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## GOVERNMENT NOTICE

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### NOTICE 754 OF 2010

### INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA ELECTRONIC COMMUNICATIONS ACT, 2005 (NO. 36 OF 2005):

### REGULATIONS

### REGULATIONS ON RADIO FREQUENCY SPECTRUM FEES IN TERMS OF THE ELECTRONIC COMMUNICATIONS ACT, 2005 (NO. 36 OF 2005)

The Independent Communications Authority of South Africa in terms of section 4(1) of the Electronic Communications Act, 2005 (Act No.36 of 2005), hereby prescribes regulations in the schedule.

  
DR STEPHEN MNCUBE

CHAIRPERSON

ICASA

## SCHEDULE

### 1. Definitions

In these Regulations, unless the context otherwise indicates, a word or expression to which a meaning has been assigned in the Act has the meaning so assigned, unless otherwise defined in these regulations:

<b>“the Act”</b>	means the Electronic Communications Act, 2005 (Act No. 36 of 2005);
<b>“ASTER”</b>	means the Area Sterilized Factor;
<b>“Area Sterilized Factor”</b>	means a factor that is applied to reflect an area that is denied to other users of a frequency assignment;
<b>“BW”</b>	means Bandwidth;
<b>“Bandwidth Factor”</b>	means MHz paired;
<b>“CG”</b>	means the Congestion Factor;
<b>“Congestion Factor”</b>	means the factor that is applied to reflect where a frequency spectrum is congested and demand exceeds supply;
<b>“FREQ”</b>	means the Frequency Factor;
<b>“Frequency Factor”</b>	means the factor that is applied to reflect the frequency band or the spectrum location in which the frequency assignment is positioned;
<b>“GEO”</b>	means the Geographic Factor;
<b>“Geographic Factor”</b>	means the factor that is applied to reflect the geographic area of South Africa covered by a frequency spectrum assignment;
<b>“GHz”</b>	means Gigahertz of Radio Frequency Spectrum;
<b>“HOPMINI”</b>	means the Minimum Hop Factor;
Icasa Act	means the Independent Communications Authority of South Africa, 2000 (Act No. 13 of 2000);
<b>“Minimum Hop Factor”</b>	means the factor that is applied to a point to point frequency spectrum assignment when the hop length is shorter than the minimum hop length identified for the frequency;
<b>“Khz”</b>	means Kilohertz of Radio Frequency Spectrum;

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<b>"MHz"</b>	means Megahertz of Radio Frequency Spectrum;
<b>"Minimum Fee"</b>	means the minimum fee paid for a radio frequency spectrum licence;
<b>"SHR"</b>	means the Sharing Factor;
<b>"Sharing Factor"</b>	means the factor that is applied when the frequency spectrum that is the subject of an assignment can be shared;
<b>"UNIBI"</b>	means the Uni-directional factor;
<b>"Uni-directional Factor"</b>	means the factor that is applied when a single link only is assigned;
<b>"UNIT"</b>	means the Unit Price per Megahertz paired;
<b>"Unit Price"</b>	means the price that is applied when the radio frequency spectrum licence fee is calculated by means of a formula;
<b>"VSAT"</b>	means Very Small Aperture Terminal.

## 2. Object of the regulations

The object of these regulations is to:

- (1) Standardise Radio Frequency Spectrum Licence Fees and Pricing in order to promote efficiency of spectrum use and conformity with international standards in the usage of spectrum in the Republic;
- (2) Establish a transparent, fair, competitive and non-discriminatory Radio Frequency Spectrum Pricing based on administrative incentive pricing and which does not preclude the use of auctions and other internationally accepted methods of determining Radio Frequency Spectrum Price;
- (3) Encourage efficient and effective utilization of spectrum, encouraging, on an incentive basis, migration to lesser populated and low-demand bands;
- (4) Ensure that the costs of managing and monitoring the radio frequency spectrum are at least covered by fee income;
- (5) Promote competition by simplifying and harmonizing the Radio Frequency Spectrum Pricing process; and
- (6) Achieve government policy objectives of even development of telecommunications infrastructure across the Republic.

### 3. Fee Determination

- (1) The licence fees payable for each category of Frequency Spectrum will be as determined by a pricing formula as prescribed in these regulations or by application of the minimum fee.
- (2) The unit price per MHz of Frequency Spectrum is as stated in Annexure "A" to these regulations and may be reviewed from time to time as may be prescribed by the Authority.
- (3) The minimum fee is as stated in Annexure A and may be reviewed from time to time as may be prescribed by the Authority.

### 4. Competing Applications

Where the Authority determines that the assignment of frequency should be made on a competitive basis, the radio frequency spectrum licence fee may be determined in accordance with the regulations developed in terms of section 31(3) of the Act.

### 5. Formulae

The following formulae are applicable in determining the radio frequency spectrum licence fees:

(a) Point-to-area formula

Applied to all point to area services except for Amateur, aeronautical and maritime with exclusive band allocations.

$$\text{Fee} = (\text{UNIT} * \text{FREQ} * \text{BW} * \text{CG} * \text{GEO} * \text{SHR} * \text{ASTER} * \text{UNIBI})$$

The fee is the multiplication of the unit price (UNIT) by the frequency factor (FREQ), the bandwidth in MHz, the congestion factor (CG), the Geographic factor (GEO) the sharing factor (SHR), the area sterilized factor (ASTER) and the unidirectional factor (UNIBI) where this is applicable for point to area.

(b) Point-to-point formula

Applied to all fixed links whether below or above 1GHz. The formula is as follows:

$$\text{Fee} = (\text{UNIT} * \text{FREQ} * \text{BW} * \text{CG} * \text{GEO} * \text{SHR} * \text{HOPMINI} * \text{UNIBI})$$

The fee is the multiplication of the unit price (UNIT) by the frequency factor (FREQ), the bandwidth (BW) in MHz, the congestion factor (CG), the Geographic factor (GEO), the sharing factor (SHR), the minimum hop length (HOPMINI) and the unidirectional factor (UNIBI).

(c) Satellite Hub Ground Station Formula

The fee for a principle hub station for uplink is determined by the following fee

$$\text{Hub ground station Fee} = \text{Max} (R_{UL}; \text{UNIT} * \text{BW})$$

The fee is the multiplication of the unit price (UNIT) by the bandwidth (BW) in MHz, and  $R_{UL}$  is the minimum fee for satellite uplink connections.

(d) Satellite VSAT subordinate ground station Formula

The fee for subordinate Very Small Aperture Station for uplink is determined by the following formula

$$\text{VSAT Fee} = (\text{UNIT} * \text{BW})$$

The fee is the multiplication of the unit price (UNIT) by the bandwidth (BW) in MHz.

## 6. Factors and Look Up Tables

(1) Unit Price – the Unit Price (UNIT) is applied per MHz paired of bandwidth. UNIT is as stated in Annexure "A".

(2) Bandwidth (BW)

The Bandwidth factor is expressed per MHz paired.

(3) Frequency factor (FREQ)

The following are the ranges and the relevant frequency band factor:

Frequency Ranges		FREQ Factor
From	To	
30 MHz	174 MHz	1
174 MHz	880 MHz	0.75
880 MHz	1.8 GHz	0.5
1.8 GHz	5 GHz	0.4
5 GHz	10 GHz	0.3
10 GHz	17 GHz	0.2
17 GHz	23 GHz	0.15
23 GHz	30 GHz	0.1
30 GHz	above	0.05

(4) Geographic factor (GEO)

(a) The following is the table of geographic factors:

GEO Area	GEO Factor Value
High Density	1
Low Density	0.1

(b) The definition of high, and low density is stated in the Annex to this regulation.

(c) Where the geographic area that is covered by a licence includes more than one GEO area, the highest GEO factor will be applied.

## (5) Congestion factor (CG)

- (a) The following is the table of congestion factors:

CONGESTION	CG Factor Value
Congested	1.5
Not Congested	1

- (b) 'Congested' applies where there is a waiting list for the frequency spectrum that is the subject of the licence, while 'Not Congested' applies when there is no waiting list.

## (6) Degree of sharing (SHR)

- (a) The following is the table of Share factors

Sharing	Value of sharing factor
Exclusive	1
Shared	0.5

- (b) 'Shared' applies where two or more licensees share the frequency spectrum

## (7) Area sterilized (ASTER)

- (a) The following is the table of ASTER factors

Area (km <sup>2</sup> )		ASTER Factor
From	To	
0	1	0.6
1	10	2
10	100	6
100	1,000	18
1,000	10,000	56
10,000	100,000	180
100,000	500,000	400
100,000	1,000,000	600

## (8) Minimum hop length (HOPMINI)

- (a) The following is a table of minimum path lengths by frequency. Frequencies not appearing specifically in this table shall be rounded to the next highest value in the table.

Frequency Band (MHz)	Min Path Length (Km)
400	100
800	60
1.4/1.6/2	30
4 and 5	16
7.5	14
10 and 11	10
13/14/15	9
17/18	4
22/23	3
25/26	3



28	2
31 and 32	1.5
38	1
Higher	0

- (b) Where the actual path length of the licensee's link is shorter than the minimum path length for the frequency, the HOPMINI factor in the formula shall be calculated as the square root of the ratio between the minimum path length for the frequency requested and the actual path length of the licensee's link  $\text{SQRT}(\text{Minimum Path Length for the Frequency} / \text{Actual Path Length})$ .
- (c) Where the actual path length is equal to the minimum path length for frequency spectrum or the length is not known, the value of HOPMINI in the formula will be 1.

(9) Unidirectional factor (UNIBI)

- (a) The following is a table of UNIBI factors as applied in the respective Point to Point formula and the Point to Area formula.

UNIBI	Value for Point to Point	Value for Point to Area
Unidirectional	0.75	0.5
Bi-directional	1	1

- (b) In the Point to Point formula, the Uni-directional factor is applied when a single (unidirectional link) is the subject of the licence.
- (c) In the Point to Area formula, the Uni-directional factor is applied when an unpaired frequency is the subject of the licence.

## 7. Minimum Fees

- (1) The Minimum Fees are as stated in the Annexure "A".
- (2) The Minimum fees are applicable to the services as defined in the Table of Fees by Type of Radio Communications Service.
- (3) Where the Radio Frequency Spectrum Licence fee is defined by formula and the result is lower than the minimum fee, then the minimum fee shall apply.
- (4) For satellite hub uplink stations, the minimum fee for satellite hub uplink stations shall apply.

## 8. Multi Year Licences

- (1) For licensees in the Amateur, Aeronautical and Ship Station category the fee for a multi-year licence can be determined by the following table where the annual fee as calculated by formula is multiplied by the relevant factor for the number of years.

Years	1	2	3	4	5
Factor	1	1.91	2.74	3.49	4.17

(2) The fee should be rounded up to the nearest whole Rand.

**9. Reference Table for Calculating Radio Frequency Spectrum Licence Fees.**

	<b>Fee Basis</b>
<b>1. Amateur Radio</b>	
(i) All classes of licence (including CEPT Format)	Minimum Fee
(ii) Beacon	Minimum Fee
(iii) Change of call sign on request	Minimum Fee
(iv) Guest or special event licence	Minimum Fee
(v) Listener	Minimum Fee
(vi) Repeater station including radio link	Minimum Fee
(vii) Digipeater/Bulleting Board	Minimum Fee
(viii) Experimental station for weather satellite reception and Re transmission	Minimum Fee
<b>2. Aeronautical</b>	
(i) Aircraft station	Minimum Fee
(ii) Beacon	Minimum Fee
(iii) Ground station	Minimum Fee
(iv) Relay station	Minimum Fee
(v) Radio Link	
<b>3. Land Mobile Service</b>	
3.1 Alarm station (see also item 5.1 for alarm systems)	see item 5.1 for alarm systems
<b>3.2 Base Station General Base/Mobile</b>	
(i) Citizen band	Minimum Fee
(ii) Civil Defence/Marnet	
(a) Station without private frequency	Minimum Fee
(b) Station with private frequency	Point to Area Formula
(iii) 27/29 MHz frequency band	
(a) Station with one frequency channel	Minimum Fee
(b) Station with more than one frequency channel (Including station for use at sea and inland waters)	Minimum Fee
(iv) Other	
(a) Station with one single frequency channel	Point to Area Formula
(b) Station with more than one single frequency channel	Point to Area Formula
(c) Station with one or more double frequency channels	Point to Area Formula
(d) High frequency band:	
(i) First Base station	Point to Area Formula
(ii) Each additional base station	Point to Area Formula
(iii) Civil defence station	Point to Area Formula
<b>3.3 Experimental station</b>	
	Minimum Fee

<b>3.4 Load Management station (see also item 5.2)</b>	See load management systems
<b>3.5 Mobile Two Way Station</b>	
(i) Citizen band	Minimum Fee
(ii) Civil Defence/Marnet	
(a) Station without private frequency	Minimum Fee
(b) Station with private frequency	Point to Area Formula
(iii) Portable (low power)	
(a) 26/27 MHz frequency band with apparatus not exceeding 100 mW	Minimum Fee
(b) Station in the UHF for onsite communication, not exceeding 2W	Point to Area Formula
(iv) 27/29 MHz frequency band (Including station for use at sea and inland waters)	
(a) Station with one frequency channel	Minimum Fee
(b) Station with more than one single frequency channel (Including station for use at sea and inland waters)	Minimum Fee
(v) Other	
(a) Station with one single frequency channel	Point to Area Formula
(b) Station with more than one single frequency channel	Point to Area Formula
(c) Station with one or more double frequency channels	Point to Area Formula
(d) High frequency band:	Point to Area Formula
i. Per Station	Point to Area Formula
ii. Civil Defence Station	Point to Area Formula
<b>3.6 Paging Station which is used in a system other than that indicated under item 5.4 per page</b>	
(i) One way	Point to Area Formula
(ii) Two way	Point to Area Formula
<b>3.7 Relay Station</b>	
(i) Station with one single frequency channel	Point to Area Formula
(ii) Station with more than one single frequency channel	Point to Area Formula
(iii) Station with one or more double frequency channels	Point to Area Formula
<b>3.8 Repeater Station (See item 5.6)</b>	Point to Area Formula
<b>3.9 Special radio service: Per license</b>	Minimum Fee
<b>3.10 Telemetry Station</b>	Point to Area Formula
<b>3.11 Licence fee payable by the SANDF, SAPS, Telkom and Transnet per MHz</b>	Point to Point Formula for each link
<b>3.12 Radio Link Station</b>	
(i) Single Frequency Link below 1000 MHz (per control and/or interconnect point)	Point to Point Formula

(ii) Double Frequency Link below 1000 MHz (per control and/or interconnect point)	Point to Point Formula
(iii) Radio Link above 1000 MHz calculated on the assigned bandwidth per frequency (per control and/or interconnect point)	Point to Point Formula
<b>4. Maritime</b>	
<b>4.1 Beacon</b>	Minimum Fee
<b>4.2 Coast station:</b>	
(i) Non-commercial	Minimum Fee
(ii) Commercial	
a) In the medium and HF bands, per base station with:	
1 to 20 Mobile Stations	Minimum Fee X 20
over 20 Mobile Stations	Minimum Fee X 40
b) In the VHF bands, per base station with:	
1 to 5 mobile stations	Minimum Fee X 5
6 to 10 mobile stations	Minimum Fee X 10
11 to 15 mobile stations	Minimum Fee X 15
16 to 20 mobile stations	Minimum Fee X 20
21 and more mobile stations	Minimum Fee X 40
<b>4.3 Ship station: Maritime frequency band</b>	
<b>4.4 Ships operating on land mobile frequencies</b> (See item 3.2 (iii) (b) and 3.5 (iv) (b))	Minimum Fee
<b>5. Electronic Communications Network Service</b>	
<b>5.1 Alarm systems</b>	Point to Area Formula
<b>5.2 Load management system (Minimum licence fee as for 200 load management stations)</b>	Point to Area Formula
<b>5.3 Message handling (two way)</b>	Point to Area Formula
<b>5.4 Paging system</b>	Point to Area Formula
<b>5.5 Radio trunking;</b>	Point to Area Formula
<b>5.6 Repeater system (communal and private):</b>	
<b>5.8 National Electronic Communications Network</b>	Point to Area Formula using maximum ASTER factor value
<b>5.10 Wireless data telecommunication services:</b>	Point to Area Formula
<b>5.12 Broadcasting band sub carrier system - per frequency of subcarrier used</b>	Point to Area Formula

<b>5.14 Microwave Multipoint Distribution Systems (MMDS)</b>	Point to Area Formula
<b>5.16 Digital Enhanced Cordless Telecommunication system (DECT)</b> per megahertz frequency system	Point to Area Formula
<b>5.18 National mobile data telecommunications services</b>	Point to Area Formula
<b>6. Satellite</b>	
<b>6.1 Satellite Terminals</b>	Minimum Fee
<b>6.2 Uplink broadcasting signal distribution fixed satellite earth station</b>	Hub Satellite Formula
<b>6.2 Mobile or fixed satellite news gathering station</b>	Hub Satellite Formula
<b>VSAT</b>	VSAT Satellite Formula

## 10. Information requirements

- (1) Licensees must furnish information concerning the equipment they deploy as required by the Authority.
- (2) Assignment of Radio Frequency Spectrum and the issuance of licences to use Radio Frequency Spectrum is at the discretion of the Authority and applicants for Radio Frequency Spectrum must furnish all information to support their application as required by the Authority.

## 11. Contraventions and penalties

Any person who contravenes or fails to comply with the provisions of these regulations is liable to a fine not exceeding 10% of the Licensee's gross profit.

## 12. Short title and commencement

These Regulations are called the Radio Frequency Spectrum Licence Fee Regulations, 2010, and will come into operation on 1 April 2011.

## 13. Repeal and amendment

The E1 licence fees contained in Chapter 6 of the Radio Regulations published in Government Gazette number 2862 of 1979 is hereby repealed.

### **Annexure "A"**

- A. The Unit Price per MHz paired is R2 000 (Two thousand Rand)
  - B. The Minimum Fee is R120 (One hundred and twenty Rand)
  - C. The Minimum fee for a Satellite Hub Station is R 50 000 (Fifty thousand Rand)
  - D. The GEO Areas are
    - High Density includes Gauteng province, and the municipal areas of Cape Town and Durban.
    - Low Density – includes all parts of South Africa that do not fall under high density.
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