
Regulations

Spectrum Monitoring, Interference Management and Enforcement

Version 1.0

Document Date: 18 May 2023

Telecommunications and Digital Government Regulatory Authority (TDRA)
P O Box 26662, Abu Dhabi, United Arab Emirates (UAE)
www.tdra.gov.ae

Article (1)

Legal Reference

- 1.1 These Regulations are issued in accordance with the provisions of the UAE Federal Law by Decree No 3 of 2003 on Regulation of the Telecommunications Sector, as amended and its Executive Order.
- 1.2 These Regulations describe the monitoring and enforcement actions that the Authority may take in order to implement the Telecom Law in terms of its decisions, rules, regulations and instructions in relation to the use of Radio Spectrum and specifically interference management.
- 1.3 These Regulations shall be read in conjunction with the following documents available from the TDRA website at www.tdra.gov.ae:
 - 1.3.1 Spectrum Allocation and Assignment Regulations.
 - 1.3.2 Telecommunications Equipment Type Approval Regime.

Article (2)

Definitions

- 2.1 The terms, words and phrases used in these Regulations shall have the same meaning as is ascribed to them in the Federal Law by Decree No 3 of 2003 on Regulation of the Telecommunications Sector, as amended and its Executive Order; unless these Regulations expressly provide otherwise for, or the context in which those terms, words and phrases are used in these Regulations indicates otherwise.
- 2.2 The following terms and words shall be interpreted, as follows:
 - 2.2.1 **“Acceptable Interference”** means interference at a higher level than that defined as Permissible Interference and which has been agreed upon between two or more but without prejudice to, Other Administrations;
 - 2.2.2 **“Allocation”** means the entry of a designated Frequency or Frequency Band in the National Frequency Plan for use by one or more users for a terrestrial or space Radiocommunication Service in the UAE.
 - 2.2.3 **“Assigned Frequency Band”** means the Frequency Band within which the operation of a Station is authorized by the Authority.

TDRA Regulations for Spectrum Monitoring, Interference Management and Enforcement, Version 1.0

- 2.2.4 **"Authority" or "TDRA"** means the General Authority for Regulating the Digital Government and Telecommunication Sector known as Telecommunications and Digital Government Regulatory Authority established pursuant to the provisions of the Federal Law by Decree No 3 of 2003 on Regulation of the Telecommunications Sector, as amended.
- 2.2.5 **"Authorization"** means a valid Radio Frequency Spectrum authorization issued by the Authority and permits the use of Radio Frequency Spectrum subject to terms and conditions as stipulated by the Authority.
- 2.2.6 **"Authorized Wireless Equipment"** means Wireless Equipment approved for use in the UAE by the Authority on specified terms and conditions.
- 2.2.7 **"Authorized User"** means a Person that has been granted a Radio Frequency Spectrum Authorization by the Authority or is using Authorized Wireless Equipment.
- 2.2.8 **"Harmful Interference"** means Interference which impairs the functioning of a Radiocommunication Service or which materially degrades or obstructs or repeatedly interrupts Radiocommunications Services.
- 2.2.9 **"ITU"** means International Telecommunication Union, a United Nations agency for information and communication technologies (ICTs).
- 2.2.10 **"National Frequency Plan"** means the radio frequency allocation plan for the UAE.
- 2.2.11 **"Other Administrations"** means an entity with powers and duties in relation to radiocommunications in the region, including the GCC Telecom Bureau.
- 2.2.12 **"Other Interference"** means the adverse effect of electromagnetic energy on Radiocommunication or Wireless Equipment that may result in interruption to or loss of signal and may result, for example, from circumstances beyond a Person's control, such as natural atmospheric conditions, and includes Permitted and Acceptable Interference; but is not Harmful Interference.
- 2.2.13 **"Out-of-Band Emissions"** means emissions on a Frequency or Frequencies immediately adjacent to the necessary bandwidth, which results from the modulation process, but excluding Spurious Emissions.
- 2.2.14 **"Person"** will include 'juridical entities' as well as 'natural persons'.

TDRA Regulations for Spectrum Monitoring, Interference Management and Enforcement, Version 1.0

- 2.2.15 **“Permitted Interference”** means observed or predicted interference which complies with quantitative interference and sharing criteria contained in the Radio Regulations or special agreements provided for in the Radio Regulations.
- 2.2.16 **“Primary”** means Radiocommunication Services having a higher priority and protection from Harmful Interference when notified than Secondary Radiocommunication Services. The name of these Radiocommunication Services appears as capital letters in the National Frequency Plan.
- 2.2.17 **“Public Protection & Disaster Relief”** or **“PPDR”** means Public Protection and Disaster Relief as set out in the ITU regulatory and technical frameworks.
- 2.2.18 **“Radiocommunication Service”** means the transmitting and/or receiving of Radio Frequency Spectrum emissions which may be used for the conveyance of data, or messages or voice or visual images, or for the operation or control of machinery or apparatus.
- 2.2.19 **“Radio Frequency Spectrum”** means that portion of the electromagnetic spectrum below 3000 GHz.
- 2.2.20 **“Radio Regulations”** means the publication issued by the ITU, adopted by the World Radiocommunication Conference, and ratified by the UAE.
- 2.2.21 **“Regulation”** means any instrument issued by the Authority under its powers, and includes without limitation regulations, violation decisions, directives, instructions, guidance and recommendations and regulatory policies.
- 2.2.22 **“Safety Services”** means a Radiocommunications Service used permanently or temporarily for the safeguarding of human life and property;
- 2.2.23 **“Secondary Services”** means Radiocommunication Services that appear as lower case in the National Frequency Plan. These services shall not cause harmful interference to stations of Primary Services.
- 2.2.24 **“Spurious Emissions”** means emissions on a frequency or frequencies which are outside the necessary bandwidth 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.

TDRA Regulations for Spectrum Monitoring, Interference Management and Enforcement, Version 1.0

- 2.2.25 **“Station”** means one or more transmitters or receivers or a combination of transmitters and receivers, including the accessory equipment necessary at one location for carrying out a Radiocommunication Service.
- 2.2.26 **“Telecom Law”** means the Federal Law by Decree No 3 of 2003 on Regulation of the Telecommunications Sector, as amended.
- 2.2.27 **“UAE”** or **“State”** means the United Arab Emirates including its territorial waters and the airspace above.
- 2.2.28 **“Violation”** means behaviour that constitutes a breach of the Telecom Law and its Executive Order and the Regulations and regulatory frameworks issued by the Authority, in particular non-compliance with the Regulations, Authorizations, terms and conditions that regulate the use of radio frequencies and Wireless Equipment.
- 2.2.29 **“Wireless Equipment”** means a category of Telecommunication Apparatus used for Radiocommunication Service (including a Station).

Article (3)

Objectives

- 3.1 The broad objectives of spectrum monitoring, interference management and enforcement by the Authority in the UAE are to:
- 3.1.1 Protect Authorized Users from Harmful Interference;
- 3.1.2 Ensure that Persons using Radio Frequency Spectrum or Wireless Equipment or both are authorized to do so;
- 3.1.3 Ensure compliance with the National Frequency Plan and national, regional and international agreements regarding the use of Radio Frequency Spectrum;
- 3.1.4 Assist in the spectrum management and planning process; and
- 3.1.5 Assist in achieving the efficient use of the Radio Frequency Spectrum.

Article (4)

Harmful Interference

- 4.1 No Person shall cause Harmful Interference;
- 4.2 The Authority may, in the course of carrying out its duties establish that a Person is causing Harmful Interference or have a reasonable suspicion that a Person is causing Harmful Interference;
- 4.3 Any Authorized User may file a complaint with the Authority regarding an incident of or ongoing Harmful Interference; and
- 4.4 Any Harmful Interference caused to or suffered by PPDR, emergency frequencies and Safety Services shall be immediately notified to the Authority under Article (5).

Article (5)

Harmful Interference Complaints

- 5.1 All Harmful Interference complaints must be lodged with the Authority using the form specified by the Authority;
- 5.2 An Authorized User making a complaint must:
 - 5.2.1 provide sufficient technical and other details of the alleged Harmful Interference including where known, the location of the Harmful Interference; and
 - 5.2.2 assist the Authority where necessary, provided that if the complaint concerns PPDR, emergency services or Safety Services, the Person making the complaint shall use the emergency email address: interference@tdra.gov.ae or any other agreed contact.
- 5.3 The Authority will not consider any complaint that does not contain all of the information required and it may reject a complaint that does not comply with this Article; and
- 5.4 A Person or Authorized User making a complaint shall first have established that the source of the Harmful Interference is not within their own control.

Article (6)

Other Interference

- 6.1 The National Frequency Plan allows more than one Radiocommunication Service in an Assigned Frequency Band on a Primary or Secondary basis;
- 6.2 Authorized Users of Radiocommunication Services that operate on a Secondary basis shall ensure that their Services do not cause Harmful Interference to other Authorized Users and may not claim protection from Harmful Interference from Authorized Users of Primary Services;
- 6.3 Wireless Equipment shall have a minimum level of performance and Authorized Users shall comply with any and all requirements for Spurious and Out-of-Band Emissions for Authorized Wireless Equipment to avoid causing Other Interference;
- 6.4 Any Person may file a complaint with the Authority regarding an incident of or ongoing Other Interference in the form and according to the procedure published by the Authority from time to time; and
- 6.5 The Authority has discretion to determine, on a case by case basis:
 - 6.5.1 the type of interference;
 - 6.5.2 its severity in relation to the conditions applying to the Authorized User or Wireless Equipment; and
 - 6.5.3 its effect on other Authorized Users, Persons or Radiocommunications Services.

Article (7)

Spectrum monitoring

- 7.1 The Authority may use any Radio Frequency Spectrum management system to facilitate monitoring, interference management and enforcement, including mobile measurements in accordance with international best practices and the Radio Regulations;
- 7.2 The Authority may monitor signal levels in order to detect overspill, if any, within the UAE;

TDRA Regulations for Spectrum Monitoring, Interference Management and Enforcement, Version 1.0

- 7.3 The Authority may also monitor, evaluate, analyze, surveil and demodulate all types of Radiocommunications Services emitted from or received in the UAE in order to:
- 7.3.1 conduct electromagnetic compatibility studies for sharing between different Radiocommunications Services;
 - 7.3.2 measure adjacent channel power, necessary bandwidth, Spurious Emissions and Out-of-Band Emissions;
 - 7.3.3 detect Users, Radiocommunications Services and Wireless Equipment that are not Authorized;
 - 7.3.4 detect Harmful Interference;
 - 7.3.5 measure non-ionizing radiation levels to verify compliance with health and safety standards;
 - 7.3.6 prepare Radio Frequency Spectrum usage reports;
 - 7.3.7 support Radio Frequency Spectrum planning and technical studies;
 - 7.3.8 participate in international monitoring programs; and
 - 7.3.9 monitor Radiocommunications Services where requests to do so are received from the ITU or any Other Administration.
- 7.4 The Authority's monitoring activity will include verifying compliance with the terms and conditions and the technical parameters of an Authorization in terms of Article (9); and for this purpose, the Authority may request Authorized Users to provide information and documents and access to Wireless Equipment.

Article (8)

International monitoring

- 8.1 The Authority may exchange Radiocommunications Services monitoring information where it deems appropriate, with other countries, in a mutually agreed format and the Authority may also inform the GCC Telecommunication Bureau in relation to regional monitoring data;
- 8.2 The Authority may designate any of its monitoring stations to participate in an international Radiocommunications Services monitoring system. In such cases, the Authority will forward to the ITU the required details for publishing the monitoring station details in the 'List of International Monitoring stations'; and
- 8.3 The Authority may, where it detects overspill under Article (7), notify the relevant Other Administration immediately and attempt to resolve the issue.

Article (9)

Assessment and Verification

- 9.1 The Authority may conduct assessment and verification of Wireless Equipment or any part of a Telecommunications Network that contains or uses or is connected to Wireless Equipment or uses Radio Frequency Spectrum on the basis of random sampling, a published timetable or as a result of monitoring;
- 9.2 The Authority may, having regard to the reason for the request, conduct a site verification for this purpose upon request from an Authorized User or on its own initiative; and
- 9.3 The Authority may assess and verify Wireless Equipment under Article (7) or Article (10).

Article (10)

Spectrum regulatory enforcement

- 10.1 The objective of spectrum regulatory enforcement is to achieve regulatory compliance. The Authority will facilitate compliance through engagement with Persons using the Radio Frequency Spectrum;
- 10.2 Where the Authority determines that there are reasonable grounds to suspect that a Person is in Violation as a result of monitoring, assessment and verification of Wireless Equipment or a complaint, it may take enforcement action including a show-cause demand which shall be proportionate to the Violation;
- 10.3 A show-cause demand:
 - 10.3.1 must be in writing;
 - 10.3.2 must specify the nature of the Violation;
 - 10.3.3 must specify the provisions of the Telecom Law or its Executive Order or Regulation that the Person has failed to comply with;
 - 10.3.4 must specify a reasonable period during which the Person notified has the opportunity to make representations in response to any of the grounds for the show-cause demand; and
 - 10.3.5 must describe the consequences if the necessary actions to remedy the Violation are not taken within a specified timescale.
- 10.4 If the Authority has not received an acceptable explanation or if the response time to the Violation (with significant impact or that has not been removed) has expired, then the Authority may:

TDRA Regulations for Spectrum Monitoring, Interference Management and Enforcement, Version 1.0

- 10.4.1 revoke the Authorization in the case where an Authorized User is not complying with its terms or the terms of a Regulation;
 - 10.4.2 initiate judicial measures; and
 - 10.4.3 coordinate with the competent judicial authorities, public prosecutions and public authorities regarding legal procedures when necessary.
- 10.5 If Harmful Interference is being caused to assigned frequencies to PPDR, or emergency or Safety Services, the Authority may issue a warning notice requiring immediate cessation of the Harmful Interference; and
- 10.6 If the Authority detects Harmful Interference or receives a complaint about Harmful Interference under Article (5) above but the Harmful Interference does not affect assigned frequencies to PPDR, emergency or Safety Services, the Authority may issue:
- 10.6.1 a warning notice requiring immediate cessation of the Harmful Interference; or
 - 10.6.2 a show-cause demand.

Article (11)

Validation and Publication

- 11.1 These regulations should be published in the official gazette and shall be effective as of the date of their publication.