

**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 RONALD B. ADAMS II, *ET. AL.***

1. I hold an Amateur Extra class amateur radio license. My call sign is W3JJH.
  
2. I wish to express my profound disagreement with the comments filed by Ronald B. Adams II and others in the matter of the above captioned *Notice of Proposed Rule Making and Order*. Mr. Adams states that the code test “instill [*sic*] a sense of ... tradition in the new licensee.”<sup>1</sup> Even if this were true, it is not germane to the matter at hand. The Commission’s Rules clearly state that the purpose of the Amateur Radio Service is expressed in the following principles:<sup>2</sup>

(a) Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications.

(b) Continuation and extension of the amateur’s proven ability to contribute to the advancement of the radio art.

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<sup>1</sup> [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6518139059](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6518139059)

<sup>2</sup> 47 CFR 97.1

(c) Encouragement and improvement of the amateur service through rules which provide for advancing skills in both the communication and technical phases of the art.

(d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts.

(e) Continuation and extension of the amateur's unique ability to enhance international goodwill.

While many ham radio operators enjoy communicating via manual Morse telegraphy, maintenance of such "traditions" of a group of hobbyists/enthusiasts is not part of the mission of the Amateur Radio Service. The Commission should ignore Mr. Adams' and any similar appeals to preserve the "tradition" of Morse telegraphy.

3. I wish to express my profound disagreement with comments submitted by Merritt W. Olson. Mr. Olson believes that retaining manual telegraphy testing is a national security issue.

Today only amateur radio provides a pool of trained Morse Code operators available to the government just for the asking. The Army, Navy, Air Force, Marine Corps, and the Coast Guard suspended training of Morse Code operators. Yet today thousands of Morse Code messages are routinely being sent by foreign operators who rely on it as a means of sending coded clandestine messages to spies in the US thereby controlling their actions.<sup>3</sup>

Even if be true that Al Qaeda and other enemies of the United States use manual Morse telegraphy to communicate with agents in the U. S. (as opposed to using encrypted email), the National Security Agency has no public job postings for Morse Intercept Operators as these comments are being drafted. The government agencies responsible for national security are not looking for a large pool of trained telegraphers. Indeed, manual telegraphy has been effectively eliminated from the United States' national security infrastructure. While maintaining a pool of trained

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<sup>3</sup> [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6518136845](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6518136845)

operators is one of the purposes of the Amateur Radio Service, the Commission should not continue to maintain an operator skill for which neither the government nor private industry has any need. The Commission should ignore Mr. Olson's and any similar appeals to preserve telegraphy testing on national security grounds.

4. Steven D. Katz<sup>4</sup> restates the ideas that the manual telegraphy test is a “ ‘behind the wheel’ ” test that demonstrates good operating practice and that manual telegraphy's potential use in emergency communications makes it so vital that all HF amateur operators must demonstrate proficiency with Morse code. The Commission has already examined the evidence for and against these propositions and, after weighing that evidence, rejected both. Mr. Katz offers no new evidence to support his positions. The Commission should ignore Mr. Katz's and other similar rehashings of old arguments that do not introduce new facts for consideration.

5. Albert J. Schramm<sup>5</sup> asks that the scope of the *Notice of Proposed Rule Making and Order* be expanded to clarify the station identification requirements in 47 CFR 97.119. While Mr. Schramm's comments may have some merit, elimination of the telegraphy requirement is not a reason to adjust the station ID rules *per se*. The public interest would be served best by moving forward with the changes to the Commission's Rules as outlined in the *NPRM* and deferring consideration of other changes to a later date.

6. Myron W. Manker asserts that since Morse telegraphy is a low-bandwidth mode of transmission,

[t]o say that eliminating Morse code telegraphy would produce a “more efficient” use of the frequency spectrum allocated to amateur radio service does not seem to be a valid argument.<sup>6</sup>

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<sup>4</sup> [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6518113148](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6518113148)

<sup>5</sup> [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6518013217](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6518013217)

<sup>6</sup> [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6518172322](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6518172322)

While it is true that Morse telegraphy is efficient in its trade-off of bandwidth vs. data rate, it is not as efficient as 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.

7. 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*.

Respectfully submitted,

/s/  
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Dated: 1 November, 2005