by stations in the fixed service, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies in the fixed service, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

K50 On condition that harmful interference is not caused to the stations of the broadcasting service located in the neighbouring countries, frequencies in the bands 9 775 – 9 900 kHz, 11 650 – 11 700 kHz and 11 975 – 12 050 kHz may be used by stations in the fixed service communicating only within the boundary of Kenya, each station using a total radiated power not exceeding 24 dBW.

K51 When making assignments to stations of other services to which this band is allocated, all practical steps must be taken to protect the Radio Astronomy service either in this band or adjacent band from harmful interference.

K52 The bands 13 553 - 13 567 kHz, 26957 - 27283 kHz, 40.66 - 40.70 MHz, 2400 - 2500 MHz, 5725 - 5875 MHz and 24 - 24.25 GHz may also be designated for industrial, scientific and medical (ISM) applications subject to specific authorisation by the Authority. Radiocommunication services operating within this band must accept harmful interference, which may be caused by these applications. The ISM equipment operating in this band is subject to the provisions of Article No. 15.13.

K53 The use of the band 26 925 – 27 403 KHz for Citizen Band applications involving onsite communications with radiated power being limited to no more than 1W is subject to specific authorisation.

K54 Frequencies in the bands 13 570-13 600 kHz and 13 800-13 870 kHz may be used by stations in the fixed service and in the mobile except aeronautical mobile (R) service , communicating only within the boundary of the country in which they are located, on the condition that harmful interference is not caused to the broadcasting service. When using frequencies in these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

K55 The band 21870 - 21924 kHz is used by the fixed service for provision of services related to aircraft flight safety.

K56 The use of the band 23200 - 23350 kHz by the fixed service is limited to provision of services related to aircraft flight safety.

K57 The use of the band 23 350 - 24 000 kHz by the maritime mobile service is limited to inter-ship radiotelegraphy.

K58 All practical steps shall be taken to protect stations of the radio astronomy service in the bands 37.5 - 38.25 MHz and 73 - 74.6 MHz from harmful interference**.**

K59 Low power private paging systems employing an EIRP power not exceeding 1 watt may be accommodated within the frequency band 30 - 46 MHz subject to specific individual authorisation.

K59A The use of the frequency band 40-50 MHz by the Earth exploration-satellite service (active) shall be in accordance with the geographical area restrictions and the operational and technical conditions. The provisions of this footnote in no way diminish the obligation of the Earth exploration-satellite service (active) to operate as a secondary service in accordance with Nos. 5.29 and 5.30. (WRC-23)

K60 In Kenya, the bands 47 - 68 MHz is allocated to analogue terrestrial television broadcasting service, subject to the Geneva 1989 (GE89) Plan established by Regional Administrative Radio Conference for planning of VHF/UHF Television Broadcasting in the African Broadcasting Area and the neighbouring countries.

K60A In Kenya the frequency band 50-54 MHz is allocated to the amateur service on a primary basis.
Stations in the amateur service operating in the frequency band 50-54 MHz, shall not cause harmful interference to, or claim protection from, stations of other services operating in accordance with the Radio Regulations in Algeria, Egypt, Iran (Islamic Republic of), Iraq, Israel, Libya, Palestine*, the Syrian Arab Republic, the Dem. People's Republic of Korea, Sudan and Tunisia. The field strength generated by an amateur station in the frequency band 50-54 MHz shall not exceed a value of +6 dB(μV/m) at a height of 10 m above ground for more than 10% of time along the borders of listed countries requiring protection.

K61 In Kenya, the frequency band 174-230 MHz is allocated to digital terrestrial sound and television broadcasting services with effect from 17th June 2015, in accordance with the final Acts of the Regional Radiocommunication Conference 2006 Agreement (RRC-06).

K62 In Kenya, the frequency band 470-694 MHz is allocated to digital terrestrial sound and television broadcasting services with effect from 17th June 2015, in accordance with the final Acts of the Regional Radiocommunication Conference 2006 Agreement (RRC-06).

K63 The band 46-50 MHz may be used for low power cordless telephones within premises on secondary basis.

K64 The frequency 75 MHz is globally assigned to aeronautical marker beacons. Caution shall be taken when assigning frequencies that are close to the limits of the guard band to stations of others services which, because of their power or geographical position, might cause harmful interference or otherwise place a constraint on marker beacons.

K65 The band 87.5 - 108 MHz is allocated to FM sound broadcasting service. The stations in this band shall be established and operated in accordance with the Final Acts of the Regional Administrative Conference for the planning of VHF Sound broadcasting in ITU Region 1 and part of Region 3.

K66 The band 108-117.975 MHz is used to support VHF Navigation Aids.

K67 The band 108 - 117.975 MHz is also allocated on a primary basis to the aeronautical mobile (R) service, limited to systems operating in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution 413 (Rev.WRC07). The use of the band 108-112 MHz by the aeronautical mobile (R) service shall be limited to systems composed of ground-based transmitters and associated receivers that provide navigational information in support of air navigation functions in accordance with- recognised international standards.

K68 Only equipment employing AM modulation techniques may be used in this band.

K69 The use of this band shall be co-ordinated with the Kenya Civil Aviation Authority.

K70 In the band 117.975-137 MHz, the frequency 121.5 MHz is the aeronautical emergency frequency and, where required, the frequency 123.1 MHz is the aeronautical frequency auxiliary to 121.5 MHz. Mobile stations of the maritime mobile service may communicate on these frequencies under conditions laid down in Article 31 for distress and safety purposes with stations of the aeronautical mobile service and the aeronautical mobile-satellite service.

K71 The use of the frequency band 117.975-137 MHz by the aeronautical mobile satellite (R) service is subject to coordination under No. 9.11A. No. 9.16 does not apply. Such use shall be limited to non-geostationary-satellite systems operated in accordance with international aeronautical standards.

K71A The use of the frequency band 117.975-137 MHz by the aeronautical mobile (R) service shall have priority over use by the aeronautical mobile-satellite (R) service.

K72 The use of the band by mobile satellite service is subject to coordination under Article 9.11A.

K73 The band is allocated to space research, space operation, meteorological satellite and mobile satellite in the space-earth direction. The use of the space operation service (space-to-Earth) with non-geostationary satellite short-duration mission systems in the frequency band 137-138 MHz is subject to Resolution 660 (WRC-19).

Resolution 32 (WRC-19) applies. These systems shall not cause harmful interference to, or claim protection from, the existing services to which the frequency band is allocated on a primary basis.

K73A The use of the frequency band 137.175-137.825 MHz by non-geostationary-satellite systems in the space operation service identified as short-duration mission in accordance with Appendix 4 is not subject to No. 9.11A.

K74 The frequency band 138-144 MHz is additionally allocated to the fixed service on a primary basis. The band 138.0-139.4/142.6-144.0 MHz is planned for public trunked VHF radio networks. Fixed services are prohibited.

K75 The band 138 -144 MHz is additionally allocated in Kenya to, Land Mobile and Maritime Mobile Services. In the Land Mobile service, this band shall be used for assignment to stations of the trunk radio networks. Fixed services are prohibited

K76 The bands 148.3 – 148.5 MHz and 149.7- 149.9 MHz may be used for wide area paging services**.**

K77 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 fixed or mobile services.

K77A The use of the frequency band 148-149.9 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 fixed, mobile and space operation services in the frequency band 148-149.9 MHz. The use of the frequency band 148-149.9 MHz by non-geostationary-satellite systems in the space operation service identified as short-duration mission is not subject to No. 9.11A.

K78 The use of the band 149.9-150.05 and 399.9-400.5 MHz by mobile satellite service is subject to coordination under No. 9.11. The mobile satellite service shall not constrain the development of radionavigation satellite service in these bands.

K79 The use of the bands 137 – 138 MHz, 148 – 150.05 MHz, 399.9 – 400.05 MHz, 400.15 – 401 MHz by the mobile satellite service is limited to the non-geostationary-satellite systems. Further, the use of the 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 1st January 2015. Stations of the mobile-satellite service in the frequency band 148-149.9 MHz shall not cause harmful interference to, or claim protection from, stations of the fixed or mobile services

K79A The frequency band 148-149.9 MHz in the space operation service (Earth-to-space) may be used by non-geostationary-satellite systems with short-duration missions. Non-geostationary-satellite systems in the space operation service used for a short-duration mission in accordance with Resolution 32 (WRC-19) of the Radio Regulations are not subject to agreement under No. 9.21. At the stage of coordination, the provisions of Nos. 9.17 and 9.18 also apply. In the frequency band 148-149.9 MHz, non-geostationary-satellite systems with short-duration missions shall not cause unacceptable interference to, or claim protection from, existing primary services within this frequency band, or impose additional constraints on the space operation and mobile-satellite services.

K80 The allocation of the bands 149.9-150.05 and 399.9-400.5 MHz to the radionavigation satellite service shall be effective until 1st January 2015.

K81 Emissions of the Radionavigation satellite service in the bands 149.9-150.05 and 399.9-400.5 MHz may also be used by receiving earth stations of the space research service.

K82 Band 157.025 - 157.800 MHz may also be used for assignment to privately owned trunked networks, subject to not causing harmful interference to the Maritime Mobile Services.

K83 the bands 156.4875-156.5125 MHz and 156.5375-156.5625 MHz are also allocated to the fixed and land mobile services on a primary basis. The use of these bands by the fixed and land mobile services shall not cause harmful interference to nor claim protection from maritime mobile VHF radiocommunication services.

K84 In the frequency bands 156-156.4875 MHz, 156.5625-157.7625MHz, 156.8375-157.45, 160.6-160.975 MHz and 161.475-162.05 MHz, priority shall be given to the maritime mobile service on only such frequencies as are assigned to stations of the maritime mobile service (see Articles 31 and 52, and Appendix 18).
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 VHF radiocommunication service.

K85 The use of this band for Maritime Mobile service shall be in accordance with the conditions set forth in Appendix 18.

K86 The frequency 156.8 MHz is the international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service. The conditions for use of this frequency and the band 156.7625-156.8375 MHz are contained article 31 and appendix 18.
The frequency 156.525 MHz is the international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service using digital selective calling (DSC). The conditions for use of this frequency and the band 156.4875-156.5625 MHz are contained in articles 31 & 52 and in appendix 18.
However, the frequency 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 neighbouring administrations and taking into account current frequency usage and any existing agreements.

K87 The bands 156.725 – 156.7875 MHz, 156.8125-156.8375 MHz, 161.9625-161.9875 MHz and 162.0125-162.0375 MHz are also allocated to mobile-satellite service (Earth-to-Space) on a secondary basis for the reception of automatic identification system (AIS) emission of long-range AIS broadcast messages (Message 27) from station operating in the maritime-mobile service (Appendix 18).

K87A The use of the frequency bands 157.1875-157.3375 MHz and 161.7875-161.9375 MHz by the maritime mobile-satellite service (Earth-to-space) is limited to non-geostationary-satellite systems operating in accordance with Appendix 18.

K87B The use of the frequency bands 161.9375-161.9625 MHz and 161.9875-162.0125 MHz by the maritime mobile-satellite (Earth-to-space) service is limited to the systems which operate in accordance with Appendix 18

K88 The bands 235-322 MHz and 335.4-399.9 MHz may be used by the mobile-satellite service, subject to agreement obtained under No. 9.21, on condition that stations in this service do not cause harmful interference to those of other services operating or planned to be operated in accordance with the Table of Frequency Allocations.

K89 The frequency 243 MHz is the frequency in this band for use by survival craft stations and equipment used for survival purposes.

K90 The use of the band is limited to Instrument Landing Systems (glide path).

K91 The frequency band is allocated for simplex Studio-to-Transmitter links for sound broadcasting.

K91A In the frequency band 399.9-400.05 MHz, the maximum e.i.r.p. of any emission of earth stations in the mobile-satellite service shall not exceed 5 dBW in any 4 kHz band and the maximum e.i.r.p. of each earth station in the mobile-satellite service shall not exceed 5 dBW in the whole 399.9-400.05 MHz frequency band. Until 22 November 2022, this limit shall not apply to satellite systems for which complete notification information has been received by the Radiocommunication Bureau by 22 November 2019 and that have been brought into use by that date. After 22 November 2022, these limits shall apply to all systems within the mobile-satellite service operating in this frequency band.
In the frequency band 399.99-400.02 MHz, the e.i.r.p. limits as specified above shall apply after 22 November 2022 to all systems within the mobile-satellite service. Administrations are requested that their mobile satellite service satellite links in the 399.99-400.02 MHz frequency band comply with the e.i.r.p. limits as specified above, after 22 November 2019. In the frequency band 400.02-400.05 MHz, the provisions of No. 5.260A are not applicable for telecommand uplinks within the mobile-satellite service.

K92 Emissions shall be confined in a band of ±25 KHz about the standard frequency 400.1 MHz.

K93 The use of the band 406 - 406.1 MHz by the mobile - satellite service is limited to low power satellite emergency position - indicating radio beacons (see also Articles 31). Any emission capable of causing harmful interference to the authorised uses of the band 406-406.1 MHz is prohibited.

K93A In making assignments to stations of other services to which the band 406.1-410 MHz is allocated, all practicable steps shall be taken to protect the radio astronomy service from harmful interference, especially from space or airborne stations which can be particularly serious sources of interference to the radio astronomy service

K94 The frequency band 410-430 MHz is allocated for trunked radio networks.

K95 Band 430-440 MHz is allocated in Kenya to fixed Service on primary basis, and bands 430- 435 MHz and 438 - 440 MHz are allocated to mobile service (except aeronautical mobile) on primary basis.

K96 Amateur service is limited to the frequency band 430-440 MHz on no interference no protection basis.

K97 The band 450-470 MHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). See Resolution 224 (Rev.WRC-19). 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.

K98 In the maritime mobile service, the frequencies 457.5125-457.5875 MHz and 467.5125-467.5875 MHz may be used by on-board communication stations. The use of these frequencies in Kenya's territorial waters is subject to national regulations. The characteristics of the equipment and the channelling arrangement shall conform to those specified in Recommendation ITU-R M.1174-4.

K99 The band 470-694 MHz is additionally allocated on secondary basis in Kenya to land mobile services intended for applications ancillary to broadcasting and programme making. Stations of the land mobile service shall not cause harmful interference to existing or planned digital TV stations.

K100 For the frequency band 620-790 MHz, see also Resolution 549 (WRC-07)

K101 The frequency band 694-790 MHz is allocated to the mobile service on a primary basis and identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). The use of the frequency band 694-790 MHz by the mobile, except aeronautical mobile, service is subject to the provisions of Resolution 760 (Rev.WRC-23). See also Resolution 224 (Rev.WRC-19/23). The use of stations of the mobile service in the band 790-862 MHz is also subject to the successful application of the procedures of GE06 Agreement. Resolutions 224 (Rev.WRC-19/23) and 749 (Rev.WRC-23) applies as appropriate.

K101A The frequency band 694-960 MHz, or portions thereof, are identified for use by high-altitude platform stations as International Mobile Telecommunications (IMT) base stations (HIBS). This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. HIBS shall not claim protection from existing primary services.

K102 The band 880-960 MHz may be used to implement terrestrial component of IMT systems.

K103 The frequency bands 880-915 MHz and 925-960 MHz are used for implementation of public GSM cellular mobile telephony services

K104 The use of the band 960-1164 MHz by aeronautical mobile (R) service is limited to systems that operate in accordance with recognised international aeronautical standards. Such use shall be in accordance with resolution 417 (WRC-07)

K104A The frequency band 1 087.7-1 092.3 MHz is also allocated to the aeronautical mobile-satellite (R) service (Earth-to-space) on a primary basis, limited to the space station reception of Automatic Dependent Surveillance-Broadcast (ADS-B) emissions from aircraft transmitters that operate in accordance with recognized international aeronautical standards. Stations operating in the aeronautical mobile-satellite (R) service shall not claim protection from stations operating in the aeronautical radionavigation service. Resolution 425 (WRC-19) applies.

K105 The use of the band 960-1 215 MHz by aeronautical radionavigation service is reserved on a world-wide basis for the operation and development of airborne electronic aids to air navigation and any directly associated ground-based facilities.

K106 Stations in the Radionavigation Satellite service in the band 1164-1215 MHz shall operate in accordance with provisions of Resolution 609 (Rev.WRC-07) and shall not claim protection from stations in the Aeronautical

Radionavigation service in the band 960-1215MHz. Article No. 5.43A does not apply. The provisions of No. 21.18 shall apply.

K107 The use of the bands 1 164-1 300 MHz, 1 559-1 610 MHz and 5 010-5 030 MHz by systems and networks in the radionavigation-satellite service for which complete coordination or notification information, as appropriate, was 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).

K108 The use of the band 1300-1350 by the aeronautical radionavigation service is restricted to ground based radars and to associated airborne transponders which transmit only on frequencies in these bands and only when actuated by radars operating in the same band.

K109 In Kenya, the band 1215-1300MHz is allocated to Radionavigation service on primary basis. The use of the radionavigation service shall be limited to the aeronautical radionavigation service.

K110 Use of radionavigation satellite service in the band 1215-1300 MHz shall be subject to the conditions that no harmful interference is caused to, and no protection is claimed from, the radionavigation service authorised under No. 5.331. Furthermore, the use of the radionavigation-satellite service in the band 1 215-1 300 MHz shall be subject to the condition that no harmful interference is caused to the radiolocation service. No. 5.43 shall not apply in respect of the radiolocation service. Resolution 608 (WRC-19) shall apply.

K111 Use of systems in the radionavigation satellite service (space-Earth) operating in the bands 1215-1300 MHz and 1559-1610 MHz is not intended to provide safety service applications, and shall not impose additional constraints on other systems or services operating in accordance with the national table.

K111A Administrations authorizing operation of the amateur and amateur-satellite services in the frequency band 1 240-1 300 MHz, or portions thereof, shall ensure that the amateur and amateur-satellite services do not cause harmful interference to radionavigation-satellite service (space-to-Earth) receivers in accordance with No. 5.29 (see the most recent version of Recommendation ITU-R M.2164). The authorizing administration, upon receipt of a report of harmful interference caused by a station of the amateur or amateur-satellite services, shall take all necessary steps to rapidly eliminate such interference.

K112 The band 1215-1350 is extensively used for the National Integrated Radar System

K113 All emissions in the band 1 400-1 427 MHz are prohibited.

K113A The frequency bands 1 427-1 452 MHz and 1 492-1 518 MHz are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC-15). This identification does not preclude the use of these frequency bands by any other application of the services to which it is allocated and does not establish priority in the Radio Regulations.

K114 In Kenya, the use of the band 1452 - 1492 MHz (L-band) by the Broadcasting Satellite Service, and broadcasting service is limited to digital audio broadcasting.

K114B In Kenya, the frequency band 1 452-1 492 MHz is identified for implementation of International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC-19). This identification does not preclude the use of this frequency band by any other application of the services to which it is allocated and does not establish priority in the Radio Regulations. The use of this frequency band for the implementation of IMT is subject to agreement obtained under No. 9.21 with respect to the aeronautical mobile service used for aeronautical telemetry in accordance with No. 5.342. See also Resolution 761 (Rev.WRC-19).

K115 The use of the band 1452-1492 MHz by the broadcasting satellite service and broadcasting service is limited to digital audio broadcasting and is subject to provisions of Resolution 528 (Rev.WRC-19).

K116 In the bands 1452-1 492 MHz, 1 525-1 559 MHz, 1613.8-1 626.5 MHz, 2655-2 670 MHz, 2670-2 690 MHz, 21.4-22 GHz, Resolution 739 (WRC-03) applies. In the frequency bands 1 350-1 400 MHz, 1 427-1 452 MHz, 22.55-23.55 GHz, 24.25-27.5 GHz, 30-31.3 GHz, 49.7-50.2 GHz, 50.4-50.9 GHz, 51.4-52.4 GHz, 52.4-52.6 GHz, 81-86 GHz and 92-94 GHz, Resolution
750 (Rev.WRC-19) applies.

K117 The use of the band 1 518-1 525 MHz by the mobile-satellite service is subject to coordination under No. 9.11A. In the band 1 518-1 525 MHz stations in the mobile-satellite service shall not claim protection from the stations in the fixed service. Footnote No. 5.43A does not apply.

K118 The use of the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz by the mobile-satellite service is subject to coordination under No. 9.11A.

K119 The 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. In exceptional circumstances, however, an earth station at a specified fixed point in any of the mobile satellite services may be authorised to communicate via space stations using these bands.

K120 In applying the procedures of section II of Article 9 to the mobile satellite service in the bands 1530-1544 and 1626.5-1645.5 MHz, priority shall be given to accommodating spectrum requirements for distress, urgency and safety communications of the GMDSS. Maritime mobile satellite distress, urgency and safety communications shall have priority access and immediate availability over all other mobile satellite communications operating within the network. Other mobile satellite services in the band shall not cause interference to, or claim protection from safety/distress/urgency communications of GMDSS. Account shall be taken of the priority of safety related communications in the other mobile satellite services.(The provisions of Resolution 222(Rev.WRC-23) shall apply.)K121 In applying the procedures of section II of Article 9 to the mobile satellite service in the bands 1545-1555 and 1646.5-1656.5 MHz, priority shall be given to accommodating spectrum requirements of the aeronautical mobile satellite (R) service providing transmission of messages with priority 1 to 6 in Article 44. Aeronautical mobile satellite (R) communications with priority 1 to 6 in Article 44 shall have priority access, by pre-emption if necessary, over all other mobile satellite communications operating in the network. Other mobile satellite services in the band shall not cause interference to, or claim protection from, aeronautical mobile satellite service (R) communications with priority 1 to 6 in Article 44. Account shall be taken of the priority of safety related communications in the other mobile satellite services (the provisions of Resolution 222 (Rev. WRC-23 shall apply).

K122 The use of the band 1544-1545 MHz by the mobile - satellite service (space-to-Earth) is limited to distress and safety communications.

K123 The use of the band 1610-1626.5 MHz by the mobile satellite service (Earth-space) and by the radiodetermination satellite service (Earth-space) is subject to coordination under Article 9.11A. A mobile earth station operating in either of the services in the band shall not produce a peak eirp in excess of –15 dB(W/4 KHz) in the part of the band used by systems operating in accordance with provisions of footnote No. K124 unless otherwise agreed by the affected administrations. In part of the band where such systems are not operating, the mean eirp density of a mobile earth station shall not exceed –3 dB (W/4 KHz). Stations of the mobile satellite service shall not claim protection from stations in the aeronautical radionavigation operating in accordance with footnote K124. Administrations responsible for the coordination of mobile satellite networks shall make all practical efforts to ensure protection of stations operating in accordance with the provisions of footnote No. K124.

K124 The use of the band 1613.8-1626.5 MHz by the mobile satellite service (space-Earth) is subject to coordination under Article 9.11A.

K124A The maritime mobile-satellite service in the frequency bands 1 614.4225-1 618.725 MHz or 1 616.3-1 620.38 MHz (Earth-to-space) (see resolves 5 of Resolution 365 (WRC-23)) and 2 483.59-2 499.91 MHz (space-to-Earth) when they are used for the global maritime distress and safety system (GMDSS) is limited to the geostationarysatellite networks identified in Resolution 365 (WRC-23) and their associated earth stations located within a service area -Nfrom 75°E to 135°E longitude and from 10°N to 55°N latitude. Resolution 365 (WRC-23) applies.

K125 The band 1610-1626.5 MHz is reserved on worldwide basis for use and development of airborne electronic aids to air navigation and any directly associated ground based or satellite borne facilities. Such use is subject to agreement obtained under Article 9.21.

K126 The band 1610-1626.5 MHz and 5000-5150 MHz are additionally allocated to the aeronautical mobile satellite (R) service on a primary basis subject to agreement obtained under Article 9.21.

K127 Harmful interference shall not be caused to stations of the Radio Astronomy service using the band 1610.6 - 1613.8 MHz by stations of the radiodetermination satellite and mobile satellite services. The equivalent power flux-density (epfd) produced in the frequency band 1 610.6-1 613.8 MHz by all space stations of a non-geostationary-satellite system in the mobile-satellite service (space-to-Earth) operating in frequency band 1 613.8-1 626.5 MHz shall be in compliance with the protection criteria provided in Recommendations ITU-R RA.769-2 and ITU-R RA.1513-2, using the methodology given in Recommendation ITU-R M.1583-1, and the radio astronomy antenna pattern described in Recommendation ITU-R RA.1631-0. The use of the band 1 613.8-1 626.5 MHz by the mobile-satellite service (space-to-Earth) is subject to coordination under No. 9.11A.

K128 Maritime mobile earth stations receiving in the frequency band 1 621.35-1 626.5 MHz shall not impose additional constraints on earth stations operating in the maritime mobile-satellite service or maritime earth stations of the radiodetermination-satellite service operating in accordance with the Radio Regulations in the frequency band 1 610-1 621.35 MHz or on earth stations operating in the maritime mobile-satellite service

operating in accordance with the Radio Regulations in the frequency band 1 626.5-1 660.5 MHz, unless otherwise agreed between the notifying administrations.

K130 The use of the band 1645.5-1656.5 MHz by the mobile satellite service (earth-space) and for intersatellite links is limited to distress and safety communications (see Article31).

K131 Transmissions in the band from aircraft station in the aeronautical mobile (R) service directly to the terrestrial aeronautical stations, or between aircraft stations, are also authorised when such transmissions are used to extend or supplement the aircraft to satellite links.

K132 Mobile satellite stations in the band 1660.0-1660.5 MHz shall not cause harmful interference to stations in the Radio Astronomy service.

K133 Administration s are urged to give all practical protection in the band 1660.5-1668.4 MHz for future research in radio astronomy particularly by eliminating air-to –ground transmissions in the meteorological aids service band 1664.4-1668.4 MHz as soon as practical.

K134 The use of the band 1668-1675 by the mobile-satellite service is subject to coordination under Article No. 9.11A.

K135 In the 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 before 1 January 2004. Any new assignment to these earth stations in this band shall also be protected from harmful interference from stations in the mobile-satellite service

K136 For sharing of the band 1 668.4-1 675 MHz between the mobile-satellite service and the fixed andmobile services, Resolution 744 (Rev. WRC-23) shall apply.

K137 In Kenya, the frequency band 1690 - 1700 MHz is also allocated to Fixed and Mobile service (except aeronautical mobile) as a different category of service.

K138 In Kenya, the bands 1885 - 2025 MHz and 2110 - 2200 MHz will be used to implement IMT. Such use does not preclude the use of these bands by other services to which they are allocated. The bands should be made available for IMT in accordance with Resolution 212(Rev. WRC-23) (See also Resolution 223 (Rev.WRC-23)).

K139 The bands or portions of band 1710-1885 MHz, 2300-2400 and 2500-2690 MHz are identified for implementation of IMT in accordance with Resolution 223 (WRC-2007). 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.

K140 The frequency bands 1 710-1 980 MHz, 2 010-2 025 MHz and 2 110-2 170 MHz are identified for the use by high altitude platform stations as International Mobile Telecommunications (IMT) base stations (HIBS). This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated. Resolution 221 (Rev.WRC-23) shall apply. HIBS shall not claim protection from existing primary services. Such use of HIBS in the frequency band 1 710-1 785 MHz in

Regions 1 is limited to reception by HIBS, and in the frequency band 2 110 -2 170 MHz is limited to transmission from HIBS. (WRC-23)

K141B The frequency band 2 500-2 690 MHz is identified for use by high-altitude platform stations as International Mobile Telecommunications (IMT) base stations (HIBS). This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated. Resolution 218 (WRC-23) shall apply. HIBS shall not claim protection from existing primary services. Such use of HIBS in the frequency bands 2 500-2 510 MHz is limited to reception by HIBS (WRC-23)

K142 For the use of bands 1525 - 1544 MHz, 1545 – 1559 MHz, 1610 - 1626.5 MHz, 1626.5 - 1645.5 MHz, 1645.5-1660.5 MHz, 1980-2010 MHz, 2170-2200 MHz, 2483.5-2500 MHz, 2500-2520 MHz and 2670-2690 MHz, see Resolution 212 (Rev. WRC-97) and Resolution 225 (WRC-2000).

K143 The use of the bands 1980 - 2010 MHz and 2170 - 2200 MHz by the mobile-satellite service is subject to coordination under article 9.11A and the provisions of Resolution 716(Rev. WRC-23)

K144 In making assignments to mobile service in the bands 2025-2110 and 2200-2290 MHz, administrations shall not introduce high-density systems.

K145 Administrations are urged to take all practical measures to ensure that space-space transmissions between two or more non-geostationary satellites in the space research, space operation or Earth Exploration satellite services in the bands 2025-2110 MHz and 2200-2290 MHz, shall not impose any constraints to the Earth-space, Space-Earth and space-space transmissions of those services and in those bands between geostationary and non-geostationary satellites

K146 The allocation of the band 2670-2690 MHz to the mobile satellite service shall be effective from 1st January 2005. When introducing systems of the mobile satellite service in this band, all necessary steps should be taken to protect satellite systems operating in this band prior to 3 March 1992. Coordination of mobile satellite systems shall be in accordance with Article 9.11A.

K147 All emissions in the band 2 690-2 700 MHz are prohibited by international agreement, except those provided for by Articles 5.421 and 5.422 of RRs.

K148 In the band 2700-2900 MHz, ground based radars used for meteorological purposes may be authorised to operate on equal basis with stations of aeronautical radionavigation.

K149 The use of the band 2900-3100 MHz by aeronautical radionavigation service is limited to ground based radars. The use of ship borne interrogator transponder system (SIT) shall be confined to the band 2930-2950 MHz

K150 In the band 2 900-3 100 MHz, stations in the radiolocation service shall not cause harmful interference to, nor claim protection from, radar systems in the radionavigation service.

K151 In the bands 2900-3100 and 9300-9500 MHz, the response from radar transponders shall not be capable of being confused with the response from radar beacons (racons) and shall not cause interference to ship or aeronautical radars in the radionavigation service having regard however to Article 4.9.

K152 In Kenya, the band 3 300-3 400 MHz is also allocated to the fixed and mobile services on a primary basis and is identified for the implementation of International Mobile Telecommunications (IMT in accordance with Resolution 223 (Rev. WRC-23). The use of the frequency band 3 300-3 400 MHz by IMT stations in the mobile service shall not cause harmful interference to, or claim protection from, systems in the radiolocation service, and administrations wishing to implement IMT shall obtain the agreement of neighbouring countries to protect operations within the radiolocation service. This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-23).

K152A The frequency band 3 400-3 600 MHz is identified for International Mobile Telecommunications (IMT) subject to agreement obtained under No. 9.21. The provisions of Nos. 9.17 and 9.18 shall also apply in the coordination phase. Mobile/base station 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 at the border of the territory of any other administration. This limit may be exceeded on the territory of any country whose administration has so agreed. Stations of the mobile service in the frequency 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). (WRC-15)

K152B The use of the frequency band 3 600-3 800 MHz by the mobile, except aeronautical mobile, service on a primary basis in Region 1 is subject to agreement obtained under No. 9.21 if the power flux-density (pfd) limit below is exceeded. The provisions of Nos. 9.17 and 9.18 shall also apply in the coordination phase. Before an administration in Region 1 brings into use a station in the mobile service in the frequency band 3 600-3 800 MHz, for the protection of stations in the fixed and fixed-satellite services, it shall ensure that the pfd produced at 3 m above ground does not exceed −154.5 dB(W/(m2 □ 4 kHz)) for more than 20% of the time at the border of the territory of any other administration. Stations in the mobile service operating in the frequency band 3 600-3 800 MHz shall not claim more protection from space stations than that provided in Table 21-4 of the Radio Regulations. (WRC-23)

K152C In Kenya, the frequency band 3 600-3 800 MHz is identified for International Mobile Telecommunications (IMT). The conditions in K152B shall apply;

K153 Use of the band 4 200-4 400 MHz by the aeronautical radionavigation service is reserved exclusively for radio altimeters installed on board aircraft and for the associated transponders on the ground.

K153A Use of the frequency band 4 200-4 400 MHz by stations in the aeronautical mobile (R) service is reserved exclusively for wireless avionics intra-communication systems that operate in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution 424 (Rev. WRC-23).

K154 The use of the bands 4500-4800 MHz (space–to- Earth), 6725-7025 MHz (Earth-to-space) by the fixed-satellite service shall be in accordance with the provisions of Appendix 30B. The use of the bands 10.7-10.95 GHz (space-to-Earth), 11.2-11.45 GHz (space-to-Earth), and 12.75-13.25 GHz (Earth-to-space), by geostationary satellite systems in the fixed-satellite service shall be in accordance with the provisions of Appendix 30B. The use of the bands 10.7-10.95 GHz (space-to-Earth), 11.2-11.45 GHz (space-to-Earth), and 12.75-13.25 GHz (Earth-to-space), by a non-geostationary satellite system in the fixed-satellite service is subject to application of the provisions of Article 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 Radio Regulations. Non-geostationary satellite systems in the fixed satellite service shall be operated in

such a way that any unacceptable interference that may occur during their operation may be rapidly eliminated.

K155 In making assignments to stations of other services to which the band 4990-5 000 MHz is allocated, all practicable steps shall be taken to protect the radio astronomy service from harmful interference, especially from space or airborne stations which can be particularly serious sources of interference to the radio astronomy service.

K156 The 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 uses of this band. For the use of this band, footnote No. K155 and Resolution 114 (Rev.WRC-03) apply.

K157 The band 5091 - 5150 MHz is also allocated to Fixed-Satellite Service (Earth to space) on primary basis, limited to feeder links of non-geostationary mobile-satellite systems and is subject to coordination under Article 9.11A.

K157A The use of the frequency band 5 091-5 150 MHz by the aeronautical mobile service is limited to:–systems operating in the aeronautical mobile (R) service and in accordance with international aeronautical standards, limited to surface applications at airports. Such use shall be in accordance with Resolution 748 (Rev.WRC-19); – aeronautical telemetry transmissions from aircraft stations (see No. 1.83) in accordance with Resolution 418 (Rev.WRC-19).

K158 The use of the bands 5150-5350 MHz and 5470-5725 MHz by stations in the mobile except aeronautical mobile, service shall be in accordance with Resolution 229 (Rev. WRC-23

K159 In order not to cause harmful interference to microwave landing system operating above 5030 MHz, aggregate pfd produced at earth's surface in the band 5030-5150 MHz by all the space stations within any radionavigation satellite service system (space –Earth) operating in the band 5010-5030 MHz shall not exceed –124.5 dB(W/m^2) in a 150 KHz band. In order not to cause harmful interference to radio astronomy service in band 4990-5000 MHz, the aggregate pfd produced 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).

K160 The band 5150 – 5216 MHz is also allocated to the Fixed- Satellite Service (Space to Earth) on primary basis, limited to feeder links of non-geostationary systems in the mobile-satellite service and is subject to provisions of Article 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 shall not exceed –164 dB (W/m^2) in any 4 kHz band for all angles of arrival.

K161 The use of the bands 5 150-5 350 MHz and 5 470-5725 MHz by the stations in the mobile service shall be in accordance with Resolution 229 (Rev. WRC-23).

K162 The use of the bands 2400-2483.5 MHz, 5150-5350 MHz and 5470-5800 MHz for implementation of wireless access systems (WAS) shall be in accordance with the guidelines issued by the Authority.

K163 In the band 5 150-5 250 MHz, stations in the mobile service shall not claim protection from earth stations in the fixed-satellite service. Article No. 5.43A does not apply to the mobile service with respect to fixed-satellite service earth stations.

K164 The use of the band 5250-5350 MHz by the earth exploration satellite (active) and space research (active) shall not constrain the future development and deployment of the radiolocation service.

K165 The use of the band 5350 –5470 MHz by the aeronautical radionavigation service is limited to airborne radars and associated airborne beacons. The earth exploration satellite (active) operating in the band 5350-5460 MHz shall not cause harmful interference to, or constrain the use and development of, the aeronautical radionavigation service.

K166 In the frequency band 5 350-5 470 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 No. K161.

K167 In the frequency band 5 470-5 650 MHz, stations in the radiolocation service, except ground-based radars used for meteorological purposes in the band 5 600-5 650 MHz, shall not cause harmful interference to, nor claim protection from, radar systems in the maritime radionavigation service.

K168 In Kenya, the band 5 650-5 850 MHz is also allocated to the fixed and mobile services on a primary basis. In this case, the provisions of Resolution 229 (Rev. WRC-19) do not apply.

K169 In the band 5 470-5 725 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.

K170 Within bands 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.

K171 The band 6400 - 7100 MHz is extensively used for implementation of high capacity telecommunications terrestrial fixed links in Kenya.

K171A The frequency bands 6 425-7 125 MHz is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. Resolution 220 (WRC-23) applies.

K172 In making assignments in the band 6700-7075 MHz to space stations of fixed satellite service, administrations are urged to take all practical steps to protect spectral line observations of radio astronomy service in the bands 6650-6675.2 MHz from harmful interference from unwanted emissions.

K173 The space-to-Earth allocation to fixed satellite service in the band 6700-7075 MHz is limited to feeder links for non-geostationary satellite systems of the mobile satellite service and is subject to coordination under article 9.11A.

K174 Administrations making submissions in the band 7025-7075 MHz (Earth-space) for geostationary satellite systems in the fixed satellite service shall consult on the basis of relevant ITU-R recommendations with administrations that have notified and brought into use non-geostationary satellite systems in this band before 18 November1995 upon request of the latter administrations.

K175 In the bands 5 925-6 425 MHz and 14.0-14.5 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 (Rev. WRC-23). In the frequency band 5 925-6 425 MHz, earth stations located on board vessels and communicating with space stations of the fixed-satellite service may employ transmit antennas with minimum diameter of 1.2 m and operate without prior agreement of any administration if located at least 330 km away from the low-water mark as officially recognized by the coastal State. All other provisions of Resolution 902 (Rev. WRC-23) shall apply.

K176 The band 7145-7190 MHz is also allocated to space research service (Earth-to-space) on a primary basis restricted to deep space, subject to agreement obtained under Article 9.21. Geostationary satellites in the space research service operating in the band 7 190-7 235 MHz shall not claim protection from existing and future stations of the fixed and mobile services

K176A The use of the frequency band 7 190-7 250 MHz (Earth-to-space) by the Earth exploration-satellite service shall be limited to tracking, telemetry and command for the operation of spacecraft. Space stations operating in the Earth exploration-satellite service (Earth-to-space) in the frequency band 7 190-7 250 MHz shall not claim protection from existing and future stations in the fixed and mobile services, and No. 5.43A does not apply. No. 9.17 applies. Additionally, to ensure protection of the existing and future deployment of fixed and mobile services, the location of earth stations supporting spacecraft in the Earth exploration-satellite service in non-geostationary orbits or geostationary orbit shall maintain a separation distance of at least 10 km and 50 km, respectively, from the respective border(s) of neighbouring countries, unless a shorter distance is otherwise agreed between the corresponding administrations. (WRC-15)

K177 The bands 7250-7375 MHz (earth – space) and 7900-8025 MHz (space – Earth) are also allocated to the mobile satellite service on a primary basis subject to agreement obtained under Article 9.21 with the exception that No. 9.21 shall not apply to the geostationary-satellite networks in the mobile-satellite service for which complete coordination information is received by the Bureau as of 1 January 2025 with respect to Non geostationary-satellite systems for which complete coordination or notification information, according to the case, is received by the Bureau as of 1 January 2025. Non-geostationary-satellite systems for which complete coordination or notification information, according to the case, is received by the Bureau as of 1 January 2025 shall not cause unacceptable interference to and shall not claim protection from geostationary-satellite networks in the mobile-satellite service operating in accordance with these Regulations. No. 5.43A does not apply. (WRC-23)

K178 The use of the band by meteorological satellite service (space-earth) is limited to geostationary satellite systems.

K178A In the frequency band 7 375-7 750 MHz, non-geostationary-satellite systems operatingin the fixed-satellite service for which complete coordination or notification information, according to the case, is received by the Bureau as of the date of entry into force of the Final Acts of WRC-23 shall not cause unacceptable interference to and shall not claim protection from geostationary satellite networks in the maritime mobile-satellite service.

K179 Aircraft stations are not permitted to transmit in the band 8025-8400 MHz.

K180 In the space research service, the use of the band 8400-8450 MHz is limited to deep space.

K181 In Kenya, the band 8 500-8 750 MHz is also allocated to the fixed and mobile services on a primary basis.

K182 The use of the band 8750-8850 MHz by the aeronautical radionavigation service is limited to airborne Doppler navigation aids on a centre frequency of 8800 MHz.

K183 In the bands 8850 –9000 and 9200-9225 MHz, the maritime radionavigation service is limited to shore based radars. Stations in the Earth exploration-satellite service (active) shall not cause harmful interference to, or claim protection from, stations of the maritime radionavigation and radiolocation services in the frequency band 9 200-9 300 MHz, the radionavigation and radiolocation services in the frequency band 9 900-10 000 MHz and the radiolocation service in the frequency band 10.0-10.4 GHz. (WRC-15)

K184 In the bands 9200-9500 MHz, search and rescue transponders (SART) may be used, having due regard to appropriate ITU-R Recommendations (see also Article 31).

K184A The use of the frequency bands 9 200-9 300 MHz and 9 900-10 400 MHz by the Earth exploration-satellite service (active) is limited to systems requiring necessary bandwidth greater than 600 MHz that cannot be fully accommodated within the frequency band 9 300-9 900 MHz

K185 The use of the band 9300-9500 MHz 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 bands 9300-9320 MHz on condition that harmful interference is not caused to maritime radionavigation service

K186 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 5.337 operating in the aeronautical radionavigation service, or radar systems in the maritime radionavigation service operating in this band on a primary basis

K187 The band 9975-10025 MHz is also allocated to the meteorological satellite service on secondary basis for use by weather radars.

K188 In Kenya, the band 10.45-10.5 GHz is also allocated to the fixed and mobile services on a primary basis.

K189 In the band 10.6-10.68 GHz, stations of the fixed and mobile (except aeronautical mobile) services shall be limited to a maximum EIRP of 40 dBW and the power delivered to the antenna shall not exceed 3 dBW. These limits may be exceeded subject to agreement obtained under Article No. 9.21.

K190 For sharing of the band 10.6-10.68 GHz between the Earth exploration-satellite (passive) service and the fixed and mobile, except aeronautical mobile, services, Resolution 751 (WRC07) applies. -

K191 In Kenya, all emissions are prohibited in the frequency band 10.68-10.7 GHz.

K192 The use of band 10.7 - 11.7 GHz by the Fixed- Satellite Service (earth-space) is limited to feeder links for the broadcasting - satellite service. The band 11.45-11.7 GHz may be used for UAS CNPC links in non-segregated airspace after adoption of the relevant international aeronautical standards and recommended practices (SARPs). Resolution 155 (WRC-15) applies.

K193 The use of the frequency 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.

K194 In the band 11.7-12.5 GHz in Regions 1 & 3, the fixed, fixed satellite-, mobile except aeronautical mobile, and broadcasting services, in accordance with their respective allocations, shall not cause harmful interference to, or claim protection from, broadcasting satellite stations -operating in accordance with the provisions of the Regions 1and 3 plans in Appendix 30.

K195 The band 11.7-12.5 GHz is also allocated to the fixed satellite service (space-Earth) on a primary basis limited to non-geostationary satellite systems and subject to application of provisions of Article 9.12 for coordination with other non-geostationary satellite systems in the fixed satellite service. Non-geostationary satellite systems in the fixed satellite service shall not claim protection from geostationary satellite networks in the broadcasting satellite service operating in accordance with 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 Article No. 5.43A does not apply.
Non-geostationary satellite systems in the fixed satellite service in the above band shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated.

K195A The frequency band 12.75-13.25 GHz (Earth-to-space) may be used by earth stations in motion, limited to earth stations on aircraft and vessels, communicating with geostationary space stations in the fixed-satellite service. Resolution 121 (WRC-23) shall apply.

K196 Assignments to stations of the broadcasting satellite service which are in conformity with the appropriate regional plan or included in Region 1 or 3 list in the Appendix 30 may also be used for transmissions in the fixed satellite service (space-earth), provided that such transmissions do not cause more interference, or require more protection from interference from broadcasting satellite service transmissions operating in conformity with the Plan or List, as appropriate.

K197 The use of the band 13.25 - 13.4 GHz by the aeronautical radionavigation service is limited to Doppler navigational aids.

K197A The allocation of the frequency band 13.4-13.65 GHz to the space research service on a primary basis is limited to:

– satellite systems operating in the space research service (space-to-space) to relay data from space stations in the geostationary-satellite orbit to associated space stations in non-geostationary satellite orbits for which advance publication information has been received by the Bureau by 27 November 2015,
– active spaceborne sensors,
– satellite systems operating in the space research service (space-to-Earth) to relay data from space stations in the geostationary-satellite orbit to associated earth stations. Other uses of the frequency band by the space research service are on a secondary basis. (WRC-15)

K198 In the band 13.75-14.0 GHz, an earth station of a geostationary fixed satellite service network shall have a minimum antenna diameter of 1.2m and an earth station of a non-geostationary fixed satellite service system shall have a minimum antenna diameter of 4.5m. In addition, the 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. Before an administration brings 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, it shall ensure 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 e.i.r.p. of any emission should be at least 68 dBW and should not exceed 85 dBW.

K199 The band 14-14.5 GHz may be used, within the fixed satellite service (-Earth-to-space), for feeder links for the broadcasting satellite service, subject to co-ordination with other networks in the -fixed satellite service.-

K200 In the 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 Articles Nos. 5.29, 5.30 and 5.31 apply.

K201 In the band 14-14.5 GHz, ship earth stations with an 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 (Rev. WRC-23). This footnote shall not apply to ship earth stations for which the complete Appendix 4 information has been received by the Bureau prior to 5 July 2003.

K202 The use of the band 14.0-14.3 GHz by the radionavigation service shall be such as to provide sufficient protection to space stations of the fixed satellite service.

K203 The band 14.5 -15.35 GHz is extensively used countrywide to support low and medium capacity fixed point-to-point approach links for cellular mobile base stations.

K203A The allocation of the frequency band 14.8-15.35 GHz to the space research service on a primary basis is limited to satellite systems operating in the space-to-space, space-to-Earth and Earth-to-space directions at distances

from the Earth of less than 2 × 106 km in accordance with Resolution 678 (WRC-23). Other uses of the frequency band by the space research service are on a secondary basis.

K204 All emissions in the band 15.35 - 15.4 GHz are prohibited.

K205 Fixed satellite service systems for which complete information for publication had been received by ITU by 21 November 1997 may operate in the bands 15.4 - 15.43 GHz and 15.63 - 15.7 GHz in the space-earth direction and the band 15.63-15.65 GHz in the earth –space direction. In the bands 15.4 - 15.43 GHz and 15.65 - 15.7 GHz, emissions from a non-geostationary space station shall not exceed -146 dB ($W/m^2/MHz$) for any angle of arrival. In the band 15.63 - 15.65 GHz where an administration plans a non-geostationary space station that exceed –146 dB ($W/ m^2/MHz$) for any angle of arrival, it shall coordinate with the affected administration under Article 9.11A. Stations of the fixed satellite service operating in the band shall not cause harmful interference to stations of aeronautical service.

K206 Stations operating in the aeronautical radionavigation service shall limit the effective eirp in accordance with Recommendation ITU-R S.1340, which also specifies minimum coordination distance required to protect the aeronautical radionavigation stations from harmful interference from feeder link earth stations and maximum eirp transmitted towards the local horizontal plane by a feeder link earth station.

K206A Stations in the aeronautical mobile (OR) service operating in the frequency band 15.41-15.7 GHz shall not cause harmful interference to the radio astronomy service operating in the frequency band 15.35-15.4 GHz. The aggregate power flux-density (pfd) received from stations in the aeronautical mobile (OR) service operating in the frequency band 15.41-15.7 GHz at any radio astronomy station operating in the frequency band 15.35-15.4 GHz shall be in compliance with the protection criteria provided in Recommendations ITU-R RA.769-2 and ITU-R RA.1513-2, unless specifically agreed by the affected administration(s).

K207 The band 15.43 - 15.63 GHz is also allocated to fixed satellite service (space-earth) on primary basis and its use by fixed satellite service (space-earth, earth-space) is limited to feeder links of non-geostationary mobile satellite service subject to coordination under Article 9.11A. The use of the band by the fixed satellite service (space to earth) is limited to feeder links of the non-geostationary systems in the mobile satellite service for which advance publication information has been received by the Bureau prior to 2 June 2000. In the space-to-earth direction, the minimum earth station elevation angle above and gain towards the local horizontal plane and the minimum coordination distances to protect an earth station from harmful interference shall be in accordance with Recommendation ITU-R S.1341. In order to protect the Radio Astronomy service in the band 15.35 - 15.4 GHz, the aggregate power flux density in the band 15.35-15.4 GHz by all space stations within any feeder link of a non-geostationary system in the mobile satellite service (space-earth) operating in the band 15.43 - 15.63 GHz band shall not exceed the level -156 dB ($W/ m^2/MHz$) in a 50 MHz bandwidth, into any radio observatory site for more than 2% of the time.

K208 In Kenya, the band 15.7-17.3 GHz is also allocated to the fixed and mobile services on a primary basis.

K209 In the band 17.3-17.7 GHz, earth stations of the fixed-satellite service (space-to-Earth) in Region 1 shall not claim protection from the broadcasting-satellite service feeder-link earth stations operating under Appendix 30A, or 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.

K210 The following bands are identified for use by high-density applications in the fixed-satellite service:

i) Space-to-Earth direction

17.3-17.7 GHz, 19.7-20.2 GHz, 39.5-40 GHz, 40-40.5 GHz, 47.5-47.9 GHz, 48.2-48.54 GHz & 49.44-50.2 GHz

ii) Earth-to-space direction

27.5-27.82 GHz, 28.45-28.94 GHz and 29.46-30 GHz

This identification does not preclude the use of these bands by other fixed-satellite service applications or by other services to which these bands are allocated on a co-primary basis and does not establish priority in these Regulations among users of the bands. Administrations should take this into account when considering regulatory provisions in relation to these frequency bands. See Resolution 143 (Rev. WRC-19).

K211 The use of the band 17.3-18.1 GHz by the geostationary satellite systems in the fixed satellite service is limited to feeder links for broadcasting satellite service. The use of the band by non-geostationary satellite systems in the fixed satellite service is subject to application of the provisions of Article 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. Non geostationary satellite systems in the fixed satellite service shall be operated in such a way that any unacceptable interference that may occur shall be rapidly eliminated.

K211A The operation of earth stations in motion communicating with geostationary fixed-satellite service space stations within the frequency bands 17.7-19.7 GHz (space-to-Earth) and 27.5-29.5 GHz (Earth-to-space) shall be subject to the application of Resolution 169 (Rev. WRC-23).

K211B The operation of aeronautical and maritime earth stations in motion communicating with non-geostationary space stations in the fixed-satellite service in the frequency bands 17.7-18.6 GHz, 18.8-19.3 GHz and 19.7-20.2 GHz (space-to-Earth) and 27.5-29.1 GHz and 29.5-30 GHz (Earth-to-space) shall be subject to the application of Resolution 123 (WRC-23).

K211C The operation of earth stations in motion communicating with the FSS is subject to Res. 156 (Rev.WRC-23). (WRC-23)

K212 The use of the band 18.1 –18.4 GHz by the fixed satellite service (earth-space) is limited to feeder links of geostationary satellite system in the broadcasting satellite service.

K213 The band 18.1 – 18.3 GHz is also allocated to the meteorological satellite service (space –earth) on a primary basis. Its use is limited to geostationary satellites.

K213A For use of the frequency bands 18.1-18.6 GHz, 18.8-20.2 GHz and 27.5-30 GHz, or parts thereof, by space stations in the inter-satellite service, Resolution 679 (WRC-23) shall apply. Such use is limited to space

research, space operation and/or Earth exploration-satellite applications, and also transmissions of data originating from industrial and medical activities in space. When using these frequencies, administrations shall ensure that this inter-satellite service is used only for the aforementioned purposes and is not subject to coordination under No. 9.11A. For use of the frequency bands 18.1-18.6 GHz, 18.8-20.2 GHz, 27.5-29.1 GHz and 29.5-30 GHz by space stations, the allocation is limited to inter-satellite links between non-geostationary satellites or between non-geostationary satellites and geostationary satellites. For use of the frequency band 29.1-29.5 GHz by space stations, the allocation is limited to inter-satellite links between non-geostationary satellites and geostationary satellites.

K214 The emission of the fixed service and the fixed satellite service in the band 18.6 - 18.8 GHz is limited to values given in Article Nos. 21.5A and 21.16.2 respectively.

K215 The use of the 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 20000 km.

K216 The use of the bands 18.8-19.7 GHz (space –earth) and 28.6-29.1 GHz (earth –space) by geostationary and non-geostationary fixed satellite service networks is subject to application of provisions of Article No. 9.11A. Non geostationary satellite networks shall not cause unacceptable interference to geostationary fixed satellite service networks for which Appendix 4 notification information is considered as having been received by the Bureau prior to 18 November 1995.

K217 The use of the bands 19.3-19.6 GHz (earth -space) by the fixed satellite service is limited to feeder links for non-geostationary satellite systems in the mobile satellite service. Such use is subject to application of provision of Article No. 9.11A.

K218 Article 22.2 shall continue to apply in the band 19.3 - 19.6 GHz and 29.1 - 29.4 GHz between feeder links of non-geostationary mobile satellite service networks and those fixed satellite service networks for which Appendix 4 coordination information, or notification information is considered as having been received by the Bureau prior to 18 November 1995.

K219 The use of the bands 19.3-19.7 GHz (earth -space) by the geostationary fixed satellite service is limited to feeder links for non-geostationary satellite systems in the mobile satellite service is subject to application of provisions of Article No. 9.11A but not subject to provisions of Article No. 22.2. The use of this band for other non-geostationary fixed satellite service systems is not subject to provisions of Article 9.11A and shall continue to be subject to provisions of Article 9 (except Article 9.11A) and 11 procedures, and to the provisions of Article No. 22.2,

K219B In order to protect feeder links of non-geostationary networks in the mobile-satellite service in the frequency band 19.3-19.7 GHz, the power flux-density values produced at the surface of the Earth for all angles of arrival by a space station in the inter-satellite service operating in this band in accordance with Resolution 679 (WRC-23) shall not exceed −140 dB(W/m2) in any 1 MHz within 150 km of any of the above feeder-link earth stations recorded in the Master International Frequency Register.

K220 Article 22.2 shall continue to apply in the band 19.6 - 19.7 GHz and 29.4 - 29.5 GHz between feeder links of non-geostationary mobile satellite service networks and those fixed satellite service networks for which Appendix 4 coordination information, or notification information is considered as having been received by the Bureau prior to 21 November 1997.

K221 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.

K222 In the bands 20.1 - 20.2 GHz and 29.9 -30 GHz in Regions 1 and 3, 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.

K223 In the bands 19.7 - 20.2 GHz and 29.5 - 30 GHz, the provisions of Article No. 4.10 (requiring special measures be taken to protect from harmful interference, the safety services and safety aspects of radionavigation services) do not apply with respect to the mobile-satellite service.

K224 The allocation to the mobile-satellite service is intended for use by networks which use narrow spot-beam antennas and other advanced technology at the space stations. Administrations operating systems in the mobile-satellite service in the band 19.7 - 20.1 GHz in Region 2 and in the band 20.1 - 20.2 GHz shall take all practicable steps to ensure the continued availability of these bands for administrations operating fixed and mobile systems in accordance with the provisions of Article No. 5.524.

K224A In the frequency bands 20.2-21.2 GHz and 30-31 GHz, non-geostationary-satellite systems for which complete coordination or notification information, according to the case, is received by the Bureau as of 1 January 2025 shall not cause unacceptable interference to and shall not claim protection from geostationary-satellite networks in the mobile-satellite service operating in accordance with these Regulations.

K225 The use of the band 21.4 - 22 GHz band by the broadcasting satellite service is subject to provisions of Resolution 52 (Rev. WRC-07). Any station in the fixed or mobile services of an administration shall not produce a power flux-density in excess of −120.4 dB(W/(m2 • MHz)) at 3 m above the ground of any point of the territory of any other administration in Regions 1 and 3 for more than 20% of the time.

K226 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.

K226A The use of the aeronautical mobile (OR) service in the frequency band 22-22.2 GHz is limited to non-safety applications.

K226B Aircraft stations in the aeronautical mobile (OR) service operating in the frequency band 22-22.2 GHz are subject to agreement obtained under No. 9.21 with respect to the fixed service and shall not cause harmful interference to, nor claim protection from, the fixed service. The following power flux-density values shall be used as a threshold for coordination under No. 9.21:

-110 dB(W/(m2 · MHz))	for	$0° \le \theta \le 12.6°$
$2.86\,\theta - 146$ dB(W/(m2 · MHz))	for	$12.6° < \theta \le 15°$
$0.87\,\theta - 116$ dB(W/(m2 · MHz))	for	$15° < \theta \le 30°$
$0.067\,\theta - 92$ dB(W/(m2 · MHz))	for	$30° < \theta \le 90°$

where θ is the angle of arrival of the incident wave above the horizontal plane, in degrees.

This criterion should be applied at the border of the territory of another administration for any aircraft station located at an altitude of up to 15 km above the ground. In conducting the calculations, the most recent version of Recommendation ITU-R P.525 should be used.

K226C Stations in the aeronautical mobile (OR) service operating in the frequency band 22-22.2 GHz shall not cause harmful interference to the radio astronomy service operating in the frequency band 22.21-22.5 GHz. The aggregate power flux-density (pfd) received from these stations at any radio astronomy station operating in the frequency band 22.21-22.5 GHz shall be in compliance with the protection criteria provided in Recommendations ITU-R RA.769-2 and ITU-R RA.1513-2, unless specifically agreed by the affected administration(s).

K226D In order to protect stations of the Earth exploration-satellite service (passive) operating in the frequency band 22.21-22.5 GHz, the unwanted equivalent isotropically radiated power (e.i.r.p.) of stations operating in the aeronautical mobile (OR) service shall not exceed −23 dBW in any 100 MHz band in the frequency band 22.21-22.5 GHz.

K226E The use of the aeronautical mobile (OR) service in the frequency band 22-22.2 GHz outside national boundaries shall not cause harmful interference to, or claim protection from, services in other countries operating in accordance with the Table of Frequency Allocations.

K227 All emissions in the band 23.6 – 24 GHz are prohibited.

K227A The frequency band 24.25-27.5 GHz is identified for use to implement the terrestrial component of International Mobile Telecommunications (IMT). Resolution 242 (Rev. WRC-23) applies.

K228 The use of the band 25.25-27.5 GHz by the inter-satellite service is limited to space research and earth exploration applications, and also transmission of data originating from medical and industrial activities in space.

K229 Administrations operating earth stations in the Earth exploration satellite service or 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 space research service should be operated taking into account most recent version of Recommendation ITU-R SA.1862. Resolution 242 (Rev.WRC-23) applies.

K230 Earth stations operating in the earth exploration satellite service in the band 25.5 - 27.0 GHz shall not claim protection from, or constrain the use and deployment of, stations of the fixed and mobile services. Resolution 242 (WRC-19) applies.

K231 The 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.

K232 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.

K233 The band 27.5 - 30 GHz may be used by the fixed-satellite service (Earth-to-space) for the provision of feeder links for the broadcasting-satellite service.

K234 The use of the band 29.1 - 29.4 GHz (Earth-to-space) by the FSS is limited to GSO satellite systems and feeder links to non-GSO satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of Article No. 9.11A, but not subject to the provisions of Article No. 22.2 except as indicated in footnote Nos. K212 and K214 where such use is not subject to provisions of Article No. 9.11A and shall continue to be subject to Articles 9 (except Article No.9.11A) and 11 procedures and to the provisions of Article No. 22.2.

K235 Feeder links of Non-Geostationary networks in the mobile satellite service and geostationary networks in the fixed satellite service operating in the 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 it is changed by a future competent world radiocommunication conference. Administrations submitting Appendix 4 information for coordination before this date are encouraged to utilize these techniques to the extent practicable. These methods are also subject to review by the ITU-R (see Resolution 121 (WRC-95)).

K236 All emissions in the band 31.3 – 31.5 GHz are prohibited.

K236A The allocation to the fixed service in the frequency band 31-31.3 GHz is identified for worldwide use by high-altitude platform stations (HAPS). This identification does not preclude the use of this frequency band by other fixed-service applications or by other services to which this frequency band is allocated on a co-primary basis, and does not establish priority in the Radio Regulations. Such use of the fixed-service allocation by HAPS shall be in accordance with the provisions of Resolution 167 (Rev. WRC-23).

K237 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. Administrations should take this into account when considering regulatory provisions in relation to these bands. Because of the potential deployment of high-density applications in the fixed-satellite service in the frequency bands 39.5-40 GHz and 40.5-42 GHz (see No. K210), administrations should further take into account potential constraints to high-density applications in the fixed service, as appropriate.

K237A The frequency band 37-43.5 GHz, or portions thereof, is identified for use to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. Because of the potential deployment of FSS earth stations within the frequency range 37.5-42.5 GHz and high-density applications in the fixed-satellite service in the frequency bands 39.5-40 GHz, potential constraints to IMT in these frequency bands should be taken into account, as appropriate. Resolution 243 (Rev.WRC-23))applies.

K237B Non-geostationary-satellite systems in the fixed-satellite service operating with an apogee altitude above 407 km and below 2 000 km in the frequency band 37.5-38 GHz shall not exceed an unwanted emission e.i.r.p. density of −21 dB(W/100 MHz) per space station for angles greater than 65.0° from nadir relative to the space station in the fixedsatellite service in the frequency band 36-37 GHz in order to protect the Earth exploration-satellite service (passive) operating in the latter frequency band. (WRC-23)

K238 Practical measures should be taken to minimise the potential interference between stations in the fixed service and airborne stations in the radionavigation service in the 31.8-33.4 GHz band, taking into account the operational needs of airborne radar systems.

K239 In designing systems for the inter-satellite in the band 32.3-33 GHz, for radionavigation service in the band 32 - 33 GHz and for space research service(deep space) in the band 31.8-32.3 GHz, administrations shall take all necessary measures to prevent harmful interference between these services, bearing in mind the safety aspects of the radionavigation service (see Recommendation 707 (Rev. WRC-23))

K240 In the 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 dB(W/m2) in this band.

K240A The use of the frequency bands 37.5-39.5 GHz (space-to-Earth), 39.5-42.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) by a non-geostationary-satellite system in the fixed satellite service is subject to the application of the provisions of No. 9.12 for coordination with other non-geostationary satellite systems in the fixed-satellite service but not with non-geostationary-satellite systems in other services. Resolution 770 (WRC-19) shall also apply, and No. 22.2 shall continue to apply.

K240B The allocation to the fixed service in the frequency band 38-39.5 GHz is identified for worldwide use by administrations wishing to implement high-altitude platform stations (HAPS). In the HAPS-to-ground direction, the HAPS ground station shall not claim protection from stations in the fixed, mobile and fixed-satellite services; and No. 5.43A does not apply. This identification does not preclude the use of this frequency band by other fixed-service applications or by other fixed - services to which this frequency band is allocated on a co-primary basis and does not establish priority in the Radio Regulations. Furthermore, the development of the fixed-satellite, fixed and mobile services shall not be unduly constrained by HAPS. Such use of the fixed-service allocation by HAPS shall be in accordance with the provisions of Resolution 168 (Rev. WRC-23).

K240C The use of the frequency bands 39.5-40 GHz and 40-40.5 GHz by non-geostationary-satellite systems in the mobile-satellite service (space-to-Earth) and by non-geostationary-satellite systems in the fixed-satellite service (space-to-Earth) is subject to the application of the provisions of No. 9.12 for coordination with other non-geostationary satellite systems in the fixed-satellite and mobile-satellite services but not with non-geostationary-satellite systems in other services. No. 22.2 shall continue to apply for non-geostationary-satellite-systems.

K241 The equivalent power flux-density (epfd) produced in the band 42.5-43.5 GHz by all space stations in any non-geostationary-satellite system in the fixed-satellite service (space-to-Earth), or in the broadcasting-satellite services (space-to-Earth) operating in the 42-42.5 GHz band, shall not exceed the following values at the site of any radio astronomy station for more than 2% of the time:

- –230 dB(W/m2) in 1 GHz and –246 dB(W/m2) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a single-dish telescope; and
- –209 dB(W/m2) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a very long baseline interferometry station.

These epfd values shall be evaluated using the methodology given in Recommendation ITU-R S.1586-1 and the reference antenna pattern and the maximum gain of an antenna in the radio astronomy service given in Recommendation ITU-R RA.1631 and shall apply over the whole sky and for elevation angles higher than the minimum operating angle min of the radio-telescope (for which a default value of 5° should be adopted in the absence of notified information).

These values shall apply at any radio astronomy station that either:

– was in operation prior to 5 July 2003 and has been notified to the Bureau before 4 January 2004; or

– was notified before the date of receipt of the complete Appendix 4 information for coordination or notification, as appropriate, for the space station to which the limits apply.

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.

K242 The power flux-density in the band 42.5-43.5 GHz produced by any geostationary space station in the fixed-satellite service (space-to-Earth), or the broadcasting-satellite service (space-to-Earth) operating in the 42-42.5 GHz band, shall not exceed the following values at the site of any radio astronomy station:

–137 dB(W/m2) in 1 GHz and –153 dB(W/m2) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a single-dish telescope; and

–116 dB(W/m2) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a very long baseline interferometry station.

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

– was in operation prior to 5 July 2003 and has been notified to the Bureau before 4 January 2004; or

– was notified before the date of receipt of the complete Appendix 4 information for coordination or notification, as appropriate, for the space station to which the limits apply.

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.

K243 The allocation of the spectrum for the fixed-satellite service in the bands 42.5 - 43.5 GHz and 47.2 -50.2 GHz for Earth-to-space transmission is greater than that in the band 37.5 39.5- GHz for space-to-Earth transmission in order to accommodate feeder links to broadcasting satellites. Administrations are urged to take all practicable steps to reserve the band 47.2 - 49.2 GHz for feeder links for the broadcasting-satellite service operating in the band 40.5 - 42.5 GHz.

K244 In the 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.

K245 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 (see Article No. 5.43).

K246 The use of the bands 47.5-47.9 GHz, 48.2-48.54 GHz and 49.44-50.2 GHz by the fixed-satellite service (space-to-Earth) is limited to geostationary satellites.

K247 The power flux-density in the band 48.94-49.04 GHz produced by any geostationary space station in the fixed-satellite service (space-to-Earth) operating in the bands 48.2-48.54 GHz and 49.44-50.2 GHz shall not exceed –151.8 dB(W/m2) in any 500 kHz band at the site of any radio astronomy station.

K248 The band 48.94 - 49.04 GHz is also allocated to the radio astronomy service on a primary basis.

K249 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 (HAPS). The use of the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz is subject to provisions of Resolution 122 (Rev. WRC-07).

K249A In Kenya the frequency band 47.2-48.2 GHz is identified for use to implement IMT. Resolution 243 (WRC-23) applies.

K250 All emissions in the band 50.2 – 50.4 GHz are prohibited.

K251 In the bands 51.4 - 54.25 GHz, 58.2 - 59 GHz, 64 - 65 GHz, radio astronomy observations may be carried out under national arrangements.

K251A The use of the frequency band 51.4-52.4 GHz by the fixed-satellite service (Earth-to-space) is limited to geostationary-satellite networks. The earth stations shall be limited to gateway earth stations with a minimum antenna diameter of 2.4 metres.

K252 Use of the bands 54.25 - 56.9 GHz, 57 - 58.2 GHz and 59 - 59.3 GHz by the inter-satellite service is limited to the satellites in the geostationary satellite orbit. The single entry 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 dB (W/m^2/100 MHz) for all angles of arrival.

K253 In the bands 55.78- 58.2 GHz, 59 - 64 GHz, 66-71 GHz, 122.5-123 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 (see Article No. 5.43).

K254 Use of the bands 56.9 -57GHz by inter-satellite service is limited to the satellites in the geostationary satellite orbit and to transmissions from non-geostationary satellites in high earth orbit to those in low earth orbit. For links between satellites in the geostationary satellite orbit, the single entry power flux density at all altitudes from 0 km to 1000 km above the earth's surface, for all conditions and for all methods of modulation shall not exceed -147 dB (W/m^2/100 MHz) for all angles of arrival.

K255 In the band 55.78-56.26 GHz, in order to protect stations of 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).

K256 In the band 59-64 GHz, airborne radars in the radiolocation service may be operated subject to not causing harmful interference to the inter-satellite service nor claiming protection from harmful interference caused by inter-satellite service.

K256A The frequency band 66-71 GHz is identified for use to implement the terrestrial component of International Mobile Telecommunications (IMT). Resolution 241 (Rev. WRC-23) applies.

K257 In the band 74-76 GHz, stations in the fixed, mobile and broadcasting services shall not cause harmful interference to the stations of the fixed satellite or broadcasting satellite services operating in accordance with the decisions of appropriate frequency assignment planning conference for the broadcasting satellite service.

K258 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.

K259 The 81-81.5 GHz band is also allocated to amateur and amateur satellite services on a secondary basis.

K260 The use of the band 94 - 94.1 GHz by the earth exploration satellite (active) and space research (active) services is limited to space borne cloud radars.

K261 In the bands 94-94.1 GHz and 130-134 GHz, transmissions of space stations from the earth exploration satellite service (active) that are directed into the main beam of the radio astronomy antenna have the potential to damage some radio astronomy receivers. Space agencies operating the transmitters and radio astronomical stations concerned should mutually plan their operations so as to avoid occurrences to the maximum possible extend.

K262 In the bands 105 -109.5 GHz, 111.8 - 114.25 GHz and 217 - 226 GHz, the use of this allocation is limited to space based radio astronomy only.

K263 Use of the bands 116 -122.25 GHz by the inter-satellite service is limited to the satellites in the geostationary satellite orbit. The single entry power flux density by a station in the inter-satellite service for all conditions and for all methods of modulation, ,at all altitudes from 0 km to 1,000 km above the earth's surface and in the vicinity of all geostationary orbital positions occupied by passive sensors, shall not exceed -148 dB ($W/m^2/MHz$) for all angles of arrival.

K264 The allocation to the Earth Exploration Satellite service (active) is limited to the band 133.5 - 134 GHz.

K265 In the frequency band 235-238 GHz, stations in the Earth exploration-satellite service (passive) shall not claim protection from stations in the fixed and mobile services. (WRC-23)

K266 In the band 155.5-158.5 GHz, the allocation to the Earth Exploration Satellite (passive) and space Research (passive) services shall terminate on 1 January 2018.

K267 Use of the bands 174.8-182 GHz and 185-190 GHz by the inter-satellite service is limited to the geostationary satellite orbit. The single entry power flux density produced by a station in the inter-satellite service for all conditions and for all methods of modulation, at all altitudes from 0 km to 1,000 km above the earth's surface and in the vicinity of all geostationary orbital positions occupied by passive sensors, shall not exceed -144dB($W/m^2/MHz$) for all angles of arrival.

K268 In the bands 200 - 209 GHz, 235 - 238 GHz, 250 - 252 GHz and 265 - 275 GHz, ground based passive atmospheric sensing is carried out to monitor atmospheric constituents.

K269 The bands 237.9 - 238 GHz, is also allocated to earth exploration satellite service (active) and space research service (active) for space borne cloud radars only.

K270 For the operation of fixed and land mobile service applications in frequency bands in the range 275-450 GHz:
The frequency bands 275-296 GHz, 306-313 GHz, 318-333 GHz and 356-450 GHz are identified for implementation of land mobile and fixed service applications, where no specific conditions are necessary to protect Earth exploration-satellite service (passive) applications.
The frequency bands 296-306 GHz, 313-318 GHz and 333-356 GHz may only be used by fixed and land mobile service applications when specific conditions to ensure the protection of Earth exploration-satellite service (passive) applications are determined in accordance with Resolution 731 (Rev.WRC-19).
In those portions of the frequency range 275-450 GHz where radio astronomy applications are used, specific conditions (e.g. minimum separation distances and/or avoidance angles) may be necessary to ensure protection of radio astronomy sites from land mobile and/or fixed service applications, on a case-by-case basis in accordance with Resolution 731 (Rev.WRC-19).

K271 The frequency band 275-1000 GHz may be used for experimentation with, and development of, 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 , 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.