

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

In the Matter of)	
)	
1998 Biennial Regulatory Review --)	WT Docket No. 98-143
Amendment of Part 97 of the Commission's)	
Amateur Service Rules.)	
)	
FCC Report and Order)	FCC Report and Order 99-412
Released December 30, 1999)	

To: The Commission

cc: Chairman William E. Kennard
Commissioner Susan Ness
Commissioner Michael Powell
Commissioner Harold W. Furchtgott-Roth
Commissioner Gloria Tristani

PETITION FOR PARTIAL RECONSIDERATION

DATE: January 17, 2000

On behalf of

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EXECUTIVE SUMMARY

In accordance with the procedures set forth in 47 CFR §1.429, we respectfully request that the Commission reconsider and modify, in part, the *Report and Order*, FCC 99-412, released December 30, 1999 (hereafter referred to as R&O), and relating to WT Docket 98-143. The R&O significantly simplifies the Amateur Radio Service and streamlines a number of procedures. However, it also compromises the basis and purpose of the Amateur Radio Service (defined in 47 CFR §97.1). At a time when we are preparing to enter a new century, the R&O discourages technical innovation, unnecessarily lowers technical requirements for licensing, and fails to address major issues brought forth in the comments and reply comments.

This petition addresses problems created by the R&O, including: (1) decreasing emphasis on the technical questions on the written tests, (2) failure to consider comments calling for an end to applicants repeating failed test elements at one sitting by just paying a second fee to the Volunteer Examiner; (3) unnecessarily reducing the telegraphy speed requirement for Amateur Extra Class; and (4) merging the “Technician” and “Technician Plus” designations within the FCC database, which hampers enforcement and thereby may violate international treaty.

We request that the Commission partially reconsider the R&O and: (1) retain sufficient question pool categories within 47 CFR Part 97 to maintain, or increase, the proportion of technical and theoretical questions on each written test; (2) set the total number of questions per written test to 50 questions each for the Technician and General Classes, and 100 questions for Amateur Extra Class; (3) allow an applicant to fail only *one* written element and *one* telegraphy element per VE session (or per day), or declare that such a rule change is beyond the scope of the present rule making; (4) retain the 20 wpm telegraphy test for the Amateur Extra Class, and do not allow code waivers; and (5) keep “Technician Plus” designation within the FCC’s database.

INTRODUCTION

1. Pursuant to the Commission's rules (47 CFR §1.429), we hereby respectfully request that the Commission reconsider and modify, in part, the *Report and Order*, FCC 99-412, released December 30, 1999 (hereafter "R&O"), relating to WT Docket 98-143. In support of our petition, we state as follows:

2. The petitioners are all active, licensed amateurs who serve their communities through the Amateur Radio Service. They are drawn from a cross section of professions: One is a social scientist, another a retired engineer, and the third runs a small business. None of them has any financial interest in the outcome of these proceedings, nor will they gain additional privileges¹. They are united in one goal: To ensure that the Amateur Radio Service remains a fundamentally technical service in the 21st century as it has remained throughout the 20th century.

3. Mr. Wormser, N5LF, has been licensed since 1975. He is a Volunteer Examiner (VE) with ARRL-VEC² and W5YI-VEC³. He is experienced in HF and VHF emergency communications in Travis County ARES⁴, SKYWARN⁵, and as a volunteer at the Texas State Emergency Operations Center. He is a member of the Texas CW Net (telegraphy) and 7290 Traffic Net (SSB voice

¹ Many of the commenters who recommended lowering technical standards stand to gain from increased sales of books, magazines, and equipment. Others recommended lower standards while admitting that they wanted access to the HF bands without meeting any technical requirements. The petitioners believe it is relevant to consider this when evaluating comments.

² Sponsored by the American Radio Relay League (ARRL), Newington, CT.

³ Directed by Frederick O. Maia, W5YI-Group, Inc., Dallas, TX.

⁴ Amateur Emergency Radio Service is a volunteer organization sponsored by the ARRL.

supplemented with telegraphy). He has taught Novice and Technician courses, he repairs his own equipment, and he operates telegraphy, SSB, FM, VHF packet, RTTY, AMTOR, and PSK31. Mr. Wormser is vice president of the Austin Amateur Radio Club, Inc., which is one of the oldest radio clubs in the United States⁶, and he is a past president of the Southern Methodist University Amateur Radio Club. He is also a member of the American Radio Relay League (ARRL), the Austin Repeater Organization, and the FISTS CW Club—one of the fastest growing amateur radio clubs in the United States⁷.

4. Mr. Adsit, NY2V, was first licensed in 1948. He is a veteran HF and VHF emergency and traffic operator. He is a member and founder of the Central NY Traffic Net, member and former net manager of the NY State CW traffic net, a veteran Transcontinental Corps⁸ operator, and member of Second Region Net and Eastern Area Net, as well as a number of other HF nets using SSB. He also uses VHF packet in traffic work, and is a regular HF user of the PacTOR, AMTOR and GTOR digital modes, as well as an HF CW operator with an ARRL 35 wpm Code Proficiency certificate. He is a

⁵ SKYWARN is a volunteer emergency storm spotting network sponsored by NWS.

⁶ The Austin Amateur Radio Club, Inc., first became affiliated with the ARRL on December 5, 1919, and was the fifth club to affiliate with ARRL after World War I.

⁷ From April 1997 to April 1999, FISTS grew from just over 3000 to over 6000 members. FISTS is dedicated to assisting to those who wish to acquire on-the-air Morse code proficiency.

⁸ ARRL's *Public Service Communications Manual* (1996:47) states that members of the Transcontinental Corps (TCC) must have "the highest caliber of operating ability and NTS [National Traffic System] savvy." TCC forms the backbone of NTS, linking the US and Canada from coast to coast. They relay messages by combining of phone, telegraphy, and digital modes.

member of Onondaga County ARES, RACES, and SKYWARN. He holds the ARRL A-1 Operator Award and is an ARRL Official Emergency Station as well as Official Relay Station, holding many public service awards, including Brass Pounder's League⁹. He is a member and past president of the Radio Amateurs of Greater Syracuse, member of the ARRL, and member of the FISTS CW Club, through which he assists others in on-the-air code practice. He is currently assisting a number of hams in building their stations and becoming familiar with all modes of station operation as well as how their equipment works. Mr. Adsit is a retired electronics engineer who chose that career based on teenage ham radio experience and influence.

5. Mr. Dinelli, N9BOR was first licensed in 1980. He recently upgraded from General Class to an Amateur Extra Class license and was accredited as a Volunteer Examiner with the ARRL-VEC. He is a life member of the ARRL and is president of the Metro Amateur Radio Club¹⁰. Mr. Dinelli is also a member of the FISTS CW Club. He operates many different modes, including AM, CW, DATA, FM and SSB.

6. The R&O attempts to “streamline our licensing process and eliminate unnecessary and duplicative rules.”¹¹ The R&O further states that the rules changes will “(a) allow current Amateur Radio Service licensees to contribute more to the advancement of the radio art; (b) reduce the administrative costs that we incur in regulating this service and streamline our licensing processes; (c) eliminate unnecessary requirements that may discourage or limit individuals from becoming trained

⁹ Brass Pounders League is a prestigious ARRL award given to active traffic handlers.

¹⁰ The Metro Amateur Radio Club has been affiliated with the ARRL since 1975.

operators, technicians, and electronic experts; and (d) promote efficient use of spectrum allocated to the Amateur Radio Service¹².”

7. Specific elements of the R&O (FCC 99-412) contradict its stated and implied goals: to maintain the Amateur Radio Service as a fundamentally technical service and attract technically minded individuals¹³, to encourage amateurs to advance their skills¹⁴, to contribute to the radio art¹⁵, and to reduce burdensome procedures inflicted on volunteer examiners. The R&O fails to consider major issues brought forth in a number of the formal comments that were filed, and also makes incorrect statements about the nature of emergency operations on the HF bands in the Amateur Radio Service.

8. Since about 1980, the Commission has lowered the testing standards, while concomitantly increasing the privileges to less skilled license classes.¹⁶ Some changes were based on an attempt to draw more technically inclined individuals into the service. Other rules changes lowered standards

¹¹ See, *FCC 99-412*, para. 1

¹² See, *FCC 99-412*, para. 2.

¹³ See, *FCC 99-412*, para. 30. References to the importance of emphasizing technical aspects of the service appear throughout the R&O.

¹⁴ See, *FCC 99-412*, para. 8

¹⁵ See, *FCC 99-412*, para. 2

¹⁶ Examples of reducing testing standards include: Allowing renewable Novice Class licenses (about 1978); publishing the exact questions and answers to the written exams (about 1980); changing telegraphy exams from 1 minute error-free copy to 10 fill-in-the-blank questions, then to 10 multiple choice questions (early 1980s); Novice Enhancement, which gave Novices and Technicians voice privileges on HF (1987); creating a simplified written test for the Technician Class (1987); and removing the telegraphy requirement from the Technician Class (1991).

inadvertently when they were only intended to streamline the licensing process or reduce the Commission's workload.

9. Twenty years of reducing standards reveals that a strategy of lowering technical standards does not attract technically inclined individuals--it has the opposite effect. The R&O does not provide any quantified *measures of merit* to allow evaluating the effectiveness of the "reduce the standards" strategy. Instead, its failure can be measured by the R&O's assessment that modern-day codeless Technician Class amateur radio operators are incapable of repairing their own equipment and are dependent on manufactured radios¹⁷. In 1991, the last time the Commission lowered testing standards, the stated intent was that "the amateur service should, as it has in the past, attract technically inclined persons."¹⁸

10. The low skill level of today's codeless Technicians is unacceptable; a solution is to insist on higher, not lower, technical standards. For most radio amateurs, and especially newcomers to the Technician Class, the learning process begins when the applicant studies for the written tests. It is unreasonable to expect that amateur radio operators will "contribute to the radio art"¹⁹ if they cannot even pass a test on basic electronics and radio theory. The petitioners request the Commission to act to reverse this trend toward reduced skills.

11. The elements we wish to address for reconsideration are (1) the R&O's decreased emphasis on the technical and theoretical questions on the written tests, (2) failure to consider the

¹⁷ See, FCC 99-412, para. 42 and para. 44.

¹⁸ See, Amendment of Part 97 of the Commission's Rules Concerning the Establishment of a Codeless Class of Amateur Operator License, *Report and Order*, PR Docket 90-55, para. 13.

recommendation by a number of commenters to end the practice of applicants repeating failed test elements at one sitting by just paying a second fee to the Volunteer Examiner (VE), (3) unnecessary reduction of the Amateur Extra Class telegraphy examination speed and (4), the technical legalities resulting from removing the distinction between the Technician and Technician Plus licenses. We discuss these issues presently, and offer specific recommendations.

II. EMPHASIS ON TECHNICAL QUESTIONS

The Report and Order *decreases* the emphasis on the technical questions on the written tests, and thus fails to maintain the Amateur Radio Service as a *fundamentally technical service*.

12. We applaud the R&O for emphasizing the significance of maintaining the Amateur Radio Service as a fundamentally technical service. In order to achieve that goal, the written tests for *all classes of amateur license* must retain a significant and substantial proportion of technical and theoretical questions. ***But the R&O does exactly the opposite:*** (1) it decreases the proportion of technical questions on the Technician and General written tests, (2) it reduces the cumulative number of questions needed for an applicant to achieve each license, and (3) it also reduces the total size of the question pool.

13. Instead of maintaining the current technical level of the tests, the R&O recommends reducing the Technician Class written test to rules and operating procedures, and concurs with the comments of the NCVEC (authored by Fred Maia) and Ray Adams, who were a tiny minority among the commenters. The R&O fails to mention that of 2200 comments and reply comments that the FCC

¹⁹ See, FCC 99-412, para. 2.

received, almost all who responded to the question of the technical difficulty of the written tests recommended compensating the decrease in telegraphy testing speed by *increasing* the technical difficulty of the written tests.

14. Regarding the General Class, almost no commenters suggested downgrading technical standards. Nevertheless, the R&O suggests a reduction in the General written test as well. In the two instances where the R&O describes the number of questions on the written test, the Technician and General tests are both described as “35 questions,” while the Amateur Extra Class test is described as “50 *technically oriented* questions” [emphasis ours]. The *'negative pregnant'* implies that General and Technician examinations will not contain technical questions. This dichotomy indicates how seriously the R&O would degrade the technical level of this “fundamentally technical” service.

15. As an example of the R&O reducing test standards, the R&O shares the opinions of Ray Adams that Technicians do not need to understand how their radios work, because most amateurs these days do not know how to repair their own equipment.²⁰ However, this indicates a *failure* of the current technical standards. The problem is only compounded by reducing technical skills still further.

16. The R&O shares the opinion of the NCVETC (Fred Maia) comment that today’s Technician Class licensees primarily purchase commercially-made radios, and therefore do not need to know how the electronics work. Maia further implies that such a dependency on ready-made equipment is a positive thing, because it increases sales for domestic and foreign manufacturers. If this is true, then it points to a failure of the original intent of the Technician Class as experimenters in the VHF and UHF bands. The R&O would tend to reduce the Amateur Radio Service to another non-technical

²⁰ See, FCC 99-412, para. 42.

personal radio service²¹, and would fail to attract technically inclined individuals. These petitioners believe that few such amateurs would be capable of serving the basis and purpose of the amateur service as set out in Section 97.1.

17. The R&O relies on the NCVEC Question Pool Committee to decide what the proportion of technical questions would be, influenced as it would be by the present R&O which suggests reduction in technical questions.

18. One of the primary duties of the Commission is maintaining technical standards for its services. The Commission would not be able to maintain the technical standards if they delegate all the testing standards to a party, such as the NCVEC's Question Pool Committee, which is not as accountable to the public.

19. The R&O fails to maintain technical standards in yet another way: It reduces the total number of questions in the written tests on the upgrade path to Amateur Extra. As it exists currently, the Element 4A and 4B tests have 50 and 40 questions, respectively. Element 4A is the Advanced Class test, while Element 4B is the Amateur Extra Class test. To upgrade from General Class to Amateur Extra Class requires answering 90 questions divided among two tests obtaining 74% correct answers

²¹ In accordance with both FCC regulations and international treaty the Amateur Radio Service functions as a voluntary, technical, and noncommercial service with international scope, and fostering international goodwill and cooperation. There are alternative outlets for non-technical individuals through the many other services regulated by the FCC. Examples include the Family Radio Service, the Citizens Radio Service, shortwave broadcasters, and the Internet.

on each. FCC regulations require the question pool to consist of 10 times the number of questions on each written test²², or 900 questions for Element 4A and 4B combined. The R&O will merge the 4A and 4B tests into a single 50-question test, thereby reducing the question pool from 900 to only 500 questions. Such a reduction will severely reduce the scope of the questions and a less thorough test will result.

20. We note that the NCVEC's original recommendations called for 50 questions each for the Technician and General written tests, and 100 questions for the Extra Class written test, and they believed it was not an undue burden to maintain the pool at that level. The petitioners concur with the NCVEC's original comments.

21. *Recommendation:* (1) Retain the questions categories for each written test within the regulations to a degree that ensures that the proportion of technical questions on all tests are maintained at the same levels or increased. (2) Increase the total number of questions on written tests: Technician and General should be more on the order of 50 questions each, and the Amateur Extra should be approximately 100 questions (see, Table 1).

²² 47 CFR 97.503

Table 1. Cumulative number of test questions required of license candidates to achieve each license class. The R&O significantly *reduces* the requirements for all license classes, while the petitioners’ recommend maintaining similar standards to existing rules.

License Class	Existing Rules: Cumulative number of test questions	R&O (% change from existing rules)	This Petition (% change from existing rules)
Novice	35	n/a	n/a
Technician	65	35 (46% decrease)	50 (23% decrease)
General	95	70 (26% decrease)	100 (5% increase)
Advanced	145	n/a	n/a
Amateur Extra	185	130 (30% decrease)	200 (8% increase)

III. APPLICANTS REPEATING FAILED TESTS

The Report and Order fails to address comments regarding the practice of applicants repeating failed test elements at one sitting by just paying a second fee to the Volunteer Examiner. This practice degrades our ability to test an applicant’s knowledge and is a burden for Volunteer Examiners.

22. The R&O fails to address issues raised by the few commenters who prepared formal, comprehensive comments.²³ Instead, the R&O only focuses on a few of the formal comments, such as

²³ The formal comments (e.g., ARRL, NCVEC, Wormser, Dinelli, Adsit, Billingsley) referred to here contrast to the hundreds of single issue letters and e-mails.

those by the ARRL, NCVEC, and Kenwood Corporation. As a result, the R&O ignores significant comments by Wormser, Adsit, Dinelli, and Billingsley,²⁴ that were also supported by at least 15 others.

23. One primary issue raised by Wormser, Adsit, Dinelli, and Billingsley regards testing procedures, and the practice at VE sessions of allowing license applicants to repeat a failed test element at one sitting by simply paying a second fee. In the case of the ARRL-VEC, who waives the fees for the Novice written test and all telegraphy exams, the candidate can fail test after test until they either pass or the VE team runs out of new versions to give them.

24. Wormser, Adsit, Dinelli and Billingsley recommend an end to this practice. It is an unacceptable test procedure and would not be acceptable in any of our schools or certifying boards²⁵. Before the VE system was created, applicants who failed a test element had to wait 30 days before repeating the test. This may be difficult to enforce in an environment where semi-independent VE teams administer test sessions, but it would still be reasonable to require the candidate to study some more and return another day.

25. *Recommendation.* A reasonable rule would only allow an applicant to fail **one** written element and **one** telegraphy element per VE session, or per day. We request that such a rule be added to 47 CFR 97. We further request that the R&O discuss this issue and any decision made regarding it.

²⁴ *Formal comments* by Alan J. Wormser, Fred Adsit, Michael J. Dinelli, and Tim Billingsley. *Reply comments* by Alan J. Wormser, Fred Adsit, and Michael J. Dinelli.

²⁵ It is also an undue burden to a VE team, since allowing applicants to repeat failed tests over and over makes testing sessions longer and complicates record keeping.

Furthermore, if the issue is considered a matter that is beyond the scope of WT Docket 98-143, then the R&O should so state that fact.

IV. AMATEUR EXTRA CLASS TELEGRAPHY EXAM

The Report and Order unnecessarily reduces the speed of the Amateur Extra Class telegraphy examination as a way to avoid code waivers. The new 5 wpm telegraphy speed for the General Class is adequate as a *reasonable accommodation*, thus making makes code waivers unnecessary.

26. The R&O states that telegraphy is a hindrance to those that might enter the Amateur Service or attempt to upgrade skills. Yet, the Amateur Extra Class, with the 20 wpm telegraphy exam, remains the fastest growing class of license after the Technician. The R&O is incorrect to say this is a barrier. It is only a barrier to unmotivated individuals. As the ARRL 1999 Handbook states, "Learning Morse code is as easy as learning about 40 words in a foreign language."²⁶

27. The R&O states that the commenters' opinions on importance of telegraphy testing forms a clear dichotomy. However, the R&O inadequately discusses the comments received supporting modern applications of telegraphy in the Amateur Radio Service. For example, the R&O ignores amateur radio activities such as weak signal experimentation, the necessity to **pair** telegraphy skills with SSB voice skills during emergencies on HF bands, and the distinctions between Amateur Radio and other communications services²⁷.

28. The R&O did not address the numerous examples of the modern usefulness of telegraphy

²⁶ ARRL (1999) *The Amateur Radio Handbook*. Page 3.3.

²⁷ See, e.g., Comments by Alan J. Wormser, dated August 17, 1998.

presented by Wormser²⁸ and others. For example, most of today's builders and experimenters on HF today are telegraphers because of the straightforward designs.

29. The R&O states that “no communication system has been designed in many years that depends on hand-keyed telegraphy or the ability to receive messages in Morse code by ear.”

But this statement fails to acknowledge that the most recently invented mode in Amateur Radio,

PSK31, is a direct offshoot of telegraphy. As its inventor, Peter Martinez, states²⁹,

The method I have devised for using modern digital processing to improve on the start-stop code, without introducing extra delays due to the error-correcting or synchronisation processes, is based firmly on another traditional, namely that of Morse code. Because Morse uses short codes for the more common letters, it is actually very efficient in terms of the average duration of a character. In addition, if we think of it in terms that we normally use for digital modes, Morse code is self-synchronising: we don't need to use a separate process to tell us where one character ends and the next begins. This means that Morse code doesn't suffer from the "error-cascade" problem that results in the start-stop method getting badly out of step if a start or stop-bit is corrupted. This is because the pattern used to code a gap between two characters never occurs inside a character.

Mr. Martinez combined his knowledge of telegraphy, information theory, and digital signal processing to invent a digital technique that is more robust than PacTOR and yet uses no handshaking between stations. The petitioners believe that this example is one of many³⁰ proving that knowledge of telegraphy is not obsolete knowledge.

²⁸ See, Reply comments by Alan J. Wormser

²⁹ See, Peter Martinez, G3PLX (1998), *PSK31: A New Radio-Teletype Mode with a Traditional Philosophy, Part I. RADCOR*, Radio Society of Great Britain.

³⁰ See, e.g., Emil Pocock (1998) “The Necessity of CW,” *QST* (February, page 86), ARRL; and David Sumner (1998), “It Seems to Us: The Joys of Morse,” *QST* (April, page 9), ARRL.

30. The R&O incorrectly states that telegraphy proficiency is irrelevant to emergency operations in the Amateur Radio Service. Such a conclusion is in error with respect to HF conditions, where telegraphy frequently supplements voice traffic. The effectiveness of telegraphy on HF, is well documented³¹.

31. The R&O also incorrectly states that most amateurs provide emergency communications using voice or digital modes. But this comment only applies to VHF operating conditions, and not to HF. This is further biased by the fact that VHF FM receivers are not compatible with SSB or unmodulated telegraphy.

32. The R&O is concerned with granting easier access to the HF bands, where conditions are very different than on VHF. Even in the commercial services, telegraphy continued to be used until those services shifted from HF to the VHF and UHF bands. Morse code is still used in specialized situations by the US Army Special Forces³² and in foreign marine communications. Foreign military and civilian services still use CW for a variety of issues including its low cost, easy-to-maintain equipment, simplicity, and reliability.

33. Furthermore, although packet radio is the preferred digital mode currently used on VHF for

³¹ According to John Devoldere, ON4UN, President of UBA, the Belgian equivalent to our ARRL, "Comfortable SSB reception requires a 10 dB signal-to-noise (S/N) ratio... and any CW operator can deal with a 0 dB S/N ratio quite well. Experienced operators can dig CW signals out of the noise at -10 dB S/N ratio. This proves again the inherent advantage of CW over SSB for weak-signal communications." See, John Devoldere (1999) *ON4UN's Low-Band Dxing*, ARRL, Newington, CT.

³² Communications specialists in the US Army Special Forces are required to have a proficiency of 16 wpm in Morse code (*personal communication*: Arnie Macy, communications instructor, KT4ST, Bloomingdale, GA; also (via Arnie Macy, *personal communications*): Staff Sgt. Stiles, Special Forces Recruiter, Ft. Stewart, GA; and Lt. Col. Perry Almendinger, Garrison Commander, Hunter Army Airfield, GA.

emergency communications, the R&O is incorrect in suggesting that digital communications are commonly used in emergencies on the HF bands – they are not. Almost all HF emergency communications in amateur radio, as we have stated above, use SSB voice supplemented by telegraphy. Reduction of telegraphy skills will severely hamper the ability of the Amateur Radio Service to respond to regional and national emergencies. Examples of the use of telegraphy on HF during emergencies were presented by several commenters³³, but these are not mentioned in the R&O. During the year since the end of the reply comment period, one of the petitioner’s (Wormser) has personally experienced two additional situations where telegraphy supplemented SSB voice during an FCC-declared voluntary communications emergency³⁴.

34. The R&O is mistaken in asserting that video modes are used commonly on any amateur bands during emergencies. The only instances we are aware of are use of ATV on VHF in order to conduct damage assessments after the communications emergency has passed. In any case, this use of video modes is restricted to VHF bands, to which the codeless Technician Class licensees already have access.

35. The R&O further states that the across-the-board 5 wpm speed was chosen, in part, to avoid the need for a code waiver, which was originally implemented to accommodate disabled persons

³³ See, e.g., reply comments by Alan J. Wormser, and reply comments by Michael Dinelli.

³⁴ During Hurricane Floyd, in the fall of 1999, a battery operated station from Florida had to use telegraphy to check in to the Texas Emergency Net on 3873 kHz. In the second example, the day after Hurricane Bret landed on the south Texas coast, Mr. Wormser was the amateur radio operator at the Texas State EOC’s RACES station, WC5AAH. The Texas Emergency Net on 7285 kHz was experiencing poor propagation conditions, and stations could not hear one another on SSB voice. The

who might not be able to find a reasonable accommodation for testing speeds faster than 5 wpm. Since that rule was implemented, there have been a number of reports of fraud and abuse of code waivers.

36. By reducing the speed of the General Class telegraphy exam to 5 wpm, the R&O created a license class that allows licensees access to all the activities, modes, and HF and VHF bands offered in the Amateur Radio Service. A General Class licensee has full privilege on all bands, and therefore has the opportunity to fulfill all the functions that form the basis and purpose of the service.

37. As an incentive to upgrade skills, the Amateur Extra Class license only adds a few subbands on HF, and none of the additional privileges are relevant to the basis and purpose of the service. We believe that the 5 wpm General Class is **reasonable accommodation** for those rare individuals who, for reason of a **qualified** disability, would have difficulty taking even an *accommodated* telegraphy exam at 20 wpm. For that reason, the use of code waivers for the Amateur Extra Class is now irrelevant under the R&O.

38. *Recommendation.* Maintain the Amateur Extra Class telegraphy examination at 20 wpm. Eliminate the code waiver. The General Class test, with its 5 wpm telegraphy test, is adequate as a reasonable accommodation to give disabled persons the opportunity to fulfill the basis and purpose of the Amateur Radio Service.

39. In the alternative, if the Commission is of the opinion that the General Class license would not constitute reasonable accommodation, then the Commission should retain the 20 wpm standard and allow individuals claiming an exemption to certify their own impairment under oath. A physician's certification should not be required, and neither the Commission nor the VEC's need conduct any

stations sent each other test messages in telegraphy and they were able to copy each other very easily.

routine review of these self-certifications. The undersigned petitioners believe that, while some abuses will inevitably occur, they will constitute a relatively small percentage of those upgrading to Extra Class. Therefore, we believe, the purposes of this service as set forth in Section 97.1 would be served in the vast majority of cases.

V. TECHNICIAN: DATABASE RECORDS AND ENFORCEMENT

The Report and Order removes the designation “Plus” from the Technician Plus license as it appears in the FCC database. Unlike licensees of the Technician Plus Class, the “no code” Technicians do not meet the international treaty requirements for operations below 30 MHz. Merging the two classes hampers the FCC’s ability to enforce the treaty.

40. The R&O would end the distinction between Technician and Technician Plus in the FCC database. Conversely, the R&O retains the designations for Novice and Advanced Class. The burden of proof of Technician Plus status will be on the licensee to maintain his paper license or CSCE in perpetuity.

41. The petitioners consider this an undue burden on Technician Plus licensees as well as a serious impediment to enforcing the international treaty, *Radio Regulations*³⁵, Rule S25.5, requiring all amateur stations operating below 30 MHz to have demonstrated ability in telegraphy.

42. Since the only difference between Technician and Technician Plus Classes is the telegraphy examination, if the Commission and its auxiliary observers are hampered in distinguishing between the two, then the Commission risks violating Rule S25.5 of the treaty.

³⁵ International Telecommunications Union, *Radio Regulations* (Geneva 1979)

43. *Recommendation.* The Commission should consider keeping the “Technician Plus” designation within the call sign database in order to aid in continued enforcement of the international treaty.

VI. CONCLUSION

44. The R&O streamlines the licensing process, but at the expense of relaxing the technical standards. The R&O ignores a significant issue raised by a number of commenters regarding the repeating of failed test elements at the same VE session. The R&O confuses VHF with HF emergency operations and fails to take into consideration the modern role of telegraphy in HF communications. The R&O also unnecessarily lowers the telegraphy testing speed for the Amateur Extra Class license, when the new General Class requirements form an adequate reasonable accommodation. The “Technician Plus” designation should be retained within the Commission’s call sign database just as the R&O recommends for the Novice Class and Advanced Class.

45. We request reconsideration of the items discussed above. The petitioners are convinced that the R&O is not adequate to maintain the fundamentally technical nature of the service, nor does it comport with the other bases and purposes of the Amateur Radio Service. However, if the Commission reconsiders the specific items discussed in the petition, we are confident that the service will remain relevant as we move into a new era of communications.