



International Amateur Radio Union Region 1

Europe, Middle East, Africa and Northern Asia

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SUBJECT			
Region 1 HF Emergency Communications 3kHz bandwidth channels			
Society	Emergency Comms WG	Country:	Region 1
Committee:	C4	Paper number:	08
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INTRODUCTION

Early in 2004 the IARU-R1 Emergency Communications Co-ordinator Gordon L Adams G3LEQ submitted a paper on the subject of HF communications frequencies to the Executive Committee. This was considered at their meeting held between 17th and 20th April 2004 in Sofia Bulgaria. An outline of this proposal had been placed previously on the IARU-R1 Web site in July 2003, for comment, and is still available there as at February 2005. It is now presented as a paper for consideration by Committee C4 at DAVOS-05.

This paper puts forward the concept of specific 3kHz bandwidth channels to be made available for Emergency Communications use, primarily by stations in the Amateur Service, during times of National or Internationally declared disasters. An alternative paper putting forward the concept of "Centres of Activity" for Emergency Communications general purpose usage in certain HF bands is being submitted by the Radio Society of Great Britain (RSGB). These two papers are NOT in conflict - being mutually or independently tenable (see INFORMATION below).

No formal co-ordination exists between National Emergency Communications groups to eliminate mutual interference between adjacent countries, or indeed to enable effective inter-communication between countries. HF is an international resource requiring international direction and planning. IARU-R1 should retain the lead in such planning.

THEREFORE:

IARU Region 1 should adopt the principle of Emergency Communications 3kHz bandwidth channels within the HF Bandplan, and requests Member Societies to co-operate in the recommendation of such emergency channels. These would be set aside for emergency communications use only at times of disasters declared as such by one or more national administrations. Some limited provision is also put forward for training usage in respect of channels not located adjacent to band edges. At all other times the "Emergency Channels" would be available for general use by stations in the Amateur Service in accordance with the HF Bandplan.

This proposal has several merits:-

1. During an officially declared emergency, Emergency Communications activities would be afforded the exclusive use of one or two designated 3kHz bandwidth channels in any given HF Amateur Service band, regardless of the mode being employed.
2. A single 3kHz channel, instead of random frequency selection, would mitigate against conflict with other regular Amateur Service activities such as Contesting and DX working.
3. Single Emergency Channels would reduce unintentional interference from non-emergency communications stations, since the process of educating others will be easier.
4. The use of the term "Emergency Channels", having 3kHz bandwidth, will allow emergency communicators to spread communications networks within the channel, provided that suitably narrow bandwidth modes are employed. Voice communications would be limited to SSB or Digital systems by virtue of the channel bandwidth.

In the case of the 10.100MHz band, existing unplanned SSB usage in the South of Region 1 has been taken into account. No proposals are made for 3kHz channels above 14.350MHz, although this approach would be commended to other Regions, and may be extended to higher bands in order to permit inter-continental emergency communications operations.

RECOMMENDATION

IT IS PROPOSED THAT IARU Region 1 adopts the principle of Emergency Communications Channels within the HF bandplan and requests Member Societies to co-operate in the recommendation of the following HF Emergency 3kHz Channels:-

1995kHz +/- 1.5kHz. *This channel would permit effective communications after dark in the Temperate Zones, and just clears the two Deltafix 2-PSK navigation stations on 1998kHz and 1999kHz. This channel might be raised to the upper band edge in the event of Amateur Service exclusivity being granted at a later date.*

3600kHz +/- 1.5kHz. *This channel would permit effective communications at dusk and at dawn in the Temperate Zones, and - being in-band - would permit Emergency and Training communications, possibly involving the Fixed and Land Mobile Services also.*

3797kHz to 3800kHz. *Within Region 1 this channel would complement the aforementioned 3600kHz channel - but would be for declared Emergency usage only.*

5400kHz +/- 1.5kHz. *This channel would be ideal for Emergencies, and possibly Training, for Day and Night communications primarily in Temperate Zone countries, subject to Amateur Service usage being permitted by individual National administrations.*

5405kHz +/- 1.5kHz. *This channel might be sought on the same basis as 5400kHz. Alternatively a derogation in the channel range 5395kHz to 5445kHz might be requested from individual National administrations.*

7000kHz to 7003kHz. *This channel would permit effective communication throughout 24-hours on selected propagation paths. It might also permit inter-Service communications with other emergency stations operating just below 7000kHz, subject to regulation by individual National administrations. Usage would be confined to declared Emergencies only.*

7197kHz to 7200kHz. *This channel would be made available on the same basis as 7000kHz above, subject to the provisions for the Amateur Service within the individual National administrations of Region 1, and would be adjusted to any future upper band edge.*

10147kHz to 10150kHz. *This channel would be ideal for declared Emergency usage only, when distances exceeding 800kms have to be covered throughout 24-hours, and would be adjusted to any future upper band edge.*

14347kHz to 14350kHz. *This channel would be for declared Emergency usage only, when World-wide communications are required.*

INFORMATION

The above Band Edge channels would be ideal where National administrations might permit inter-Service communications with Fixed and Mobile Service emergency operations, and precise band-edge nominal or suppressed carrier frequency operation might be permitted. The In-Band channel at 3600kHz might also be employed for inter-Service Emergency or Training communications since this lies in a non-exclusive shared assignment. The Northern Temperate Zone lies roughly between 40 degrees and 65 degrees of latitude North, and allows optimum HF communications over 400kms paths during much of the sunspot cycle, when Near Zenithal Radiation (or Near Vertical Incidence Skywave propagation) is employed. This Zone is characterised by warm Summers and cold Winters. Unexpected excessive rainfall, accompanied by serious flooding, can occur in parts of Western Europe and to the South of the Black Sea. Furthermore earthquake areas stretch from Iberia to the Far East in the Equatorial Zone. Adoption of the above proposed Emergency channels might allow international protection to be sought from BPL/PLT interference sources.

(v.2) February 2005