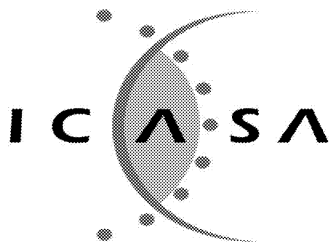


INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA

NOTICE 149 OF 2018

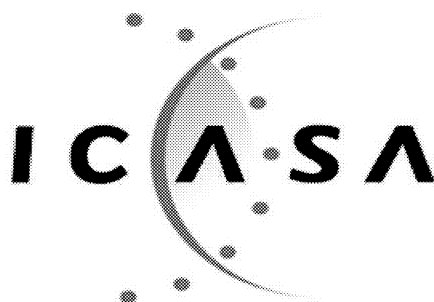


**PURSUANT TO SECTION 4 (1) OF THE ELECTRONIC COMMUNICATIONS ACT
2005, (ACT NO. 36 OF 2005)**

**HEREBY ISSUES A NOTICE REGARDING THE FINAL RADIO FREQUENCY
SPECTRUM ASSIGNMENT PLAN FOR THE FREQUENCY BAND 150.5 MHz TO
153 MHz.**

1. The Independent Communications Authority of South Africa ("the Authority"), hereby publishes **Final Radio Frequency Spectrum Assignment Plan for the frequency band 150.5 MHz to 153 MHz.**
2. This Radio Frequency Spectrum Assignment Plan supersedes any previous spectrum assignment arrangements for the same spectrum location.

**RUBBEN MOHLALOGA
COUNCILLOR**



Radio Frequency Spectrum Assignment Plan

Rules for Services operating in the
Frequency Band
150.5 MHz to 153 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
“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 150.5 MHz to 153 MHz for single frequency alarms, alarms (and single frequency mobile until migrated out).

The intention of this RFSAP is to:

- Allocate the 152.05 to 152.55 MHz frequency band to SF alarms on an exclusive basis and migrate other users out.

- Indicate that the use of channels 150.625 MHz and 150.675 MHz for in-house paging is subject to review.

3. General

Technical characteristics of equipment used in single frequency alarms, alarms and single frequency 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.

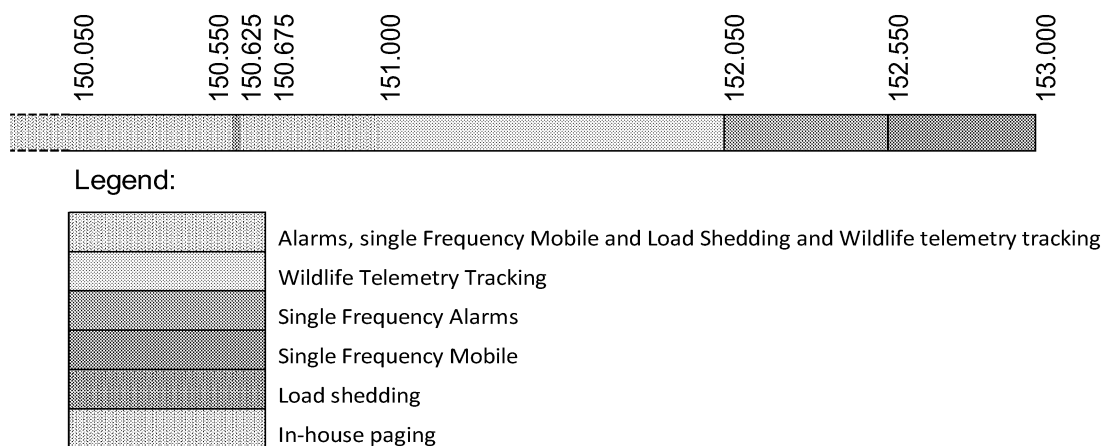
The allocation of this frequency band and the information in this Radio Frequency Spectrum Assignment Plan (RFSAP) are subject to review.

Use of this band will be for single frequency alarms, alarms, wildlife telemetry tracking and single frequency mobile

4. Channelling Plan

The frequency band 150.5 MHz to 153 MHz provides a total bandwidth of 2.5 MHz.

Channel Arrangements (MHz):



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 limited to single frequency alarms, alarms, single frequency mobile, wildlife telemetry tracking, load shedding and (subject to review), in-house paging.

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 for single frequency operation.

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 alarms, alarms and single frequency mobile in the band 150.5 MHz to 153 MHz 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 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

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 the use of the 152.05 to 152.55 MHz band for purposes other than SF Alarms will be revoked by 31st March 2019.

10. Radio Frequency Migration

Existing licensees to conform to the requirements of this RFSAP by the effective date.

The 152.05 to 152.55 MHz band is allocated to SF Alarms on an exclusive basis. Other users of the 152.05 to 152.55 MHz band including SF Mobile shall migrate out by 31st March 2019.

Other current users continue to use the band.

The use of Channels 150.625 MHz to 150.675 MHz reserved for in-house paging is subject to review.

SF Mobile users in the 152.05 to 52.55 MHz band may migrate to the 152.55 to 153.05 MHz band.

11. APPENDIX A - National Radio Frequency Plan

ITU Region 1 allocation and footnotes	South African Allocation and footnotes	Typical Applications	Comments
150.5-153 MHz FIXED	150.5-153 MHz FIXED	Single Frequency Alarms (152.05-152.55 MHz)	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	Alarms, Single Frequency Mobile and Load Shedding (148.950-151 MHz)	Channels 150.550 and 150.5625 MHz are used for load shedding. Channels 150.625 MHz and 150.675 MHz are reserved for in-house paging.
		Government Services	

<p>RADIO ASTRONOMY</p> <p>5.149</p>	<p>RADIO ASTRONOMY</p> <p>5.149</p>	<p>Wildlife Telemetry Tracking (148-152 MHz)</p> <p>Single Frequency Mobile (152.55-153.05 MHz)</p>	<p>Radio Frequency Spectrum Regulations (Annex B) (GG No. 34172, 31 March 2015)</p>
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12. 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.