

1. I have carefully studied the text of RM-11708 filed by the American Radio relay league (ARRL) on November 15, 2013. In the Comment I am filing herewith I have referenced specific items contained in RM-11708 by their paragraph no. and the line nos. within that paragraph.

2. My Comment also contains references to certain notices of the Commission or those published by the executive leadership of ARRL. Of the latter, a Briefing Memorandum relating to RM-11708, is dated December 23, 2013, and states (page 2 lines 1-5): “The *Petition* WOULD NOT...Have any effect on CW operation in the HF bands,”

3. My Comment intends to show that this ARRL written statement, whose intended message appears nowhere in their filed Petition, is patently false.

4. Turning first to RM-11708, para. 3, lines 1-3, “An authorized bandwidth limitation is reasonable and may be necessary to ensure equitable and efficient sharing among Amateur licensees of very limited and heavily used Amateur Radio Spectrum especially at HF).” This accurately describes the crowded situation which exists within that spectrum, and entirely acceptable is the proposed remedy of ‘an authorized bandwidth limitation’.

5. As RM-11708 continues, such a bandwidth limitation ceases to be an optional (‘may be necessary’) undertaking, but becomes a vital component of this Petition; “A reasonable bandwidth limitation would facilitate sharing in the bands in which data transmissions are made under local or remote control”, (para. 3, lines 16-17).

6. At this point a ‘reasonable bandwidth limitation’ has yet to be quantified. However, para. 3, lines 17-19 state, “Furthermore, there is precedent for such an approach in the present Amateur radio regulations: the 60 meter channels near 5.4 MHz have a maximum authorized bandwidth (2.8 kHz)”. It must be pointed out that these ‘60 meter channels’ do NOT represent a usable precedent. This 60 meter allocation was delivered to amateur radio as five individual channels, none of which are directly adjacent to one another in frequency. In fact the four inter-frequency separations are 2.2, 11.7, 17.2 and 29.2 kHz. Contrast this “channelized” configuration with all

other amateur radio frequency allocations in the HF region (1.8-29.7 MHz) where there are no individual channels between the upper and lower frequency limits, and as such these frequency allocations are universally and accurately termed “bands”.

7. The five channels near 5.4 MHz do not represent a situation analogous to any of the nine HF amateur bands. ARRL’s declaring the operation authorized for these five channels to be a precedent for its desired changes is simply an invalid proposition. Its presence in RM-11708 however serves as a convenient point of entry for the proposed 2.8 kHz bandwidth. “ARRL requests that the Commission...apply to all locally or remotely controlled data emissions below 29.7 MHz a maximum bandwidth of 2.8 kHz.”, (para. 4, lines 4-7).

8. This Comment will contend that the 2.8 kHz bandwidth limit that ARRL has proposed be applicable to data emissions THROUGHOUT the nine amateur bands, and presumably also to the five channels neighboring 5.4 MHz., is not “reasonable”, (that earlier appearing adjective having been dropped from the ARRL request cited in the preceding paragraph).

9. Since their creation seven of the nine bands allocated to amateur radio in the HF region have been equipped with sub-bands that specify permitted emission types. Historically, the creation of these sub-bands occurred when it was recognized that different types of emissions often caused interference to each other. With the arrival of radio telephony to amateur radio, it was desired to avoid the earlier conflict between spark and CW. Sub-bands were created to separate voice from CW communications. For voice its sub-band had statutory limits, and in the case of CW to avoid interference to the voice sub-band. its intra-band limits have been universally observed by convention.

10. This long-established separation of voice from CW implicitly acknowledges their different bandwidths without setting specific bandwidth limits for each mode. When this was initially put into practice, voice bandwidths were on the order of 6 kHz, but technical advances beginning in the 1950s have reduced almost all amateur voice emissions to about 2.8 kHz. CW emission remains at its much

narrower bandwidth of 200Hz. With further improvements in reception technology satisfactory voice communication can take place despite frequency-adjacent interference with received bandwidths of nearly 1.8 kHz.

11. The implicit bandwidth-defined character of the sub-bands in the HF region is longstanding in its recognition by the Commission. In WT Docket no. 04-140, FCC-149, dated October 6, 2006, it writes, “We believe that separation of emission types by bandwidth is accepted in the amateur service as a reasonable means to minimize interference on shared frequencies and bands...”, (para. 19, lines 5-7).

12. It is interesting that in all 11 pages of ARRL’s RM-11708, including its footnotes, the word “interference” does not appear, not even once. This omission may bespeak a reluctance to reveal the findings of its internal deliberations, or more worryingly, the subject of interference to existing amateur radio users of the HF spectrum was never addressed. However, given the previously noted Briefing Memorandum of December 23, 2013, in which ARRL maintains that its Petition would have no effect on CW operation, it seems likely that it had examined the matter of interference but elected to make no mention of it when filing RM-11708.

13. For the impact of ARRL’s proposed changes on existing amateur users of amateur frequency allocations to be completely absent from their RM-11708 is a serious omission. This subject needs to be considered in this and other Comments filed, and thereafter by the Commission. Interference minimization did appear in the Commission’s WT Docket, as noted above.

14. In RM-11708 there are numerous mentions of the 2.8 kHz maximum bandwidth limit. Although this figure is invariably stated to be a maximum one, it is important to note that 2.8 khz is the bandwidth that will be approached 100 percent of the time when PACTOR 3 and PACTOR 4 type emissions with their 2.4 kHz bandwidths are deployed. Were 2.4 kHz bandwidth emissions allowed throughout amateur radio’s HF sub-bands now occupied by narrowband non-voice communications, CW and RTTY operations with their respective bandwidths of 200 Hz and 1 kHz, would be subjected to the considerable interference from 2.4 kHz digital

emissions, something that would be nearly impossible to remedy when their source is remotely controlled.

15. Were RM-11708's stipulated 2.8 kHz bandwidth to be implemented, digitally transmitted data's interference to operators using narrow bandwidths will become a reality.

16. RM-11708 promises greater efficiency of data transfer by wireless by virtue of large volumes of material transmitted at high data rates (data bits per second). One cannot help but wonder why this vastly increased data handling capability is really needed. What is the expected origin of this sizable amount of communications traffic? Nothing within RM-11708 gives a clear indication of where it will come from. Amateur radio licensing is only growing at around one percent each year, and that will certainly not provide a huge leap in originated digital traffic.

17. There have begun to appear indications that certain groups with interests other than amateur radio have received ARRL's encouragement to obtain amateur radio licenses in order to engage internet-connected means of low-cost wireless communication that would replace those communications service providers presently used.

18. Promotion of amateur radio that leads to the granting of amateur radio licenses is of course relevant to ARRL, which, like almost all organizations, seeks to enlarge its membership. Knowledge of how ARRL goes about this is not within this author's capability, and being external to this Comment, it requires no further mention.

19. This Comment solicits the Commission to not comply with ARRL's request to "issue a Notice of Proposed Rule Making at an early date, so as...to establish a bandwidth limit of 2.8 kilohertz for Amateur data emissions below 29.7 MHz.", (para. 13, lines 19-23). Rather, there must first be a clear acknowledgement of the definite likelihood of interference that will be caused to existing users of the frequency allocations into which ARRL seeks to introduce the provisions of its RM-11708. And if whatever measures necessary to mitigate such interference cannot be incorporated, then ARRL's request to the Commission as it now stands should be denied.

20. This Comment also urges the Commission to learn from ARRL the basis for its belief that there looms a huge increase data-based traffic needing to be passed via amateur radio, therefore making the provisions of RM-11708 a necessity. What are the presumed origins and content of that traffic? Are its origins and content appropriate to and permitted by the amateur radio service?

21. This Comment' sole author is an active radio amateur, continuously licensed since 1965, with continuous ARRL membership for more than 55 years.