



FREQUENCY SPECTRUM MANAGEMENT GUIDELINES

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1 Preamble

This may be cited as the Frequency Spectrum Management Guidelines of the Communications Authority of Kenya (CA) hereafter referred to as “The Authority”. These Guidelines form a basis for spectrum management in Kenya, which includes radio frequency licensing strategies, requirements and procedures in the management of national radio spectrum resource and related satellite orbital slots.

These guidelines are made pursuant to Section 38 and 46 K of the Kenya Information and Communications Act No. 2 of 1998 and the Kenya Information and Communications (Radio Communications and Frequency Spectrum) Regulations, 2010.

2 Definitions and Abbreviations

2.1 Abbreviations

ATU	African Telecommunication Union
ARSK	Amateur Radio Society of Kenya
EACO	East African Communications Organization
ICAO	International Civil Aviation Authority
ICT	Information Communication and Technology
IMO	International Maritime Organization
ISM	Industrial, Scientific and Medical
ITU	International Telecommunications Union
KCAA	Kenya Civil Aviation Authority
KICA	Kenya Information and Communications Act No. 2 of 1998
KMA	Kenya Maritime Authority
R&D	Research and Development
TOFA	Table of Frequency Allocations
USF	Universal Service Fund
WMO	World Meteorological Organization

2.2 Definitions

For the purpose of these Guidelines, the following terms will have the meaning defined below:

Allocation of a Frequency Band: Entry in the TOFA of a given frequency band for the purpose of its use by terrestrial or space services or the radio astronomy service.

Allotment of a Radio Frequency: Entry of a designated frequency channel in an agreed plan, adopted by the ITU's World Radio Conference or regional radio communication conferences, for use by one or more administrations for a terrestrial or space service in one or more identified countries or geographical areas.

Assignment of a Radio Frequency: Authorization given by the Authority, for a radio station to use a radio frequency or radio frequency channel for the specified period under the given terms and conditions.

Assigned Frequency: The center of the frequency band assigned to a station.

Authorization: An approval granted to use spectrum or provide telecommunications services.

Emission: Radiation produced, or the production of radiation, by a radio transmitting station.

Industrial, Scientific and Medical (ISM) applications: Operation of equipment designed to generate and use locally radio frequencies for industrial, scientific, medical or similar purposes.

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

National Table of Frequency Allocations (TOFA): The national spectrum plan which provides specific information on the allocation of spectrum for various applications.

Regulations: The Kenya Information and Communications (Radio Communications and Frequency Spectrum) Regulations, 2010, as may be amended from time to time or its successor.

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

Radio Communication: Telecommunication services by use of radio waves.

Service Provider: An entity that is licensed to provide telecommunications services.

Spectrum refarming: This is the process of repurposing/reusing of spectrum bands to more efficient technologies and /or new services.

Telecommunications Service: Any form of transmission or reception of signals, images, and sounds provided by means of a telecommunications network to a third party.

The Act: Kenya Information and Communications Act No. 2 of 1998

3 Principles

This Guideline is based on the following principles:

- i. That the Radio Frequency Spectrum is a scarce national and natural resource that is held in trust and managed by the Authority on behalf of the people of Kenya. It's management therefore requires:
 - a. Practicable sharing of the resource.
 - b. Planning for efficient utilisation of spectrum for optimal use.
- ii. Encouragement of the introduction of advanced and innovative information and communication technologies to meet the evolving demands.
- iii. Establishment of a fair and objective spectrum management regime.
- iv. Ensuring transparency and stakeholder participation in the spectrum management regime.
- v. Conformity to Standards and National Frequency Plans in line with the ITU Radio Regulations.

4 Objectives

These Guidelines establish a framework for management of the radio frequency spectrum by measures aimed at:

- i. Efficient and effective management of radio frequency spectrum that will contribute to national development, socio-economic growth, employment and public welfare.
- ii. Facilitating provision of a variety of wireless services in accordance with the National ICT Policy.
- iii. Increasing and promoting greater spectrum efficiency in the utilization and management of radio frequency spectrum by licensees.
- iv. Use of radio frequency spectrum in accordance with the provisions of the Act, ITU Radio Regulations 2010 and Recommendations, and other related standards.
- v. Defining the regulatory criteria for meeting public, commercial and non-commercial demand for radio frequency spectrum.
- vi. Providing frequency assignment procedures that ensure minimum harmful interference between Radio communication services.
- vii. Ensuring the fulfilment of essential requirements of national security as defined in the Constitution of Kenya 2010.
- viii. Providing an efficient spectrum management system based on spectrum economic value for public, commercial and non-commercial uses of radio frequency spectrum.
- ix. Representing the interests of Kenya in the regional and international agreements, treaties and conventions relating to the radio frequency spectrum;
- x. Ensuring effective coordination across respective borders to protect radio communication services within the borders of Kenya.
- xi. Encouraging innovative utilization of spectrum by spectrum users in Kenya.

5 Frequency Spectrum Guidelines

5.1 Spectrum Allocation

- 5.1.1 **Responsibility for allocating spectrum:** The Authority has the sole authority of allocating the radio frequency spectrum, based on the provisions of the National Table of Frequency Allocations (TOFA) and international agreements such as ITU Radio Regulations and Recommendations.
- 5.1.2 **Availability of the National Table of Frequency Allocations:** The national TOFA will be posted on the Authority's website and be made available for free download. The TOFA will be updated regularly to capture changes in frequency allocations.
- 5.1.3 **Safety of life and emergency services:** The Authority, when allocating spectrum, will give priority to spectrum needs of radio services used for ensuring safety of life/property, public protection/national security and emergency services in accordance with the Tampere Convention of 1998.
- 5.1.4 **Spectrum Sharing:** Where feasible and depending on the category of service, the Authority will promote the use of radio frequency spectrum on shared basis in terms of time or location i.e., on the same geographical location or different geographical areas with sufficient separation.
- 5.1.5 **Use of Spectrum on shared non protected basis:** Spectrum usage will be maximized by designating certain bands for use by low power, short range and ISM systems.
- 5.1.6 **Use of Spectrum by the National Government:** The Authority will consider and wherever possible set aside spectrum for use by the National Government.
- 5.1.7 **Use of Spectrum by the devolved Governments:** The Authority will consider and wherever possible set aside spectrum for use by the County Governments in accordance with the law.
- 5.1.8 **Review of the National Table of Frequency Allocations (TOFA):** The national TOFA will be reviewed and revised periodically in order to incorporate technological developments or decisions of a World or Regional Radio Communication Conference and/or developments in frequency spectrum management policies and allocation within the country.

5.2 Assignment and Licensing of Frequencies

- 5.2.1 **Frequency Assignment:** The Authority will assign radio frequency spectrum based on the provisions of the allotments and allocations in the National Table of Frequency Allocations (TOFA).

- 5.2.2 **Frequency Licensing:** All spectrum assignments will be subject to licensing by the Authority, including frequency assignments to the National and County Governments. The Authority's instruments will include granting, amending, renewing, suspending and revoking class licenses, radio spectrum licenses and authorizations. The Authority will also determine the terms and procedures necessary for the issuance of licenses, as well as monitoring the compliance of the licensees with the terms of the licenses and authorizations issued to them.
- 5.2.3 **Prescription of Technical Parameters for Frequency Assignments:** The Authority will prescribe the minimum technical parameters for a frequency assignment that will include, but may not be limited to geographical location, effective isotropic radiated power (EIRP) and bandwidth.
- 5.2.4 **Amendments to Authorization:** The Authority may amend the frequency authorization if it determines that such amendment is necessary to achieve the objectives of the Act, Regulations, any relevant Policy or Regulatory instrument, or changes resulting from international, multilateral and bilateral agreements.
- 5.2.5 **Procedure for Spectrum Assignment:** The assignment of radio frequencies will be conducted on the basis of the prevailing assignment regime i.e. administratively or through market-based mechanisms, as prescribed by the Authority from time to time. In the case of market-based mechanisms in the form of auctions, applicable rules will be auction-specific and will be prescribed during the design of a specific auction.
- 5.2.6 **Payment of License Fees:** Licensees will be required to pay requisite frequency fees prescribed by the Authority as and when they fall due. Failure to which will result in penalties or other actions as stipulated in the authorization instrument (the license), the Act and the Regulations. However, this will not be applicable to licensees who have been exempted from payment of frequency fees.
- 5.2.7 **Renewal of Frequency Licenses:** Upon expiry of the term of a frequency license, a licensee may request to renew the license, subject to the spectrum assignment regime prescribed at that point in time. Continued use of spectrum without having a valid license is an offense under the Act that will attract regulatory action as per Section 35 (2) of the KICA.
- 5.2.8 **Frequencies for National and County Government Authorities:** Frequency assignments to Government agencies will be prescribed by the Authority.
- 5.2.9 **Frequencies for Research and Innovation:** The Authority may allow access to radio spectrum on temporary basis for trials, experimental or research purposes provided there is sufficient justification for an application for that purpose. In this regard:

5.2.10 The Authority will provide the necessary conditions under which such frequency will be used and the duration of use.

5.2.10.1 The results of the Research and Development (R&D) or trial will be communicated to the Authority.

5.2.11 Aeronautical and Maritime Frequency Licensing Policy:

5.2.11.1 Aeronautical Frequency Bands: Licensing of aeronautical services will be subject to procedures laid down by the Authority.

5.2.11.2 Maritime Frequency Bands: Licensing of maritime services will be subject to procedures laid down by the Authority.

5.2.11.3 The Authority will develop and uphold; memoranda of understanding with relevant authorities e.g. Kenya Maritime Authority (KMA) for maritime services and Kenya Civil Aviation Authority (KCAA) for Aeronautical services

5.2.11.4 Maritime and Aeronautical Radio Navigation, Distress and Safety Communications: The Authority will not levy any fees on radio navigation, distress alerting frequencies including search and rescue, and safety beacons in the aeronautical and maritime services.

5.2.12 Diplomatic Communications: The Authority will authorize frequency spectrum assignments to diplomatic missions' subject to the following:

5.2.12.1 Reciprocation of the conditions of spectrum authorization to the Kenyan diplomatic mission in those states.

5.2.12.2 Frequencies that do not qualify under the Vienna Convention on Diplomatic Relations (1961) will be subjected to all regulatory instruments and the prevailing spectrum fees policy will apply.

5.2.13 Amateur and Citizen Frequency Bands: The Authority will license users of these frequency bands subject to:

5.2.13.1 Vetting of amateur band applicants by the Amateur Radio Society of Kenya.

5.2.13.2 Fulfilment of all application requirements in accordance with 4.2.2.

5.2.14 Transfer of Assigned Frequencies: Without prejudice to the generality of any other law, unless otherwise approved by the Authority, the right to use the assigned frequencies is Not Transferable. An application for the transfer of the right to use the Assigned Frequency will be made in accordance with the guidelines for transfer of frequencies prescribed by the Authority.

5.3 Frequency Assignment Revocation and Surrender

5.3.1 The Authority may revoke frequency assignments where the licensees: fail to pay the requisite license fees within a stipulated period; fail to renew the license; fail to utilize the frequency within the stipulated period; or fail to observe other actions as stipulated in the authorization instrument (the license), the Act and/or the Regulations. The revocation of frequency assignment shall be done subject to the Authority giving adequate notice to the affected licensees.

5.3.2 A licensee may apply to the Authority to surrender spectrum assigned to them before expiry of the term of the license. The Authority will not refund any frequency fee already paid as a result of this surrender. Further, the Licensee will be required to pay all outstanding fees owing to the Authority.

5.4 Spectrum Pricing

- 5.4.1 **Spectrum Pricing:** The Authority will set the spectrum fees in a manner which will enable efficient use of this scarce resource when determining the pricing methodology for a given spectrum band. The Authority will employ market-based and administrative mechanisms, as appropriate, in determining the price of spectrum.
- 5.4.2 **Levying Fees on Spectrum Use:** The Authority will ensure optimal use of radio spectrum by levying appropriate fees on spectrum utilization in order to support this objective. The spectrum fees will be set at a level that promotes technical efficiency, encourages the rollout of infrastructure in rural areas and supports the development of innovative services. The total of all spectrum charges levied on licensed spectrum users will inter alia, recover the total of the direct and indirect costs incurred in managing the frequency spectrum.
- 5.4.3 **Amount of Spectrum Fees Charged:** The Authority will charge frequency spectrum fees based on its approved frequency fee schedule which will take into consideration spectrum availability, band occupancy, power output, geographical/congestion zoning and frequency band differentiation and its purpose. Spectrum fees payable by each category of Radio Communication service or user-group and the means, by which they are calculated, will be prepared and published in guidelines that will be made public and posted on the Authority's website.
- 5.4.4 **Reward and Penalization on use of spectrum:** The Authority will, through its spectrum pricing methodology, reward efficient use of spectrum and penalize inefficient use. The Authority will outline specific and clear parameters which will be used to assess efficient and inefficient utilization of spectrum.
- 5.4.5 **Annual spectrum fees:** The annual spectrum fees payable by all licensed radio communication services are as per section 35 of the Act.
- 5.4.6 **Exemptions and Subsidies on Payment of Frequency Fees:**
- 5.4.6.1 Entities whose duties pertain to National security, public safety, humanitarian and emergency services may be exempted from paying the requisite spectrum fees. Guidelines on exemptions will be prescribed by the Authority.
 - 5.4.6.2 The Authority may include discounting incentives on the pricing of spectrum in rural and marginalized areas to encourage deployment of services in these areas. These incentives will be based on the provisions of the Universal Service Fund (USF).

5.5 Frequency Spectrum Re-Farming & Recovery

5.5.1 **Spectrum Re-farming:** The Authority shall encourage spectrum re-farming of already assigned frequencies as long as the operator conforms to the agreed deployment terms and conditions. This is in order to enhance spectrum utilization efficiency as required by the Act.

5.5.2 **Spectrum Recovery:** The Authority may require licensees affected by change in spectrum allocation arising from spectrum re-planning to migrate to alternative frequency bands within a mutually agreed time frame. In this regard the Authority will not be liable or responsible for compensation of the existing spectrum users.

5.6 Monitoring, Inspection and Enforcement

5.6.1 The Authority will assign frequencies and issue licenses to users, under certain terms and conditions that will ensure operation of radio communications without harmful interference. In this regard:

5.6.1.1 **Monitoring:** The Authority will continuously monitor all emissions to check against compliance with license conditions and will participate in regional and international monitoring activities whenever requested by EACO, ATU, ITU or other administrations.

5.6.1.2 **Inspection:** The Authority will inspect radio network installations, from time to time, to check compliance against license conditions.

5.6.1.3 **Surveillance:** The Authority will carry out surveillance audits to verify utilization of the allocated frequencies and support the frequency planning function.

5.6.1.4 **Enforcement:** The Authority will take appropriate enforcement action against any unlicensed user of the radio spectrum or user operating outside the parameters of their license conditions.

5.7 Frequency Planning

5.7.1 Frequency planning involves the allotment of frequency bands to various radio communication services under regulatory conditions that take national priorities into consideration. In this regard:

5.7.1.1 Frequency Plans: The Authority will develop band and channelization plans in accordance with the provisions of the Kenya TOFA, ITU Radio Regulations & Recommendations and regional planning agreements.

5.7.1.2 Coordination: In the process of developing frequency plans, the Authority will coordinate with other administrations that may be impacted by the planning process. The developed plans will be subjected to appropriate ITU regulatory mechanisms such as notification and coordination whenever such requirements are mandatory. All frequency assignments capable of causing interference to or requiring protection from, emissions from stations of other administrations will be coordinated with the administration concerned.

5.8 International Cooperation

5.8.1 The Authority will endeavor to cooperate with regional agencies and neighboring administrations to develop common positions on spectrum management issues, in order to achieve frequency-use harmonization which is necessary to achieve economies of scale. In this regard:

5.8.1.1 National Position: The Authority will develop national positions on spectrum management matters, in consultation with relevant stakeholders, and endeavor to harmonize these positions with neighboring countries and regional organizations & agencies i.e. EACO, ATU, ITU, ICAO, IMO and WMO.

5.8.1.2 Regional and International Forums: The Authority will participate in related regional and international spectrum management activities, as appropriate. The Authority will establish a National Preparatory Committee (NPC) to prepare for international forums addressing radio matters such as Radio Conferences. The NPC will include the stakeholders who are major users of the radio frequency spectrum. The eventual delegation will be composed based on relevance of the matters to be discussed in those conferences/meetings, and government guidelines on external representation.

5.9 Unused Radio Spectrum

- 5.9.1 **Repossession of Unused Frequency Spectrum:** The Authority will repossess any spectrum that has not been put into use following expiry of the period stipulated for the licensee to put the frequency into use. This will be implemented in accordance with the stipulated conditions of frequency assignment /license.
- 5.9.2 **Extension of Period to Utilize Assigned Frequency Spectrum:** The Authority may grant licensees a one-time opportunity for extending the grace period within which to put into use assigned frequencies. The duration of such extensions will be solely determined by the Authority. The spectrum fees that would have been accrued for the duration of the said grace/extension period will be payable to the Authority.
- 5.9.3 **Re-Assignment of Repossessed Frequency Spectrum:** The Authority may assign repossessed spectrum to other users without further reference to the initial or previous licensee.
- 5.9.4 **Spectrum Fee Refund:** Under no circumstance will the Authority be required to refund all or part of spectrum utilization fees for any unused or terminated frequencies.

6 Review of this Guideline

This guideline may be reviewed from time to time, to ensure that it meets the Authority's statutory obligations in as far as its approach for spectrum management is concerned.

Annex 1: Useful Links related to the Guidelines

1. Kenya Information and Communications Act No. 2 of 1998. <https://ca.go.ke/about-us/statutes-regulations/sector-legislation/>
2. Kenya Information and Communications (Radio Communications and Frequency Spectrum) Regulations, 2010. <https://ca.go.ke/wp-content/uploads/2018/02/Radio-Communications-and-Frequency-Spectrum-Regulations-2010-1.pdf>
3. Frequency spectrum licensing procedures. <https://ca.go.ke/wp-content/uploads/2018/03/Procedure-for-Licensing-use-of-Radio-Frequencies.pdf>
4. Frequency Spectrum fee schedule. <https://ca.go.ke/wp-content/uploads/2018/02/Frequency-Fee-Schedule-Effective-1st-July-2018-.pdf>
5. Kenya Table of Frequency Allocations (TOFA). <https://ca.go.ke/industry/frequency-spectrum/national-frequency-allocation/>