
Radio Spectrum Guidelines

Private Mobile Radio (PMR)

June 2021

Document History

Release	Date
1.0 (Active)	June 2021

1 Scope

This document provides the regulatory guidelines and technical limitations for using Private mobile radio (PMR).

Private mobile radio (PMR) is a communication system operating under the Land Mobile Service allocations using VHF and UHF radio frequencies to transmit voice. PMR systems use portables, mobiles, base stations, and dispatch console radios. PMR radio systems are based on different standards such as TETRA and DMR...etc. These systems are used by police, fire, ambulance, emergency services, and diplomatic agencies and by private companies. Transceivers are normally in receive mode. The user presses a push-to-talk button on his microphone when he wants to talk. They use channels in the VHF and UHF bands, repeaters may be used to increase the range of systems.

2 Definitions

The terms, words and expressions used in this document have the defined meaning clarified in the Telecommunications Regulatory Law No. (10) of 2003. In addition, this document provides terms and phrases that are defined as follows:

The State: The Arab Republic of Egypt, including its geographical borders, territorial waters and airspace.

NTRA: National authority regulating the telecommunication sector established pursuant to the provisions of the Egyptian telecommunication law no. 10 of 2003.

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

Applicant: Any person who can apply for a frequency license in accordance with the Telecom Law No. (10) of 2003.

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.

Duplex operation: Operating method in which transmission is possible simultaneously in both directions of a telecommunication channel.

Station: Means one or more radiocommunication transmitters or receivers or a combination of transmitters and receivers, including the accessory equipment.

Assignment (of a radio frequency or radio frequency channel): Authorization granted by NTRA to an applicant to use radio station or to use a radio frequency or radio frequency channel under specified conditions.

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

Public Access Mobile Radio (PAMR): PMR systems deployed to allow public access (by subscription) and the users of the systems are usually not the system owners or the operator.

Trunking systems: 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.

Public Access Mobile Radio (PAMR): PMR systems deployed to allow public access (by subscription) and the users of the systems are usually not the system owners or the operator.

3 Legal Considerations

3.1 The guidelines contained in this document are issued by NTRA according to articles of the Telecommunications Regulatory law No. (10) of 2003 and subsequent ministerial decisions.

3.2 NTRA has the right to modify any of the guidelines contained in this document.

4 Scope of Implementation

The guidelines contained in this document:

4.1 indicate the regulatory measures and technical conditions for licensing Private Mobile Radio (PMR) systems in the Arab Republic of Egypt;

4.2 are meant be implemented in conjunction with other guidelines issued by the NTRA for the use of the frequency spectrum, including:

4.2.1 National Frequency Allocations Table,

4.2.2 Other Radio Spectrum guidelines;

5 Eligibility Criteria

5.1 Eligible users who may apply for a PMR frequency usage license are:

5.1.1 Corporate users. (private data networks, connection of remote premises, etc.)

5.1.2 Private users. (customer access to PSTN or other networks)

5.2 The application for PMR frequency usage license can be made for the following usage types:

5.2.1 Land Mobile Radio systems for private use.

6 Spectrum Requirements

6.1 The PMR equipment shall operate in accordance with the provisions of the Radio Regulations and relevant ITU-R Recommendations.

6.2 The following table lists the designated frequency bands for PMR systems:

Frequency Range	Usage
1.81 – 87.5 MHz	Private Mobile Radio (PMR)
146 – 174 MHz	
235 – 380 MHz	
380 – 399.9 MHz	Trunking for PAMR
400.05 – 406 MHz	Private Mobile Radio (PMR)
406.1 – 470 MHz	

7 Technical Conditions

7.1 PMR devices shall not include the encryption function.

7.2 Occupied channel bandwidth is 6.25 kHz or 12.5 kHz.

7.3 PMR devices transmit output power:

7.3.1 Handheld devices = 5 W.

7.3.2 Repeaters, Fixed stations and mobile units = 10 W.

7.3.3 Repeaters, Fixed stations and mobile units > 10 W (case by case basis).

8 Additional Considerations

NTRA encourages applicants to deploy of systems that make efficient use of the radio spectrum, therefore it is recommended to consider the following:

8.1 To utilize PMR systems supporting channel bandwidth 6.25 kHz

- 8.2 To configure the transmit output power of the radio devices and repeaters based on the required coverage area only not exceeding the defined limits.
- 8.3 To mount the antenna as low as possible with appropriate down tilt in order to contain the transmitted power within the required coverage area only.

9 Frequency Assignment Application process

For licensing PMR systems, the applicant has to submit a complete request through NTRA [E-services](#) portal including all the required technical information (e.g. Type of station, Location, Mobile Station Transmit power, antenna location (indoor - outdoor), Frequency operation (Simplex - Duplex) and channel bandwidth).