

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

In the Matter of)	
)	
Amendment of Part 97 of the Commission's Rules Governing the Amateur Radio Service to Implement Changes to Article 25 of the International Radio Regulation Adopted at the 2003 World Radiocommunication Conference)	RM-10867
)	
)	RM-10870
)	

Via the ECFS

Reply to Comments of James P. Miccolis Made on 23 April 2004

by Leonard H. Anderson

Mr. Miccolis' [Miccolis] Comments are that of a long-tenured conservative in United States Amateur Radio. Of his Comments to two of the four 2004 Petitions, I will address principally equivalent paragraphs in my Reply to his Comments.

Please allow me to state that I am a retired electronics design engineer with no vested interest in any professional or amateur radio activity nor any educational institution nor with any of those who have commented on these three Petitions for Rule Making. All of the following comments are those of a private citizen fortunate to experience a half century in the radio-electronics industry and military of the United States, that including radio communications.

A. Elimination of the Telegraphy Test is *Bad*?

1. Mr. Miccolis states, "*Such elimination is not in the best interest of the Amateur Radio Service. Morse Code is the second most popular mode used by amateurs on the bands below 30 MHz, second only to single sideband voice communications. While the use of Morse Code has essentially disappeared in other radio services, the mode is widely used by radio amateurs for a variety of purposes, particularly on the HF and MF amateur radio bands. Since an amateur rdio license authorizes its holder to operate only in the amateur radio bands, it is only logical that amateur license requirements be based primarily on what modes and technologies amateurs actually use on the air, and only secondarily on what modes and technologies other services use. Therefore, the argument that the decline of Morse code use by other services should result in elimination of any*

Morse code testing for an amateur radio license is faulty."¹ I submit that such an expression of logic is itself faulty for a variety of reasons.

2. The Commission has **never** required any manual proficiency test for licensing in the **most popular** mode on HF: Voice. There is **no** justification for retention of the manual telegraphy test for being the *second most-used mode*.

3. The general definition statements about United States Amateur Radio is that it be a *pool* or *reservoir of trained radio operators* for some vague national purpose. Since all other radio services no longer use radiotelegraphy for communications, there is **no need** to have a reservoir of radiotelegraphers for any undefined national purpose other than **in** Amateur Radio.

4. There is **no regulation** on manual proficiency testing of **voice, data, or image modes** for any amateur license class. Yet, there has always been a manual telegraphy proficiency test for licensing. That a manual telegraphy test was there at the start in 1912, and never removed, is no reason to retain it.

5. Commission regulations do **not** mandated manual radiotelegraphy mode use **over** other modes. **All allocated modes are optional for use.**

6. There is **no regulatory need** to maintain a manual telegraphy test for license examination purposes. That was stated by the Commission in 1990 and again in 1999.²

7. A manual telegraphy proficiency test establishes only **one** thing about an applicant: Proficiency at manual telegraphy. **Nothing else.**

8. Manual telegraphy has existed as a craft for 160 years.³ It is **not** *state of any art* and certainly not any *advancement* in communications.

9. Manual telegraphy skills can be learned **off** of any radio circuit. Most telegraphy-proficient individuals have begun learning through recordings or in telegraphy classes.⁴ There is **no valid reason** to retain any manual telegraphy proficiency test for Amateur Radio licensing.

¹ Identical wording in Miccolis on RM-10867 in 6th paragraph, Miccolis on RM-10870 in 11th paragraph.

² Proceeding 90-53 and Report & Order 99-412.

³ Based on the first commercial telegraph system installed Baltimore, MD, to Washington, DC, in 1844.

⁴ Informal information to this commenter from individuals over a four-decade time span, no exceptions.

B. The Telegraphy Test is Required to *Show The Way Into Simple Radio Hardware?*

10. Mr. Miccolis states, “*Skill in Morse Code, even at a very basic level, permits amateurs to use radio equipment ranging from very simple to highly advanced designs, and technologies of almost any vintage. Morse Code skill encourages amateurs to actually build their own radio equipment by offering an easy first step, and a growth path that leads to almost any useable technology.*”⁵ Those are **illogical** connections for several reasons.

12. Voice and image communications technologies require **no** manual telegraphy skills. Data communications requires **no** manual telegraphy skills. Old electromagnetic-machine teleprinters (often classified as *telegraphy* equipment) require **no** manual telegraphy skills. The **only** communications technology requiring telegraphy proficiency is radiotelegraphy itself.

13. The parts count and complexity of a simple FM voice transmitter and a simple on-off-keyed radiotelegraphy transmitter is the **same**.⁶

14. The assumption by all *simplicity* proponents is that all radio amateurs *begin knowing very little about radio-electronics*. That is **not** an absolute. Far from it. Electronic component vendors of today offer an amazing variety of both components and kits for everything from Amateur Radio to music amplifiers to robotics to test equipment to home electronics experimental packages. Any citizen can **enter** Amateur Radio **at any age, any previous experience**.

15. A manual telegraphy examination does not prove soldering, assembly, or other radio construction skills.

16. A manual telegraphy examination does not prove antenna or transmission line knowledge.

17. A manual telegraphy examination does not prove radio theory knowledge.

18. A manual telegraphy examination does not prove knowledge of radio regulations.

19. A manual telegraphy examination only proves proficiency in manual telegraphy.

⁵ Miccolis on RM-10867 in 13th paragraph, Miccolis on RM-10870 in 18th paragraph, wording identical.

⁶ Based on comparison of typical two-vacuum-tube or two-transistor Class C biased stages, the telegraphy key replaced by a simple push-button switch, microphone, and voltage-variable-capacitance diode to modulate the oscillator stage of the simple FM voice transmitter. The voice transmitter microphone can be that of the receiver’s speaker or headphones as is common in modern hand-held transceivers. A telegraph hand key cannot be used as a speaker or headphones.

C. Amateur Radio for A Living Museum of Archaic Radio Skills?

20. Mr. Miccolis states, “*The Amateur service is different from other radio services in several ways, such as its noncommercial nature. Its most unique feature, however is that amateur radio is about radio for its own sake, rather than as a means to an end. Unlike other services, operating skill and technical know-how are fundamental qualities of the radio amateur. Other radio services have long focused on eliminating the need for operator skill and technical competence because those services, unlike amateur radio, are not fundamentally concerned with radio as an end in itself.*”⁷ That has a number of errors and disconnections which require correction.

21. The first word of *Amateur Radio* denotes it as not professional, not for pecuniary compensation. Ergo, *non-commercial*. Amateur.⁸

22. There is a decided ignorance of the tasks of other radio service operators displayed by Miccolis as to *know-how*. Implying that other radio services are so lax on knowledge is a decided **insult** to the broadcasting industry, civil aviation, maritime world, and all of those services which enable constant communications by means of radio.⁹

23. The rest of the radio world decided some time ago that manual radiotelegraphy was too slow, too error-prone, too restricted by the need to have radiotelegraphy specialists at each end of the radio circuit. Those in the radio world could see the replacement of manual telegraphy on wireline circuits with teleprinters. The last wireline manual telegraphy service in the United States shut down two decades ago.

24. The epitome of radio operator skills of the 1930s *may* have been radiotelegraphy proficiency both commercially and militarily. This present time is **seven decades past** that time. The state of the art of radio has advanced far from manually turning an RF carrier on and off in a telegraphic code sequence to communicate.

25. Continuation of known radio operating skills is **not advancing any state of the art**.

26. There is absolutely **no** harm or fault in **using** radiotelegraphy.

⁷ Miccolis on RM-10867 at 7th paragraph, Miccolis on RM-10870 at 12th paragraph, wording identical.

⁸ No college diploma is required to understand that.

⁹ Having been in broadcasting, civil aviation, in private business radio as a co-owner, and a long time spent on military communications equipment design both in the laboratory and out in the field for applications counseling, Miccolis’ remarks must be taken as due to his ignorance of the radio world outside amateurism. Having served in the United States Army assigned to the third largest Army Command and Administrative Network station for three years as operations and maintenance supervisor from 1953 to 1956, we alleged *know-nothings* got the messages through on HF 24 hours a day, 7 days a week.

27. Keeping the manual telegraphy **test** is akin to forcing the Commission to be some *curator of a living museum of archaic radio skills*. That is not a chartered purpose of the Commission.

28. If Miccolis' allegation is true that Amateur Radio is about *radio itself* then the emphasis should be on radio theory, regulations, and a host of things encouraging a **true advancement of the state of the radio art**.

29. Outdated requirements applicable seven decades ago should be dropped, relegated only to the history archives. Amateur Radio should start looking to the **future, not the past**. The Commission should continue to offer all citizens sufficient options in regard to radio. Option is not a failure.

I thank the Commission for allowing an independent citizen's viewpoint to be heard and with the ability to share a half century's accumulation of experience and knowledge in radio and electronics at work and in hobbyist activities.

Respectfully submitted this 26th day of April, 2004,

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