

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

**In the Matter of** )  
 )  
**Recommendations Approved by the Advisory** ) **IB Docket No. 04-286**  
**Committee For the 2007 World** )  
**Radiocommunication Conference** )

**To: The Chief, International Bureau**  
**Via: Office of the Secretary**

**COMMENTS OF ARRL, THE NATIONAL ASSOCIATION  
FOR AMATEUR RADIO**

ARRL, the National Association for Amateur Radio, also known as the American Radio Relay League, Incorporated (ARRL), by counsel and pursuant to the Public Notice, DA 06-2013, released October 12, 2006, hereby respectfully submits its comments with respect to one of the draft preliminary views on an issue to be considered at the 2007 World Radiocommunication Conference (WRC-07). Appended to the Public Notice were certain recommendations of the WRC-07 Advisory Committee. In the interests of the Amateur Radio Service in effective emergency, disaster relief and public service communications, ARRL states as follows:

**I. Introduction.**

1. ARRL's interest in this proceeding is most immediately with respect to Document Number WAC/137(04.10.06), a Draft Proposal from Informal Working Group 4 (IWG-4) dealing with Broadcasting and Amateur issues. The Draft Proposal, Agenda Item 1.13, takes into account Resolutions 729 (WRC-97), 351 (WRC-03) and 544 (WRC-03) and addresses the allocations to all services in the HF bands between 4 MHz and 10 MHz. The Background information provided in the draft proposal for Agenda Item 1.13

establishes accurately the need to make adequate provision in that spectrum for the disaster relief, emergency and public service communications provided by radio amateurs:

Changes to Article 25 made at WRC-03 encourage administrations to take the necessary steps to allow amateur stations to prepare for and meet communication needs in support of disaster relief. Most administrations recognize the amateur services as serving humanitarian and disaster relief agencies as well as non-government organizations such as the Red Cross and Red Crescent Movement. The amateur services provide emergency communications on a local, national and international basis as an adjunct to normal communications, and in many cases provide the first information about disasters and serve as the only communications link when communications infrastructures are destroyed.

Public Notice, at p.24

2. It is for the above reasons that adequate provision must be made for Amateur Radio Communication throughout the HF spectrum, to permit flexible, reliable long-distance communications via Amateur Radio. As the draft recommendation puts it:

Based on the recommendation of the 1978 CCIR Special Preparatory Meeting, WARC-79 accepted the principle that, like other high-frequency radio services, the amateur service should have access to a family of frequency bands so communications can be maintained as propagation conditions change. Particularly in the higher latitudes, there are many times when the maximum usable frequency (MUF) is below 7 MHz but is too far above the next lowest amateur frequency band (3.8, 3.9 or 4.0 MHz, depending upon the Region) for communication to be supported in that band.

Public Notice, at 24

3. Given the foregoing, it has been an important goal of the Amateur Radio community, both domestically within the United States and internationally, to have a contiguous band of frequencies in the range of 5 MHz. The principal reason for this priority is as stated in the Draft Proposal: there are times when the propagation at 5 MHz bridges a significant gap between the Maximum Usable Frequency (MUF) when the MUF is below 7 MHz, but the Lowest Usable Frequency (LUF) is above the next lower Amateur Radio allocation at around 3.8 MHz. For reliable communications, an Amateur allocation in the vicinity of 5 MHz is the solution.

## **II. There is a Successful History of Compatible Sharing in the HF spectrum by Radio Amateurs at Both 10 MHz and 5 MHz.**

4. The Draft Proposal notes that since 1999, several administrations have permitted Amateur Radio Service operation on specific voice-bandwidth channels between 5,250 kHz and 5,450 kHz. These administrations include the United States, Canada, Finland, Iceland, Norway, and the United Kingdom. It notes that there is a successful history of Amateur secondary use of bands in which incumbent primary users are present. For example, the band 10,100-10,150 kHz is allocated to the fixed service on a primary basis and the Amateur Service on a secondary basis. Yet, compatible secondary use of that band by Amateurs has been ongoing for many years without any reports of interference from the primary fixed service users.

5. On May 14, 2003, in a *Report and Order* in ET Docket No. 02-98 (See, FCC 03-105), the Commission, among other things, allocated to the Amateur Service five channels within the band 5,250-5,450 kHz on a secondary basis. The purpose of the allocation, according to paragraph 1 of that *Report and Order*, was to provide “spectrum for amateur radio service licensees to participate in a voluntary, noncommercial communication service which provides emergency communications and allows experimentation with various radio techniques and technologies to further the understanding of radio use and the development of new technologies.” The allocation was made pursuant to Footnote US381

to the United States' Table of Allocations.<sup>1</sup>

6. Internationally, the band 5,250-5,450 kHz is allocated on a primary basis to the fixed and mobile, except aeronautical mobile, services. There is currently no international Amateur Service allocation in this band. In the United States, the 5,250-5,450 kHz band is allocated to the fixed service on a primary basis for Federal Government and non-Federal Government use, and on a secondary basis to the mobile (except aeronautical mobile) service. There are other applicable footnotes to the United States Table of Frequency Allocations which provide for Federal and non-Federal Government maritime and aeronautical mobile stations to use this band, among others, for various non-communication purposes.<sup>2</sup> The band is primarily used by the United States Government for ship-to-shore and fixed point-to-point communications. There is also a limited amount of non-Federal Government use.<sup>3</sup>

7. The Commission had initially proposed in ET Docket 02-98 to allocate the band 5,250-5,400 kHz on a secondary basis to the Amateur Service domestically. It found that an allocation in the 5,250-5,400 kHz band would enhance amateur emergency communications and experimentation in the HF range when propagation conditions are not favorable for communication in the 3,500 kHz and 7,000 kHz Amateur bands. In making this proposal, the Commission stated that it appears that Amateur Radio operators should be able to avoid interference to primary operations in this band due to the limited numbers

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<sup>1</sup> That footnote currently reads as follows:

US381 The frequencies 5332 kHz, 5348 kHz, 5368 kHz, 5373 kHz, and 5405 kHz are allocated to the amateur service on a secondary basis. Amateur use of these frequencies shall be limited to: (1) a maximum effective radiated power (e.r.p.) of 50 W; and, (2) single sideband suppressed carrier modulation (emission designator 2K8J3E), upper sideband voice transmissions only.

<sup>2</sup> See, e.g. United States Footnote 340.

<sup>3</sup> See the *Report and Order*, at paragraph 22.

of primary assignments.<sup>4</sup> In addition, the Commission indicated that the operational protocol of “listen before transmit” employed by amateur radio operators could further minimize interference, and asked whether use of this technique should be explicitly required in the rules in order to protect the primary operators in the 5,250-5,400 kHz band. In the end, a series of five individual channels, each 2.8 kHz wide, were allocated to the Amateur Service on a secondary basis, subject nevertheless to No. 4.4 of the Radio Regulations, and subject to certain operating parameters in the Commission’s Part 97 service rules to insure that Federal primary users would be able to access the channels, if necessary, without delay. These channels have been in regular use in the United States by licensed Radio Amateurs without any instances of interference reported by primary users. The same reports of compatible use have been received relative to Amateur use of similar or identical channels in other countries. A fundamental reason for this compatibility is the normal practice, well-understood by licensed Radio Amateurs, of using “listen-before-talk” operating protocols and procedures so as to avoid interference to co-channel or adjacent-channel users.

### **III. The ITU Conference Preparatory Meeting Draft Report Supports Agenda Item 1.13.**

8. The ITU Conference Preparatory Meeting (CPM) draft Report, at Chapter 5, with respect to Agenda Item 1.13, has provided Method 6 as a basis for a possible secondary allocation of the band 5,260-5,410 kHz to the Amateur Service. The Draft CPM Report includes the following relevant excerpts:

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<sup>4</sup> The Commission stated that a search of the Government Master File and the Commission’s license databases in this band in January 2002 identified a total of 757 assignments. Twenty-six of those assignments were non-Federal Government assignments.

"5/1.13/6.6 Method 6 (Issue E): "This method responds only to Issue E (the review of allocations to all services).

"Modifications to RR Article 5 to provide a worldwide secondary allocation to the amateur service of 150 kHz at 5 260-5 410 kHz.

"Advantages:

- Provides propagation at times when MUF is below 7 MHz and LUF is above 4 MHz permitting reliable communication for radio amateurs at any time of the day and support Report ITU-R M.2085.

"Disadvantages:

- Some administrations are of the opinion that this method is outside the agenda item.
- The allocation would increase congestion and potential interference to the fixed and mobile services at 5 MHz. Compatibility between Amateur Service and Fixed Service adaptive systems around 5 MHz has not been shown and thus a decision to make an allocation to the amateur service could seriously affect reliable 24 hours communication capabilities of the fixed and mobile services."

9. The modifications to Article 5 to implement the allocation set forth at page 25

of the Public Notice agree with the table in the draft CPM Report, as follows:

**Proposal:**

USA/ /1 MOD

**ARTICLE 5**

**Frequency allocations  
Section IV – Table of Frequency Allocations**

**5 003-7 450 kHz**

Allocation to services		
Region 1	Region 2	Region 3
<b>5 250-5 450<del>260</del></b>	FIXED MOBILE except aeronautical mobile	
<b>5 260-5-410</b>	FIXED MOBILE except aeronautical mobile <u>Amateur</u>	
<b>5 410-5 450</b>	FIXED MOBILE except aeronautical mobile	

**Reasons:** Allocation of a band at 5 MHz to the amateur service, on a secondary basis, will provide communications at times when the MUF is below 7 MHz and above the next lower amateur frequency band. Use of listen-before-transmit techniques avoids interference to the primary services.

10. ARRL would respectfully disagree with the alleged disadvantages listed in the CPM draft Report. This proposed allocation is well within the scope of existing resolutions from WRC-03, and is appropriate according to the specific language of Agenda Item 1.13, which calls for a review of the allocations of *all services* between 4 and 10 MHz. Further, substantial Amateur use of specific channels in the 5,260-5,410 kHz band over the past few years has not resulted in any apparent compromise in the use of the band by the fixed and mobile services. To the contrary, that use has demonstrated compatibility with primary users over a reasonable period of time. There are numerous techniques used by the Amateur Service to avoid interference to primary users in HF allocations.<sup>5</sup> In the 10.100-10.150 MHz band as a case in point, no preclusion of fixed services has been

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<sup>5</sup> Such techniques as may be required to avoid interference are best addressed in domestic service rules rather than in the Radio Regulations, as they will evolve over time with improvements in technology.

alleged in many years of Amateur secondary operation. The Amateur Service can be relied upon to make careful and non-preclusive use of the secondary allocation. Secondary status places the burden of interference avoidance on the secondary service. This is a burden that the Amateur Service is willing to assume in order to gain access to this frequency range.

Therefore, the foregoing considered, and for the reasons stated in the proposed Agenda Item 1.13, ARRL, the National Association for Amateur Radio respectfully requests that Commission should support proposed Agenda Item 1.13, and support the proposed secondary allocation of a band of 150 kHz at 5,260-5,410 kHz to the Amateur Service in all Regions.

Respectfully submitted,

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