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INDEPENDENT BROADCASTING AUTHORITY

REGULATIONS RELATING TO TECHNICAL STANDARDS AND SPECIFICATIONS APPLICABLE TO ALL SOUND BROADCASTING SERVICES.

The Independent Broadcasting Authority has, under section 78 (1) (a) of the Independent Broadcasting Authority Act, 1993 (Act No. 153 of 1993), made the regulations in the Schedule.

SCHEDULE

Definitions

1. In these regulations any word to which a meaning has been assigned in the Independent Broadcasting Authority Act, 1993 Act No. 153 of 1993 shall have that meaning and unless the context otherwise indicates:

- 1.1 **"Antenna Gain"** means the ratio expressed in decibels of the power required at the input of a loss free reference antenna to the power supplied to the input of the given antenna to produce in a given direction the same field strength.
- 1.2 **"Assigned Frequency"** means the centre of the frequency band assigned to a sound broadcasting service.
- 1.3 **"Authority"** means the Independent Broadcasting Authority established by section 3 of the Act and includes the Broadcasting Monitoring and Complaints Committee established in terms of section 21(1)(b) of the Act.
- 1.4 **"Coverage Area"** means the area within which the field strength of the wanted transmitter is equal to or greater than the usable field strength.
- 1.5 **"Effective Radiated Power"** means the product of the power supplied to the antenna and its gain relative to a half wave dipole in a given direction.
- 1.5 **"Emission"** means radiation produced or the production of radiation by a radio transmitting station.
- 1.6 **"Frequency Tolerance"** means the maximum permissible departure by the centre frequency of the frequency band occupied by an emission from the assigned frequency.
- 1.6 **"Necessary bandwidth"** means for a given class of emission the width of the frequency band which is sufficient to ensure the transmission of information at the rate and with the quality required under specified conditions.
- 1.7 **"Out of band emission"** means emission on a frequency or frequencies immediately outside the necessary bandwidth which results from a modulation process but excluding spurious emission.
- 1.8 **"Power"** of the radio transmitter shall be expressed in one of the following forms according to the class of emission using the symbols indicated:

Peak envelope power	PX
Mean power	PY
Carrier power	PZ

- 1.9 **"Peak envelope power of a radio transmitter"** means the average power

supplied to the antenna transmission line by a transmitter during one radio frequency cycle at the crest of the modulation envelope taken under normal operating conditions.

- 1.10 **"Mean power of a radio transmitter"** means the average power supplied to the antenna transmission line by a transmitter during an interval of time sufficiently long compared with the lowest frequency encountered in the modulation taken under normal operating conditions.
- 1.11 **"Carrier power of a radio transmitter"** means the average power supplied to the antenna transmission line by a transmitter during one radio frequency cycle taken under the condition of no modulation.
- 1.12 **"Radiation"** means the output flow of energy from any source in a form or radio waves.
- 1.13 **"Radio"** means an electromagnetic wave propagated in space without artificial guide and having, by convention, a frequency lower than 3 000 Ghz.
- 1.14 **"Radio communication"** means telecommunication by means of radio waves.
- 1.15 **"Service Area"** means that part of the coverage area in which the licensee has the right to demand that agreed protection conditions be provided.
- 1.16 **"Spurious Emission"** means an emission on a frequency or frequencies outside the necessary bandwidth and the level of which may be reduced without affecting the corresponding transmission of information. Spurious emissions include harmonic emission, parasitic emissions intermodulation products and frequency conversion products but exclude out of band emissions.
- 1.17 **"Station"** means 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 radio communication service.
- 1.18 **"Telecommunication"** means any system or method of conveying signs, signals sound, communications or other information by means of electricity, magnetism, electromagnetic waves or any agency of a like nature whether with or without the aid or tangible conductors from one point to another.
- 1.19 **"the Act"** means the Independent Broadcasting Authority Act, 1993(Act No. 153 of 1993), as amended.
- 1.20 **"Usable Field Strength"** means minimum value of field strength necessary to permit a desired reception quality under specified receiving conditions in the presence of natural and man made noise and interference.

The Broadcasting Services Frequency Bands for Sound Broadcasting Services

The following spectrum will be allocated to sound broadcasting services in South Africa:

2.1 Medium frequency (MF) sound broadcasting:

535.5 kHz to 1606.5 kHz

2.2 High frequency (HF) sound broadcasting (Tropical Band):

2 300 kHz to 2 498 kHz

3 200 kHz to 3 400 kHz

5 005 kHz to 5 060 kHz

4 750 kHz to 4 995 kHz

2.3 High frequency sound broadcasting:

3 900 kHz to 4 000 kHz

5 950 kHz to 6 200 kHz

7 100 kHz to 7 300 kHz

9 500 kHz to 9 900 kHz

11 650 kHz to 12 050 kHz

13 600 kHz to 13 800 kHz

15 100 kHz to 15 600 kHz

17 550 kHz to 17 900 kHz

21 450 kHz to 21 850 kHz

25 670 kHz to 26 100 kHz

2.4 High frequency single sideband (SSB) sound broadcasting:

5 900 kHz to 5 950 kHz

7 300 kHz to 7 350 kHz

9 400 kHz to 9 500 kHz

11 600 kHz to 11 650 kHz

12 050 kHz to 12 100 kHz

13 570 kHz to 13 600 kHz

13 800 kHz to 13 870 kHz

15 600 kHz to 15 800 kHz

17 480 kHz to 17 550 kHz

18 900 kHz to 19 020 kHz

2.5 Very high frequency sound broadcasting (VHF-FM) Band II:

87.5 MHz to 108 MHz

Transmitter frequency tolerances

Transmitter frequency tolerances shall be as set out in the table below:

Frequency Band	Tolerance
535.5 kHz to 1606.5 kHz	10 Hz
1606.5 kHz to 29.7 MHz	10Hz
87.5 MHz to 108 MHz	2000 Hz

4. Spurious emission power levels

The maximum permitted levels of spurious emissions, in terms of the mean power level of any spurious component supplied by a transmitter to the antenna transmission line shall be as set out in the table below:

Frequency Band	Spurious Emission Level
535.5 kHz to 1606.5 kHz	40dB/50mW
87.5MHz to 108MHz	
Tx o/p > 25W	60dB/1mW
Tx o/p < 25W	40dB/25mW

- 4.1 A spurious emission from any part of the installation other than the antenna and its transmission line shall not have an effect greater than would occur if the antenna system were supplied with the maximum permitted power at that spurious emission frequency.
- 4.2 In respect of any spurious component, the mean power within the necessary bandwidth relative to the mean power of the spurious component concerned shall be at least that specified in the table above.
- 4.3 The absolute mean power level specified in the table above shall not be exceeded.
- 4.4 If the Authority is satisfied that spurious emission from an installation is interfering with other licenced users, the Authority shall, at any time after written notice, request the relevant sound broadcasting service to cease transmission, if it is satisfied that such cessation is necessary under the circumstances which request shall be immediately complied with, until such time as the Authority indicates, in writing, that transmission may resume.

5 Designation of Emission

- 5.1 Emissions will be designated according to their necessary bandwidth and their classification.
- 5.2 Bandwidth will be expressed by three numerals and one letter and classification will be according to a set of basic characteristics and standards symbols as specified by the Authority.

5.2.1 First symbol - type of modulation of the main carrier

Amplitude modulated double sideband	A
Vestigial sideband	C
Frequency modulation	F

5.2.2 Second symbol - nature of signal(s) modulating the main carrier

Single channel containing analogue information	3
Two or more channels containing analogue information	8

5.2.3 Third symbol - type of information to be transmitted

Sound broadcasting	E
Television	F

5.2.4 Fourth symbol - details of signal(s)

Monophonic sound broadcasting	G
Stereophonic sound broadcasting	H
Colour television broadcasting	N

5.2.5 Fifth symbol - nature of multiplexing

None	N
Frequency division multiplex	F

For the full designation of an emission, the necessary bandwidth, indicated in four characters shall be added just before the classification symbols.

6. Transmission Systems

The following maximum frequency deviations will be allowed:

6.1 in respect of monophonic systems: 75 kHz

6.2 in respect of stereophonic systems: 75 kHz

7. Channel Spacing

In licensing sound broadcasting services the Authority will require a uniform channel spacing of 100 kHz and ensure that nominal carrier frequencies are integral multiples of 100 kHz.

8. Channel Numbering in Band II (87.5MHz - 108MHz)

A		B		C		D		E		F	
1	87.6	32	90.7	64	93.9	97	97.2	132	100.7	168	104.3
2	87.7	33	90.8	65	94.0	98	97.3	133	100.8	169	104.4
3	87.8	34	90.9	66	94.1	99	97.4	134	100.9	170	104.5
4	87.9	35	91.0	67	94.2	100	97.5	135	101.0	171	104.6
5	88.0	36	91.1	68	94.3	101	97.6	136	101.1	172	104.7
6	88.1	37	91.2	69	94.4	102	97.7	137	101.2	173	104.8
7	88.2	38	91.3	70	94.5	103	97.8	138	101.3	174	104.9
8	88.3	39	91.4	71	94.6	104	97.9	139	101.4	175	105.0
9	88.4	40	91.5	72	94.7	105	98.0	140	101.5	176	105.1
10	88.5	41	91.6	73	94.8	106	98.1	141	101.6	177	105.2
11	88.6	42	91.7	74	94.9	107	98.2	142	101.7	178	105.3
12	88.7	43	91.8	75	95.0	108	98.3	143	101.8	179	105.4
13	88.8	44	91.9	76	95.1	109	98.4	144	101.9	180	105.5
14	88.9	45	92.0	77	95.2	110	98.5	145	102.0	181	105.6
15	89.0	46	92.1	78	95.3	111	98.6	146	102.1	182	105.7
16	89.1	47	92.2	79	95.4	112	98.7	147	102.2	183	105.8
17	89.2	48	92.3	80	95.5	113	98.8	148	102.3	184	105.9
18	89.3	49	92.4	81	95.6	114	98.9	149	102.4	185	106.0
19	89.4	50	92.5	82	95.7	115	99.0	150	102.5	186	106.1
20	89.5	51	92.6	83	95.8	116	99.1	151	102.6	187	106.2
21	89.6	52	92.7	84	95.9	117	99.2	152	102.7	188	106.3
22	89.7	53	92.8	85	96.0	118	99.3	153	102.8	189	106.4
23	89.8	54	92.9	86	96.1	119	99.4	154	102.9	190	106.5
24	89.9	55	93.0	87	96.2	120	99.5	155	103.0	191	106.6
25	90.0	56	93.1	88	96.3	121	99.6	156	103.1	192	106.7
26	90.1	57	93.2	89	96.4	122	99.7	157	103.2	193	106.8
27	90.2	58	93.3	90	96.5	123	99.8	158	103.3	194	106.9
28	90.3	59	93.4	91	96.6	124	99.9	159	103.4	195	107.0
29	90.4	60	93.5	92	96.7	125	100.0	160	103.5	196	107.1
30	90.5	61	93.6	93	96.8	126	100.1	161	103.6	197	107.2
31	90.6	62	93.7	94	96.9	127	100.2	162	103.7	198	107.3
Additional channels:											
63	93.8	95	97.0	96	97.1	128	100.3	129	100.4	130	100.5
131	100.6	163	103.8	164	103.9	165	104.0	166	104.1	167	104.2
199	107.4	200	107.5	201	107.5	202	107.7	203	107.8	204	107.9

9. Modulation Standards

9.1 Monophonic transmissions

9.1.1 The radio frequency signal must consist of a carrier frequency modulated

by the sound signal after pre-emphasis with a maximum frequency deviation of 75 kHz.

- 9.1.2 The pre-emphasis characteristic of the sound signal must be identical to the admittance frequency curve of a parallel resistance capacitance circuit having a time constant of 50 μ s.

9.2 Stereophonic transmissions

- 9.2.1 The radio frequency signal must consist of a carrier frequency modulated by a baseband signal according to the specification of the pilot-tone system. The maximum frequency deviation level will be 75 kHz.

- 9.2.2 The pre-emphasis characteristics of the sound signals M and S. are identical to the admittance - frequency curve of a parallel resistance capacitance circuit having a time constant of 50 μ s.

10. Total Harmonic Distortion

In respect of frequencies from 30 Hz to 15 kHz a total harmonic distortion may not exceed 0.5%.

11. Signal to noise ratio

The unweighted audio frequency signal to noise ratio should be greater than 60dB.

12. Crosstalk

The non-linear crosstalk from the mono into the stereo component of the multiplex signal (and vice versa) should be more than 40dB below the wanted level, for all modulating frequencies from 30 Hz to 15 kHz.

13. Channel Separation

The channel separation should be more than 35dB below the wanted level for all frequencies from 30 Hz to 15 kHz.

14. AM Non-Synchronous noise

The non-synchronous AM noise modulation depth, for zero frequency modulation of the transmitter carrier, should be less than 0.3% or -50dB.

15. Synchronous AM

The synchronous AM depth due to frequency modulation of the transmitter carrier to ± 75 kHz deviation by a 1 kHz tone, should be less than 1% or 40dB.

16. Control of modulation level

Over deviation of FM sound transmitters is capable of causing interference to other transmitters. Suitable limiters must, therefore, be installed at the programme inputs of all FM transmitters to avoid over deviation and the resultant interference.

17. Radio transmissions in VHF Band

The technical specifications contained in SABS 1609-1/2 for radio transmissions in the VHF band shall be incorporated herein and shall be applicable to all sound broadcasting services.

18. Short title

These regulations may be cited as the Independent Broadcasting Authority Sound Broadcasting Services Technical Regulations, 1997.

No. R. 1388

17 October 1997

INDEPENDENT BROADCASTING AUTHORITY

REGULATIONS RELATING TO THE CRITERIA ACCORDING TO WHICH THE SUPPORT FOR AN APPLICANT FOR A COMMUNITY SOUND BROADCASTING LICENCE BY THE RELEVANT COMMUNITY OR BY THOSE ASSOCIATED WITH OR PROMOTING THE INTERESTS OF SUCH COMMUNITY SHALL BE MEASURED

The Independent Broadcasting Authority has, under section 78(1) read with section 47(1)(c) of the Independent Broadcasting Authority Act, 1993 (Act No. 153 of 1993) as amended, made the regulations in the Schedule.

SCHEDULE

Definitions

1. In these regulations, unless the context otherwise indicates -
 - 1.1 **"an applicant"** means a person who has applied for a community broadcasting licence contemplated in section 47 of the Act;
 - 1.2 **"Authority"** means the Independent Broadcasting Authority as established by section 3 of the Act.
 - 1.3 **"the Act"** means the Independent Broadcasting Authority Act, 1993 (Act No. 153 of 1993), and the regulations framed thereunder

and any word or expression to which a meaning has been assigned in the Act shall bear such meaning.

Criteria for measuring support of community

2. Support for a community sound broadcasting service shall be determined according to the following criteria:
 - 2.1 The number of listeners which the applicant proposes to serve;
 - 2.2 The level of interest among the potential listenership in the proposed service;
 - 2.3 The level of support from funders;
 - 2.4 The provision of sufficient resources and funding necessary to ensure the viability of the service.

Evidence of the relevant support and of its extent shall be provided in the manner outlined in regulation 3 or 4.

Methods of providing evidence

3. The applicant must provide evidence of support from the community for the proposed service by providing at least two of the following four categories of documents:

3.1 A list containing -

3.1.1 a declaration that the applicant has the support of each signatory;

3.1.2 the signatures of the members of the community;

3.1.3 the name and address of each signatory; and

3.1.4 the personal characteristics of each signatory which qualify him or her as a member of the community to be served by the proposed service. This may include gender, age, religion, language and any other relevant characteristic;

3.2 correspondence, minutes of meetings, lists of *bona fide* members of voluntary associations and any other documents that show support for the proposed service.

3.3 letters or other documents that show -

3.3.1 the amount of funding which the proposed broadcasting service is likely to receive from each different source, whether donations, grants, sponsorships or advertising or membership fees. A monthly breakdown of income for the duration of the licence must be provided.

3.3.2 resources other than funding which the proposed broadcasting service is likely to receive and the sources thereof; or

3.4 any other material that shows the applicant has the support of the community.

The Authority may require the production of proof on affidavit of anything contained in any document furnished as provided in subregulation 3.

3.5 In addition to the above documents the applicant may also be required to conduct a survey if:

3.5.1 competitive licence applications have been submitted or if

3.5.2 the evidence provided does not sufficiently show whether the applicant has the support of the community.

Survey

4. An applicant may, instead of providing evidence as contemplated in sub-regulation 3, provide results of a survey which show whether the applicant has the support of the community.

4.1 Such survey shall be conducted by a person or body who is affiliated to -

4.1.1 The Association of Marketing Research Organisations; or

4.1.2 any other person which conduct market research and which has a code of conduct that is acceptable to the Authority or

4.1.3 by any other person or body who is acceptable to the Authority.

4.2 When investigating the potential listener support for a service, surveys must;

4.2.1 relate to the particular community to be served by the proposed service;

4.2.2 Ascertain the personal characteristics of each respondent which qualify him or her as a member of the community;

4.2.3 ascertain whether the respondent possesses or has access to a receiver;

4.2.4 ascertain the nature of the radio programmes which each respondent habitually listens to and the days and time when he or she listens to,

4.2.5 ascertain the extent of interest of each respondent in receiving the proposed broadcasting service.

4.3 The survey shall be conducted in accordance with the code of conduct for marketing research of the Southern African marketing Research Association. the Authority may waive this requirement if an adequate motivation is given by the applicant.

4.4 The applicant shall provide, together with the survey results -

4.4.1 the name, address, qualifications and experience and professional membership, if any, of the person who conducted the survey;

4.4.2 the period during which the survey was conducted;

4.4.3 how the data was collected;

4.4.4 times of the day when the survey was conducted;

4.4.5 the characteristics and qualifications of the field workers used in conducting the survey;

4.4.6 the instruments used in the survey;

- 4.4.6 the instruments used in the survey;
- 4.4.7 problems experienced during the conducting of the survey and how they were resolved with particular reference to non-response;
- 4.4.8 a summary of the results and as many detailed tables as possible;
- 4.4.9 a distribution of the sample errors for all the variables reported in the results;
- 4.4.10 a questionnaire containing the questions reported in the results and, if the survey was carried out in more than one language, the questionnaire used in all the languages;
- 4.4.11 the sampling methods employed;
- 4.4.12 the geographical areas covered by the survey and
- 4.4.13 any other information relating to the carrying out of the survey as may be relevant.

Short title

5. These regulations may be cited as the Independent Broadcasting Authority Community Sound Broadcasting Licences: Criteria to Measure Community Support Regulations, 1997.

No. R. 1389

17 October 1997

INDEPENDENT BROADCASTING AUTHORITY**APPLICATIONS RECEIVED FOR TEMPORARY COMMUNITY
BROADCASTING LICENCES**

The Independent Broadcasting Authority gives notice under the Independent Broadcasting Authority (Temporary Community Broadcasting Licences) Regulations, 1994 that applications have been received for temporary community broadcasting and signal distribution licences as set out in the Schedule.

The applications and any representations received pursuant thereto are open for inspection by interested parties during the normal office hours of the Authority.

Interested persons are invited to submit written representations in relation to the application to the Authority at, Khasho House, 26 Baker Street, Rosebank, Johannesburg, **OR** Private Bag X31, Parklands, 2121, **OR** by Fax No (011) 441-1401 within **two weeks of the date of publication of this notice.**

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

SCHEDULE

1. **Name and Address of Applicant:** **TROPICAL COMMUNITY RADIO**, 3487 Vundla Drive, Rockville, P O Botshabelo, 1818.
2. **Community:** People of diverse culture, race and languages residing within their broadcasting area.
3. **Proposed licence Area:** Greater Soweto and the surrounding areas of the West Rand.
4. **Nature of proposed service:** By providing programmes that will educate and enlighten young people both formally and informally.
5. **Proposed Signal Distributor:**
Signal Distribution Licence: **TROPICAL COMMUNITY RADIO**
 - i. **Location:** Tembi Center, Rockville, Vundla Drive
 - ii. **Preferred frequency band:** FM
 - iii. **Preferred effective radiated power:** 1KW

1. **Name and Address of Applicant:** WINTERVELDT COMMUNITY RADIO, P.O
Box 911-1124, ROSSLYN, 0200.
2. **Community:** People of different racial, cultural and language groups residing within
their area of broadcasting.
3. **Proposed licence Area:** Winterveldt, Soshanguve, Klipgat, Tsebe, Maboloka and
Makaunyane.
4. **Nature of proposed service:** By providing programmes that will inform, educate and
facilitate communication within the community.
5. **Proposed Signal Distributor:**
Signal Distribution Licence: WINTERVELDT COMMUNITY RADIO
 - i. **Location:**, Winterveldt Show Village, 15869
 - ii. **Preferred frequency band:** FM
 - iii. **Preferred effective radiated power:** 10Watts

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