Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the matter of	)	
	)	
Amendment to Part 97 of the	)	WT Docket No. 05-235
Commission's Rules to Implement	)	
WRC-03 Regulations Applicable to	)	RM-10781, RM-10782, RM-10783,
the Requirements for Operator	)	RM-10784, RM-10785, RM-10786,
Licenses in the Amateur Radio Service	)	RM-10787, RM-10805, RM-10806,
	)	RM-10807, RM-10808, RM-10809,
	)	RM-10810, RM-10811, RM-10867,
	)	RM-10868, RM-10869, RM-10870

To The Commission:

REPLY COMMENTS OF W. J. J. HOGE
TO THE COMMENTS OF ARRL, THE NATIONAL ASSOCIATION FOR AMATEUR RADIO

1. I hold an Amateur Extra class amateur radio license. My call sign is W3JJH. I am a member of ARRL, the National Association for Amateur Radio.

2. I wish to express my disagreement with the comments filed by the ARRL[1] in the matter of the above captioned *Notice of Proposed Rule Making and Order*.

3. The ARRL states that the Commission should use this *Rule Making* to modify the operating privileges of Technician class licensees. While I support the general thrust of the ARRL's proposed changes in Technician operating privileges, *I believe that the Commission has correctly limited the scope of this* NPRM *to the elimination of the manual telegraphy testing requirement*—that is all that is required to "Implement WRC-03 Regulations Applicable to the Requirements for Operator Licenses in the Amateur Radio Service." Other issues should be addressed in a further *NPRM*.

[1] http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6518176064

4. The ARRL comments seem to question the Commission's understanding "that the elimination of Morse telegraphy will constitute a more efficient use of Amateur Radio spectrum."[2] This is a red herring—there is nothing in the Commission's proposal that would eliminate the use of manual telegraphy by Amateur Radio licensees. While it is true that Morse telegraphy is efficient in its trade-off of bandwidth vs. data rate, it is not as efficient as some other modes of communication. Using the generally accepted PARIS weighing scheme for element rate, a 20-word/min Morse code signal contains 1000 elements per minute. That results in a single "dit" being 60 ms wide. The minimum sampling rate that allows accurate detection of that dit signal is 16.7 Hz. Because radiotelegraphy uses amplitude modulation, the theoretical minimum bandwidth for 20-word/min telegraphy would be 33.3 Hz. While that might be possible with machine detection of the signal, detection via a human operator will probably require a system bandwidth on the order of 100 Hz because of psychoacoustic limitations. 2 kHz of spectrum would be needed for 10 such channels delivering 200-word/min throughput, a rate roughly equivalent to normal English language speech. Many amateurs operate using 1.8- or 2-kHz filters for single-sideband radiotelephony during crowded band conditions. Thus, manual Morse telegraphy operated near the limits of its bandwidth-vs-throughput capabilities barely equals the spectrum efficiency of a commonly used radiotelephony method. Furthermore, very few amateur operators have radios that are capable of using 100-Hz channel spacing; 500 Hz would be a more normal minimum value for practical radiotelegraphy. The Commission should ignore this and other arguments touting the myth of manual telegraphy's spectrum efficiency.

5. The ARRL asserts

> Morse telegraphy, the only manual operating skill that exists in Amateur Radio, is an element of communications ability that should be include in the portfolio of operating skills demonstrated by the most accomplished radio amateurs. The Amateur Extra Class license has traditionally focused heavily, and indeed almost exclusively, on specialized operating techniques. This is the proper focus of that highest license class. The examination should also include a minimal demonstration of Morse telegraphy, which remains a useful, often-used, and extremely popular means of domestic and

[2] *ARRL* at 2

> international Amateur Radio communications. Retaining Morse telegraphy as a requirement for only the Amateur Extra Class license, in ARRL's view, places Morse telegraphy in a proper, balanced perspective.[3]

While it is true that Morse telegraphy has become a specialized communication method, it is certainly not an advanced technique. The question pool for the Amateur Extra examination covers many communications techniques. No one is examined on all of them, but each examinee is tested on a randomly selected set of questions from the pool. Requiring that only one method always be tested elevates that technique above the others. That is not balance. Questions concerning Morse telegraphy could certainly be added to the question pool, but requiring a demonstration of proficiency in the use of a specialized, obsolete mode of communication does not make sense. The Commission is correct in its view that telegraphy testing should be eliminated across the board.

6. I encourage the Commission to act as expeditiously as possible to amend its Rules as proposed in the *Notice of Proposed Rule Making and Order*. I also encourage the Commission to proceed with an additional *Notice of Proposed Rule Making and Order* to modify Technician class operating privileges along the lines as proposed by the ARRL and to do so at an early date.

Respectfully submitted,

/s/
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Dated: 1 November, 2005

[3] *ARRL* at 16