INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA

NOTICE 124 OF 2019

NOTICE REGARDING THE RADIO FREQUENCY SPECTRUM ASSIGNMENT PLAN FOR THE FREQUENCY BAND 75.2 TO 87.5 MHz.

1. The Independent Communications Authority of South Africa ("the Authority"), hereby publishes **Radio Frequency Spectrum Assignment Plan for the frequency band 75.2 to 87.5 MHz** in terms of Regulation 3 of the Radio Frequency Spectrum Regulations 2015, as amended, 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.

RUBBEN MOLHALOGA
CHAIRPERSON

Radio Frequency Spectrum Assignment Plan

Rules for Services operating in the Frequency Band 75.2 to 87.5 MHz

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1. Glossary

In this Radio Assignment Plan, terms used shall have the same meaning as in the Electronic Communications Act, 2005 (Act No. 36 of 2005), as amended, 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
"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

2.1 This RFSAP provides information on the requirements attached to the use of a frequency band 75.2 to 87.5 MHz in line with the allocation and other information in the 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.

2.2 This RFSAP states the requirements for the utilization of the frequency band 75.2 to 87.5 MHz for dual frequency alarms, other single frequency and dual frequency links.

3. General

3.1 This RFSAP:

(a) Keeps the DF/SF links as is (BTX)
(b) Allocates the 81 – 81.625 MHz (BTX) band paired with 86.375 – 87 MHz (MTX) for dual frequency (DF) alarms. DF alarms operating in other bands may be migrated in.

3.2 Dual frequency alarms are used in various types of alarm systems, which are typically used to warn people of an event such as an intrusion, forced entry or a fire.

3.3 The Single frequency and dual frequency links are typically used in private and communal radio repeaters, which boost and retransmit weak radio signal across a wider area.

3.4 Technical characteristics of equipment used in for dual frequency alarms, and other single frequency and dual frequency links will conform to all applicable South African standards, international standards, International Telecommunications Union (ITU) and its Radio Regulations as agreed and adopted by South Africa.

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

3.6 The equipment used must be certified under South African law and applicable regulations.

3.7 The allocation of this frequency band and the information in thisRFSAP are subject to amendments to the National Radio Frequency Plan.

3.8 Use of 75.2 to 87.5 MHz is for dual frequency alarms and other single frequency and dual frequency links.

3.9 Repeaters (private/communal) in mining, farming and small business primarily use this band.

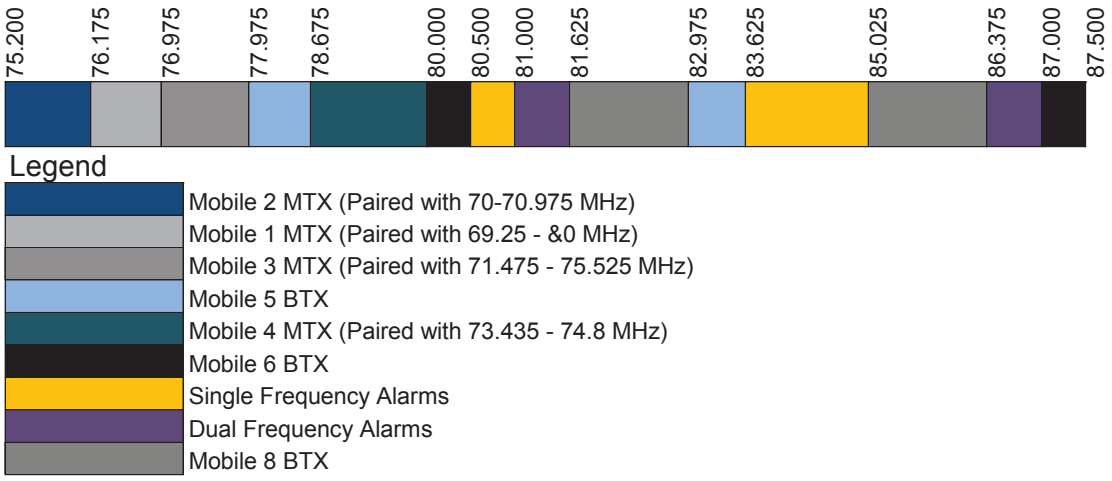
3.10 Various types of alarms are catered for by different types of systems and services whose typical technical and operational characteristics are described in the documents listed below:

4. Channelling Plan

4.1 The frequency band 75.2 – 87.5 MHz provides a total bandwidth of 12.3 MHz for alarms and other single and dual frequency links.

4.2 Channel Arrangements:

4.2.1 12.5 kHz channel spacing is used for the dual frequency assignments. The use of the band is shown below.



5. Requirements for usage of radio frequency spectrum

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

5.2 The use of the 75.2 to 87.5 MHz band is limited for dual frequency alarms, and other single frequency and dual frequency links.

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

5.4 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.

5.5 The allocation of spectrum and shared services within these bands are found in the NRFP and an extract of the NRFP is shown in 0.

5.6 Maximum radiated power:

5.6.1 Base Station transmissions shall not exceed 44.8 dBm/5MHz EIRP.

5.6.2 Mobile Station transmissions shall not exceed 38.8 dBm EIRP.

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

5.7 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

6.1 This RFSAP comes into effect on the date of publication.

6.2 No new assignment for dual frequency alarms, and other single frequency and dual frequency links in the band 75.2 to 87.2 MHz shall be approved unless they comply with this RFSAP.

7. Co-ordination Requirements

7.1 Co-ordination with respect to non-shared spectrum shall be performed by the Authority during the process of assignment.

7.2 In the event of any interference, the affected parties may refer the matter to the Authority for a resolution. The Authority will decide on the necessary modifications and schedule of modifications to resolve the dispute. The Authority will be guided by the interference resolution process as shown in **0**.

7.3 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

8.1 Standard Approach

8.1.1 The assignment of frequency will be conducted according to the Standard Application Procedures in the Radio Frequency Spectrum Regulations 2015.

9. Revocation

9.1 Not applicable.

10. Radio Frequency Migration

10.1 No out-migration is required for this band.

10.2 The 81-81.625 MHz band (BTX) paired with the 86.375-87 MHz band (MTX) is identified as a destination band for dual frequency alarms.

Appendix A: National Radio Frequency Plan

ITU Region 1 allocation and footnotes	South African Allocation and footnotes	Typical Applications	Comments
75.2-87.5 MHz	**75.2-87.5 MHz**		
FIXED MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	Mobile 2 MTX (75.2 – 76.175 MHz)	Paired with 70 – 70.975 MHz
		Mobile 1 MTX (76.175 – 76.925 MHz)	Paired with 69.25 – 70 MHz
		Mobile 3 MTX (76.925 – 77.975 MHz)	Paired with 71.475 – 72.525 MHz
		Mobile 4 MTX (78.625 – 80 MHz)	Paired with 73.425 – 74.8 MHz
		Mobile 5 BTX (77.975 – 78.625 MHz)	Paired with 82.975 – 83.625 MHz
		Mobile 6 BTX (80 – 80.5 MHz)	Paired with 87 – 87.5 MHz
		Single Frequency Mobile (80.5 – 81 MHz)	Paired with 86.375 - 87 MHz
		Mobile 7 BTX (81 – 81.625 MHz)	Paired with 85.025 - 86.375 MHz
5.175 5.179 5.187		Mobile 8 BTX (81.625 – 82.975 MHz)	Paired with 77.975 - 78.625 MHz
		Mobile 5 MTX (82.975 – 83.625 MHz)	Paired with 81.625 - 82.975 MHz
		Single Frequency Mobile (83.625 – 85.025 MHz)	Paired with 81 - 81.625 MHz
		Mobile 8 MTX (85.025 – 86.375 MHz)	Paired with 80 - 80.5 MHz
		Mobile 7 MTX (86.375 – 87 MHz)	
		Mobile 6 MTX (87 – 87.5 MHz)	
		PMR and/or PAMR	

Appendix B: Interference Resolution Process

When requesting coordination, the relevant characteristics of the base station 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.