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GENERAL NOTICES ALGEMENE KENNISGEWINGS

NOTICE 2922 OF 1998

INDEPENDENT BROADCASTING AUTHORITY

NOTICE OF PUBLICATION OF THE DRAFT GUIDELINES FOR PARTY POLITICAL BROADCASTS AND POLITICAL ADVERTISEMENTS DURING THE ELECTION PERIOD FOR THE 1999 ELECTIONS

The Independent Broadcasting Authority, hereinafter referred to as "the Authority", hereby gives notice, in terms of section 13 of the Independent Broadcasting Authority Act No 153 of 1993, as amended, of the publication of the draft guidelines for party political broadcasts and political advertisements during the election period for the 1999 elections, hereinafter referred to as "the guidelines".

Public, Private, Community **sound** broadcasting licensees, all registered political parties and interested persons are invited to submit written comments to the Head of the Licensing, Monitoring and Complaints Department of the Authority at 26 Baker Street, Rosebank, Johannesburg OR Private Bag X31, Parklands, 2121 OR by fax at Fax No (011) 441-1401 **on or before the 7th of January 1999.**

The guidelines are available for inspection at the Authority's Library during normal office hours at the address mentioned above.

The Authority will send copies of the guidelines to the stations outside Gauteng and the Independent Electoral Commission will distribute the guidelines to registered political parties. The political parties should contact **Ms. T. Phillips of the Independent Electoral Commission at (012) 428 5494** for more information on the availability of the guidelines.

NOTICE 2923 OF 1998**INDEPENDENT BROADCASTING AUTHORITY****NOTICE OF AMENDMENT TO ORBICOM'S KU - BAND DOWNLINK LICENCE**

The Independent Broadcasting Authority, hereinafter referred to as "the Authority", hereby gives notice under section 52 (2) (a) of the Independent Broadcasting Authority, Act No 153 of 1993, that an application has been received in terms of section 52 (1) (c) for an amendment to Orbicom's KU - Band downlink licence issued by the Postmaster General on 14th December 1995, as set out in the Schedule.

The Authority by virtue of a recent agreement entered into between IBA, SATRA and Telkom and published in Government Gazette No. 19343 Notice No 2358 dated the 9th of October 1998 has jurisdiction to deal with this matter.

The application and any written representations received pursuant to this notice are open for inspection by interested parties during normal office hours at the Authority's Library.

Interested parties are invited to submit written representations in relation to the application to the Licensing, Monitoring and Complaints Department of the Authority at Khasho House, 26 Baker Street, Rosebank, Johannesburg **OR** Private Bag X31, Parklands, 2121 **OR** by fax at Fax No. (011) 441-1401 **within 21 (twenty one) days of the date of publication of this notice** and shall indicate whether they require an opportunity to make oral representations to the Authority.

Persons who submit written representations in terms hereof shall, when submitting such representations, provide proof to the satisfaction of the Authority that a copy of the representations submitted has been sent by registered post or delivered to the Applicant.

The Authority shall at the request of any person and on payment of such fees as prescribed furnish him/her with a certified copy of or extract from any part of the application or representation.

SCHEDULE**INDEX: ORBICOM KU & C-BAND UPSTATIONS**

A1-A6	PAS-4	KU-BAND
BI-B3	PAS-4	C-BAND
C1-C7	IS601	C-BAND T PONDER 101/101
D1-D5	IS601	C-BAND T PONDER 20/20
E1-E6	PAS-7	KU-BAND

CO-ORDINATES: KU & C-BAND EARTH STATIONS

Lat.: 26° 26' 09" (South)

Long: 28° 00' 08" (East)

Altitude: 1600m a.m.s.l.

**CHARACTERISTICS OF ORBICOM PAS-7 KU-BAND UPLINK SYSTEM
(EX RANDBURG E/STN)**

Location	:	Randburg
Map No.	:	2628 AA (1:50000)
Co-ordinates	:	28° 00' 05" (E), 26° 06' 06" (S)
Site Elevation	:	1600m
Satellite	:	Pas-7
Position	:	68°,5 (E)
Antennas	:	9,15m (both Ku and C-band)
Manufacturer	:	Scientific Atlanta /or Vertex
Model	:	8009 A (typically)
Gain	:	61.2 dB (Ku-band)
Gain	:	53.8 dB (C-Band)
Carrier Characteristics	:	(Ku-Band)
Beam	:	Spot
Transponders	:	A2
Polarisation (downlink)	:	Linear: Horizontal
Transponders	:	A8 - A11
Polarisation (downlink)	:	Linear: Vertical
Transponders	:	B3-B6
Polarisation(downlink)	:	Vertical

Carrier 1	:	TP A2	V (up)
Frequency	:	13814 MHz	
Downlink EIRP	:	52 dBW (RSA Contour)	
Carrier type	:	Digital	
Bandwidth	:	28.4 MHz	
Downlink frequency	:	11010 MHz (H)	
Carrier 2	:	TP A8	H (up)
Frequency	:	13814 MHz	
Downlink EIRP	:	52 dBW (RSA Contour)	
Carrier type	:	Digital	
Bandwidth	:	28.4 MHz	
Downlink frequency	:	11010 MHz (V)	
Carrier 3	:	TP A9	H (up)
Frequency	:	13854 MHz	
Downlink EIRP	:	52 dBW (RSA Contour)	
Carrier type	:	Digital	
Bandwidth	:	28.4 MHz	
Downlink frequency	:	11050 MHz (V)	
Carrier 4	:	TP A10	H (up)
Frequency	:	13894 MHz	
Downlink Beam Edge EIRP	:	52 dBW	
Carrier type	:	Digital	
Bandwidth	:	28.4 MHz	
Downlink frequency	:	11090 (V)	
Carrier 5	:	TP A11	H (up)
Frequency	:	13934 MHz	
Downlink EIRP	:	52 dBW (RSA Contour)	
Carrier type	:	Digital	
Bandwidth	:	28.4 MHz	
Downlink frequency	:	11130 MHz (V)	
Carrier 6	:	TP B3	H (up)
Frequency	:	14104 MHz	
Downlink EIRP	:	52 dBW (RSA Contour)	
Carrier type	:	Digital	
Bandwidth	:	28.4 MHz	
Downlink frequency	:	11554 MHz (V)	
Carrier 7	:	TP B4	H (up)
Frequency	:	14144 MHz	
Downlink EIRP	:	52 dBW (RSA Contour)	
Carrier type	:	Digital	
Bandwidth	:	28.4 MHz	
Downlink frequency	:	11594 MHz (V)	
Carrier 8	:	TP B5	H (up)
Frequency	:	14184 MHz	
Downlink EIRP	:	52 dBW (RSA Contour)	
Carrier type	:	Digital	
Bandwidth	:	28.4 MHz	
Downlink frequency	:	11634 MHz (V)	
Carrier 9	:	TP B6	H (up)
Frequency	:	14224 MHz	
Downlink EIRP	:	52 dBW (RSA Contour)	

Carrier 9	:	TP B6	H (up)	
Frequency	:	14224 MHz		
Downlink EIRP	:	52 dBW (RSA Contour)		
Carrier type	:	Digital		
Bandwidth	:	28.4 MHz		
Downlink frequency	:	11674 MHz (V)		
Uplink Frequency Range	:	13,75 – 14,25 GHz	}	Band limits
Downlink Frequency Range	:	10,95 – 11,750 GHz	}	Band limits
No. of carriers	:	9		
Carrier type	:	Digital		
Downlink EIRP	:	52 dBW (enclosing South Africa)		
Bandwidth	:	28.4 MHz		

C-BAND

Beam	:	Semi-global
Transponders	:	1-5
Polarisation downlink	:	Linear Vertical

Carrier Characteristics (C-Band) Provisional

Carrier 1	:	TP 1	C	H (up)
Frequency	:	7455 MHz		
Downlink EIRP	:	dBW (Africa Contour) tbc		
Carrier type	:	Digital		
Bandwidth	:	28.4 MHz		
Downlink frequency	:	4430 MHz (V)		
Carrier 2	:	TP 2	C	H (up)
Frequency	:	6495 MHz		
Downlink EIRP	:	dBW (Africa Contour) tbc		
Carrier type	:	Digital		
Bandwidth	:	28.4 MHz		
Downlink frequency	:	3470 MHz V		
Carrier 3	:	TP 3	C	H (up)
Frequency	:	6535 MHz		
Downlink EIRP	:	dBW (Africa Contour) tbc		
Carrier type	:	Digital		
Bandwidth	:	28.4 MHz		
Downlink frequency	:	3510 MHz (V)		
Carrier 4	:	TP 4	C	H (up)
Frequency	:	6575 MHz		
Downlink EIRP	:	dBW (Africa Contour) tbc		
Carrier type	:	Digital		
Bandwidth	:	28.4 MHz		
Downlink frequency	:	3550 MHz (V)		
Carrier 5	:	TP 5	C	H (up)
Frequency	:	6615 MHz		
Downlink EIRP	:	dBW (Africa Contour) tbc		
Carrier type	:	Digital		
Bandwidth	:	28.4 MHz		
Downlink frequency	:	3590 MHz (V)		

Uplink Frequency Range	:	6425 – 6725 MHz
Downlink Frequency Range	:	3400 – 3700 MHz
No. of carriers	:	5
Carrier type	:	Digital
Downlink EIRP	:	
Bandwidth	:	28.4 MHz

LOADING CHARACTERISTICS		
Satellite location	68.5 deg E	Pas-7
No. of carriers/transponder	1	
Modulation	QPSK	DVB compliant
Gross rate	49.6 Mbits/s	
Convolutional	7/8	
Reed-Solomon	0.922	DVB compliant
Info. Rate	39.996 Bbit/s	
Symbol rate	24.8 Mbaud	
Threshold Eb/No	6.400 dB	DVB compliant

UPLINK ANALYSIS		
Uplink EIRP calculation		
Satellite SFD	-95.000 dBW/m ²	Johannesburg
Input back-off	1.000 dB	
Input attenuator	10.000 dB	
Slant path range	39868.000 km	
Spreading loss	163.004 dB	
EIRP	74.704 dBW	
HPA Sizing calculation		
Antenna gain	61.200 dB	9.1m
Combiner losses	0.000 Db	
IFL Losses	3.000 Db	
Rain att margin	4.500 Db	Uplink power control
Actual Power required	21.004 dBW	
HPA output back-off	4.800 dB	Spectral regrowth
HPA sat power required	380.583 Watt	
Standard HPA available	2200.000 Watt	Klystron

Uplink C/No calculation		
Frequency	13.894 GHz	
Satellite G/T	2.300 dB/K	
Path m atmosphere loss	207.729 dB	
EIRP	74.704 dBW	
Pointing loss	0.100 dB	
C/No	97.775 dBHz	
DOWNLINK C/No. ANALYSIS		
Location	Cape Town	
Latitude	-33.560 deg N	
Longitude	18.280 deg E	
Elevation	24.311 deg	
Azimuth	65.285 deg	
Height	0.050 km	
EIRP at saturation	53.700 dBW	
Output back-off	2.500 dB	
EIRP per carrier	51.200 dBW	
Slant path range	39949.572 km	
Frequency	11.090 GHz	Txpnder 4
Path & atmosphere loss	205.619 dB	
Pointing loss	0.500 dB	
Receive dish size	0.9 m	
Receive G/T	16.763 dB/K	Clear sky
Downlink C/No	90.44 dBHz	Clear sky

UPLINK THERMAL & INTERFERENCE ANALYSIS

Uplink Interference		
Csat/I	28.000 dB	Sat power/interference ratio
Csat/Io	101.945 dBHz	
C/Io	100.945 dBHz	
Uplink cross-pol Interference		
XP signal back-off	-1.000 dB	XP back-off from saturation
SPD ratio	27.000 dB	
C/Xo	99.945 dBHz	
Adjacent satellite interference		
Csat/I	18.000 dB	Sat power/interference ratio
Csat/Io	91.945 dBHz	
C/Io	92.445 dBHz	
Downlink cross-pol interference		
XP signal back-off	-2.500 dB	XP back-of from saturation
SPD ratio	20.000 dB	RX terminal
C/Xo	91.445 dBHz	

C/No+I _o +X _o	87.864 dBHz	Inc. U/L C/No (excl. D/L C/No) based on Eb/No
C/No @ threshold	82.420 dBHz	@ demod to achieve thr.
D/L C/No required	83.880 dBHz	C/No above
Total C/No degradation	1.460 dB	Thr. C/No - D/L C/No req.

MARGINS		
C/No degradation	1.460 dB	From above
Carrier drive error	0.000 dB	
Eb/No degradation	1.000 dB	
Additional margin required	0.000 dB	Additional rain margin
Rain + G/T (due to rain) margin	5.564 dB	Resulting
Rain margin	2.900 dB	Iterated
G/T degradation due to rain	2.663 dB	
Non availability	0.078	Iterated
Availability	99.922%	

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