



GUIDELINE FOR PRIVATE MOBILE RADIO SPECTRUM LICENSES

January, 2019

National Communications Authority

GUIDELINE FOR PRIVATE MOBILE RADIO SPECTRUM LICENSES

I. INTRODUCTION

Private mobile radio (PMR) are radio communications between radio stations that are fixed on land with others are in motion (mobile), or fixed on land. Private radio networks are used for communication within a closed-user group and are therefore not used to provide a public service. They could support features such as group calls and or push-to-talk. It uses - in the simplex mode of operation - with the same radio frequency channel being used for sending and receiving voice and data messages but without employing any switching mechanisms. PMR systems conform to two variants, that is analogue and digital with both of these operated in the same band. Both variants are also governed by the same operating parameters.

2. OBJECTIVE

These guidelines outline the authorization and operational requirements for Private Mobile Radio (PMR) systems in Somalia in the frequency band in the Table 1. They further define the minimum technical parameters, and regulatory considerations that shall govern the operation of PMR in the allocated frequency bands in accordance with the Somali National Frequency Allocation Table (NFAT).

Table 1:

	VHF		UHF	
Frequency bands	40 MHz, 30-33.7MHz, 33.7-37 MHz, 37-40 MHz, 40-47 MHz	150 MHz, 146-153 MHz, 160 MHz, 156-165 MHz	360-380 MHz 410-430 MHz	450-470 MHz

3. APPLICABILITY AND LICENCEE RESPONSIBILITIES

Individual users do not require any certification but licensees have to ensure that the radio equipment is operated by authorized persons only and the users are aware of the conditions of use. Unauthorized persons must be prevented from obtaining access to the equipment. The communications are restricted to business use and the equipment has to be used on the specified frequencies.

Licencees are responsible to ensure that:

- A) All PMR systems shall operate on unprotected basis (within the band) subject to not causing interference to other authorized radio communication services in the adjacent band.
- B) All PMR devices shall have to be type approved and registered with the NCA.
- C) Any change of location or change of technical parameter is notified to and agreed with NCA prior to implementation.
- D) Equipment is properly maintained in order that system continues to meet the parameter limits defined in the terms and conditions and the technical schedules.
- E) All PMR operations shall be in the designated band.
- F) Up to date records of the equipment, configuration and technical parameters are maintained. These shall be made available to NCA for inspection on request.
- G) The license is renewed in a timely manner.

4. PMR – FREQUENCY ASSIGNED LICENCE

PMR Frequency assigned licences are available in two options:

- A) Frequency Assigned Network Frequency Assigned Network: This is a flexible licence that authorizes the use of a wide variety of different types of equipment, analogue or digital PMR, paging and data systems etc. The licence allows the deployment of a single base station along with one or more handheld or mobile stations. Frequencies are assigned by NCA on a first-come first-served basis and are not re-usable.
- B) Frequency Assigned Area: This licence is available to those applicants who require to deploy a number of base stations / repeaters over a considerably large geographic area using re-usable list of frequencies. NCA will issue a licence provided that spectrum is available within the geographical area requested. The licensee is free to deploy radio equipment anywhere within the licensed geographical area provided they meet the applicable license conditions and only use / re-use those frequencies specifically identified in the license.

4.1 Minimum Technical Requirements

Technical requirements may include but not limited to standards, spectrum allocation, emission mask, antenna and interference. The minimum requirements in this document are made for reasons related to the effective and appropriate use of the radio spectrum, in particular maximizing spectrum utilization.

The assessment of the field strength values to determine how often the spectrum can be reused will be done using:

- a) Methods and criteria described in ITU-R Recommendations P.1546 & P.1812-1 for **P.1546** is for “Method for point-to-area predictions for terrestrial services in the frequency range 30 MHz to 3 000 MHz”, ITU-R P.1546

also, **P.1812-1** is for “A path-specific propagation prediction method for point-to-area terrestrial services in the VHF and UHF bands”, ITU-R P.1812-1

b) Onsite monitoring

4.1.1 Standards

- a) In order to ensure co-existence with other services in the bands in the Table 1, PMR devices shall comply with the maximum Effective Isotropic Radiated Power (EIRP) and Transmitter & Receiver Spurious Emissions prescribed. (for details refer to the Table 2).
- b) The authorized EIRP powers are expected to self-limit the transmission coverage of the PMR devices.

Table 2: Minimum requirements for the use of PMR equipment

1	Frequency band(s)	40 MHz, 30-33.7MHz, 33.7-37 MHz, 37-40 MHz, 40-47 MHz, 150 MHz,	146-153 MHz, 160 MHz, 156-165 MHz, 360-380 MHz, 410-430 MHz,
2	Radiocommunication service	Mobile	
3	Application	Public Mobile Radio	
4	Channeling	12.5 kHz, 25 kHz, 6.25 kHz	
5	Modulation / Occupied bandwidth	Single-frequency simplex	
6	Maximum transmit power / Power Density	16 dBW (50W) ERP. (In detail for each KHz how much density must be)	
7	Additional essential requirements	Type approval certification	

8	Frequency planning assumptions	Devices are pre-configured and predefined for operation of bands in the Table 1.	
9	Standards and specifications	ETSI TS 103 236 EN 300 113-2 EN 300 296-2 ETSI TR 102 335-1 V1.1.2	EN301 166-2, EN 300 086-2, EN 300 390-2 ETSI TR 102 443
10	Power spectral density	The Area Assigned Licensee must operate the Radio Equipment with a power spectral density of not more than -116 dBm/12.5kHz at and beyond the geographical boundary(ies) specified in the license document.	

4.1.2 Eligibility Criteria

Eligible persons who may apply for Public Mobile Radio Frequency Assigned licenses are:

- i) Organizations registered in Somalia which may require a PMR license to fulfil their internal communication needs.
- ii) Government ministries and government agencies for their internal communication.

Each application is considered on its merits and requirements, e.g. security, safety, quality of service and the area of coverage etc. The license fee structure for the categories of license may also influence the applicant’s choice of the licensing option.

5. SPECTRUM COORDINATION AND NOTIFICATION

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

APPENDIX A: LICENCE TEMPLATES AND TERMS & CONDITIONS

License Number: **NCA-XXXX/2021**

LICENCE

For the Provision of

PMR Frequency Assigned Network License

WHEREAS [**Company Name**] requested authorization to use Private Mobile Radio network comprising of a base station Services in Somalia under the authority of the National Communications Authority (NCA).

AND WHEREAS, in accordance with mandate and the policy of the Ministry of Post, Telecommunications & Technology, the National Communications Authority, with principal responsibility for Radio Spectrum Licensing, **MAY GRANT** a PMR Frequency Assigned Network License.

NOW, THEREFORE, by Article 41 of Communication Act of October 02, 2017 and pursuant to section 2 of its regulations, the National Communications Authority hereby grants a PMR Frequency Assigned Network License [**Company Name**]

The [**Company Name**] is hereby authorized to establish, install and work Private Mobile Radio network in Somalia for the specified term of this License and subject to the provisions of the Spectrum Regulations and the License terms and conditions overleaf.

Dated: 13 January 2021

General Manager
National Communications Authority
Federal Republic of Somalia

1. Radio Equipment Operation (Specific Terms & Conditions)

1.1 Licensees shall ensure that the Radio Equipment

- a) is not used to transmit music, broadcast programmes or obscene or offensive language.
- b) not used as a public address system
- c) not used to send misleading messages

1.2 Licensees shall ensure that users are instructed:

- a) To restrict communications to business use only
- b) that on receipt of messages not connected with the business of the Licensee, the Licensee or any person using the Radio Equipment shall not:
 - 1) make known the contents of any such message, its origin or destination, its existence or the fact of its receipt to any person, except to a duly authorised government official, a person authorised by NCA or in the course of legal proceedings or for the purpose of any report thereof.
 - 2) retain any copy or make any use of any such message, or allow it to be reproduced in writing, copied or made use of.

2. Technical conditions

- a) The licensee shall comply with relevant international cross border coordination requirements which are specified / provided by NCA.
- b) The licensee shall use good site engineering techniques and / or ensure adequate separation distances to minimise the risk of interference.

3. Technical Schedule

This schedule forms part of the PMR-Frequency Assigned Network License No. XXXX issued to XXXX, the Licensee on [Date].

BASE STATION	
Base station location (Lat and Long)	
Site name /address	
Call sign / System ID	
frequency(ies)	
Channel bandwidth	
Transmitter power (e.r.p.) (W)	
Equipment manufacturer	
Equipment model	
Antenna height	
Antenna manufacturer	
Antenna model	

4. Special Conditions Special Conditions

--

License Number: **NCA-XXXX/2021**

LICENSE

For the Provision of

PMR Frequency Assigned Area License

WHEREAS [**Company Name**] requested authorization to use Private Mobile Radio network comprising of a base station Services in Somalia under the authority of the National Communications Authority (NCA).

AND WHEREAS, in accordance with mandate and the policy of the Ministry of Post, Telecommunications & Technology, the National Communications Authority, with principal responsibility for Radio Spectrum Licensing, **MAY GRANT** a PMR Frequency Assigned Network License.

NOW, THEREFORE, by Article 41 of Communication Act of October 02, 2017 and pursuant to section 2 of its regulations, the National Communications Authority hereby grants a PMR Frequency Assigned Area License to [**Company Name**]

The [**Company Name**] is hereby authorized to establish, install and work Private Mobile Radio network in Somalia for the specified term of this License and subject to the provisions of the Spectrum Regulations and the License terms and conditions overleaf.

Dated: 13 January 2021

General Manager
National Communications Authority
Federal Republic of Somalia

1. Radio Equipment Operation (Specific Terms & Conditions)

1.1 Licensees shall ensure that the Radio Equipment

- a) is not used to transmit music, broadcast programmes or obscene or offensive language.
- b) not used as a public address system
- c) not used to send misleading messages

1.2 Licensees shall ensure that users are instructed:

- a) To restrict communications to business use only
- b) that on receipt of messages not connected with the business of the Licensee, the Licensee or any person using the Radio Equipment shall not:
 - 3) make known the contents of any such message, its origin or destination, its existence or the fact of its receipt to any person, except to a duly authorised government official, a person authorised by NCA or in the course of legal proceedings or for the purpose of any report thereof.
 - 4) retain any copy or make any use of any such message, or allow it to be reproduced in writing, copied or made use of.

2. Technical conditions

- a) The licensee shall comply with relevant international cross border coordination requirements which are specified / provided by NCA.
- b) The licensee shall use good site engineering techniques and / or ensure adequate separation distances to minimise the risk of interference.

3. Technical Schedule 1

This schedule forms part of the PMR-Frequency Assigned Area License No. XXXX

issued to XXXX, the Licensee on [Date].

Frequency (ies)									
Maximum power allowed									
Field intensity/Power Spectral Density at the edge of the area									
Geographic Area									
Northern limit:	Lat:		Long:		Western limit:	Lat:		Long:	
Southern limit:	Lat:		Long:		Eastern limit:	Lat:		Long:	
OR									
Centre point:	Lat:		Long:		Radius (kms)				

4. Technical Schedule 2

This schedule forms part of the PMR-Frequency Assigned Area License No. XXXX

issued to XXXX, the Licensee on [Date].

BASE STATION/REPEATER STATION (For each station)	
location (Lat and Long)	
Site name /address	
frequency(ies)	

Channel bandwidth	
Transmitter power (e.r.p.)	
Equipment manufacturer	
Equipment model number	
Antenna height	
Antenna manufacturer	
Antenna model	
Antenna Gain	

5. Special Conditions Special Conditions

--

License Number: **NCA-XXXX/2021**

LICENSE

For the Provision of

PMR Frequency Band Assigned License

WHEREAS [**Company Name**] requested authorization to use Private Mobile Radio network comprising of a base station Services in Somalia under the authority of the National Communications Authority (NCA).

AND WHEREAS, in accordance with mandate and the policy of the Ministry of Post, Telecommunications & Technology, the National Communications Authority, with principal responsibility for Radio Spectrum Licensing, **MAY GRANT** a PMR Frequency Band Assigned License.

NOW, THEREFORE, by Article 41 of Communication Act of October 02, 2017 and pursuant to section 2 of its regulations, the National Communications Authority hereby grants a PMR Frequency Band Assigned License to [**Company Name**]

The [**Company Name**] is hereby authorized to establish, install and work Private Mobile Radio network in Somalia for the specified term of this License and subject to the provisions of the Spectrum Regulations and the License terms and conditions overleaf.

Dated: 13 January 2021

General Manager
National Communications Authority
Federal Republic of Somalia

1. Radio Equipment Operation

1.1 Licensees shall ensure that the Radio Equipment

- a) is not used to transmit music, broadcast programmes or obscene or offensive language.
- b) not used as a public address system
- c) not used to send misleading messages

1.2 Licensees shall ensure that users are instructed:

- a) To restrict communications to business use only
- b) that on receipt of messages not connected with the business of the Licensee, the Licensee or any person using the Radio Equipment shall not:
 - 5) make known the contents of any such message, its origin or destination, its existence or the fact of its receipt to any person, except to a duly authorised government official, a person authorised by NCA or in the course of legal proceedings or for the purpose of any report thereof.
 - 6) retain any copy or make any use of any such message, or allow it to be reproduced in writing, copied or made use of.

2. Technical conditions

- a) The licensee shall comply with relevant international cross border coordination requirements which are specified / provided by NCA.
- b) The licensee shall use good site engineering techniques such as those provided in ETSI ETR 053, and / or ensure adequate separation distances to minimize the risk of interference.

3. Technical Schedule (1)

This schedule forms part of the PMR- Band Assigned License No. XXXX issued to XXXX, the Licensee on [Date].

Frequency Band	
Maximum power allowed	

4. Special Conditions Special Conditions

--

