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## Public Consultation

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### TDRA Regulations – Private Mobile Radio

Commencement Date: 12 July 2021

Response Date: 15 August 2021

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

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## Preface and Notes to Potential Respondents

In keeping with its values of Transparency and sector engagement, the TDRA wishes to review and study the impact of regulatory instruments issued by it to keep abreast of developments to better involve all stakeholders. The TDRA strives to meet the needs of the sector and seeks the views and feedback from the sector for the revision of the regulations. The purpose of this document is to invite comments from stakeholders regarding the TDRA's intention to revise TDRA Regulations – Private Mobile Radio (PMR) Version 2.0 in accordance with the Telecom Law.

Stakeholders who wish to respond to this consultation should do so in writing to the TDRA on or before the response date stated on the front cover of this document.

The comments which are contained in any response to this consultation should be clearly identified with respect to the specific question in this consultation to which such comments refer. Any comments which are of a general nature and not in response to a particular question should be clearly identified as such.

Responses to this consultation should be made in writing and provided electronically in MS Word format and Adobe PDF format, on or before the response date stated on the front cover of this document. Responses must be accompanied by the full contacts details (contact name, e-mail address and phone and fax numbers) of the respondent to:

[spectrumconsultation@TDRA.gov.ae](mailto:spectrumconsultation@TDRA.gov.ae);

Executive Director Spectrum Affairs  
Telecommunications and Digital Government Regulatory Authority  
P.O. Box 26662  
Abu Dhabi, UAE

Respondents are advised that it will be the general intention of the TDRA to publish in full the responses received to this consultation. Additionally, the TDRA may, at its discretion generate and publish a "Summary of Responses" document at the conclusion of this consultation.

Accordingly, the Summary of Responses may include references to and citations (in whole or in part) of comments which have been received. The TDRA recognizes that certain responses may include commercially sensitive and confidential information which the respondent may not wish to be published. In the event that a response contains confidential information, it shall be the responsibility of the respondent to clearly mark any information which is considered to be of a confidential nature.

In any event the respondent shall be required to submit two versions of its response to the TDRA as follows:

- A full copy of its response in MS Word format with any confidential information clearly marked. The TDRA will not publish the Word document and will only use it for internal purposes.
- A publishable copy of its response in Adobe PDF format. The TDRA will publish the PDF version in its entirety. Thus, the respondent should take care to redact any commercially sensitive and confidential information in the PDF version of its response.

By participating in this consultation and by providing a PDF version of its response the respondent expressly authorizes the TDRA to publish the submitted PDF version of its response in full.

It should be noted that none of the ideas expressed or comments made in this consultation document will necessarily result in formal decisions by the TDRA and nothing contained herein shall limit or otherwise restrict the TDRA's powers to regulate the telecommunications sector at any time.

If any Person or entity seeks to clarify or discuss any part of this Regulations can request for a meeting in writing again to the above E-mail and then TDRA will set the meetings in the period from **27 to 29 July 2021** so that formal comments can still be received by **15.00pm on 15 August 2021**.

### Consultation Schedule

| Milestone   | Due Date       | Notes  |
|---|----------------|--|
| Closing Date for Initial Responses  | 15 August 2021 | All responses to this consultation should be properly received by no later than <u>15.00 noon</u> on the closing date. Responses are to be submitted in electronic format as set out in this consultation document.  |
| Latest date for requests for extension to the due date for Initial Responses. | 8 August 2021  | <p>Stakeholders wishing to secure an extension to the Closing Date for Initial Responses may apply in writing to the TDRA for such an extension. The request should set out the rationale for the request.</p> <p>Requests for extension should be submitted by e-mail to the e-mail address shown above.</p> <p>The TDRA will not consider any requests for extension which the TDRA receives after <u>15.00 noon</u> on the date stated here.</p> <p>The TDRA will consider requests to extend the Closing Date for Initial Responses and will take into account such factors as:<br/>the number of such requests received; the rationale for such requests; and the effect on the overall time-scale of the particular project in question. In the event that the TDRA extends the Closing Date for Initial Responses, the TDRA will publish the revised closing date on its website.</p> |

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## 1. Introduction

- 1.1 The TDRA intend to revise its Regulations on Private Mobile Radio Services 2.0. As such, all readers are informed that this document outlines the draft version of this Regulations in order to give this document context and to enable the TDRA to ask pertinent questions. All text in this consultation document should be read and interpreted as text and not as recording decisions of the TDRA.
- 1.2 The TDRA notes that there were recent updates in ITU-R recommendations related to these devices and with the anticipated increase in the use of Private Mobile Radio across the UAE and there is a need to update relevant parts of these Regulations to provide more clarity on the frequencies and associated attributes under which they can operate.
- 1.3 As such, the TDRA seeks to consider inputs of all industry stakeholders regarding these changes, which are increasingly relevant and valuable in the TDRA's exercise of its duties and legal mandates.
- 1.4 Additionally, the TDRA strives to follow the principles of Transparency, fairness and openness in dealings with customers, partners and other stakeholders and, therefore considers that it is important to take into account the views of those who have a legitimate interest in the outcomes of the TDRA's regulation.
- 1.5 In the ensuing text, significant changes are marked as follows:
- Additions are highlighted in yellow
  - Deletions are struck through and highlighted in grey

## Matters for Discussion and Consultation

### Article (1)

#### Scope of Document

1. These regulations are issued in accordance with the provisions of the UAE Federal Law by Decree No 3 of 2003 (Telecom Law) as amended and its Executive Order.
2. This document comprises technical regulations for the authorization of Private Mobile Radio (PMR). It shall be read in conjunction with the following documents available from the TDRA website at [www.tdra.gov.ae](http://www.tdra.gov.ae):
  - 2.1. Spectrum Allocation and Assignment Regulations
  - 2.2. Spectrum Fees Regulations
  - 2.3. Interference Management Regulations

Question 1: Do you have any proposed modifications/additions/suppressions to Scope of Regulations.

### Article (2)

#### Definitions

1. The terms, words and phrases used in these Regulations shall have the same meaning as ascribed to them in the Telecom Law (Federal Law by Decree No. 3 of 2003 as amended) and its Executive Order. In addition, these Regulations expressly provide for the meaning and context in which those terms shall be interpreted, as follows:
  - 1.1. “**Aeronautical Mobile Service**” means 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. “**Applicant**” means any Person who has applied for a License or an Authorization in accordance with the Telecom Law or other Regulatory Instruments issued by the Authority.
  - 1.3. “**Application**” means the request for issuance of a License or an Authorization, received at the Authority on prescribed forms as per the procedure in vogue.
  - 1.4. “**Authority (TDRA)**” means the General Authority for Regulating the Telecommunication Sector known as Telecommunications and Digital Government Regulatory Authority (TDRA) established pursuant to the provisions of Article 6 of Federal Law by Decree No. 3 of 2003.

- 1.5. **“Authorization”** means a valid frequency spectrum authorization issued by the **TDRA** and permits the use of radio frequency subject to terms and conditions as stipulated by the **TDRA**.
- 1.6. **“Authorized User”** means a Person that has been granted an Authorization by the **TDRA**.
- 1.7. **“Assignment (of a radio frequency or radio frequency channel)”** means an Authorization given by The Authority for a radio station to use a radio frequency or radio frequency channel under specified conditions.
- 1.8. **“Base Station”** means a land mobile radio which is fixed.
- 1.9. **“CNS”** means Communication, Navigation and Surveillance
- 1.10. **“Class Authorization”** means the Authorization which permits the operation of Wireless Equipment by any Person within designated frequency bands subject to the terms and conditions stipulated by the **TDRA**.
- 1.11. **“International Civil Aviation Organization (ICAO)”** means the United Nations specialized agency for civil aviation.
- 1.12. **“ITU”** means the International Telecommunication Union, a leading United Nations agency for information and communication technologies.
- 1.13. **“LPD433”** means land mobile radio (i.e. walkie talkie) that operate in the 433 MHz frequency range with technical characteristics as specified in the regulation on Ultra-wide band and Short Range Devices for this frequency range.
- 1.14. **“Maritime Mobile Service”** A mobile Radiocommunication Service between coast stations and ship stations, or between ship stations, or between associated on-board communication stations: survival craft stations and emergency position-indicating radio beacon stations may also participate in this service.
- 1.15. **“MID FASID”** means the ICAO Middle East office (MID) Facilities and Services Implementation Document (FASID).
- 1.16. **“Person”** will include ‘juridical entities’ as well as ‘natural persons’.
- 1.17. **“PMR over WLAN”** means land mobile radio (i.e. walkie talkie) and base stations (access points) operating in the 2.4 GHz and 5 GHz frequency range based on radio standard IEEE 802.11 a/b/g/n with technical characteristics as specified in the regulation on Ultra-wide band and Short Range Devices for the applicable frequency ranges.
- 1.18. **“PMR446”** means land mobile radio (i.e. walkie talkie) that operate in the 466 MHz frequency range with technical characteristics as specified in the regulation on Ultra-wide band and Short Range Devices for this frequency range.

- 1.19. **“Private Mobile Radio (PMR)”** are radio communications systems for terrestrial use. They consist of a network of radios which may contain one or more Base Stations, Repeaters, vehicle mounted radio and handheld including walkie-talkie. The Base Station and Repeaters are fixed while vehicle mounted radio and handheld are mobile.
- 1.20. **“Public Access Mobile Radio (PAMR)”** means PMR systems are deployed to allow public access (by subscription) and where the users of the systems are usually not the same as the system's owner and operator.
- 1.21. **“Radio Regulations (RR)”** means a publication issued by the ITU, adopted by the World Radiocommunication Conference and ratified by the UAE.
- 1.22. **“Radiocommunication Service”** means the transmitting or receiving of Radio Frequency 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.
- 1.23. **“RFID”** means Radio Frequency Identification. RFID systems enable data to be transmitted by a transponder (tag) via radio signals which are received by an RFID interrogator and processed according to the needs of a particular application.
- 1.24. **“Secondary Basis”** means the order of a Radiocommunication Service where it shall not cause harmful interference to stations of Primary Services and cannot claim protection from harmful interference from stations of Primary Services. This service appears as lower case in the National Frequency Plan.
- 1.25. **“Single Side Band (SSB)”** means amplitude modulation where one side band of the modulated signal is suppressed to use bandwidth more efficiently.
- 1.26. **“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 on a radiocommunication service.
- 1.27. **“SRD860”** means land mobile radio (i.e. walkie talkie) that operate in the 860 MHz frequency range with technical characteristics as specified in the regulation on Ultra-wide band and Short Range Devices for this frequency range.
- 1.28. **“Trunking systems”** means land mobile radio systems with one or more radio base station(s) (cells) where each cell offers one or several transmission channels which will be dynamically assigned to users as soon as a connection is required.

- 1.29. “**UAE**” means the United Arab Emirates including its territorial waters and the airspace above.
- 1.30. “**Wireless Equipment**” means a category of Telecommunication Apparatus used for Radiocommunication Service.
- 1.31. “**WRC**” means World Radiocommunications Conference of the ITU.

Question 2: Do you have any proposed modifications/additions/suppressions to Definitions.

### Article (3)

#### Uses related to Private Mobile Radio (PMR)

1. Usage of private mobile radio is allowed but not limited to the following:
  - 1.1. Land based radio systems for private use including trunking and paging.
  - 1.2. Aeronautical mobile (Ground –to –Air) stations
  - 1.3. Maritime mobile (Shore –to- ship) stations
  - 1.4. Others
2. Applications can be made for systems to be operated at any location within the UAE (for example for use during camel racing, hunting etc.).
3. LPD433, PMR 446, SRD860 and “PMR over WLAN” is allowed in the UAE under Class Authorization if meeting technical parameter as specified in the regulation on Ultra-Wide Band and Short Range Devices.

Question 3: Do you have any comments on the uses indicated above?

## Article (4)

### Technical Conditions

- The following table provides guidance on frequency ranges for Private Mobile Radio and their use:

| Frequency Range | Use  |
|-----------------|--|
| 415-526.5 kHz   | Maritime Mobile (shore-to-ship)  |
| 1606.5-3800 kHz | Maritime Mobile (shore-to-ship)  |
| 1.6-30 MHz      | Land based radio systems for private use<br>Maritime Mobile (shore-to-ship)  |
| 30-47 MHz       | Land based radio systems <del>for private use</del> with priority for Governmental use   |
| 66-87.5 MHz     | Land based radio systems <del>for private use</del> with priority for Governmental use   |
| 118-137 MHz     | Aeronautical mobile (Ground-to-Air)  |
| 137-144 MHz     | Land based radio systems for private use   |
| 146-156 MHz     | Land based radio systems for private use   |
| 156-162.1 MHz   | Maritime Mobile ( <del>shore to ship</del> )   |
| 162.1-174 MHz   | Land based radio systems for private use   |
| 350-380 MHz     | Land based radio systems for private use   |
| 380-400 MHz     | Trunking system for PAMR. with priority for Governmental use   |
| 400.15-406 MHz  | Land based radio systems for private use on Secondary Basis and with protection to Meteorological Aids                           |
| 406.1-410 MHz   | Land based radio systems for private use   |
| 410-430 MHz     | Land based radio systems for private use   |
| 430-433.05 MHz  | Land based radio systems for private use   |
| 434.79-450 MHz  | Land based radio systems for private use   |
| 450-470 MHz     | Private Land Mobile for Governmental Use<br>Surveying equipment in sub-band 450-451 MHz may be considered by the TDRA (footnote) |

|                        |  |
|------------------------|--|
| 868-870 MHz            | High Power RFID Toll Applications with band- width not higher than 400 kHz and transmit powers between 4 and 25 Watt     |
| <del>915-921 MHz</del> | <del>High Power RFID Applications with bandwidth not higher than 400 kHz and transmit powers between 4 and 10 Watt</del> |

2. Applicable Channel widths are 3 kHz for SSB, 6.25 kHz, 8.33 kHz, 12.5 kHz and 25 kHz.

3. Frequency use for Aeronautical Mobile (Ground-to-Air) shall be in line with the relevant regulations of ICAO Annex 10 and Table 2, MID FASID App B (CNS).
4. Frequency use for Maritime Mobile (shore-to-ship) shall be in line with relevant regulations of ITU like ITU Geneva-85 Plan GE85-MM-R1RR Appendix 17, 18 and 25.
5. The TDRA encourages the deployment of systems that make efficient use of the Radio frequency and will apply frequency re-use based on the coverage area specified in the Authorization. The applicant shall therefore consider the following while dimensioning the system:
  - 5.1. The maximum radiated power shall be selected with due consideration of the required coverage area including relevant parameter like building penetration losses.
  - 5.2. Maximum radiated powers for base stations and repeaters shall be determined on the basis of the required coverage and intended use as indicated in the application and will be specified as an Authorization condition.
  - 5.3. For larger coverage areas preference shall be to use several repeaters or base stations with low radiated power instead of a single repeater or base station with high radiated power.
  - 5.4. Wherever applicable, directive antennas shall be preferred over omnidirectional antennas or dipoles. Antenna mounting heights shall be selected as low as possible and appropriate down tilt of antennas shall be used to focus the transmitted power to the required coverage area.
6. For coverage requirements beyond specific location e.g. countrywide or Emirate wide, detailed justification shall be submitted to the TDRA with the application as it is a burden on the spectrum re-use. The TDRA shall evaluate such requests and reject if justification to the satisfaction of the TDRA is not appropriately provided.

7. The **TDRA** will determine the number of frequency assignments per system based on the intended use and the requirements as stated in the application. The applicant shall therefore consider the following while dimensioning the system:
  - 7.1. For networks requiring more than ten frequency Assignments, it is preferred to consider trunking systems to increase spectral efficiency. The **TDRA** may reject an application if more than ten Frequency Assignments are requested without due consideration of the trunking system option.
  - 7.2. For networks using repeaters, duplex frequencies can be requested but the Applicant shall justify the number of channels required for transmission through Base Station or Repeater. Minimum number of frequencies shall be allowed for coverage beyond a specific location.
8. The **TDRA** does not support any particular trunking standard or technology.

Question 4: Do you agree with the above frequency bands and usage restrictions? Do you have any proposed modifications/additions/suppressions to these frequency bands or usage restrictions?

## Article (5)

### Spectrum Coordination and Notification

1. Coordination of Radio Frequencies for radio stations at the national, regional and international levels shall be made through the Authority, as it is the sole body responsible for Radio Frequency coordination.
2. Notifying and Registering of Radio Frequencies in the ITU shall be made through the Authority according to the procedures outlined in the Radio Regulations.
3. The applicant shall support the coordination procedures.

Question 5: Do you have any comments on coordination/notification indicated above?

### 3. General comments

- 3.1 Further to the specific matters discussed, and questions asked above, please identify any additional issues which you feel are relevant for consideration in this consultation. Please provide specific support and/or explanation of your viewpoints as well as recommendations regarding how such issues might be resolved.