

**IARU Region 1 Conference 2002***San Marino 10 – 15 November*

SUBJECT	C 4 Part

Committee	C 4
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# Papers of Committee C 4

# IARU Region 1 Conference 2002

*San Marino 10 – 15 November*

SUBJECT	Agenda (draft version 1 august 2002)
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SOCIETY	Chairperson
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Committee	Committee C4.1
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## AGENDA

### 1 Opening of the HF Committee Meeting

### 2 Introduction of delegates and observers

3	To receive the report from the HF Committee Chairperson	Doc C4.13	HFC
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4	To receive the report from the HF Beacon Coordinator	Doc C4.18	IBP
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### 5 Band usage:

5.1	Proposal for 495 – 505 kHz amateur band	Doc C4.11	RSGB
5.2	CEPT amateur band 135,7 – 137,8 kHz	Doc C4.12	RSGB

### 6 Band planning:

6.1	Split frequency operation on the HF bands	Doc C4.5	OVSV
6.2	QRS frequencies for CW	Doc C4.9	UBA
6.3	Bandplan for 1,8 MHz	Doc C4.16	EDR
6.4	Region 1 HF Bandplan	Doc C4.14	SARA
6.5	Region 1 HF Bandplan	Doc C4.3	DARC
6.6	Bandplanning and Contests	Doc C4.17	EDR

**7 To receive the report from the CSG Meeting in San Marino.**

Sub Agenda for the CSG Meeting in San Marino:

7.1	HF Contest – SO/2R	Doc C4.6	DARC
7.2	1,8 Mhz Bandplan and Contesting	Doc C4.15	EDR
7.3	HF Contests – WRTC	Doc C4.7	DARC
7.4	HF Field Day – Acknowledgements of Log Data	Doc C4.8	DARC
7.5	Change of date for the HF SSB Field-day	Doc C4.10	EDR
7.6	Nomination of chairperson for the HF Contest Sub Group		

**8 Nomination of Chairperson for the HF Committee for the coming three years.**

**9 Date and venue for the next HF Committee Meeting.**

**10 Any other business.**

**11 To close the HF Committee Meeting 2002.**

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# IARU Region 1 Conference 2002

*San Marino 10 – 15 November*

SUBJECT	Region 1-HF-Bandplan
SOCIETY	DARC

Committee	C 4.3
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## Introduction

The principle idea of a band plan concept based on typical bandwidths used by various modes was submitted to the IARU Region 1 HF Committee in 1992 by DARC.

The idea was prompted by the emergence of new modes, changes in user pattern and the desirability of more economical frequency usage.

This concept, called Bandplan 2000, has been reviewed by the HFC several times. SARA came up with a very detailed bandplan concept in 1999, based on the same idea.

Discussion within HFC has shown, that a new bandplan should be easy to understand, should be simple, should take care of traditionally grown and world wide known areas of activity like dx-windows and contest preferred segments and should give space for implementing new technologies or modes without reviewing the complete document.

## 2. Proposal

A)

It is proposed to split the HF bandplan into two parts

Source plus Usage

Remarks.

3. It is furthermore proposed to add guidelines which are not part of the bandplan but which have to be reviewed and adopted by the HFC. As guidelines are concerned, the centers of activity for given NB- and WB-Modes are listed.

B)

It is proposed to use the following expressions (specified in the remarks) for the Source:

1. NB: Narrow Bandwidth Modes, Bandwidth less than 500 Hz

2. WB: Wide Bandwidth Modes, Bandwidth more than 500 Hz but less than 3 kHz

C)

It is proposed to use the following expressions (specified in the remarks) for the Usage:

1. CW: Telegraphy

2. PHONE: SSB and other voice modes with bandwidth less than 3 kHz

3. All NB-Modes: All Analog and Digital Narrow- Bandwidth-Modes with bandwidth less than 500 Hz, listed under remarks,

4. All WB\_Modes: All Analog and Digital Wide- Bandwidth-Modes with bandwidth more than 500 Hz and less than 3 kHz, listed under remarks,

5. IBP: Intl. Beacon Project (protected frequencies with +/- 1 kHz guide).

D)

For the time being the now existing bandplan can easily be implemented into the new concept. World-wide known areas of activity such as DX-windows on 3,5 MHz and contest segments on 3,5 MHz and 14 MHz stay as they are.

E)

In the case that the IBP will be shifted to the lower bandedges this bandplan becomes more simple.

F)

The IARU Regions 2 and 3 asked for consideration in order to have a world wide common band plan on HF.

## 2. Remarks to the HF Bandplan:

The expression cw includes all modes of this form of transmission.

The expression "phone" includes all modes of this form of transmission. Up to 10 MHz LSB and above USB should be used on HF bands.

The expression "All NB-Modes" includes all analog and digital modes with bandwidth equal or less than 500 Hz, like:

CW, PSK31, AMTOR, PACTOR, AX25-PACKET, GLOVER, ASCII, RTTY...,

The expression "All WB-MODE" includes all analog and digital modes with bandwidth between 500 Hz and 3 kHz, like: MT63, SSTV, FAX, Digital Voice...

Specially licensed experimental transmissions which require more than 3 kHz bandwidth should be announced and coordinated within HFC.

Usage is generally on non-interference basis according to the ITU Radio Regulations.

### 1.8 MHz band:

Those societies which have an existing Phone allocation below 1840 kHz may continue to use it. However, they are requested to take all necessary steps with their licensing administration to adjust the phone allocations in accordance with the Region 1 Band Plan.

The use of Packet Radio is discouraged on 1.8 MHz band.

### 3.5 MHz band:

Intercontinental operation should be given priority in the 3500-3510 kHz and 3775-3800 kHz band segments.

Member societies should approach their national telecommunications authorities and ask them not to allocate frequencies to other than amateur stations in the band segment that IARU has assigned to intercontinental long distance (DX) traffic, i.e. 3500-3510 kHz and 3775-3800 kHz.

### Contest Preferred Segments.

Where no dx-traffic is involved, the contest preferred segments should not include 3500-3510 kHz or 3775-3800 kHz. Member societies will be permitted to set other (lower) limits for national contests (within these limits). This recommendation does not apply to Digimode stations.

Contest activity shall not take place on the 10, 18 and 24 MHz bands.

### 7 MHz band:

The use of Packet Radio is discouraged on 7 MHz band.

The band segment 7035 – 7045 kHz may be used for store-and-forward traffic in the area of Africa south of the equator during local daylight hours. However, the use of more efficient modes than AX.25 packet radio are encouraged.

10 MHz band:

The use of Packet Radio is discouraged on 10 MHz band.

It is recommended that unmanned nb-mode stations shall avoid the use of the 10 MHz band.

Phone may be used during emergencies involving the immediate safety of life and property and only by stations actually involved in the handling of emergency traffic.

The bandsegment 10.120 to 10.130 MHz may be used for phone transmissions in the area of Africa south of the equator during local daylight hours.

News bulletins on any mode should not be transmitted on the 10 MHz band.

14 MHz band:

The band segment 14.101-14.112 MHz should be used for store-and-forward traffic. However, the use of more efficient modes than AX.25 packet radio are encouraged.

SSTV/FAX:

The frequencies 14.230, 21.340 and 28.680 MHz should be used as calling frequencies for SSTV and FAX operators. After having established contact they should move to the All WB-Modes segment.

Satellite operation frequencies:

Member Societies should advice FM (and other) operators not to transmit on frequencies between 29.3 and 29.51 MHz in order to avoid interference to amateur satellite downlink.

Unmanned transmitting stations:

IARU Member Societies are requested to limit this activity on the HF bands. It is recommended that any unmanned transmitting station on HF shall only be activated under operator control except for IARU approved beacons or specially licensed experimental stations. It is recommended to use more efficient modes than the AX.25 packet radio.

Transmitting frequencies:

The announced frequencies in the Band Plan are understood as "transmitting frequencies"(not those of the suppressed carrier).

Experimentation with NBFM Packet radio on 29 MHz Band:

Preferred operating frequencies on each 10 kHz from 29210 to 29290 kHz incl. Should be used. A deviation of +/- 2.5 kHz being used with 2.5 kHz as maximum modulation frequency.

Footnotes:

Footnotes to the HF Band Plan should be avoided.

**National societies are requested to advice their members to follow this Band Plan.**

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## IARU Region 1 HF BAND PLAN

SOURCE			USAGE
BAND	FREQUENCY	BANDWIDTH	
1,8 MHz	1810-1838	NB	CW
	1838-1842	NB	all NB-MODES
	1842-2000	WB	PHONE
3,5 MHz	3500-3510	NB	CW-DX
	3510-3560	NB	CW-Contest Preferred
	3560-3620	NB	all NB-MODES
	3620-3650	WB	PHONE-Contest Preferred
	3650-3775	WB	all WB-MODES
	3775-3800	WB	PHONE-DX
7 MHz	7000-7035	NB	CW
	7035-7045	NB	all NB-MODES
	7045-7100	WB	all WB-MODES
10 MHz	10100-10140	NB	CW
	10140-10150	NB	all NB-MODES
14 MHz	14000-14060	NB	CW-Contest Preferred
	14060-14099	NB	all NB-MODES
	14099-14101	NB	IBP
	14101-14112	NB	all NB-MODES
	14112-14125	WB	PHONE
	14125-14300	WB	PHONE-Contest Preferred
	14300-14350	WB	all WB-MODES
18 MHz	18068-18100	NB	CW
	18100-18109	NB	all NB-MODES
	18109-18111	NB	IBP
	18111-18168	WB	PHONE
21 MHz	21000-21070	NB	CW
	21070-21149+	NB	all NB-MODES
	21149-21151	NB	IBP
	21150-21350	WB	PHONE
	21350-21450	WB	all WB-MODES
24 MHz	24890-24920	NB	CW
	24920-24929	NB	all NB-MODES
	24929-24931	NB	IBP
	24930-24990	WB	PHONE
28 MHz	28000-28050	NB	CW
	28050-28190	NB	all NB-MODES
	28190-28199	NB	IBP regional time shared
	28199-28201	NB	IBP world wide time shared
	28201-28225	NB	IBP continuous-duty
	28225-29200	WB	PHONE
	29200-29300	WB	all WB-MODES
	29300-29510	WB	Satellite down-link
	29510-29700	WB	all WB-MODES



## Guidelines to IARU REGION-1 HF-BANDPLAN

### Centers of Activity

The frequencies listed below are subject of orientation. These frequencies are not protected but world-wide known and used as indicated.

Frequency usage is on non -interference basis. All operators, especially when used computer-assisted modes, have to check the frequency before transmitting.

MODE	AMTOR ARQ	FAX/SSTV	FELDHELL	HF-PACKET	MT63-1K	FACTOR	PSK 31	RTTY 45/170	CW/QRP
Bandwidth/Hz	300	3000	360	500	1000	300	60	300	
Bandplan-Category	NB	WB	NB	NB	WB	NB	NB	NB	CW
	F1B	J3C	A1B	F1B	G2B	F1B	G2A	F1B	A1A
1.8 MHz-Band		not	-				1838.15	all NB-MODE	1810
3.5 MHz-Band		3730	3577			3583,7	3580.15	all NB-MODE	3560
7 MHz-Band		7040	7035				7035.15	all NB-MODE	7030
10 MHz-Band		not	-				10142.15	all NB-MODE	10106
14 MHz-Band	14095	14230	14115	14089-14099	14347	14079	14070.15	all NB-MODE	14060
18 MHz-Band	18102.5	18110	-	14101-14112			18100.15	all NB-MODE	18096
21 MHz-Band	21095	21340	-				21080.15	all NB-MODE	21060
24 MHz-Band		24930	-				24920.15	all NB-MODE	24906
28 MHz-Band	28095	28680	-	29210-29290		28079	28120.15	all NB-MODE	28060

Status 11/2001

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# IARU Region 1 Conference 2002

*San Marino 10 – 15 November*

SUBJECT	Change in the judging of entries
SOCIETY	Czech Radio Club

Committee	C.4.4
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**Source - VHF Managers Handbook part. 3b (original text is in Italics, proposed change is bold marked)**

## **10. Judging of entries**

*The final judging of the entries shall be the responsibility of the organizing society, whose decision shall be final. Entrants deliberately contravening any of these rules or flagrantly disregarding the IARU Region 1 band plans shall be disqualified 1).*

*The claimed contact will be disqualified for an obviously wrongly stated Locator or a time error of more than 10 minutes.*

*Claiming points for a duplicate contact will be penalized by deducting ten times the number of points claimed for that duplicate contact from the score.*

*Any error in the information logged by a station will result in the loss by the receiving station of all points for that contact.*

**Claiming points or results will be not canceled if a receiving station logged callsign with or without /p, /3 (or other number), /a or /m and error is only in this part of callsign. All indications after right / will not be evaluated.**

*The contest entrants will not be penalized for the failure of non-entrants to comply with the rules.*

Explanation:

Many stations, especially from Italy, sending in the contest CALL /p and in the log write /3 or other number or IN3, IV3 etc. In some countries is allowed to use callsign without /p (or something) during the contests. Many operators are not familiar with this and mixed both callsigns. Transmitting station will not loss the points and the receiving station has the problems.

## **IARU Region 1 Conference 2002**

*San Marino 10 15 NOVEMBER*

SUBJECT	SPLIT FREQUENCY OPERATION ON HF-BANDS
SOCIETY	Ö.V.S.V.- AUSTRIA
COMMITTEE	C4.5

The common and old practice of “SPLIT FREQUENCY OPERATION” is used by DXpeditions and rare stations to make operation more easy, to give anyone a chance to hear the rare one at least and to speed operation too. For many years it was common to use an “up” frequency segment of a few kHz but never more than 10 kHz. However- also this “civilized” practice is not in accordance with the RR calling for a minimum bandwidth to be used!

As there is neither a regulation nor any recommendation how broad that frequency segment should be more and more stations are using up to 50 kHz or even more ! That practice disturbs normal traffic on the bands and is in any form against Ham Spirit. “Normal” qsos, skeds, other important traffic and even emergency traffic are heavily affected and that situation can last for many hours !

In addition, if one tries to get a contact in an almost 50 kHz wide frequency segment (which is equal up to about 20 channels)- this is has nothing to do with experience and some luck, this is a simple tombola and no one should wonder on what we all can hear under that circumstances and – in addition- this does not speed up the operation !

ÖVSV therefor recommends to use a 5 kHz segment for split frequency operation under “normal” conditions and up to a maximum of 10 kHz under extraordinary circumstances which can be e.g. a new DCXX-area, a new and really rare island....In any way the rare station should repeat the own callsign at least every 5 minutes, but preferably more often to prevent confusion and to inform others who have the right to know what is going on and why they have to qsy.

Dr.Eisenwagner Ronald, OE3REB  
President of ÖVSV



# IARU Region 1 Conference 2002

*San Marino 10 – 15 November*

SUBJECT	HF Contest – SO/2R
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SOCIETY	DARC
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Committee	C4 - 6
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## Introduction:

In the single operator category of numerous contests, top stations use two transmitters each in order to operate alternately on two bands, a mode called SO/2R. The HF-Manager's Handbook of I.A.R.U. Region 1 demands that single-op stations have to stay for at least 10 minutes on one band, before leaving it, apart from new multipliers. This stipulation prevents an efficient SO/2R.

## Proposal:

The band change stipulation for the single operator categories in I.A.R.U. Region 1 HF-contests should be eliminated, which should be mentioned in the HF Manager's Handbook.

# IARU Region 1 Conference 2002

*San Marino 10 – 15 November*

SUBJECT	HF Contests - WRTC
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SOCIETY	DARC
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Committee	C 4.7 CSG
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## Introduction:

The World Radiosport Team Championship 2002 will be held in Finland. This championship enjoys ever greater popularity among the testers being already called Radio Olympics. Its organization, though, has been in private hands, whilst for 2002 for the first time the national I.A.R.U. Association has been included in the preparations.

## Proposal:

The EC of the I.A.R.U. Region 1 should contact WRTC officials to include the I.A.R.U. in future championships.

# IARU Region 1 Conference 2002

*San Marino 10 – 15 November*

SUBJECT	HF Field Day – Acknowledgements of Log Data
SOCIETY	DARC

Committee	C 4.8 - CSG
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## Introduction:

Evaluation of I.A.R.U. Region 1 Fielddays is not effected centrally because each association carries out its own evaluation. Consequently only a fraction of the log data are at the disposal of the evaluation commission. Now in the age of electronic log evaluation it should be attempted, though, to have as many QSO data available as possible.

## Proposal:

The I.A.R.U. Region 1 associations exchange the electronic log data. The rules should contain a statement, saying that fieldday participants agree automatically to the log exchange upon log submission.

# IARU Region 1 Conference 2002

*San Marino 10 – 15 November*

SUBJECT	QRS frequencies for CW
SOCIETY	UBA

Committee	C4.9
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## Introduction

The mandatory knowledge of CW for newly licensed Radio amateurs has either been dropped or the speed requirements has been reduced to 5 wpm. This could lead to a marginality of CW mode in the future. We feel that CW should remain important.

CW is one of the multiple modes of communication of the radio amateur, that still has its own outstanding merits (copying extremely weak signals, communicating with technically very simple equipment, low power communication etc.). CW does give the operator a sense of satisfaction that can not be equaled by operating in any other mode. If CW were to disappear this would no doubt lead to pauperism in general, in spite of multiple new numerical modes.

Therefore we should use all means to conserve and promote the art of CW and find a way to stimulate young radio amateurs to learn and especially to enjoy CW. We should continue teaching CW on the air. We should continue the development of CW training programs. We should continue to organize CW contests. But we could do more.....

Imagine you are a newly licensed radio amateur who has can just about cope with a 5 wpm CW speed. It will be very difficult for him to start making QSOs. At that speed he will hardly work any DX. And it will be literally impossible to join any kind of CW contest.

Therefore we propose to define, on several of our bands, a QRS segment, comparable to the novice segment existing in Region 2.

## Proposal

The segments 3.560-3.570, 14.055-14.060, 21.065-21.070 and 28.050-28.060 should be defined as CW QRS segments, where radio amateurs who want to develop their CW could meet one another.



## **IARU Region 1 Conference 2002**

*San Marino 10 – 15 November*

SUBJECT	Change of date for the HF SSB Field-day
SOCIETY	EDR

Committee	C4 .10– info for C5
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### **Change of date for the HF SSB Field-day**

*To avoid the conflict with the IARU, Region I, 144 MHz contest.*

For a number of years there has been a conflict between the IARU coordinated date for the SSB HF Field-day and the IARU, Region I, 144 MHz contest.

To avoid this conflict in the future we propose to move the SSB HF Field-day to a different week-end.

The IARU, Region I, 144 MHz contest has been established on this specific week-end since 1956.

# IARU Region 1 Conference 2002

*San Marino 10 – 15 November*

<b>SUBJECT</b>	<b>PROPOSAL FOR 495 – 505kHz AMATEUR BAND</b>
<b>SOCIETY</b>	<b>RADIO SOCIETY OF GREAT BRITAIN</b>
<b>Committee</b>	<b>C4.11</b>

## BACKGROUND

Monitoring of the international distress and calling frequency 500kHz ceased in many parts of the world at the end of 1997. Dutch radio amateurs, showing interest in an allocation at 500kHz, approached their licensing authority, who were interested to know if neighbouring countries would support such an allocation.

It is known that the UK's licensing authority are considering a proposal for an amateur allocation around 500 kHz.

Initial request for interest from UK amateurs actively experimenting on 136kHz produced a response from twenty amateurs. In addition, although not asked support was received from amateurs in Belgium, Holland, USA and New Zealand.

The allocation of spectrum around 500kHz would enable amateurs to revisit sky wave propagation understanding that ceased around the 1920s with the advent of ground-wave maritime communication at these frequencies. An allocation around 500kHz would prove a good balance between the technical difficulties and LF propagation effects at 136kHz and the well know, but challenging, long-distance communication at 1.8MHz. Propagation characteristics are sufficiently different from both bands to make 500kHz an interesting band.

## RECOMMENDATION

That Region 1 Societies approach their licensing authorities to seek agreement for a limited temporary amateur allocation to allow the requirement, band loading, propagation and harmonisation with services on adjacent spectrum allocations to be determined.

# IARU Region 1 Conference 2002

*San Marino 10 – 15 November*

<b>SUBJECT</b>	<b>CEPT AMATEUR BAND 135.7 – 137.8kHz</b>
<b>SOCIETY</b>	<b>RADIO SOCIETY OF GREAT BRITAIN</b>
<b>Committee</b>	<b>C4.12</b>

## BACKGROUND

The CEPT-ERC Recommendation 62-01 see Annex A, was first taken forward by Finland on 1<sup>st</sup> April 1997. The principle conditions were for secondary status and 1W ERP. UK Amateurs were given access to the 136kHz band on 30<sup>th</sup> January 1998, followed by German amateurs a year later. A further 13 Region 1 countries have since followed.

In Region 2 ARRL petitioned FCC on 22<sup>nd</sup> October 1998 to create LF allocations for the Amateur Radio Service 135.7 - 137.8 kHz and 160 - 190 kHz. Whilst neither has yet been approved, AMRAD gain FCC approval on 6<sup>th</sup> March 1999 to conduct tests to gain experience in anticipation of a 136kHz allocation in the United States. Special permits for 136kHz were issues to Canadian amateurs, upon request, from June 2000.

The prior experimental activity by UK amateurs on 73kHz triggered rapid growth after the allocation was made to UK amateurs. Whilst further growth occurred with the allocation to German amateurs, this was somewhat restricted due to the interference from DCF39 on 139 kHz near Magdeburg, and their 20W input power restriction, recently revoked upon individual request. Transatlantic reception (USA and Canada) and contacts with Canadian stations added further impetus to experimentation and long-distance operation.

Long-distance working at 1W ERP levels has resulted in W4DEX receiving G3AQC over 6366km, and VA3LK's station is heard regularly on the North American side of the Pacific Rim, into the high arctic and throughout the USA including Alaska (not Hawaii) and into the south Caribbean. This has provoked much interest in sky wave propagation.

Technical understanding is critical to success on this band because of the low efficiency of typical aerials. Modulation and data coding has received much attention. The use of DSP processors, either stand-alone or within computer soundcards, has been used to synthesise narrow-band filters to display the CW on a computer screen. This allowed the demodulator bandwidth to be narrowed to around a few hundred milli-Hertz, or lower, thus improving the minimum detectable signal level by several dB. Thus, a very slow CW technique (known as QRSS) paved the way for long-distant contacts. In addition much early work was undertaken using PSK31, both BPSK and QPSK. More recently, experiments using BPSK, as developed by VE1IQ, and a signal integrating mode call WOLF (developed by KK7KA) have taken place.

Thus, this LF allocation has provoked significant experimentation and operating, perhaps akin to early use of the amateur microwave bands. The development of techniques and operating

achievement has been perhaps more rapid than before on account of the high degree of information shared through the Internet.

## **RECOMMENDATION**

The recommendations agreed at IARU Region 1 Conference in 1999, be substituted with:-

**1) BANDPLAN:** No rigid band plan is proposed, but amateurs are asked to work within the following conventions, giving long-distance communication and experimentation priority:

- |               |   |
|---------------|---|
| 135.7 – 136.0 | Station tests & transatlantic reception window  |
|               | • 135.9 – 135.98 kHz preferred transatlantic window for Europe to North American transmissions of very slow CW (QRSS) |
| 136.0 - 137.1 | CW  |
|               | • 135.980 - 136.050kHz preferred transatlantic window for Europe/North American contacts                              |
| 137.1 - 137.6 | non-CW modes (Hell, Wolf, PSK, etc.)  |
| 137.6 - 137.8 | Very slow CW (QRSS) centred on 137.7  |
|               | • 137.700 - 137.800kHz preferred transatlantic window for Europe to North American transmissions                      |

**2) EXTENSION & HARMONISATION:** Region 1 members seek to broaden the allocation, gain primary status and influence other IARU Regions to adopt the CEPT recommendation.

## **ANNEX A**

### **CEPT/ERC Recommendation 62-01 E (Mainz 1997)**

#### **USE OF THE BAND 135.7-137.8 kHz BY THE AMATEUR SERVICE**

Recommendation adopted by the Working Group "Frequency Management" (WGFM): The European Conference of Postal and Telecommunications Administrations,

#### ***considering***

- a. that the Amateur Service is a service according to the ITU radio regulations for the purpose of self-training, intercommunication and technical investigations carried out by amateurs,
- b. that radio amateurs conduct experiments in radiowave propagation and radiocommunication on a regular basis,
- c. that the Low Frequency (LF) bands are of particular interest for investigating as yet little understood propagation phenomena,
- d. that no Europe-wide allocations have been made to the Amateur Service for this purpose in the LF bands,
- e. that in ITU Region 1 the band 130-148.5 kHz is allocated to the Maritime Mobile Service and the Fixed Service on a primary basis,
- f. that in general operators in the Amateur Service are used to sharing frequencies with other services which have higher category frequency allocations,
- g. that ERC Report 25 containing the European Table of Frequency Allocations and Utilisations does not yet include the LF bands,

#### ***recommends***

1. that the band 135.7-137.8 kHz may be used with a maximum e.r.p. of 1 Watt on a secondary basis by the Amateur Service in CEPT countries.

# IARU Region 1 Conference 2002

*San Marino 10 – 15 November*

SUBJECT	REPORT FROM THE CHAIRPERSON OF THE PERMANENT HF COMMITTEE
SOCIETY	IARU

Committee	C4.13
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## Introduction

As a newcomer in IARU work it is quit difficult to evaluate the past three years. Beside the meetings in Friedrichshafen where I could meet several HF Managers, the most contacts where done via e-mail.

## HF Managers Handbook

As promised, the handbook has been updated. I did transform the Word Perfect format to a Word 95 RTF format. Comparing the two versions, I realize that some information was missing. I did add all those lost items and of course updated the recommendations taken by the General conference 1999 in Lillehamer. The handbook was sent out in February 2001 in 2 separated ZIP-files to all member societies. The handbook was linguistically and grammatically revised by Collin, G3PSM.

## The IARU HF webpage

I made the primary version available on my personal website. I felt it was necessary to have the dispose of something as quick as possible. The HF Managers Handbook is now also available on the IARU website. There is still more work to be done at our Region 1 website to make information more quickly available, as it is an important window to the ham world.

## HF Newsletters

During the past three years, five HFC newsletters have been sent out. The first newsletter in December 1999 did contain all new HF recommendations made by the General Conference of Lillehamer. The other newsletters did contained all news and information of different kinds received from you. Although e-mail is a very fast and easy way to be in contact with everybody, I felt there was not much reaction and contribution even if I begged you for HF news from your countries.

Almost 72 % of the HFC members are reachable by their direct Email address or via their Society address. It is a real challenge is to keep the address database up to date.

### **HF Committee Meeting**

There has been no official meeting between the two conferences. In the spirit of budget restriction made in Lillehamer, I did follow the example of the VHF committee who decided also that there were not enough contributions to make it worthwhile to set up that meeting with all the related expenses.

I had the possibility to meet with several HF Managers during Ham Radio in Friedrichshafen each year. It has been a unique occasion to talk to them on a lot of subjects. We also had informal meetings during that stay.

### **Constest Sub Group**

It seems that the contest sub group has functioned well over the last three years under the chairmanship of Paul, EI5DI. I did not receive much news from him, so I suppose there where no big problems.

### **Co-operation with other bodies.**

The co-operation with Member societies has been quite limited and you did not charge me with a lot of questions. It would have been nice to receive more information about activities in each Society. It could have added value to the Newsletters!

My demand to join the Oman EC meeting, where I could have an open discussion on different subjects and my concerns on the lack of activity, was refused by the EC. The refusal was based on the free interpretation from the EC of the C2 recommendations of Lillehamer. I felt very unhappy about this.

### **External Relations matters.**

The revision of the ITU R25 article is still planned for 2003.

The CEPT countries have reduced the CW exam speed down to 5 wpm and a lot of questions were raised about the future usage of the HF bands and the protection of CW segments. More over ITU: the plan to change the suffix attributions role is underway, but fortunately actual suffixes can stay as there are.

The subject of 7 MHz re-alignment is part of the agenda of the World Radio Conference. The next Conference is WRC2003 and is scheduled for Caracas (Venezuela) in June 2003. The stated aim of the International Amateur Radio Union is to have an eventual exclusive 300 kHz Amateur Service allocation in the 7 MHz band.

## **Concluding**

I would like to take this opportunity to thank all the members of the HF committee and our Secretary Office Manager for the nice cooperation during those three years. It has been a pleasure to serve you as your chairperson. I want to wish you all good luck with your work in the future.

Respectfully submitted

Carine Ramon – ON7LX  
Chairperson of Region 1 "Permanent HF Committee



# IARU Region 1 Conference 2002

*San Marino 10 – 15 November*

SUBJECT	REGION 1 HF Bandplan
SOCIETY	Slovak Amateur Radio Association SARA

Committee	C4 .14
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SARA proposal for new **Region 1 HF Bandplan** according DARC concept which have:

- implemented until now existing Bandplan IARU Reg. 1
- SSTV and FAX sub-bands outside segments preferred by SSB contests.

## SARA changes of the DARC proposal

### 2. Proposal of new concept.

**A.** It is proposed to split the HF Bandplan into two parts. Source and Usage is part 1 and Remarks is part 2.

It is furthermore proposed to add guidelines which are not part of the bandplan but which have to be reviewed and adopted by the HFC. As guidelines are concerned, the centers of activity for given NB- and WB- are listed.

**B.** It is proposed to use following expressions (specified in the remarks) for the Source.

NB	Narrow Bandwith Modes	Bandwith less than 500 Hz *
WB	Wide Bandwith Modes	<b><i>Bandwith less than 2700 Hz *</i></b> <b><i>(* bandwith for – 6 dB)</i></b>

**C.** It is proposed to use following expressions (specified in the remarks) for the USAGE

CW	Morse Telegraphy
SSB	<b><i>SSB signal with bandwith less than 2700 Hz, up to 10 MHz LSB and above USB</i></b>
PHONE	SSB and other voice modes with bandwith less than 2700 Hz
All NB-Modes	All Analog and Digital modes with bandwith less than 500 Hz
All WB-Modes	All Analog and Digital modes with bandwith less than 2700 Hz
IBP	International Beacon Projekt with protected frequencies <b><i>+/- 0,5 kHz</i></b>

**D.** For the time being the now existing bandplan can easily be implemented into the new concept. World-wide known areas of activity as DX-windows on 3,5 MHz and contest segments on ~~3,5 MHz and 14 MHz~~ as they are.

Changes are in bold italics.

## New Region 1 HF Bandplan

### DRAFT SARA 2002

SOURCE		USAGE
Frequency (kHz)	Bw	
1810-1838	NB	CW
1838-1840		CW, all NB-modes
1840-1842	WB	CW, SSB, all NB-modes except PR
1842-1850		CW, SSB
1850-2000		CW, PHONE, all WB-modes (inc. SSTV, FAX, etc), max. 10W!

Frequency	Bw	
3500-3510	NB	CW, Intercontinental DX CW
3500-3560		CW, contests CW preferred segment (International)
3510-3560		CW, contests CW preferred segment (National)
3560-3580		CW
3580-3620		CW, all NB-modes except PR
3620-3650	WB	CW, SSB, contests SSB preferred segment (International)
3650-3700		CW, PHONE, all WB-modes (inc. SSTV, FAX, etc)
<b>3670</b>		<b><i>Calling frequency SSTV &amp; FAX</i></b>
3700-3770		CW, SSB, contests SSB preferred segment (National)
3700-3800		CW, SSB, contests SSB preferred segment (International)
3775-3800		CW, SSB – Intercontinental DX SSB

Frequency	Bw	
7000-7035	NB	CW, contests CW preferred segment
7035-7045		CW, all NB-modes except PR
7045-7090	WB	CW, SSB, contests SSB preferred segment
7090-7100		CW, PHONE

Frequency	Bw	
10100-10140	NB	CW
10140-10150		CW, all NB-modes except PR

Frequency	Bw	
14000-14070	NB	CW
14000-14060		CW, contests CW preferred segment
14070-14099,5		CW, all NB-modes except PR
14099.5-14100.5		IBP on 14100.0 kHz
14100,5-14112		CW, all NB-modes
14112-14300	WB	CW, SSB, contests SSB preferred segment
14300-14350		CW, PHONE, all WB-modes (inc. SSTV, FAX)
<b>14330</b>		<b><i>Calling frequency SSTV &amp; FAX</i></b>

Frequency	Bw	
18068-18100	NB	CW
18100-18109.5		CW, all NB-modes except PR
18109.5-18110.5		IBP on 18110.0 kHz
18110.5-18168	WB	CW, SSB

Frequency	Bw	
21000-21070	NB	CW
21000-21070		CW, contest CW preferred segment
21070-21120		CW, all NB-modes except PR
21120-21149,5		CW
21149.5-21150.5		IBP on 21150.0 kHz
21150.5-21350	WB	CW, SSB, contests SSB preferred segment
21350-21450		CW, PHONE, all WB-modes (inc. SSTV, FAX)
<b>21410</b>		<b><i>Calling frequency SSTV &amp; FAX</i></b>

Frequency	Bw	
24890-24920	NB	CW
24920-24929.5		CW, all NB-modes except PR
24929.5-24930.5		IBP on 24930 kHz
24930.5-24990	WB	CW, SSB

Frequency	Bw	
28000-28070	NB	CW
28000-28070		CW, contests CW preferred segment
28080-28150		CW, all NB-modes except PR
28150-28190		CW
28190-28199.5		Regional time shared ARS beacon
28199.5-28200.5		IBP on 28200.0 kHz
28200.5-28225		Continous-duty ARS beacon
28225- 29000	WB	CW, SSB
28225-28800		CW, SSB, contest SSB preferred segment
29000-29200		CW, PHONE, all WB-modes (SSTV, FAX)
<b>29100</b>		<b><i>Calling frequency SSTV &amp; FAX</i></b>
29200-29300	NB-FM	CW, SSB, FM, FM PR, FM PR S&F, BBS, NODE
29300-29510	WB	Satellite downlink
29510-29700	NB-FM	CW, FM, FM repeater

<b>NB</b>	Narrow Bandwidth Modes	Bandwidth less than 500 Hz *
<b>WB</b>	Wide Bandwidth Modes	Bandwidth less than 2700 Hz *
<b>NB-FM</b>	Narrow Bandwidth FM	Bandwidth less than 5000 Hz *

(\* bandwidth for – 6 dB)

<b>CW</b>	Morse Telegraphy
<b>SSB</b>	SSB signal with bandwidth less than 2700 Hz, up to 10 MHz LSB and above USB
<b>PHONE</b>	SSB and other voice modes with bandwidth less than 2700 Hz
<b>All NB-Modes</b>	All Analog and Digital modes with bandwidth less than 500 Hz
<b>All WB-Modes</b>	All Analog and Digital modes with bandwidth less than 2700 Hz
<b>IBP</b>	International Beacon Projekt with protected frequencies +/- 0,5 kHz
<b>FM</b>	FM, FM PR, FM repeater – FM mode with bandwidth less than 5000 Hz

## Remarks to the Bandplan:

Where several modes are shown in the sub-bands all are equivalent. But this has to be exercised on a NIB (Non Interference Basis), according to the ITU Radio Regulations.

### 1.8 MHz band:

Those societies which have SSB allocation below 1840 kHz may continue to use it, but they are requested to take all necessary steps with their licence administrations to adjust the phone allocations in accordance with the Region 1 Bandplan. The bandsegments 1907,5 to 1912,5 kHz (Japanese DX-window) should be kept free for transmissions by Region 1 stations. Instead use the split-frequency technique when operating here.

### 3.5 MHz band:

3.500 – 3.510 and 3.775 – 3.800 MHz Intercontinental operation should be given priority in these segments.

### Contest Preferred Segments:

Where no DX traffic is involved, the contest segments should not include 3.500 – 3.510 MHz or 3.775 – 3.800 MHz (National Contest). Member societies will be permitted to set other limits for national contest (within these limits). This recommendation does not apply to RTTY, SSTV, FAX and modes with computer protocol.

### 7 MHz band:

The band segment 7.035 – 7.045 MHz may be used for S&F traffic (U/U) in the area of Africa south from the equator during local daylight hours. ~~More effective operation modes than AX.25 PR are allowed.~~

### 10 MHz band:

SSB may be used during emergencies involving the immediate safety of life and property and only by stations actually involved in the handling of emergency traffic.

It is recommended that unmanned stations using S&F shall avoid the use of the 10 MHz band.

Note: The 10 MHz band may be used for S&F traffic (U/U) during local daylight hours in the areas of Africa and Middle East. ~~More effective operation modes than AX.25 PR are allowed.~~

### SSTV/FAX:

The frequencies **3.670, 14.330, 21.410 and 29.100 MHz** should be used as calling frequencies for SSTV and FAX operators. After having established contact, they should move to corresponding sub-band. ***SSTV and FAX sub-bands are outside of contests SSB preferred segments.***

### NBFM PR on 29 MHz Band:

Preferred operating frequencies on each 10 kHz from 29.210 to 29.290 MHz included should be used. A deviation of +/-2,5 kHz being used with 2.5 kHz as maximum modulation frequency.

### Packet Radio:

On HF, except over 28.000 MHz, more effective operation modes than AX.25-PR are allowed.

### Satellite operation frequency:

Member Societies should advise operators not to transmit on frequencies between 29,3 and 29,51 MHz to avoid interference to amateur satellite downlink.

### Unmanned transmitting stations:

IARU Member Societies are requested to limit this activity on the HF bands. It is recommended that any unmanned transmitting station on HF shall only be activated under operator control except for IARU approved beacons or specially licenced stations.

Contest activity shall not take place on the 10, 18 and 24 MHz bands.

### Transmitting frequencies:

The announced frequencies in the Bandplan are understood as “transmitting frequencies” (not suppressed carrier!).

**National Societies are requested to advise their members to follow this Bandplan.**

# IARU Region 1 Conference 2002

*San Marino 10 – 15 November*

SUBJECT	Conflicting HF/VHF contest dates
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SOCIETY	EDR
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Committee	C5.31 info C4
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## Conflicting HF/VHF contest dates !

*Between IARU, Region I, VHF contests and IARU coordinated HF field days.*

### The situation today:

Numerous club-stations from the IARU, Region I, member organizations participate every year in a great variety of contests etc. on the HF and VHF/UHF/SHF bands. Among these also the following events:

\* The HF CW Field-Day.

\* The HF SSB Field-day.

\* The IARU, Region I, 50 MHz contest.

\* The IARU, Region I, 144 MHz contest.

These four contests are among the most popular in Region 1!

### The problem:

Without knowing exactly - we estimate a great majority of these clubs to have 100 - 200 members or less! This limits the human and material resources available to the clubs.

Assuming this is a fact in (at least) the Nordic area it could not be considered as a wise decision if we organized the above mentioned contests on the same dates:

DATE	HF	VHF
<b>1.Weekend of June:</b>	CW Field-day	50 MHz Region I contest
<b>1.Week-end of September:</b>	SSB Field-day	144 MHz Region I contest

BUT - That is what we did in the past! First the HF SSB Field-day was placed on top of the Regional 144 MHz contest and a few years ago the reverse situation: The Regional 50 MHz contest was placed on top of the HF CW Field-day!

Some would say: "Do both at the same time!" But this is possible only to the big clubs - and: I deal locations for VHF and HF work differ considerably as well.

One could hope for better coordination between committees in the future!

### Possible solutions:

To give all clubs a better possibility to participate in all IARU, Region I, coordinated contests we should place these events on different dates.

As the 144 MHz contest in September and the HF CW Field-day were first on their week-ends they should remain. The 50 MHz contest in June and the HF SSB Field-day should consequently move to another week-end decided upon by the committees C5 and C4 respectively avoiding collision with any other "on the air" IARU, Region I, events.

# IARU Region 1 Conference 2002

*San Marino 10 – 15 November*

SUBJECT	1.8 MHz Bandplan and Contesting
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SOCIETY	EDR
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Committee	C4
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## 1,8 MHz Bandplan and Contesting

1. Contesting is an amateur activity that creates a lot of activity, and it is an area of growth. In the existing bandplan for 1,8 MHz the phone segment is only 10 kHz wide in the primary allocation where high power is allowed and therefore there is a great pressure for more space, and it is well-known that during major phone contests, there is phone operation going on all over the band down to the lower band edge. Try to imagine 1000 phone stations in a 10 kHz bandwidth, that's simply not possible.

2. EDR therefore proposes a footnote to the existing Region 1 bandplan for 1,8 MHz allowing phone operation in the CW-portion for major international phone contests.

3. Administrations already acknowledge contests as a special amateur event assigning special contests calls, allowing special power limits etc. Contesting is an amateur well-documented which is beneficial for our claim for spectrum.

4. Bandplanning should reflect the actual use of a band. That is how SSTV and the digital modes were adopted. In this proposal we are adopting the time-sharing principle. A bandplan that is not reflecting the actual use of a band will in a longer time scale lose its acceptance.

5. This footnote will be a good example of sharing between modes in the amateur service showing the flexibility of the service.

6. This footnote will add equal opportunities for phone contesting among countries within the narrow high power part of the band. The present restrictive bandplan may prevent some amateurs from taking part, because they want to follow the bandplan.

EDR proposes the following footnote to the Region 1 Bandplan for 1,8 MHz:

- During major international phone contests phone stations may use part of the CW band. (major international phone contests are those that can document more than 1000 participants).

# IARU Region 1 Conference 2002

*San Marino 10 – 15 November*

SUBJECT	Bandplan for 1,8 MHz
SOCIETY	EDR

Committee	C4
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## Bandplan for 1,8 MHz

The allocations for the amateur service on 1,8 MHz has been different for different countries in Region 1. However most countries have now assigned 1,810 – 1,850 MHz to the amateur service on a primary basis with full privileges as regards to power and modes. Furthermore many countries allow amateurs to use additional segments from 1,850 up to 2,0 MHz on a secondary basis but often with severe power restrictions.

Therefore most of the activity on the band is taking place from 1,810 to 1,850 MHz. EDR proposes to change the present bandplan to allow more space for phone operation by moving the border between CW and phone down to 1,830 MHz. This will give a ratio of 1 : 1 between CW and phone in the primary allocation.

The Bandplan EDR proposes is:

1,810 – 1,830 MHz	CW
1,830 plus/minus 2 kHz	CW, Digimode except packet
1,830 - 1,850 MHz	CW, Phone
(1,850 – 2,000 MHz	CW, Phone)

This change to the bandplan was supported by the interim meeting of the HF-committee in Friederichshafen 2001.



# IARU Region 1 Conference 2002

*San Marino 10 – 15 November*

SUBJECT	Bandplan and Contest
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SOCIETY	EDR
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Committee	C4
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## Discussion Paper

### Bandplanning and Contests

In normal day-to-day use the IARU Bandplan is satisfactory and generally accepted by all users of the HF-bands, and EDR sees no immediate requirements for greater changes.

It is well-known that during contests there is a very large activity on all amateur bands. In fact creating activity is the main purpose of organising contests.

The following remarks is specifically related to the situation on 1,8 MHz, and also specifically related to the largest phone contests there. The fact is that during these phone contests the bandplan is de facto suspended and the whole band is full of contest traffic, simply because there is not enough space available for phone.

This is a problem that IARU and we as bandplanners cannot neglect, because in the long term the whole concept and acceptance of IARU Region 1 bandplans is at stake. Bandplans must be in accordance with actual use of the bands, and should provide space for all amateur activities.

What can we as band-planners do?

Well, we have two options, do nothing or try to find a flexible solution.

1. If we do nothing things will go on, and in the long term the whole idea of having a bandplan, which is highly accepted and respected, will suffer. The only ones to protect bandplanning are the amateurs. Administrations in our days of liberalization have no interest in bandplanning, they just assign a range of frequencies to the amateur service, and how the amateurs use the spectrum available is of minor interest to administrations.

2. A flexible solution will recognize the fact that contesting is one of the few areas of growth in amateur radio, amateurs apparently like the competitive aspect of contesting, and no doubt the many PC-based possibilities have also increased the number of participants. Serious contesting also includes many facets of amateur radio: equipment, computers, antennas, propagation and operating. Contests are great to create activity on a band, and I will rather like to see the whole band full of amateur traffic even if its the same mode, than a band being empty and being open for all kinds of non-amateur intruders.

# IARU Region 1 Conference 2002

*San Marino 10 – 15 November*

SUBJECT	<b>HF Beacon Coordinator's Report 2001/2002</b>
SOCIETY	IARU Region 1 HF Beacon Coordinator

Committee	<b>C4.18</b>
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The worldwide distribution of HF beacons when this report was prepared was as follows. (Brackets indicate the situation in my Lillehammer report:)

	Region 1	Region 2	Region 3	Worldwide
1.8MHz	3 (3)	1 (-)	- (-)	4 (3)
3.5MHz	3 (3)	- (-)	- (1)	3 (3)
7MHz	1 (1)	- (-)	- (-)	1 (1)
10MHz	3 (2)	2 (-)	- (-)	5 (2)
14MHz	5 (5)	6 (7)	7 (5)	18(17)
18MHz	8 (8)	7 (5)	7(4)	22(17)
21MHz	6 (6)	8 (6)	7 (5)	21(17)
24MHz	8 (7)	6 (5)	8 (4)	22(16)
28MHz	31 (34)	102 (84)	17 (15)	150 (133)
All HF Bands	65 (66)	131 (107)	46 (34)	242 (207)

There have been few changes below 14MHz since Lillehammer, apart from a slight increase at 10MHz. Lillehammer authorized low-power beacons at 7MHz in southern Africa, but none have been notified. Increases at 14-24MHz mainly reflect completion of the NCDXF/IBP network, but there has also been a slight increase in solo beacons in those bands. The main growth has been at 28Mhz, chiefly in the Americas.

**Beacon Coverage.** 28MHz is the only band with a beacon segment wide enough for comprehensive coverage of our Region. We have beacons in or near most countries in western Europe. Some areas have more than are needed. However:

- There is currently no operational beacon in the Arabian gulf (A47RB QRT)
- Large areas of Africa are not adequately covered.

- The European area of the former Soviet Union has only one HF beacon.
- The Mediterranean is inadequately covered.

These areas should be our priorities for any new beacons. National societies should think very hard before adding beacons unless they are time-sharing a frequency.

In the coming years of poorer propagation beacons will be more important. Unlike human operators who become tired or discouraged they remain, indicating when the band is open, attracting activity and lessening pressure on lower bands. This is why I emphasize the need for beacons around EA/CT, IT9/9H, SV1 and CN and in 5N or 9G, where propagation will hold up better. Stronger societies could play a valuable role by contributing simple, basic beacons to societies with few resources. What the UK Six-Metre Group has done at 50MHz could surely be done by our Region's national societies. Is there the will to do this?

**Other Regions** Since many of the beacons we use lie outside Region 1 it is appropriate to comment on them, though decisions are obviously a matter for the regions concerned. Region 3 has few beacons. It would be good to see beacons in 9V/YB, central China and AP or north VU. Some parts of Region 2 are overpopulated. While additional beacons might signal sporadic-E openings, mostly they would clutter frequencies to little effect. But gaps remain in Central America, the Caribbean, CE and PY. Elsewhere in South America several beacon operate, spoiling frequencies that could be better used. The absence of W6WX at 18 and 24MHz leaves a gap in the NCDXF/IBP chain, which will be felt more keenly in the years ahead.

In all Regions the priority should be to add beacons where they will optimise band usage through solar minimum..

**Interference.** Interference at 14,18,21 and 24MHz is much as it was when I last reported. Digimode incursion at 24MHz remains serious. Commercial cw interference has been reported at 21MHz. The worst problems occur during major international contests, when even the relatively high-powered NCDXF/IBP beacons are submerged for prolonged periods on all frequencies. The 28MHz situation has deteriorated, with contest QRM, CB, operators jamming CB and, particularly, taxi dispatchers in Russia, Belarus and Ukraine whose broad-band transmissions on the 28200 NCDXF/IBP frequency are particularly disruptive. (Unlike other operators, beacons cannot QSY.) It is unclear whether these are legal. If not, their locations must be very well known. I appeal to colleagues with relevant information to assist Intruder Watch in tackling this problem, which is a serious handicap to the beacon service.

**Continuing Activities and Recent Developments.** I continue to maintain a worldwide HF beacon list ([www.keele.ac.uk/depts/por/28.htm](http://www.keele.ac.uk/depts/por/28.htm)). A valuable recent addition is the HF beacons mailing list initiated by G0AEV in 2001. With participants from many countries, this reaches beacon operators and people with an interest in beacon monitoring. Information about beacons now circulates more rapidly and beacon operators have rapid feedback about beacon performance. It would be appreciated if member societies would make this list known to their beacon coordinators and operators. ([hfb Beacons-help@explore.plus.com](mailto:hfb Beacons-help@explore.plus.com)) It is also a useful channel for encouraging better frequency coordination and good practice by informal persuasion rather than formal rules, which are often resisted.

G4FKH leads another interesting initiative. His group monitors the NCDXF/IBP beacons and he then uses their results to test and refine the algorithms used in propagation prediction programs. Existing programs may 'fit' one band well but then do not 'fit' other bands. He is working towards a version that should fit all bands equally well. Already considerable improvements have been made to the forecasts he provides to the RSGB's RadCom and on the Web ([www.g4fkh.demon.co.uk](http://www.g4fkh.demon.co.uk)). His results are significant for professionals as well as amateurs. I attach a progress report to this document.

**The Future.**.. Beacon service users owe a great debt to those who construct and maintain beacons, often for many years. We also owe a debt to everyone who has supported and administered the NCDXF/IBP network, which was completed since my last report. Although several beacons have suffered serious outage the network is a major accomplishment, a valuable operating aid and a useful base for propagation study. I salute everyone concerned.

This is not to say all is well with the beacon service. Apart from interference, there is much other room for improvement. While we have many beacons they do not amount to a coherent system and there is little technical advance apart from a number of beacons running on solar power. Some operators appear to place beacons on the air without asking what they are for. We still have beacons carrying excessively long messages or leaving unduly long gaps between transmissions. These failings seriously lessen their usefulness.

Simple continuous beacons running modest power still have their place. But the beacon service must also progress. NCDXF/IBP showed one way forward, though we need not follow that model exactly. More grouping of frequency-sharing beacons nationally or regionally would use our frequencies more efficiently and make the network more coherent. We have the technology and we have frequencies designated for that purpose. We need individuals willing to work collaboratively on next-generation beacons, demonstrating our capacity as amateurs to be efficient and innovative. We have made no progress since Lillehammer. One possibility is for some beacons to incorporate psk identifiers to facilitate automatic logging in addition to their a1a cw IDs. I would appreciate guidance from conference on whether this should be encouraged.

I also suggest that, as the higher HF bands become less reliable during solar minimum it would be useful to have a *small* number of well-located higher-power beacons, which could give a better impression of propagation possibilities in marginal conditions than the basic 10 watts, which few operators actually use. DL0IGI is a good example.

A final thought: our beacons developed when all HF operators were assumed to be familiar with morse. Morse qualifications have been relaxed and may disappear. What sort of beacon service will be appropriate then? This is not an urgent question but it may well need to be considered before much longer.

My recommendations are:

- (1) Add further beacons only sparingly where there is proven need
- (2) Very selective encouragement of higher-power beacons
- (3) Encouragement of beacons to group on a frequency-sharing basis
- (4) To consider whether it is appropriate to encourage beacons to add psk identifiers
- (5) That more must be done to inform amateurs about band plans and encourage respect for them
- (6) Every support be given to Intruder Watch in identifying and acting against intruders

Martin Harrison  
Region 1 HF Coordinator

EDR is convinced that a flexible solution in this matter will be beneficial in preserving the idea of bandplanning, which in the long term perspective is in the interest of all users.