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

In the Matter of	
Amendment of Part 97 of the Commission's	RM - 11708
Amateur Radio Service Rules to Permit Greater)	
Flexibility in Digital Data Communications	

To: The Chief, Wireless Telecommunications Bureau

Via: The ECFS

COMMENTS OF PETITIONER

ARRL, the national association for Amateur Radio (ARRL), Petitioner in the above-captioned proceeding, hereby respectfully submits these comments in response to the Public Notice dated November 21, 2013 (Report No. 2993). In support of the relief requested in its *Petition for Rule Making* filed November 15, 2013, as amended by the *Erratum* thereto¹ filed November 26, 2013 (the Petition), ARRL states as follows:

1. ARRL's Petition proposes to modify Sections 97.305 and 97.307 of the Commission's rules in order to remove the symbol rate limitation for data emissions in the band segments where RTTY and data emissions are now permitted. In lieu thereof, it would establish a maximum bandwidth for data emissions of 2.8 kHz on MF and HF bands (where *none currently exists*, except for some unattended operations). The MF and HF segments subject to this new maximum bandwidth limit are as follows: 160 meters; 3.5-3.6 MHz; 7.000-7.125 MHz; 30 meters; 14.00-14.15 MHz; 18.068-18.110 MHz; 21.0-21.2 MHz; 24.89-24.93 MHz; and 28.0-28.3 MHz. The Petition, as amended by the aforementioned *erratum*, would *leave intact* the

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¹ The Appendix submitted with the Petition as filed on November 15, 2013 contained an error in the proposed text of Section 97.307(f)(3) of the Commission's Rules. Specifically, the rule text included language that was <u>not</u> intended to be included in the proposal pertaining to unspecified digital codes. That Appendix language was included erroneously. There was no reference thereto in the body of the Petition as it was originally filed. ARRL's *Erratum* provided a <u>corrected</u> Appendix. The *Erratum* relates only to the Appendix as originally filed, and only with respect to the proposed revised text of Section 97.307(f)(3). The remainder of the Petition was correct as filed.

requirement now in the rules for the RTTY and data subbands listed above that data emissions must be a specified² digital code listed in § 97.309(a) of the FCC rules. The Petition, if granted, would permit the utilization of existing and future data protocols which allow greater throughput, while limiting data emissions to those which are reasonably spectrum efficient.

- 2. ARRL appreciates the efficiency and responsiveness exhibited by the Wireless Telecommunications Bureau in its extremely prompt handling of ARRL's Petition. It was placed on Public Notice very quickly after its filing and the matter is obviously of great interest to the Amateur Radio community. More than 700 comments have been filed thus far, which is a large number indicating that the issue of data communications is an important one in the Amateur Radio Service. It is also gratifying that the majority of the filed comments are supportive of the proposals in the Petition.
- 3. Some of the comments filed to date in this proceeding, however, which oppose the relief requested in the Petition are premised on certain recurring misconceptions or errors of fact. The Part 97 rules governing permitted emissions in the medium frequency and high frequency (MF and HF) Amateur allocations are not entirely straightforward or intuitive. Some of these misconceptions are therefore understandable. In addition to the recitation in Paragraph numbered 1 above of what the Petition <u>does</u>, however, it is desirable as well to have a summary of what the Petition does <u>not</u> do. RM-11708, as corrected by the *Erratum* we filed, would <u>not</u>:
 - A. Have any effect whatsoever on the HF subbands where phone and image emissions are now permitted. The petition would not permit digital voice transmissions in the data and RTTY subbands because digital voice is defined in the Commission's rules as voice (i.e. phone), <u>not</u> data, per Section 97.3(c)(5) of the Rules.
 - B. Have any effect on CW operation in the HF bands.

² This does not mean that each digital code is or must be specifically listed in the rules. Digital codes are "specified" if the technical characteristics of the emission are publicly documented for the purpose of facilitating communications. See Section 97.309(a)(4) of the Commission's Rules.

- C. Change the restrictions on automatically controlled digital stations. The Section 97.221 rule would remain unchanged. That rule now prohibits automatically controlled RTTY or data emissions below 6 meters unless: (1) the automatically controlled station is responding to an interrogation <u>and</u> the occupied bandwidth is less than 500 Hz; <u>or</u> (2) the station is transmitting in one of nine very small HF subbands listed in the rule.
- D. Permit data emissions to use occupied bandwidths in excess of what is presently allowed. It would instead, for the first time, limit the bandwidths of data emissions. Now, the rules for HF data emissions permit and in fact encourage spectrum inefficiency, allowing data transmissions of *unlimited bandwidth* as long as the symbol rate is sufficiently slow.
- E. Change which modes are allowed in which subbands or affect any emission other than data. The Petition proposes no changes that would affect in any way the existing rules governing Morse telegraphy, phone, and image emissions.
- F. Add rules that affect digital voice operation (As noted above, digital voice is defined in Section 97.(3)(c)(5) the Commission's rules as phone, not data).
- G. Expand the frequencies on which unspecified digital codes may be used. This is the subject of ARRL's November 26, 2013 *Erratum*. It was never ARRL's intention to permit unspecified digital codes at HF.
- H. Have any effect on Section 97.307(f)(2), which limits the bandwidth of a non-phone emission to the bandwidth of a "communications quality phone emission of the same modulation type." This provision does NOT apply to the RTTY and data subbands at HF. It applies ONLY to the phone and image subbands.
- I. Finally, the petition would not initiate any broad plan to convert to regulation of emissions by bandwidth rather than by emission type. It is, instead, a narrow means of eliminating an outdated limitation in the FCC rules which precludes radio amateurs from experimenting and contributing to the radio art.
- 4. It is hoped that those who have filed comments in this proceeding or who anticipate doing so will review the above summary of what the Petition in this proceeding does and does not propose, and that they will find it helpful in evaluating the proposal for themselves, unhindered by any misconceptions about the existing rules or the proposed changes. One topic that has received some scrutiny is the proposed 2.8 kilohertz maximum bandwidth for data

emissions in the HF subbands where locally or remotely controlled data emissions are permitted. Some comments say that bandwidths greater than 2.8 kilohertz for data emissions should be permitted in order to permit a wider array of data emissions now and in the future. Others argue that 2.8 kHz is too wide, potentially allowing usurpation of the band to the detriment of CW and other narrow bandwidth emissions. In proposing a 2.8 kHz maximum bandwidth for data emissions at HF, ARRL attempted to balance two competing objectives: (1) facilitating the use of current and future data emissions; and (2) protecting against usurpation of the band by a few data stations. Some bandwidth limit is necessary if the outdated symbol rate limit is eliminated, as it should be. It is not desirable to permit by rule an environment in which a few data stations using large swaths of spectrum could operate to the detriment of other modes in the very narrow HF Amateur allocations. It would not be possible, on the other hand, to reduce the permitted maximum bandwidth for data emissions at HF much below 2.8 kHz without prohibiting data modes that are in legal use now. So, while there is some reasonable debate about the precise maximum bandwidth for data emissions at MF and HF, the number should not be much more or less than 2.8 kilohertz.

5. ARRL is gratified at the Commission's responsiveness in addressing the issues raised in the instant Petition, and for the opportunity to address the concerns of those who have filed comments to date, and who will by the comment date.

Therefore, the foregoing considered, ARRL, the national association for Amateur Radio,

again respectfully requests that the Commission grant the relief requested in the Petition and modify the rules as per the revised *Appendix* tendered with ARRL's *Erratum*.

Respectfully submitted,

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