



Circular-letter
CR/112

8 December 1998

To Administrations of Member States of the ITU

Subject: Implementation of Article S12 - Seasonal Planning of the HF Bands Allocated to the Broadcasting Service Between 5 900 kHz and 26 100 kHz

To the Director-General

Dear Sir or Madame,

1. The World Radiocommunication Conference 1997 (WRC-97) adopted a new seasonal planning procedure for High Frequency (HF) broadcasting as set out in Article S12 of the Radio Regulations. The procedure will apply as from 1 January 1999, thus replacing the consultation procedure of the former Article 17 of the Radio Regulations. The first season under the new procedure will therefore be *season A99*, starting 31 March 1999 to 28 October 1999. This Circular-letter details the administrative procedures in relation to the new planning procedure.

2. WRC-97 also adopted Resolution 535, by which it instructed the Director of the Bureau, *inter alia*, to develop and supply appropriate computer software modules to administrations for the analysis of the broadcasting schedules. The software has been developed with assistance from many administrations, broadcasters and regional coordination groups, such as Asia-Pacific Broadcasting Union - High Frequency Conference (ABU-HFC), Arab States Broadcasting Union (ASBU) and High Frequency Coordination Conference (HFCC). The Bureau appreciates the comments received from administrations and interested parties (CR/100). In response to the requests from several entities, the Bureau encloses herewith the CD-ROM which contains ITU HF Broadcasting software (Version 1.0) which include modules for data capture, propagation prediction and compatibility analysis. The software is also available from the ITU Website.

SUBMISSION OF REQUIREMENTS

3. Requirements are to be submitted by administrations or organisations who are authorised by the administrations concerned to do so, such as broadcasters, frequency managers. In the latter case, administrations are expected to advise the Bureau in writing, in advance, stating the names of the authorised organisations, their three-letter code for ease of identification and the scope of the authorisations (see S12.1); otherwise the requirements cannot be accepted by the Bureau.

4. Submission of requirements will be **in electronic format only**. Broadcasting requirements can be submitted to the Bureau using a 3 ½" computer diskettes or can also be sent electronically to brmail@itu.int (Resolution 535 of WRC-97 refers.).
5. Administrations from the least developed countries (LDC) are being provided with computer systems equipped to run the HF Broadcasting software, through the UNDP representatives in the countries concerned.
6. A common electronic format will be used. A list of the data fields to be submitted for a requirement and their specifications is given in Annex 1. The format of the electronic file of requirements is described in Annex 2.
7. Even when submitting modification to a current schedule, administrations shall submit the **whole schedule**, not just the amended requirements. Submitting the whole schedule minimizes the potential for errors, for example, modifying incorrect requirements because the targets are incorrectly identified.
8. For cases where requirements for a given season period are exactly those of the previous corresponding season, administrations can advise the Bureau in writing of the fact **without submitting the new schedule**. This is to facilitate administrations having regular broadcast requirements.
9. When an administration ceases its broadcasting service in the HF bands, it shall notify the Bureau of such decision in writing (see S12.28).
10. Administrations should send their schedules to the Bureau four (4) months before the start date of a given schedule period. However, for the first schedule period A99, in order to allow administrations sufficient time to familiarise with the new procedure and software, **the closing date for submitting schedule is extended to 27 December 1998**.
11. The amended schedules, where required, should reach the Bureau at least two (2) weeks before the start date of a given schedule period (see S12.37).
12. During a given schedule period, administrations should send any changes to their schedules (full amended schedules) to the Bureau as soon as possible.
13. The above timing is consistent with Resolution 535 of the WRC-97.
14. If an administration does not indicate its requirements for a new seasonal schedule, the Bureau shall use the requirements from the previous corresponding seasonal schedule for this administration for the new schedule period. The Bureau will advise the administration concerned of the action. These requirements will be identified in the published schedule by the Bureau (see S12.26).
15. If the same administration does not indicate its requirements for the next corresponding seasonal period, the Bureau shall notify the administration concerned that the schedule will not include its requirements unless the administration advises otherwise (see S12.27).

PUBLICATION OF SCHEDULE AND COMPATIBILITY ANALYSIS

16. In order to allow for the time required by the Bureau to prepare for the publication of updates of the schedule and its corresponding compatibility analysis, any amended schedules received less than two (2) weeks before the publication date will not be included in the publication.

17. The schedule and corresponding compatibility analysis will be published on CD-ROM and sent by mail to subscribers. The Bureau is also assessing the feasibility of making the information available from ITU Website for electronic download by administrations/authorised organisations.

18. The CD-ROM contains the following:

- up-to-date schedule of the current seasonal schedule.
- software to allow administrations to prepare amendments to their requirements and to create a file in appropriate electronic format for submitting to the Bureau.
- software to predict HF propagation for the purpose of selecting a suitable frequency band for a requirement.
- software to allow investigation of schedules and assess compatibility of requirements of the current seasonal schedule.

19. Two months before the start of each broadcasting season, the Bureau will publish a CD-ROM containing the tentative schedule and corresponding compatibility analysis.

20. At the start of each broadcasting season, the Bureau will publish a CD-ROM containing the schedule and corresponding compatibility analysis. During the season, updated versions of the CD-ROM will be made available every two months.

21. One month after the end of the season the Bureau will publish the final schedule together with the corresponding compatibility analysis (see S12.43).

22. The schedule and its corresponding compatibility analysis available from the ITU Website will be regularly updated. This will allow administrations who subscribe to this service, to monitor their amendments as well as carry out early coordination with other administrations that may be affected by the changes.

COORDINATION

23. Coordination shall be achieved through bilateral and multilateral meetings of administrations or broadcasters or other means such as telephone, facsimile, electronic mail, etc, acceptable to the parties concerned (see S12.36).

24. Regional coordination groups shall identify themselves to the Bureau. At present the Bureau is aware of five existing coordination groups. The contact information for these groups are given in Annex 3.

25. Administrations, broadcasters and authorised organisations are encouraged to participate in the relevant coordination groups.

26. The Bureau intends to convene, after the end of the first seasonal period (A99), a joint meeting of the representatives of all the regional coordination groups to develop strategies for further reduction of incompatibilities and to discuss related matters.

ASSISTANCE TO ADMINISTRATIONS

27. Any requirement submitted without a frequency or with a number of (up to three) alternative frequencies or with a preferred operating frequency band will be considered as a request for assistance from the Bureau in selecting a suitable frequency. In this case, the Bureau will carry out studies to look for suitable frequencies and will advise the administration concerned accordingly (see S12.33).

28. Upon request and subject to its resources, the Bureau will do its best to assist administrations, particularly the administrations of developing countries, in the application of the procedure.

29. Appropriate Rules of Procedure concerning technical analysis, as stipulated in No. S12.9 of the Radio Regulations, are being submitted to the Radio Regulations Board, for consideration at the Board's meeting in November/December 1998.

30. The Bureau remains at the disposal of your Administration for any further clarification you may need in respect of this subject.

Yours faithfully,

Robert W. Jones
Director,
Radiocommunication Bureau

Annexes: 3 plus 1 CD-ROM

Distribution:

- Administrations of Member States of the ITU
- Members of the Radio Regulations Board

ANNEX 1

Input Data to be submitted for a Requirement

Administration Code (3-character string)

Mandatory, a three-letter administration code in accordance with the ITU's designation. An up-to-date reference list is included with the HF software package.

Alternate Frequencies/Bands (5-digit integer)

Optional. Up to three alternate frequencies/Bands can be notified. If notified, the Bureau will carry out necessary analysis to select the most suitable frequency among the operating frequency and any alternate frequencies notified. For SSB usage, the nominal carrier frequency is to be notified.

Antenna Code (up to 3-digit integer)

Mandatory, an unique code representing transmitting antenna of specific technical parameters.

A list including antenna code and antenna definition, based on ITU-R BS 705, is to be maintained by the Bureau. A new antenna code can be added upon request of administrations. This is to avoid the same antenna code for different transmitting antennas which may cause errors in determination of compatibility between requirements. An up-to-date reference list is included with the HF software package.

As the antenna codes between 1 and 76 are to be phased out, it is recommended that corresponding antenna codes in the range 100 to 950 should be used.

Antenna Design Frequency (up to 5-digit integer)

Mandatory, design frequency will be in kHz, within the range between 2000 kHz and 30000 kHz. 0 or blank signifies that antenna is designed for the operating frequency.

Antenna slew angle (up to 2-digit integer)

Antenna slew angle is the difference between the azimuth of maximum radiation and the physical orientation of the antenna. If a slewed antenna is in use, the slew angle must be notified. The value notified must be in the range -30 to 30. Default value is 0.

Azimuth of maximum radiation (up to 3-digit integer)

Mandatory. If the transmitting antenna is directional, the value for the azimuth of maximum radiation must be notified. This must be in the range 0 to 360 degrees (from True North). If the antenna is non-directional, 0 shall be notified.

Broadcaster Code (3-character string)

Recommended. An up-to-date reference list containing codes, names and contact information of broadcasting organisations is included with the HFBC software package.

Days of operation (up to 7-character string)

Mandatory. Each day is indicated by a number where 1 indicates Sunday and 7 indicates Saturday.

Frequency/Band (5-digit integer)

Mandatory. The frequency or Band on which this requirement is intended to operate. The value must be in kHz and must be an integer multiple of 5 kHz and must be within the frequency bands below.

For SSB usage, the nominal carrier frequency is to be notified.

Available Bands [kHz]
5950 - 6200
7100 - 7300*
9500 - 9900
11650 - 12050
13600 - 13800
15100- 15600
17550 -17900
21450 - 21850
25670 - 26100

* Regions 1 and 3 only

Frequency Manager Organisation (3-character string)

Recommended. An organisation authorised by an administration to carry out the planning of its broadcast requirements on its behalf.

Language (10-character string)

Optional. The field is included to facilitate identification of requirements that may be the sources of interference.

Modulation (1-character string)

Mandatory. D for DSB, S for SSB with 12 dB carrier reduction, T for SSB with 6 dB carrier reduction. Any other modulation system which is recommended by the ITU-R for use by HFBC shall be identified by a suitable letter code, to be determined by the Bureau when required.

Notifying Organisation (3-character string)

Mandatory. An organisation authorised by an administration to notify its broadcast requirements on its behalf. An up-to-date reference list is included with the HFBC software package.

Site Code (3-character string)

Mandatory. Unique code representing transmitting site.

A list including site code, site name, its geographical co-ordinates is to be maintained by the Bureau. A new site can be added upon request of administrations. This is to avoid the same site code for different transmitter sites which may cause confusion in coordination of requirements. An up-to-date reference list is included with the HFBC software package.

Start Date (6-character string)

Mandatory. The start date may not be earlier than the start of the schedule period. The start date may not be the same as the stop date for a requirement.

Start Time (4-digit integer)

Mandatory. A valid start time for this requirement must be notified using the 24 hour UTC system. The value must be an integral multiple of 1 minute and may not be the same as the Stop Time.

Stop Date (6-character string)

Mandatory. The stop date may not be later than the end of the schedule. The stop date may not be the same as the start date for the same requirement.

Stop Time (4-digit integer)

Mandatory. A valid stop time for this requirement must be notified using the 24 hour UTC system. The value notified must be an integral multiple of 1 minute and may not be the same as the Start Time.

Target Service Area (30-character string)

Mandatory. A set of CIRAF Zones/Quadrants must be notified representing the target area to be served.

A Zone number on its own may be used or it may be followed by S, SW , etc. to indicate a Quadrant. More than one Zone or Zone/Quadrant may be notified, provided that they are separated by a comma.

Transmitter power in kW (up to 4-digit integer)

Mandatory. The power of the transmitter in kW must be notified. The value notified must be an integer in the range 1 to 5000 (kW).

For DSB transmitters the carrier power is to be given; for SSB transmitters the peak envelope power is to be used.

ANNEX 2

ELECTRONIC FORMAT FOR INPUT/OUTPUT TEXT FILE

Line 1

Item	Format	Start col.	Stop col.	Range	Examples	Note
;	A1	1	1		;	
Season	A3	3	5	Ref. table season.txt	A99	
Notifying organization	A3	7	9		RNW	Administration or Freq. Management org.
Date sent	A11	11	21	dd-mmm-yyyy format	10-oct-1998	

then, one line for each requirement:

Item	Format	Start col.	Stop col.	Range	Examples	Note
Frequency/Band (kHz)	I5	1	5	Ref. table Rngfreq.txt	9895, 6	
Start time (UTC)	I4	7	10	0000-2359	0125, 2300	
Stop time (UTC)	I4	12	15	0001-2400	0027	
Target Service Area	A30	17	46	1-85	27, 28sw, 18-20	
Station code	A3	48	50	Reference table	SMG, FLE	
Power (kW)	I4	52	55	1-5000 kW	250	
Azimuth of Maxim. Radiation	I3	57	63	0 - 359	87	
Antenna Slew Angle	I3	65	67	>=-30, =< +30	-15	
Antenna Code	I3	69	71	Ref. table Antenna.txt		
Days of operation	A7	73	79	1-7 (Sunday=1)	56 or 1234567	
Start date	A6	81	86	>= Start date of season	270399	
Stop date	A6	88	93	<= Stop date of season	250900 = (25 Sep. 2000)	
Modulation	A1	95	95	D=DSB, S=SSB -12, T=SSB -6 dB N=Digital.	D	
Antenna design frequency (kHz)	I5	97	101	2000-30000 kHz	7200	If blank or zero operating freq. is assumed
Language (o)	A10	103	112	Free format	English	
Administration Code	A3	114	116	Ref. table Admin.txt	USA	
Broadcaster Code(r)	A3	118	120	Ref. table Broadcas.txt	TWR	
Frequency Manager Organ. Code (r)	A3	122	124	Ref. table FMOrg.txt	FCC	If blank, identical to Administration code.
Identification (br)	I5	126	130			BR or coordination group generated.
Old data (br)	I1	132	132	1 if no info is received	1	BR generated, output file only.
Alternate. Frequency 1/ Alternate. Band 1 (o)	I5	134	138	band in MHz (6,7 etc)or freq.in kHz	7150	
Alternate. Frequency 2/ Alternate. Band 2 (o)	I5	140	144	band in MHz (6,7 etc)or freq.in kHz	9	
Alternate. Frequency 3/ Alternate. Band 3 (o)	I5	146	150	band in MHz (6,7 etc)or freq.in kHz	11	
Notes (o)	A7	152	158			

(r) Recommended
(o) Optional
(br) BR generated

ANNEX 3

Existing HFBC Regional Coordination Groups

ARAB STATES BROADCASTING UNION (A.S.B.U.)

Mr Raouf Basti
Director General, A.S.B.U.
Tel: 216 1 703855 - 703854
Fax: +216 1 704203 - 704901

ASIA-PACIFIC BROADCASTING UNION-HIGH FREQUENCY CONFERENCE (ABU-HFC)

Mr Om P Khushu
Director, Technical Department
P.O. Box 1164 , 59700 Kuala Lumpur, Malaysia
Tel: 603 282 3592
Fax: +603 282 5292

HIGH FREQUENCY COORDINATION CONFERENCE

Mr Oldrich Cip
Chairman HFCC
Vinohradska 12
12099 Prague, Czech Republic
Tel: 42 02 2271 5005, 42 02 2423 0680
Fax: +42 02 2271 5005

COORDINATION GROUP FOR ENGLISH-SPEAKING COUNTRIES IN AFRICA

Mr. Barthos Hara-Gaeb
Namibia Communications Commission
Secretariat - Private Bag 13309
Windhoek
Republic of Namibia
Tel: +264 61 222 666
Fax: +264 61 222 790

COORDINATION GROUP FOR FRENCH-SPEAKING COUNTRIES IN AFRICA

M Nouhoum Traore
Directeur de la Technipue Générale
de l'Office de Radiodiffusion Télévision du Mali (ORTM)

BP 171 Bamako, République du Mali
Tel: 223 21 46 21
Fax: +223 21 42 05