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## GENERAL NOTICE

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### NOTICE 354 OF 2013

INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA



PURSUANT TO SECTION 34 (5) OF THE ELECTRONIC COMMUNICATIONS ACT  
2005, (ACT NO. 36 OF 2005)

HEREBY ISSUES A NOTICE REGARDING THE NATIONAL RADIO FREQUENCY  
PLAN 2013

1. The Independent Communications Authority of South Africa ('the Authority'), in terms of section 34 (2) and (5) of the Electronic Communications Act (Act No. 36 of 2005), hereby publishes the **National Radio Frequency Plan 2013**

A handwritten signature in black ink, appearing to read 'Dr SS MNCUBE', written over a horizontal line.

**Dr SS MNCUBE**  
**CHAIRPERSON**

**NATIONAL RADIO FREQUENCY PLAN 2013  
(NRFP-13)**

**8.3 kHz – 3000 GHz**

**INDEPENDENT COMMUNICATIONS  
AUTHORITY OF SOUTH AFRICA  
2013**

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# 1 TERMS, DEFINITIONS AND ACRONYMS

## 1.1 Terms and definitions

These definitions are for the purposes of the NRFP and do not necessarily apply elsewhere.

<i>adaptive system:</i>	A radiocommunication system which varies its radio characteristics according to channel quality.
<i>administration</i>	Any governmental department or service responsible for discharging the obligations undertaken in the Constitution of the International Telecommunication Union, in the Convention of the International Telecommunication Union and in the Administrative Regulations (CS 1002).
<i>allocation (of a frequency band)</i>	Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space radiocommunication services or the radio astronomy service under specified conditions. This term shall also be applied to the frequency band concerned.
<i>allotment (of a radio frequency or radio frequency channel)</i>	Entry of a designated frequency channel in an agreed plan, adopted by a competent conference, for use by one or more administrations for a terrestrial or space radiocommunication service in one or more identified countries or geographical areas and under specified conditions.
<i>assignment (of a radio frequency or radio frequency channel)</i>	Authorization given by an administration for a radio station to use a radio frequency or radio frequency channel under specified conditions.
<i>aeronautical earth station:</i>	An <i>earth station</i> in the <i>fixed-satellite service</i> , or, in some cases, in the <i>aeronautical mobile-satellite service</i> , located at a specified fixed point on land to provide a <i>feeder link</i> for the <i>aeronautical mobile-satellite service</i> .
<i>aeronautical mobile (OR)** service:</i>	An <i>aeronautical mobile service</i> intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes.
<i>aeronautical mobile (R)* service:</i>	An <i>aeronautical mobile service</i> reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.
<i>aeronautical mobile service:</i>	A <i>mobile service</i> between <i>aeronautical stations</i> and <i>aircraft stations</i> , or between <i>aircraft stations</i> , in which <i>survival craft stations</i> may participate; <i>emergency position-indicating radiobeacon stations</i> may also participate in this service on designated distress and emergency frequencies.
<i>aeronautical mobile-</i>	An <i>aeronautical mobile-satellite service</i> intended for communications, including

\*\* (OR): off-route.

\* (R): route.

<i>satellite (OR)** service:</i>	those relating to flight coordination, primarily outside national and international civil air routes.
<i>aeronautical mobile-satellite (R)* service:</i>	An <i>aeronautical mobile-satellite service</i> reserved for communications relating to safety and regularity of flights, primarily along national or international civil air routes.
<i>aeronautical mobile-satellite service:</i>	A <i>mobile-satellite service</i> in which <i>mobile earth stations</i> are located on board aircraft; <i>survival craft stations</i> and <i>emergency position-indicating radiobeacon stations</i> may also participate in this service.
<i>aeronautical radionavigation service:</i>	A <i>radionavigation service</i> intended for the benefit and for the safe operation of aircraft.
<i>aeronautical radionavigation-satellite service:</i>	A <i>radionavigation-satellite service</i> in which <i>earth stations</i> are located on board aircraft.
<i>aeronautical station:</i>	A <i>land station</i> in the <i>aeronautical mobile service</i> . In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea.
<i>aircraft earth station:</i>	A <i>mobile earth station</i> in the <i>aeronautical mobile-satellite service</i> located on board an aircraft.
<i>aircraft station:</i>	A <i>mobile station</i> in the <i>aeronautical mobile service</i> , other than a <i>survival craft station</i> , located on board an aircraft.
<i>amateur service:</i>	A <i>radiocommunication service</i> for the purpose of self-training, intercommunication and technical investigations carried out by amateurs; that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.
<i>amateur station:</i>	A <i>station</i> in the <i>amateur service</i> .
<i>amateur-satellite service:</i>	A <i>radiocommunication service</i> using <i>space stations</i> on earth <i>satellites</i> for the same purposes as those of the <i>amateur service</i> .
<i>base earth station:</i>	An <i>earth station</i> in the <i>fixed-satellite service</i> or, in some cases, in the <i>land mobile-satellite service</i> , located at a specified fixed point or within a specified area on land to provide a <i>feeder link</i> for the <i>land mobile-satellite service</i> .
<i>base station:</i>	A <i>land station</i> in the <i>land mobile service</i> .
<i>broadcasting service:</i>	A <i>radiocommunication service</i> in which the transmissions are intended for direct reception by the general public. This service may include sound transmissions, <i>television</i> transmissions or other types of transmission (CS).
<i>broadcasting station:</i>	A <i>station</i> in the <i>broadcasting service</i> .
<i>broadcasting-satellite</i>	A <i>radiocommunication service</i> in which signals transmitted or retransmitted by

<i>service:</i>	<i>space stations</i> are intended for direct reception by the general public. In the broadcasting-satellite service, the term "direct reception" shall encompass both <i>individual reception</i> and <i>community reception</i> .
<i>coast earth station:</i>	An <i>earth station</i> in the <i>fixed-satellite service</i> or, in some cases, in the <i>maritime mobile-satellite service</i> , located at a specified fixed point on land to provide a <i>feeder link</i> for the <i>maritime mobile-satellite service</i> .
<i>coast station:</i>	A <i>land station</i> in the <i>maritime mobile service</i> .
<i>Coordinated Universal Time (UTC):</i>	Time scale, based on the second (SI), as defined in Recommendation ITU-R TF.460-6. (WRC-03) For most practical purposes associated with the Radio Regulations, UTC is equivalent to mean solar time at the prime meridian (0° longitude), formerly expressed in GMT.
<i>Earth exploration-satellite service:</i>	A <i>radiocommunication service</i> between <i>earth stations</i> and one or more <i>space stations</i> , which may include links between <i>space stations</i> , in which:– information relating to the characteristics of the Earth and its natural phenomena, including data relating to the state of the environment, is obtained from <i>active sensors</i> or <i>passive sensors</i> on <i>Earth satellites</i> ; – similar information is collected from airborne or Earth-based platforms; – such information may be distributed to earth stations within the system concerned; – platform interrogation may be included.  This service may also include <i>feeder links</i> necessary for its operation.
<i>earth station:</i>	A <i>station</i> located either on the Earth's surface or within the major portion of the Earth's atmosphere and intended for communication: – with one or more <i>space stations</i> ; or – with one or more <i>stations</i> of the same kind by means of one or more reflecting <i>satellites</i> or other objects in space.
<i>emergency position-indicating radiobeacon station:</i>	A <i>station</i> in the <i>mobile service</i> the <i>emissions</i> of which are intended to facilitate search and rescue operations.
<i>experimental station:</i>	A <i>station</i> utilizing <i>radio waves</i> in experiments with a view to the development of science or technique.  This definition does not include <i>amateur stations</i> .
<i>facsimile</i>	A form of telegraphy for the transmission of fixed images, with or without half-tones, with a view to their reproduction in a permanent form.
<i>feeder link:</i>	A radio link from an <i>earth station</i> at a given location to a <i>space station</i> , or vice versa, conveying information for a <i>space radiocommunication service</i> other than for the <i>fixed-satellite service</i> . The given location may be at a specified

	fixed point, or at any fixed point within specified areas.
<i>fixed service:</i>	A <i>radiocommunication service</i> between specified fixed points.
<i>fixed station:</i>	A <i>station</i> in the <i>fixed service</i> .
<i>fixed-satellite service:</i>	A <i>radiocommunication service</i> between <i>earth stations</i> at given positions, when one or more <i>satellites</i> are used; the given position may be a specified fixed point or any fixed point within specified areas; in some cases this service includes satellite-to-satellite links, which may also be operated in the <i>inter-satellite service</i> ; the fixed-satellite service may also include <i>feeder links</i> for other <i>space radiocommunication services</i> .
<i>frequency-shift telegraphy</i>	Telegraphy by frequency modulation in which the telegraph signal shifts the frequency of the carrier between predetermined values.
<i>high altitude platform station:</i>	A station located on an object at an altitude of 20 to 50 km and at a specified, nominal, fixed point relative to the Earth.
<i>industrial, scientific and medical (ISM) applications</i> (of radio frequency energy):	Operation of equipment or appliances designed to generate and use locally radio frequency energy for industrial, scientific, medical, domestic or similar purposes, excluding applications in the field of <i>telecommunications</i> .
<i>instrument landing system (ILS):</i>	A <i>radionavigation</i> system which provides aircraft with horizontal and vertical guidance just before and during landing and, at certain fixed points, indicates the distance to the reference point of landing.
<i>instrument landing system glide path:</i>	A system of vertical guidance embodied in the <i>instrument landing system</i> which indicates the vertical deviation of the aircraft from its optimum path of descent.
<i>instrument landing system localizer:</i>	A system of horizontal guidance embodied in the <i>instrument landing system</i> which indicates the horizontal deviation of the aircraft from its optimum path of descent along the axis of the runway.
<i>inter-satellite service:</i>	A <i>radiocommunication service</i> providing links between artificial <i>satellites</i> .
<i>land earth station:</i>	An <i>earth station</i> in the <i>fixed-satellite service</i> or, in some cases, in the <i>mobile-satellite service</i> , located at a specified fixed point or within a specified area on land to provide a <i>feeder link</i> for the <i>mobile-satellite service</i> .
<i>land mobile earth station:</i>	A <i>mobile earth station</i> in the <i>land mobile-satellite service</i> capable of surface movement within the geographical limits of a country or continent.
<i>land mobile service:</i>	A <i>mobile service</i> between <i>base stations</i> and <i>land mobile stations</i> , or between <i>land mobile stations</i> .
<i>land mobile station:</i>	A <i>mobile station</i> in the <i>land mobile service</i> capable of surface movement within the geographical limits of a country or continent.
<i>land mobile-satellite</i>	A <i>mobile-satellite service</i> in which <i>mobile earth stations</i> are located on land.

<i>service:</i>	
<i>land station:</i>	A <i>station</i> in the <i>mobile service</i> not intended to be used while in motion.
<i>maritime mobile service:</i>	A <i>mobile service</i> between <i>coast stations</i> and <i>ship stations</i> , or between <i>ship stations</i> , or between associated <i>on-board communication stations</i> ; <i>survival craft stations</i> and <i>emergency position-indicating radiobeacon stations</i> may also participate in this service.
<i>maritime mobile-satellite service:</i>	A <i>mobile-satellite service</i> in which <i>mobile earth stations</i> are located on board ships; <i>survival craft stations</i> and <i>emergency position-indicating radiobeacon stations</i> may also participate in this service.
<i>maritime radionavigation service:</i>	A <i>radionavigation service</i> intended for the benefit and for the safe operation of ships.
<i>maritime radionavigation-satellite service:</i>	A <i>radionavigation-satellite service</i> in which <i>earth stations</i> are located on board ships.
<i>marker beacon:</i>	A transmitter in the <i>aeronautical radionavigation service</i> which radiates vertically a distinctive pattern for providing position information to aircraft.
<i>meteorological aids service:</i>	A <i>radiocommunication service</i> used for meteorological, including hydrological, observations and exploration.
<i>meteorological-satellite service:</i>	An <i>earth exploration-satellite service</i> for meteorological purposes.
<i>mobile earth station:</i>	An <i>earth station</i> in the <i>mobile-satellite service</i> intended to be used while in motion or during halts at unspecified points.
<i>mobile service:</i>	A <i>radiocommunication service</i> between <i>mobile</i> and <i>land stations</i> , or between <i>mobile stations</i> (CV).
<i>mobile station:</i>	A <i>station</i> in the <i>mobile service</i> intended to be used while in motion or during halts at unspecified points.
<i>mobile-satellite service:</i>	<p>A <i>radiocommunication service:</i></p> <ul style="list-style-type: none"> <li>– between <i>mobile earth stations</i> and one or more <i>space stations</i>, or between <i>space stations</i> used by this service; or</li> <li>– between <i>mobile earth stations</i> by means of one or more <i>space stations</i>.</li> </ul> <p>This service may also include <i>feeder links</i> necessary for its operation.</p>
<i>multi-satellite link:</i>	<p>A radio link between a transmitting <i>earth station</i> and a receiving <i>earth station</i> through two or more <i>satellites</i>, without any intermediate <i>earth station</i>.</p> <p>A multi-satellite link comprises one up-link, one or more satellite-to-satellite links and one down-link.</p>
<i>on-board</i>	A low-powered <i>mobile station</i> in the <i>maritime mobile service</i> intended for use



<i>communication station:</i>	for internal communications on board a ship, or between a ship and its lifeboats and life-rafts during lifeboat drills or operations, or for communication within a group of vessels being towed or pushed, as well as for line handling and mooring instructions.
<i>port operations service:</i>	A <i>maritime mobile service</i> in or near a port, between <i>coast stations</i> and <i>ship stations</i> , or between <i>ship stations</i> , in which messages are restricted to those relating to the operational handling, the movement and the safety of ships and, in emergency, to the safety of persons. Messages which are of a <i>public correspondence</i> nature shall be excluded from this service.
<i>port station:</i>	A <i>coast station</i> in the <i>port operations service</i> .
<i>primary radar:</i>	A <i>radiodetermination</i> system based on the comparison of reference signals with radio signals reflected from the position to be determined.
<i>public correspondence</i>	Any <i>telecommunication</i> which the offices and <i>stations</i> must, by reason of their being at the disposal of the public, accept for transmission (CS).
<i>radar beacon (racon):</i>	A transmitter-receiver associated with a fixed navigational mark which, when triggered by a <i>radar</i> , automatically returns a distinctive signal which can appear on the display of the triggering <i>radar</i> , providing range, bearing and identification information.
<i>radar:</i>	A <i>radiodetermination</i> system based on the comparison of reference signals with radio signals reflected, or retransmitted, from the position to be determined.
<i>radio</i>	A general term applied to the use of radio waves.
<i>radio altimeter:</i>	<i>Radionavigation</i> equipment, on board an aircraft or <i>spacecraft</i> , used to determine the height of the aircraft or the <i>spacecraft</i> above the Earth's surface or another surface.
<i>radio astronomy</i>	Astronomy based on the reception of <i>radio waves</i> of cosmic origin.
<i>radio astronomy service:</i>	A service involving the use of <i>radio astronomy</i> .
<i>radio astronomy station:</i>	A <i>station</i> in the <i>radio astronomy service</i> .
<i>radio astronomy:</i>	Astronomy based on the reception of <i>radio waves</i> of cosmic origin.
<i>radio direction-finding station:</i>	A <i>radiodetermination station</i> using <i>radio direction-finding</i> .
<i>radio direction-finding:</i>	<i>Radiodetermination</i> using the reception of <i>radio waves</i> for the purpose of determining the direction of a <i>station</i> or object.
<i>radiobeacon station:</i>	A <i>station</i> in the <i>radionavigation service</i> the <i>emissions</i> of which are intended to enable a <i>mobile station</i> to determine its bearing or direction in relation to the

	radiobeacon station.
<i>radiocommunication</i>	<i>Telecommunication by means of radio waves (CS) (CV).</i>
<i>radiocommunication service:</i>	A service as defined in this Section involving the transmission, <i>emission</i> and/or reception of <i>radio waves</i> for specific <i>telecommunication</i> purposes. In these Regulations, unless otherwise stated, any radiocommunication service relates to <i>terrestrial radiocommunication</i> .
<i>radiodetermination:</i>	The determination of the position, velocity and/or other characteristics of an object, or the obtaining of information relating to these parameters, by means of the propagation properties of <i>radio waves</i> .
<i>radiodetermination service:</i>	A <i>radiocommunication service</i> for the purpose of <i>radiodetermination</i> .
<i>radiodetermination Station:</i>	A <i>station</i> in the <i>radiodetermination service</i> .
<i>radiodetermination-satellite service:</i>	A <i>radiocommunication service</i> for the purpose of <i>radiodetermination</i> involving the use of one or more <i>space stations</i> . This service may also include <i>feeder links</i> necessary for its own operation.
<i>radio direction-finding</i>	<i>Radiodetermination</i> using the reception of <i>radio waves</i> for the purpose of determining the direction of a <i>station</i> or object.
<i>radiolocation land station:</i>	A <i>station</i> in the <i>radiolocation service</i> not intended to be used while in motion.
<i>radiolocation mobile station:</i>	A <i>station</i> in the <i>radiolocation service</i> intended to be used while in motion or during halts at unspecified points.
<i>radiolocation:</i>	<i>Radiodetermination</i> used for purposes other than those of <i>radionavigation</i> .
<i>radiolocation service:</i>	A <i>radiodetermination service</i> for the purpose of <i>radiolocation</i> .
<i>radiolocation-satellite service:</i>	A <i>radiodetermination-satellite service</i> used for the purpose of <i>radiolocation</i> . This service may also include the <i>feeder links</i> necessary for its operation.
<i>radionavigation</i>	<i>Radiodetermination</i> used for the purposes of navigation, including obstruction warning.
<i>radionavigation land station:</i>	A <i>station</i> in the <i>radionavigation service</i> not intended to be used while in motion.
<i>radionavigation mobile station:</i>	A <i>station</i> in the <i>radionavigation service</i> intended to be used while in motion or during halts at unspecified points.
<i>radionavigation service:</i>	A <i>radiodetermination service</i> for the purpose of <i>radionavigation</i> .
<i>radionavigation:</i>	<i>Radiodetermination</i> used for the purposes of navigation, including obstruction warning.
<i>radionavigation-</i>	A <i>radiodetermination-satellite service</i> used for the purpose of <i>radionavigation</i> .

<i>satellite service:</i>	This service may also include <i>feeder links</i> necessary for its operation.
<i>radiosonde:</i>	An automatic radio transmitter in the <i>meteorological aids service</i> usually carried on an aircraft, free balloon, kite or parachute, and which transmits meteorological data.
<i>radiotelegram</i>	A telegram, originating in or intended for a mobile station or a mobile earth station transmitted on all or part of its route over the radiocommunication channels of the mobile service or of the mobile-satellite service.
<i>radiotelex call</i>	A telex call, originating in or intended for a mobile station or a mobile earth station, transmitted on all or part of its route over the radiocommunication channels of the mobile service or the mobile-satellite service.
<i>radio waves or hertzian waves</i>	Electromagnetic waves of frequencies arbitrarily lower than 3 000 GHz, propagated in space without artificial guide
<i>safety service:</i>	Any <i>radiocommunication service</i> used permanently or temporarily for the safeguarding of human life and property.
<i>satellite emergency position-indicating radiobeacon:</i>	An <i>earth station</i> in the <i>mobile-satellite service</i> the <i>emissions</i> of which are intended to facilitate search and rescue operations.
<i>satellite link:</i>	A radio link between a transmitting <i>earth station</i> and a receiving <i>earth station</i> through one <i>satellite</i> . A satellite link comprises one up-link and one down-link.
<i>satellite network:</i>	A <i>satellite system</i> or a part of a <i>satellite system</i> , consisting of only one <i>satellite</i> and the cooperating <i>earth stations</i> .
<i>satellite system:</i>	A <i>space system</i> using one or more artificial earth <i>satellites</i> .
<i>secondary radar:</i>	A <i>radiodetermination</i> system based on the comparison of reference signals with radio signals retransmitted from the position to be determined.
<i>ship earth station:</i>	A <i>mobile earth station</i> in the <i>maritime mobile-satellite service</i> located on board ship.
<i>ship movement service:</i>	A <i>safety service</i> in the <i>maritime mobile service</i> other than a <i>port operations service</i> , between <i>coast stations</i> and <i>ship stations</i> , or between <i>ship stations</i> , in which messages are restricted to those relating to the movement of ships. Messages which are of a <i>public correspondence</i> nature shall be excluded from this service.
<i>ship station:</i>	A <i>mobile station</i> in the <i>maritime mobile service</i> located on board a vessel which is not permanently moored, other than a <i>survival craft station</i> .
<i>ship's emergency transmitter:</i>	A ship's transmitter to be used exclusively on a distress frequency for distress, urgency or safety purposes.
<i>space operation service:</i>	A <i>radiocommunication service</i> concerned exclusively with the operation of <i>spacecraft</i> , in particular <i>space tracking</i> , <i>space telemetry</i> and <i>space</i>

	<p><i>telecommand.</i></p> <p>These functions will normally be provided within the service in which the <i>space station</i> is operating.</p>
<i>space radiocommunication</i>	Any <i>radiocommunication</i> involving the use of one or more <i>space stations</i> or the use of one or more <i>reflecting satellites</i> or other objects in space.
<i>space research service:</i>	A <i>radiocommunication service</i> in which <i>spacecraft</i> or other objects in space are used for scientific or technological research purposes.
<i>space station:</i>	A <i>station</i> located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the Earth's atmosphere.
<i>space system:</i>	Any group of cooperating <i>earth stations</i> and/or <i>space stations</i> employing <i>space radiocommunication</i> for specific purposes.
<i>special service:</i>	A <i>radiocommunication service</i> , not otherwise defined in this Section, carried on exclusively for specific needs of general utility, and not open to <i>public correspondence</i> .
<i>standard frequency and time signal service:</i>	A <i>radiocommunication service</i> for scientific, technical and other purposes, providing the transmission of specified frequencies, time signals, or both, of stated high precision, intended for general reception.
<i>standard frequency and time signal station:</i>	A <i>station</i> in the <i>standard frequency and time signal service</i> .
<i>standard frequency and time signal-satellite service:</i>	A <i>radiocommunication service</i> using <i>space stations</i> on <i>earth satellites</i> for the same purposes as those of the <i>standard frequency and time signal service</i> . This service may also include <i>feeder links</i> necessary for its operation.
<i>station:</i>	One or more transmitters or receivers or a combination of transmitters and receivers, including the accessory equipment, necessary at one location for carrying on a <i>radiocommunication service</i> , or the <i>radio astronomy service</i> . Each station shall be classified by the service in which it operates permanently or temporarily.
<i>survival craft station:</i>	A <i>mobile station</i> in the <i>maritime mobile service</i> or the <i>aeronautical mobile service</i> intended solely for survival purposes and located on any lifeboat, life-raft or other survival equipment.
<i>telecommunication</i>	Any transmission, emission or reception of signs, signals, writings, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems (CS).
<i>telegraphy</i>	A form of telecommunication in which the transmitted information is intended to be recorded on arrival as a graphic document; the transmitted information may sometimes be presented in an alternative form or may be stored for subsequent use (CS 1016).
<i>telephony</i>	A form of telecommunication primarily intended for the exchange of information

	in the form of speech (CS 1017).
<i>telegram</i>	Written matter intended to be transmitted by telegraphy for delivery to the addressee. This term also includes radiotelegrams unless otherwise specified (CS). In this definition the term telegraphy has the same general meaning as defined in the Convention.
<i>terrestrial radiocommunication</i>	Any radiocommunication other than space radiocommunication or radio astronomy
<i>terrestrial station:</i>	A <i>station</i> effecting <i>terrestrial radiocommunication</i> . In these Regulations, unless otherwise stated, any <i>station</i> is a terrestrial station.

## 1.2 Acronyms

AGAA	Astronomy Geographic Advantage Act, 2007 (Act No. 21 of 2007)
AMSS	Aeronautical Mobile Satellite Service
ARNS	Aeronautical Radio Navigation Service.
ASDE	Airports Surface Detection Equipment
BFWA	Broadband Fixed Wireless Access
B-GAN	Broadband Global Area Network
BRAN	Broadband Access Network
BSS	Broadcast Satellite Service
BTX	Base Transmit
C-band	Frequency range between about 4 and 6 GHz
CDMA	Code Division Multiple Access
CEPT	European Conference of Postal and Telecommunications Administrations.
CISPR	The Special International Committee on Radio Interference Committee
CT2	Second generation cordless telephones operating to specification MPT1334.

CTCSS	Continuous Tone Controlled Signalling System (or Continuously Tone Controlled Squelch)
dBW	Decibels relative to one Watt of power.
DECT	Digital European Cordless Telecommunication system. ERC Decision ERC/DEC/(94)03 refers.
DF	Duplex Frequency
DME	Distance Measuring Equipment.
DSC	Digital Selective Calling
DSSS	Direct Sequence Spread Spectrum
DVB-T	Terrestrial Digital Video Broadcasting
e.i.r.p	Effective Isotropically Radiated power.
EBU	European Broadcasting Union
EDGE	Enhanced Data Rates for GSM Evolution
EESS	Earth Exploration-Satellite Service
E-GSM	Extended GSM
EMC	Electromagnetic Compatibility
ENG	Electronic News Gathering
ENG/OB	Electronic News Gathering / Outside Broadcasting
EPIRB	Emergency Position Indicating Radio Beacon
ERC	European Radiocommunications Committee - the main CEPT committee looking after radio matters.
ETSI	European Telecommunications Standards Institute
FDDA	Field Disturbance and Doppler Apparatus
FHSS	Frequency Hopping Spread Spectrum
FM	Frequency Modulation
FSS	Fixed Satellite Service

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FTP	File Transfer Protocol
FWA	Fixed Wireless Access
GLONASS	Global Navigation Satellite System
GMPCS	Global Mobile Personal Communications by Satellite
GMDSS	Global Maritime Distress and Safety System.
GNSS	Global Navigation-Satellite System.
GPRS	General Packet Radio Service
GPS	Global Positioning System - a satellite radio navigation system.
GSM	Global System for Mobile communications. Originally Groupe Spécial Mobile. See ERC Decision ERC/DEC/(94)01.
GSM 900	GSM using 900 MHz frequencies
GSM-R	GSM Railways
GSO	Geostationary Orbit
HAP	High Altitude Platform
HDFS	High Density Fixed Service
HDFSS	High Density Fixed Satellite Service
HDTV	High Definition Television
HF	High Frequency (3 to 30 MHz)
HIPERLAN	High Performance Radio Local Area Networks.
HDFS	Hadoop Distributed File System
IARU	International Amateur Radio Union
ICAO	International Civil Aviation Organisation
ICT	Information Communication Technology
IEC	International Electrotechnical Committee
IEEE	Institute of Electrical and Electronic Engineers

IEEE 802.11	IEEE Regulatory Advisory Group on Wireless LANs
ILS	Instrument Landing System-aeronautical radio navigation system.
IMO	International Maritime Organisation
LPVS	Low Power Video Surveillance
IMT	International Mobile Telecommunications
ISM	Industrial, Scientific and Medical. The use of radio for non-communication purposes such as microwave heating etc.
ISP	Internet Service Provider
ITU	International Telecommunication Union.
Ka-band	Part of the frequency band between about 18 and 30 GHz
Ku-band	Part of the frequency band between about 11 and 14 GHz
L-band	Frequency band around 1.5 GHz
LAN	Local Area Network
LEOs	Low Earth Orbit satellites
LF	Low Frequency (30 to 300 kHz)
LPVS	Low Power Video Surveillance
LTE	Long Term Evolution
MF	Medium Frequency (300 to 3000 kHz)
Mob-87	World Administrative Radio Conference for the Mobile Services, Geneva, 1987.
MoU	Memorandum of Understanding
MPT	Mobile Public Trunking
MSS	Mobile Satellite Service
MTX	Mobile Transmit
MVDS	Multipoint Video Distribution System.



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NGSO	Non-geostationary Satellite Orbit
NINP	Non-Interference and non-protection basis. This means that the service in question must not cause interference to, nor claim protection from interference from, other services.
OB	Outside Broadcast.
PAMR	Public Access Mobile Radio.
PLB	Public Locater Beacons
PMR	Private Mobile Radio.
PMSE	Programme Making and Special Events.
PPDR	Public Protection and Disaster Relief
PSTN	Public Switched Telephone Network
R&D	Research & Development.
RFID	Radio Frequency Identification systems
RLAN	Radio Local Area Network
RNSS	Radio Navigation Satellite Service
RR	Radio Regulation of the International Telecommunication Union
RTT	Road Transport Telematics
SAB	Services Ancillary to Broadcasting
SABRE	South African Band Replanning Exercise
SAP	Services Ancillary to Programme making
S-DAB	Satellite Digital Audio Broadcasting
SKA	Square Kilometre Array
SNG	Satellite News Gathering
SRBR	Short Range Business Radio
SRDs	Short Range Devices, formerly referred to as Low Power Devices (LPDs).
SSS	Space Science Service

T-DAB	Terrestrial Digital Audio Broadcasting.
TDD	Time Division Duplex
TDMA	Time Division Multiple Access
TETRA	Trans European Trunked Radio System (now called Terrestrial Trunked Radio).
UHF	Ultra High Frequency (300 to 3000 MHz)
UMTS	Universal Mobile Telecommunications System
UWB	Ultra Wideband Technology
VHF	Very High Frequency (30 to 300 MHz)
VLBI	Very Long Baseline Interferometry.
VLF	Very Low Frequency (3 to 30 kHz)
VOR	Very high frequency Omnidirectional Range (aeronautical radionavigation system).
VSAT	Very Small Aperture Terminal
WAS	Wireless Access Services
WARC	World Administrative Radio Conference. The last WARC was held in 1992. WARCs are now superseded by WRCs.
WLAN	Wireless Local Area Network
WLL	Wireless Local Loop
WRC	World Radiocommunication Conference.

## **2 PREAMBLE**

### **2.1 Legislative Framework**

The Electronic Communications Act, 2005 (Act No. 36 of 2005), herein after referred to as the Act; provides for the control of the radio frequency spectrum.

In carrying out its functions under the Act and the related legislation, the Authority controls, plans, administers and manages the use and licensing of the radio frequency spectrum in terms of section 30(1) of the Act.

Section 34 of the Act is concerned with the National Radio Frequency Plan (NRFP) and this National Radio Frequency Plan 2013 (NRFP 2013) has been prepared under Section 34 of the Act.

The national radio frequency plan allocates the Electromagnetic Spectrum to Radio Services in the Frequency Bands between 8.3 kHz and 3000 GHz. All frequency assignments must be in accordance with the current version of the national radio frequency plan.

This revision of the National Radio Frequency Plan incorporates the decisions taken by World Radiocommunications Conferences (WRC), including up to WRC 2012 that was concluded in Geneva in February 2012. The revision reflects the subsequent 2012 version of the ITU Radio Regulations, including the frequency allocations relevant to Region 1 and associated footnotes. It also includes updates on the Table of Frequency Allocations extending up to 3000 GHz, South African National Footnotes and corrections of typographical errors of previous editions of the national radio frequency plan (previously termed the South African Table of Frequency Allocations or SATFA). The revised NRFP further reflects agreements taken at regional level including that of the African Telecommunication Union (ATU) and the Southern African Development Community (SADC).

The Authority consulted with senior officials in the Department of Communications to incorporate the radio frequency spectrum allocated by the Minister for use by

security services taking into account the Government's current and planned use of radio frequency spectrum, including but not limited to, civil aviation, and aeronautical services and scientific research. This updated version of the NRFP incorporates the outcome of that consultation.

A document containing ITU – R and all other relevant Resolutions and Recommendations referred to in this document can be found on the Authority's website.

The pattern of radio use is not static as it is continuously evolving to reflect the many changes that are taking place in the radio environment; particularly in the field of technology. Spectrum allocations must reflect these changes and the position set out in this plan is therefore subject to continuous reviews.

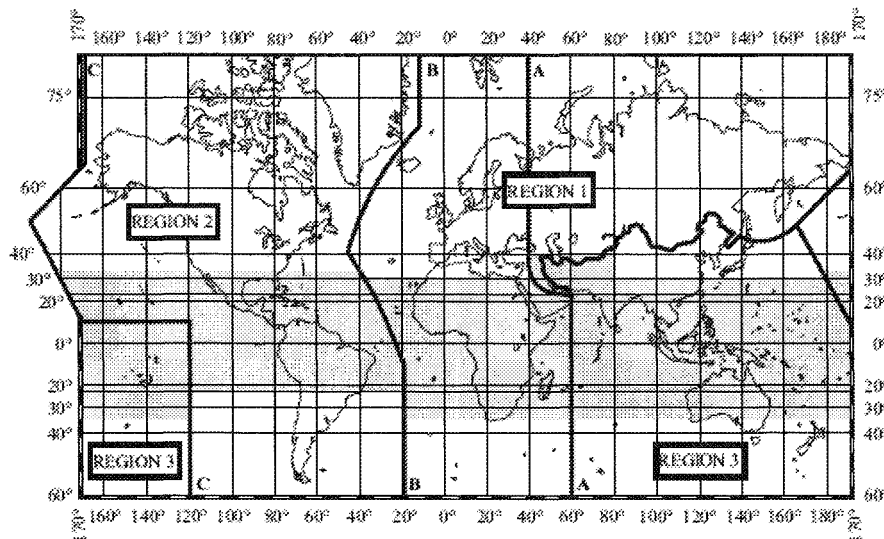
In view of the above, it is the intention of the Authority to update the national radio frequency plan when necessary in order to keep the plan current with due regard given to the current and future usage of the radio frequency spectrum.

**The following changes have been implemented in NRFP 2013:**

- National footnotes have been revised.
- The decisions taken by the World Radiocommunications Conference 2012, as agreed to by the Republic, have been reflected.
- The Astronomy Geographic Advantage Act, 2007 (Act No. 21 of 2007) covered in a separate chapter in view of the award of the Square Kilometre Array (SKA) to South Africa.
- Updated use of frequency bands for radio apparatus exempted from radio frequency spectrum licences in line with the *Radio Frequency Spectrum Regulations* (Government Gazette No. 34172, dated 31 March 2011) and *Spectrum Re-allocation for Radio Frequency Identification (RFID) Systems* (Government Gazette No. 31127, dated 5 June 2008.)
- Added new maritime, aeronautical allocations below 20 MHz and new satellite allocations above 70 GHz.

## 2.2 ITU-R Radio Regions

For the purposes of allocating frequencies, the ITU has divided the world into three Regions as shown on the following map:



Region 1: Region 1 includes the area limited on the east by line A (lines A, B and C are defined below) and on the west by line B, excluding any of the territory of the Islamic Republic of Iran which lies between these limits. It also includes the whole of the territory of Armenia, Azerbaijan, the Russian Federation, Georgia, Kazakhstan, Mongolia, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan, Turkey and Ukraine and the area to the north of Russian Federation which lies between lines A and C.

Region 2: Region 2 includes the area limited on the east by line B and on the west by line C.

Region 3: Region 3 includes the area limited on the east by line C and on the west by line A, except any of the territory of Armenia, Azerbaijan, the Russian Federation, Georgia, Kazakhstan, Mongolia, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan, Turkey and Ukraine and the area to the north of Russian Federation. It also includes that part of the territory of the Islamic Republic of Iran lying outside of those limits.

The Republic of South Africa falls under ITU Region 1 and thus aligns its frequency allocations with those specified for ITU Region 1 in the ITU Radio Regulations as required by the Act.

### **2.3 Structure of the Table of Frequency Allocations**

The Table of Frequency Allocations lists all the allocations in the radio frequency spectrum in the Republic of South Africa. The structure of the Table, which is outlined below, is similar to that of the International Table of Frequency Allocations as it appears in Article 5 of the ITU Radio Regulations.

The Table of Frequency Allocations covers the frequency range 8.3 kilohertz (kHz) to 3000 Gigahertz. It lists for each frequency range the types of radiocommunication services that are permitted and which ones are currently in use in South Africa. Information is also given on possible future uses or changes in use of particular frequency bands.

#### **2.3.1 Column 1 - ITU Region 1 Allocations**

The ITU Radio Regulations divides the spectrum into frequency bands with the allocation of primary and secondary services. Services with the names printed in “capitals” (example: FIXED) are “primary” services; and those with the names printed in “normal characters” (example: Mobile) are “secondary” services.

Secondary services are on a non-interference and non-protection basis (NINP) to the primary services. Spectrum assigned on a secondary basis means that the secondary station:

- (i) cannot cause harmful interference to stations of primary services to which frequencies are already assigned or to which frequencies may be assigned at a later date;
- (ii) cannot claim protection from harmful interference from stations of a primary service to which frequencies are already assigned or may be assigned at a later date, however;

- (iii) can claim protection from interference from stations of the secondary service(s) to which frequencies may be assigned at a later date.

The frequency band referred to in each allocation is indicated in the left hand top corner of the part of the Table concerned.

The order of listing does not indicate relative priority within each category.

The footnote references are those that appear in Article 5 of the ITU Radio Regulations and are applicable to region 1.

- The footnote references which appear in the table below reflect the allocated service or services which apply to more than one of the allocated services, or to the whole of the allocation concerned.
- The footnote references which appear to the right of the name of a service are applicable only to that particular service.

### **2.3.2 Column 2 – South African allocations and footnotes**

This column indicates the range of frequencies associated with services currently allocated in South Africa (both primary and secondary).

The footnotes from Article 5 of the ITU Radio regulations that are applicable to South Africa are included.

The national footnote references are indicated as 'NF' and appear in the table on the same basis as the ITU footnotes.

### **2.3.3 Column 3 – Typical Applications**

This column indicates frequency utilisation for existing or new systems relating to the South African allocations. It is not an all-inclusive list of applications, but serves as a quick reference of spectrum availability for service/equipment applications. The blanks on the typical applications and comments column mean that the Authority does not have records of any such typical applications.

### 2.3.4 Column 4 – Notes and comments

This column indicates items such as the following: Government Gazette Notices pertinent to specific frequency bands, future requirements in specific bands, and ITU-R Recommendations or Resolutions which require implementation. It should be noted that the list of ITU-R Recommendations and ITU Resolutions are not all inclusive but gives an indications of the applicable recommendations and resolutions pertinent to the frequency band in question; when in doubt, the ITU Radio Regulations must be consulted.

### 2.3.5 ITU and National Footnotes

South African National Footnotes and ITU footnotes applicable to Region 1 are contained in sections 5 and 6 respectively.

### 2.3.6 List of frequency bands used for Maritime services

The List of frequency bands used for Maritime services is contained in section 7.

### 2.3.7 Frequencies

Table 1: Band Segmentation

Symbols	Frequency Range
VLF	3 kHz – 30 kHz
LF	30 kHz – 300 kHz
MF	300 kHz – 3 MHz
HF	3 MHz – 30 MHz
VHF	30 MHz – 300 MHz
UHF	300 MHz – 3 GHz
SHF	3 GHz – 30 GHz
EHF	30 GHz - 300 GHz
	300 GHz – 3000 GHz



## 2.4 Contact details

Further information on the South African Table of Frequency Allocations and its interpretation can be obtained by contacting:

Independent Communications Authority of South Africa  
Pin Mill Farm  
164 Katherine Street  
Sandton  
2146  
Phone: +27 11 566 3000  
Fax: +27 11 566 3292  
URL: <http://www.icasa.org.za>  
E-mail: [info@icasa.org.za](mailto:info@icasa.org.za)