
GENERAL NOTICES • ALGEMENE KENNISGEWINGS

INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA

NOTICE 971 OF 2017



PURSUANT TO SECTION 4 (1) OF THE ELECTRONIC COMMUNICATIONS ACT
2005, (ACT NO. 36 OF 2005)

**HEREBY ISSUES A NOTICE REGARDING THE DRAFT RADIO FREQUENCY
SPECTRUM ASSIGNMENT PLAN FOR THE FREQUENCY BAND 156.4785 TO
156.5625 MHz FOR CONSULTATION.**

1. The Independent Communications Authority of South Africa ("the Authority"), hereby publishes **Draft Radio Frequency Spectrum Assignment Plan for the frequency band 156.4785 to 156.5625 MHz for consultation** in terms of sections 2 (d), (e) and 4, read with sections 30, 31(4), and 33 of the Electronic Communications Act (Act No. 36 of 2005) and read with Regulation 3 of the Radio Frequency Spectrum Regulations 2015 and read with the Frequency Migration Plan 2013.
2. This Radio Frequency Spectrum Assignment Plan supersedes any previous spectrum assignment arrangements for the same spectrum location.
3. Interested persons are hereby invited to submit written representations, including an electronic version of the representation in Microsoft Word, of their views on the **Draft Radio Frequency Spectrum Assignment Plan for the frequency band 156.4785 to 156.5625 MHz** by later than 16h00 on Friday 27 October 2017.

4. Written representations or enquiries may be directed to:

The Independent Communications Authority of South Africa (ICASA)

Pinmill Farm Block A

164 Katherine Street

South Africa

or

Private Bag X10002

Sandton

2146

Attention:

Mr Manyapelo Richard Makgotlho

e-mail: rmakgotlho@icasa.org.za

5. All written representations submitted to the Authority pursuant to this notice shall be made available for inspection by interested persons from 31 October 2017 at the ICASA Library or website and copies of such representations and documents will be obtainable on payment of a fee.

Where persons making representations require that their representation, or part thereof, be treated confidentially, then an applications in terms of section 4D of the ICASA Act, 2000 (Act No. 13 of 2000) must be lodged with the Authority. Such an application must be submitted simultaneously with the representation on the draft regulations and plan. Respondents are requested to separate any confidential material into a clearly marked confidential annexure. If, however, the request for confidentiality is refused, the person making the request will be allowed to withdraw the representation or document in question.



BOTLENYANA MOKHELE
COUNCILLOR



Radio Frequency Spectrum Assignment Plan

Rules for Services operating in the
Frequency Band
156.4875 to 156.5625 MHz

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1 Glossary

In this Radio Frequency Spectrum Assignment Plan, terms used shall have the same meaning as in the Electronic Communications Act 2005 (no. 36 of 2005); unless the context indicates otherwise:

“Act”	means the Electronic Communications Act, 2005 (Act No. 36 of 2005) as amended
“BTX”	means Base Transceiver
“DF”	means Dual Frequency
“DM RS”	means Demodulation Reference Signal
“ITU”	means the International Telecommunication Union;
“ITU-R”	means the International Telecommunication Union Radiocommunication Sector
“MTX”	means Mobile Transceiver
“NINP”	means No Interference No Protection
“NRFP”	means the National Radio Frequency Plan 2013 for South Africa
“PPDR”	means Public Protection and Disaster Relief as defined in ITU-R Report M.2033.
“RFSAP”	means Radio Frequency Spectrum Assignment Plan
“SF”	means Single Frequency

2 Purpose

A Radio Frequency Spectrum Assignment Plan (RFSAP) provides information on the requirements attached to the use of a frequency band in line with the allocation and other information in the National Radio Frequency Plan (NRFP). This information includes technical characteristics of radio systems, frequency channelling, coordination and details on required migration of existing users of the band and the expected method of assignment.

This Radio Frequency Spectrum Assignment Plan states the requirements for the utilization of the frequency band 156.4875 to 156.5625 MHz for Maritime Mobile and Single Frequency Mobile.

Maritime Mobile systems are used for shore-to-ship, ship-to-ship and ship-to-shore communications.

The frequency is pre-assigned for Maritime Mobile as a priority. Single Frequency Mobile assignments may be used where there is no possibility of harmful interference to Maritime Mobile users.

The intention of this RFSAP is to:

- Ensure that all SF mobile users within 50Km of water bodies vacate the band.
- Permit a SF Mobile operating beyond 50km from the water shoreline in the 156.4875-156.5125 MHz and 156.5375-156.5625 MHz bands to migrate into the said bands subject to the conditions stated above.

3 General

Technical characteristics of equipment used in for Single Frequency Mobile and Maritime Mobile shall conform to all applicable South African standards, international standards, International Telecommunications Union (ITU) and its radio regulations as agreed and adopted by South Africa.

All installations must comply with safety rules as specified in applicable standards.

The equipment used shall be certified under South African law and regulations.

The allocation of this frequency band and the information in this Radio Frequency Spectrum Assignment Plan (RFSAP) are subject to review.

Use of this band will be for:

- Maritime Mobile Services.
- Single Frequency Mobile – but not within 50km of the coast or water-bodies where Maritime Mobile Services are in use.

Digital Selective calling (DSC) is applicable for the provision of Maritime Mobile and the typical technical and operational characteristics identified as appropriate by the ITU are described in the following documents:

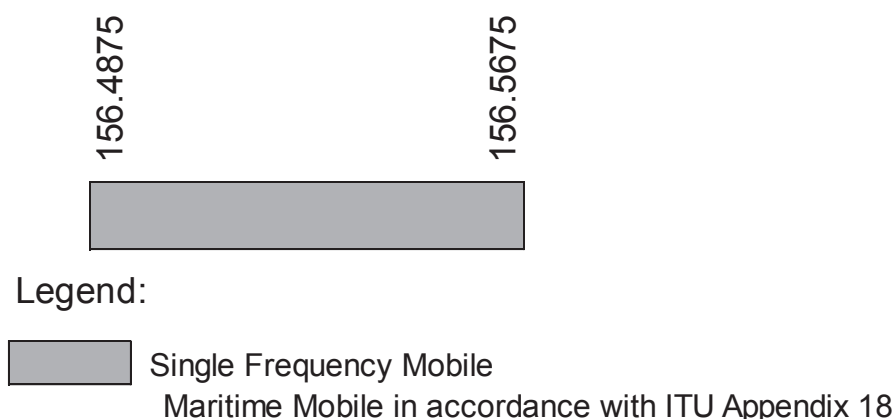
- Digital selective-calling system for use in the maritime mobile service. REC. ITU-R M.493
- Operational procedures for the use of digital selective-calling equipment in the maritime mobile service. REC. ITU-R M.541.
- Digital selective calling system enhancement for multiple equipment installations. Rec. ITU-R M.1080
- Calling-channel loading for digital selective-calling (DSC) for the maritime mobile service. Rec. ITU-R M.822
- Characteristics of a transponder system using digital selective calling techniques for use with vessel traffic services and ship-to-ship identification. Rec. ITU-R M.825
- Optional expansion of the digital selective-calling system for use in the maritime mobile service. Rec. ITU-R M.821
- International maritime mf/hf radiotelephone system with automatic facilities based on digital selective calling signalling format. Rec. ITU-R M.1082

- Channel requirements for a digital selective-calling system. Report ITU-R M.908
- Use of MF/HF DSC for automatic connection of calls in the maritime-mobile service MF and HF bands to the public switched network. Report ITU-R M.1161

4 Channelling Plan

The frequency band 156.4875-156.5625 MHz provides a total bandwidth of 0.075 MHz for Maritime Mobile Services and Single Frequency Mobile.

Channel Arrangements:



5 Requirements for usage of radio frequency spectrum

This chapter covers the minimum key characteristics considered necessary in order to make the best use of the available frequencies.

The use of the band is for Maritime Mobile Services and is limited to Single Frequency Mobile for inland areas more than 50Km from the coast and water bodies on a No Interference No Protection (NINP) Basis to Mobile Maritime Services.

Only systems using digital technologies that promote spectral efficiency will be issued with an assignment. Capacity enhancing digital techniques is being rapidly developed and such techniques that promote efficient use of spectrum, without reducing quality of service are encouraged.

In some cases, a radio system conforming to the requirements of this RFSAP may require modifications if harmful interference is caused to other radio stations or systems.

The allocation of spectrum and shared services within these bands are found in the National Radio Frequency Plan (NRFP) and an extract of NRFP is shown in Appendix A.

Maximum radiated power:

- Base Station transmissions should not exceed 44.8 dBm/5MHz EIRP.
- Mobile Station transmissions should not exceed 38.8 dBm EIRP.

On a case-to-case basis, higher EIRP may be permitted if acceptable technical justification is provided.

In some cases, a radio system conforming to the requirements of this RFSAP may require modifications if major interference is caused to other radio stations or systems.

6 Implementation

This Radio Frequency Assignment Plan comes into effect on the date of publication.

No new assignment for Single Frequency Mobile in the 156.4875-156.5626 MHz band shall be approved unless they comply with this RFSAP.

7 Co-ordination Requirements

Co-ordination is performed by the Authority during the process of assignment.

In the event of any interference, the Authority will require affected parties to carry out coordination. In the event that the interference continues to be unresolved after 24 hours, the affected parties may refer the matter to the Authority for a resolution. The Authority will decide the necessary modifications and schedule of modifications to resolve the dispute. The Authority will be guided by the interference resolution process as shown in Appendix B.

Assignment holders shall take full advantage of interference mitigation techniques such as antenna discrimination, tilt, polarization, frequency discrimination, shielding/blocking (introduce diffraction loss), site selection, and/or power control to facilitate the coordination of systems.

8 Assignment

Standard Approach

The assignment of frequency will take place according to the Standard Application Procedures in the Radio Frequency Spectrum Regulations 2015.

9 Revocation

Existing radio frequency spectrum licences for SF Mobile within 50km of a water body where the use of the Maritime Mobile can be envisaged will be revoked.

10 Radio Frequency Migration

SF Mobile may continue to operate within 156.375 – 156.7625 MHz on a non-interference basis and non-protection basis to Maritime mobile services in inland areas.

Any SF Mobile users within close proximity (50 km or less) to water-bodies to migrate out of this band.

In addition, subject to the above requirements, SF mobile operating outside 156.4875 – 156.5125 MHz and 156.5375-156.5625 MHz may migrate into the said bands.

APPENDIX A - National Radio Frequency Plan

ITU Region 1 allocation and footnotes	South African Allocation and footnotes	Typical Applications	Comments
156.4875-156.5625 MHz MARITIME MOBILE (distress and calling via DSC)	156.4875-156.5625 MHz MARITIME MOBILE (distress and calling via DSC) FIXED 5.227 LAND MOBILE 5.227	Single Frequency Mobile (156.375-156.7625 MHz)	The use of this band by the maritime services shall be in accordance with ITU Appendix 18 NINP basis to Maritime Mobile Service; Limited to inland areas
5.111 5.226 5.227	5.111 5.226		

Appendix B - Interference Resolution Process

When requesting coordination the relevant characteristics of the base station and the code or PCI group number should be forwarded to the Administration affected. All of the following characteristics should be included:

- a) carrier frequency [MHz]
- b) name of transmitter station
- c) country of location of transmitter station
- d) geographical coordinates [latitude, longitude]
- e) effective antenna height [m]
- f) antenna polarisation
- g) antenna azimuth [deg]
- h) antenna gain [dBi]
- i) effective radiated power [dBW]
- j) expected coverage zone or radius [km]
- k) date of entry into service [month, year].
- l) code group number used
- m) antenna tilt [deg]

The Administration affected shall evaluate the request for coordination and shall within 30 days notify the result of the evaluation to the Administration requesting coordination. If in the course of the coordination procedure the Administration affected requires additional information, it may request such information.

If in the course of the coordination procedure, an Administration may request additional information.

If no reply is received by the Administration requesting coordination within 30 days, it may send a reminder to the Administration affected. An Administration not having responded within 30 days following communication of the reminder shall be deemed to have given its consent and the code co-ordination may be put into use with the characteristics given in the request for coordination.

The periods mentioned above may be extended by common consent.