

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

**In the Matter of** )  
 )  
**1998 Biennial Regulatory Review;** ) **WT Docket No. 98-143**  
**Amendment of Part 97 of the Commission's** )  
**Amateur Radio Service Rules** )

**To: The Commission**

**REPLY COMMENTS OF THE  
AMERICAN RADIO RELAY LEAGUE, INCORPORATED**

The American Radio Relay League, Incorporated (the League), the national association of Amateur Radio operators in the United States, by counsel and pursuant to Section 1.415 of the Commission's Rules (47 C.F.R. §1.415), hereby respectfully submits its reply comments in the captioned proceeding, pursuant to the *Notice of Proposed Rule Making* (the Notice), FCC 98-183, released August 10, 1998. The comments in this proceeding addressed a series of Commission proposals for, and inquiries about, modification of the licensing structure of the Amateur Radio Service, in an effort to modernize and streamline the Commission's licensing rules. For its reply comments, the League states as follows:

**I. Overview of the Comments**

1. The comments in this proceeding were, essentially, as expected by the League. There were approximately 2,000 comments filed, mostly by individual licensees. Relative to other Commission docket proceedings, the number of comments filed by radio amateur licensees and amateur groups is impressive and heartening. The comments reveal that the Amateur Service is active, vital, and that the Commission's licensees in the Amateur Service are extremely interested in the Commission's handling of their licensing structure. The number of comments, and the thoughtfulness and interest that is

expressed in each of them, reveals that the Amateur Service remains an exceptionally useful and educational opportunity for the public generally. The Commission, and especially its Wireless Telecommunications Bureau, has focused its regulatory interest and attention in recent years on commercial telecommunications service providers, and has paid little attention to the private, personal, and the Amateur radio services. This proceeding reveals that the Amateur Service remains willing to step forward, participate in its own regulatory affairs to a greater extent than other services, and to serve the public, fulfilling the goals and purposes set forth at Section 97.1 of the Commission's Rules. Amateurs are willing to "carry the ball" themselves in terms of regulatory planning and execution of their own activities. To a greater extent than in other services, the Commission should heed the suggestions and advice of its licensees.

2. The comments creatively addressed revision of the licensing structure, and expressed overall a good degree of unanimity on one main point: that the current structure is overly cumbersome and requires simplification. The Commission can, on this record, and it should, confidently proceed to adopt a restructuring plan which (1) reduces the number of license classes by elimination of the Novice and Technician Plus license classes; (2) revises the high-frequency subband allocations among the remaining license classes to provide further self-training incentives; and (3) revises the nature of the written and telegraphy examination requirements to make them more relevant to modern amateur radio, and more comprehensive, though not more difficult.

3. The near-unanimity with respect to the general perception of the need to reduce and simplify the Amateur Service's license classes, however, was the extent of any real consensus to be found in the comments; there was no consensus on the specific means of doing so. The Commission should have expected no different; the Notice conducted an inquiry, and did not propose a comprehensive plan for restructuring the Service. What was requested in the Notice is what the Commission received: widely varied ideas and suggestions about options for the structure of amateur radio license classes. The comments were varied and diverse. They ranged from having one license class<sup>1</sup> to five license classes<sup>2</sup>. They ranged from suggesting no telegraphy examination requirement at all<sup>3</sup> to having three levels of telegraphy examination, the highest being the current 20 word-per-minute (wpm) speed.<sup>4</sup> They ranged from suggesting 100 questions for the Extra Class license written examination<sup>5</sup> to a suggestion of a basic amateur permit with no examination whatsoever.<sup>6</sup> Given this wide variation in proposals for license restructuring, and the different philosophical premises that underlie each, the Commission's job now is to evaluate them and to formulate a restructuring plan that makes sense for the years to come. The League's review of the comments reveals that there is a high degree of justification to be found therein for its own comprehensive, middle-ground plan for a four-tier licensing system, with modified

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<sup>1</sup> See, e.g., the Comments of Wayne Green, W2NSD, of 73 Magazine.

<sup>2</sup> See, e.g. the comments of the Marconi Chapter 138 of the Quarter Century Wireless Association.

<sup>3</sup> See, e.g. the comments of No-Code International.

<sup>4</sup> See, e.g. the comments of the California Central Coast DX Club.

<sup>5</sup> See, e.g. the comments of the "National Conference of VECs".

<sup>6</sup> See, e.g. the comments of CQ Communications, Inc.

HF subbands to account for the elimination of the Novice and Technician Plus license classes, and a reasonable emphasis on Morse telegraphy.

4. The League's Comments in this proceeding noted that the Biennial Review process offered a timely and needed opportunity for simplification of what is now an overly complex licensing structure for the Amateur Service. However, simplification of the rules, without more, does not necessarily benefit Amateur Radio, and cannot be the only goal of the Commission in the Amateur Radio Biennial Review process. It does not lead inevitably to improvements in the licensing process, and in any event, Amateur Radio is largely deregulated now. What is necessary is the adoption of a comprehensive plan for license restructuring, which was not what was contained in the Notice in this proceeding.<sup>7</sup>

5. The Chairman, in his March 25, 1998, Statement before the Subcommittee on Commerce, Justice, State, and the Judiciary Committee on Appropriations in the House of Representatives, stated, with respect to Biennial Review:

In fact, the FCC has begun a comprehensive "biennial review" of all of its existing regulations, including telecommunications and broadcast ownership regulations, as directed by the 1996 Act. Section 11 of the Communications Act, as amended by the Telecommunications Act, requires the FCC, in every even-numbered year, to review all of its regulations applicable to providers of telecommunications services to determine whether they have become unnecessary to advance the public interest as the result of meaningful economic competition

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<sup>7</sup> This is not to say that the Commission should not proceed now to adopt final restructuring rules. Though the Congress directed the Commission in Biennial Review to merely determine which regulations should be modified or deleted, and did not require that those rules actually be changed in the same proceeding, the League urges the Commission not to leave the Amateur Service in limbo. The pendency of this proceeding has a dampening effect on the inclination of newcomers to proceed with amateur licensing, and on existing licensees to upgrade their license classes.

between providers of the services and whether such regulations should therefore be repealed or modified...The Commission, however, determined that this first biennial regulatory review presented an excellent opportunity for a serious top-to-bottom examination of all the Commission's regulations, not just those required to be reviewed under the statute.

Of course, that is not what the Commission actually did in this proceeding. What the Notice asked for was comment on a very few specific deregulatory proposals, and inquired about a few others. It indicated certain predispositions of the Commission, but it did not offer a comprehensive license restructuring plan, and it did not discuss all of the ramifications of the deregulatory proposals that it did contain.<sup>8</sup> In this respect, the League believes that the Commission did not effectively fulfill the Chairman's goals and commitments to Congress relative to Biennial Review. Support for the League's view is found in the recent remarks of Commissioner Harold Furchtgott-Roth, who, on December 21, 1998 released a comprehensive report on the Biennial Review process, noting, in part, that "Congress directed a thorough, attic-to-basement review of all of the FCC's telecommunications rules"...Unfortunately, this report demonstrates that the Commission has reviewed only a handful of rules." The League acknowledges that the Amateur Service is not a telecommunications service provider within the definition in Section 11 of the Telecommunications Act, and it had no Biennial Review obligation as a matter of statute. However, the Chairman promised a review of all of the Commission's rules, "top-to-bottom", and that is not what has occurred in the Amateur Service. As the licensing structure requires modification now, and because there are significant ancillary effects of eliminating license classes, the League's comprehensive plan for amateur license restructuring is closer

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<sup>8</sup> Most notable in this respect is the proposal to eliminate the Novice and Technician Plus license classes without changing the status of the many remaining Novice Class licensees or "refarming" the HF subband allocations that are used by those licensees. One cannot efficiently be done without the other.

to the Chairman's goals for Biennial Review than is the Commission's Notice proposal. The League continues to endorse its restructuring plan *in toto*, and suggests that the comments in this proceeding are largely supportive as well.<sup>9</sup>

6. Finally, it is apparent that this proceeding should be resolved quickly. There is at present a slowdown in amateur radio growth, and a reduction in the number of examinations administered for new and upgraded licenses over the historically high levels of just a few years ago. The League believes that simplification of the licensing and examination structure will contribute to restoring an accelerated level of growth in the number of licensees, and the self-training that accompanies license upgrades. The pendency of this proceeding, however, is itself a factor which inevitably delays the realization of the benefits of restructuring. The League urges that the proceeding be resolved expeditiously for that reason.

## **II. The Number of License Classes**

7. In its comments, the League suggested a number of guiding principles for license class restructuring. There is no significant disagreement in the comments regarding these principles, and many, if not most, of the comments stated one or more of them. They were as follows: (1) No structural changes should reduce the operating privileges of existing licensees; (2) maintaining the integrity of the amateur examination and licensing process is essential to the future health and growth of Amateur Radio; (3) the new licensing plan should encourage newcomers to join; and (4) incumbent

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<sup>9</sup> The League notes the unqualified support for its restructuring plan offered by many amateur radio clubs and associations in this proceeding. For example, the comments of the Sun City Center Amateur Radio Club, the King's Point Amateur Radio Club, the Murray State University Amateur Radio Club, the Inland Empire Council of Radio Organizations, and the Kauai Amateur Radio Club comments support the League's plan without substantial change. The reply comments filed by ICOM America, Inc. are also entirely consistent with the League's restructuring plan.

licensees should be given incentives to continue the educational opportunities offered by Amateur Radio through license class upgrading. The Commission must evaluate not only the license classes, but the operating privileges attendant thereto, in order to benefit the Amateur Service and to realize the goals expected of licensees.

8. The League's comments noted that the majority of the League's survey respondents strongly preferred more than three license classes, while only 21% preferred three tiers. The comments in this proceeding show largely the same level of support. There was in this proceeding, as in the League's survey, a preference for either three or four license classes, and very few commenters herein supported more than four or fewer than three. The problem, however, is that few commenters attempted to justify their view of the proper number of license classes. Some attempted to justify a three-tier plan based on their proposal to reduce the number of telegraphy examination elements. They suggested that, since the basic entry-level amateur license class has and should have no telegraphy examination requirement, and because the comments generally propose either two levels or one level of telegraphy examination, it is possible to reduce the total number of license classes to three. Some who support three license classes simply note that fewer classes are simpler for the Commission to administer.<sup>10</sup> Others suggest that there is little difference between Advanced Class licensees and Extra Class licensees other than in terms of HF operating privileges.<sup>11</sup>

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<sup>10</sup> See, e.g. the comments of Mr. Michael McCarty.

<sup>11</sup> Comments of the "National Conference of VECs", at 10-11.

9. Other commenters suggest four license classes, based on their view that the Novice and Technician Plus classes can be eliminated, and that the remaining present license classes, the Technician, General, Advanced and Extra Class, are now in place and are adequate for the purpose. Most commenters who suggest four license classes support those four classes, rather than any substantial reconfiguration.<sup>12</sup> The Rochester Amateur Radio Association, a large association of five affiliated amateur radio clubs, with more than 700 members, supports a reduction in the number of amateur license classes from six to four, provided that licensees of any class that is modified or eliminated would not incur a loss of any existing operating privileges. ICOM America, Inc. stated that it agrees "with the FCC and ARRL rationale of providing a path for upgrade while eliminating overlap." It thus supports a 4-tier license structure.

10. There is a good and sufficient reason for retaining four license classes rather than three, regardless of the configuration of telegraphy examination elements. There is simply too much material to be tested on in the Amateur Service to have only three written examinations, if the current level of comprehensiveness of examinations is to be maintained (which it clearly should be). Four written examination levels allow a progressive self-training mechanism that does not involve large incremental "batches" of material to be learned in order to reach the next higher license class. Hence, the next forward step is not overly daunting for a candidate to pursue. Having only three license classes, and especially any plan which would combine the Advanced and Extra Classes, is a disaster from the point

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<sup>12</sup> A notable exception is CQ Communications, which proposes essentially four license classes, including a "Basic Amateur Permit" along the lines of a "learner's permit" for driving an automobile, plus the Technician, General and Extra Class licenses. The League also notes the comments of Jay Jackson, W4VG, who has extensive experience in amateur radio examination administration and regulation, and who suggests four license classes, as follows: "Basic", "Intermediate", "Advanced", and "Expert".

of view of encouraging upgrading and technical self-training in the Amateur Service. The principal goal in restructuring is to encourage, not discourage, upgrading of existing licensees. The inevitable gap between the amount of knowledge a General Class licensee is required to have, and that which would be required for matriculation of an Extra Class licensee, would be great enough to discourage licensees from trying to bridge it.<sup>13</sup> This should be obvious from a review of the current Advanced and Amateur Extra Class license examinations and question pools.

11. As a matter of fact, there is essentially no difference in terms of administrative convenience or expense to the Commission, and no contribution to its own workload, from implementing either three classes of amateur license or four; all examinations and most application processing is administered in the private sector now, and the marginal difference in rule text is minimal as between three and four classes. The Commission should determine the proper number of license classes on the basis of which will encourage incentive upgrading of incumbent licensees at the higher classes of license. Looking at the matter that way, four license classes is a good plan, and three classes is not.

12. Many comments were concerned with telegraphy as a disincentive to those who wish to upgrade from the Technician class to other, higher license classes. That is a proper concern. It is not, however, a sufficient inquiry. Other aspects of the progress of licensees in upgrading must be examined as part of the license restructuring process as well. The comments of CQ Communications are

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<sup>13</sup> This concern is implicitly acknowledged in the comments of the NCVEC, by its suggestion at page 11 of its comments that the combined Advanced/Extra Class examination must consist of 100 questions; any written examination of that magnitude, covering the amount of material presently included in each of the written examinations for the Advanced and Extra Class licenses, would constitute a significant disincentive to upgrading one's license class, and hence a disincentive to technical self-training. The League is firmly opposed to such a blindly overbearing approach to the step between the General Class license and the next level of achievement in amateur licensing.

especially well-taken in this regard; they indicate that their surveys have established an interest on the part of Technician and Technician Plus licensees to upgrade their license classes, and that a significant interest in HF amateur communications is the goal in doing so.<sup>14</sup> The license classes must be structured to encourage the achievement of that goal, not to discourage it. The Commission should proceed to adopt four license classes, rather than three, and they should be as proposed by the League: the Technician, General, Advanced, and Extra Class licenses.

### **III. The Refarming of the Novice Class Subbands**

13. Discussions with Commission staff concerning this proceeding revealed a stated concern that any revision to the HF subband regulations might be "beyond the scope" of this proceeding. That cannot be correct, however, since the elimination of the Novice and Technician Plus license classes would, of necessity, inherently include a discussion concerning the disposition of the subbands that are used principally by those licensees in the HF amateur allocations. Indeed, the Notice itself, at paragraph 12, suggests a means of addressing the use of those subbands and requests input on that subject:

We also seek comment on disposition of the designated Novice bands. Currently, other class licensees can operate within the Novice bands, but only at reduced power. Given the small number of new Novice licenses now being issued, if we were to discontinue licensing new Novices, would it be appropriate to delete the frequency limitations on Novices and the power limitations on other classes of operators using the Novice frequencies, so that Novices would continue to be limited to 200 watts output power but could operate using the Morse Code anywhere within the 80, 40, 15 and 10 meter bands?

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<sup>14</sup> This is consistent with the League's own findings. The League's survey results indicate that the step between introductory amateur operation at VHF and UHF, and the next higher license class, which permits significant HF telephony and telegraphy privileges, (and which now requires a 13 WPM telegraphy examination) is and has been too great. The League is very much concerned that, as it stands now, large numbers of codeless Technician licensees are not upgrading their license class, and many are not maintaining an interest in Amateur Radio as the result.

It is clear, therefore, that the issue of refarming the Novice bands is squarely within the scope of this proceeding.

14. The League's proposal to grant existing Novice class licensees and Technician Plus licensees General class licenses immediately has received substantial support in the comments. The Commission's proposal to simply eliminate the issuance of new Novice and Technician Plus licenses and leave incumbent licensees in limbo (or to allow them to operate in any telegraphy subband in the HF bands) was distinctly not popular. CQ Communications, for example, stated as follows:

(T)he discussion section requests comments on the disposition of the current HF Novice/Tech-Plus subbands, and suggests giving Novices CW privileges at reduced power across the entire 80, 40, 15 and 10-meter bands, but the Appendix makes no specific proposal. The lower 25 kHz of the 80, 40 and 15-meter bands currently are reserved for Extra-class licensees. Allowing Novices to operate here, even at reduced power, while banning access to General and Advanced Class licensees, will not be acceptable to the higher class licensees who would then have fewer privileges than Novices. The ARRL's proposal to "refarm" Novice frequencies into additional phone subbands is the correct approach, as is its proposal to "grandfather" existing Novices into the General class, which will make moot the question of Novice privileges...

*CQ Communications, comments at 15-16.*

Other comments are similar. The Inland Empire Council of Amateur Radio Clubs states: "(r)elative to the question posed concerning the 80M, 40M and 15M Novice telegraphy sub-bands, we propose they be returned to the General allocation." This would, of course, presume the elimination of residual Novice and Technician Plus licensees, and since no one would suggest removal of any privileges from any licensee, the grant of a General Class license to those licensees would be the logical means of doing so. The California Central Coast DX Club states that, (s)ince there is little to no activity in the HF Novice Class CW bands we feel they should be returned to general usage for General Class and higher classes of license." The comments of Murray State University Amateur Radio Club are similar: "With

the end of the issuance of the Novice class license and the minimal use of the current Novice subbands, those frequencies should be made available for use by other license classes." Kenwood Communications Corporation suggests the same, noting that upgrading Novice and Technician Plus licensees, who already have experience in HF operation and who have taken examinations relevant to HF operation, would allow those license classes to be eliminated immediately, and would be a simple means of encouraging Novice and Technician Plus licensees to further progress in amateur radio. ICOM America, Inc. stated that "we also support the ARRL proposal to re-farm the Novice class band for General, Advanced and Extra class operation. Crowding in the lower portions of CW bands will be relieved and lesser skilled Morse code operators will be encouraged to contact those with greater skills." To this, the League would add that the availability of reformed HF subbands is critical to the conceptual framework for the revised license structure, in which all incumbent licensees receive expanded telephony subbands, creating further operating incentives to upgrade their license class.

15. Indeed, the alternative is administratively difficult. By eliminating the license class for Novice and Technician Plus licensees, but maintaining those licenses in perpetuity, the Commission will have essentially maintained six license classes.<sup>15</sup> Regardless of the privileges afforded, there will have been no simplification realized. The rules governing the license classes will have to be maintained, to delineate the operating privileges to be afforded the residual Novice and Technician Plus licensees. Finally, the League's plan to grant General class privileges to Novice and Technician class licensees is

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<sup>15</sup> This administrative difficulty is ignored by the NCVEC, which simply states that having residual Novices "operate using the Morse Code anywhere within the 80, 40, 15 and 10 meter bands is a good way to deal with the elimination of the Novice (and Technician Plus) Class licenses." Those comments contain no conceptual justification for the point, but simply state blind support for the Commission's proposal. The League suggests that its own plan offers far more encouragement to those licensees to continue with their progress in self-training in the Amateur Service than does the Commission's proposal, and it benefits all license classes in the process.

not a significant step. Those licensees have each taken and passed a 5 wpm telegraphy examination, the same speed as is proposed for General Class licensees hereafter; and they have taken examinations covering HF operation. In the case of longer-term Technician Plus licensees, they have taken the exact same examination as would have been required for a General Class license; they merely lacked the 13 wpm telegraphy examination credit, which under the League's proposal is obviated.

16. Thus, the comments generally support the League's proposal, and are not supportive of the "phasing out" of the Novice and Technician Plus class licenses, as the Commission suggested in the Notice. Consolidating current Novice and Technician Plus licensees into the General Class and refarming the Novice Class HF subbands allows the creation of added operating privileges as incentives to be included in the General, Advanced and Extra Class license classes, by making additional HF telephony spectrum available to holders of those license classes. The League's proposal is therefore administratively simple; it complements the creation of a smooth transition to upgrading between the Technician Class and General class; and it substantially increases the telephony privileges now available in certain amateur HF bands for General, Advanced and Extra Class licensees, as the result of "refarming" of the HF spectrum formerly available to Novice and Technician Plus Class licensees. The League continues to strongly recommend this procedure to the Commission in lieu of any other means of addressing the elimination of the Novice and Technician Plus license classes.

#### **IV. Telegraphy Examination Requirements**

17. There is probably the least degree of unanimity reflected in the comments as to what constitutes the proper emphasis on Morse telegraphy as a licensing requirement. There are those who suggest that the Commission should immediately implement the most minimal telegraphy requirement permitted by the ITU Radio Regulations. These commenters, including No-Code International, suggest

that there is no place for telegraphy as a licensing requirement in modern Amateur Radio. On the other side are, for example, the comments of the Winston County Amateur Radio Club, which suggest preserving three classes of amateur radio telegraphy examination just as they are, urging the Commission not to lower standards of operating skills. The Winston County club, like many individual amateurs, believes that Morse telegraphy is neither unpopular nor obsolete. Other amateur radio clubs suggest retaining telegraphy examinations with requirements up to 20 wpm for the Extra Class.

18. There are various proposals which take a more moderate approach. These include the Quarter Century Wireless Association, a group of approximately 10,000 members, which proposes, as does the League, two telegraphy examination elements, one at 5 wpm for the General Class, and another at 12 wpm for the Extra Class. The Gordon West Radio School suggests two levels of examination, one at 5 wpm for General and Advanced, and the other at 20 wpm for Extra Class. Many commenters suggested only one level of telegraphy examination, at 5 wpm, for the General Class license.<sup>16</sup> While this is largely a matter of perception, it would appear that the majority of the comments agree that there is currently an overemphasis on telegraphy as an examination requirement, at least at the level of entry to HF amateur communications, and that more comprehensive (but not necessarily more difficult) written examinations on other operating modes can effectively compensate for a reduction in examination emphasis on Morse telegraphy. The League continues to support a moderate proposal for reduction in telegraphy speed, and believes that the arguments offered for some reduction from the present 5, 13 and 20 wpm code speeds, while valid, are insufficient to justify reducing the requirement to a single 5 wpm examination.

19. Morse telegraphy, while one of many popular amateur operating modes, is nonetheless a

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<sup>16</sup> See, e.g. the comments of NCVEC and Kenwood Communications Corporation.

manual communications skill which is shared by amateurs worldwide, and which bridges language barriers extremely effectively, using commonly-understood terms. There is a distinct benefit to those with certain physical handicaps to be able to communicate with others through Morse telegraphy, using inexpensive equipment. It is also useful in some emergency communications, and is regularly and necessarily used in weak-signal communications and propagation experimentation. The League suggests that claims of the obsolescence of telegraphy, and claims of diminished popularity of telegraphy, are exaggerated. As stated by the California

Central Coast DX Club:

Although many non-amateur roles for Morse Code have been eliminated in favor of voice and digital modes, CW remains a very efficient means to communicate worldwide and an important part of the Amateur Radio Service. Further, CW is the most efficient mode when one considers the narrow bandwidth of spectrum that it uses.

20. There is little support in the comments for the Commission's presumption in the Notice that because there have been notable changes in technologies that amateurs use to communicate, there has been a resultant "deemphasis" on Morse telegraphy in on-air amateur operating. The continued popularity of telegraphy is apparent at all times by listening to the (now-active<sup>17</sup>) HF amateur allocations. There is a very substantial amount of regular use of telegraphy on-air, and no indication that there is a "deemphasis" on amateur use of telegraphy whatsoever. While it should not be overemphasized in the licensing process, no one should doubt its continued relevance in amateur radio communications on a regular basis, and it should be continued as a requirement for amateur radio licensing above the entry level.<sup>18</sup>

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<sup>17</sup> With the current upturn in the 11-year sunspot cycle, amateur HF activity is steadily increasing.

<sup>18</sup> The NCVEC comments claim that "there is a vast number of Technician Class licensees who would like to operate on HF but who are precluded from doing so because of the international and FCC Morse code proficiency requirements." That statement cannot be accurate, given the number of licensees who have obtained General, Advanced and Extra Class licenses over the years. An accurate statement might be that some Technician class licensees are discouraged from taking the time to learn telegraphy at 13 wpm because they don't consider it relevant, or that HF operation is not a sufficient reward for the investment in time and effort needed to pass a 13 wpm telegraphy examination. No one should believe NCVEC's statement, however, that Technician Class licensees are "precluded" from HF operation by the present telegraphy examination requirement. They have, instead, simply made a value judgment, which might well be changed by the League's proposal to reduce telegraphy examination requirements for the General class to 5 wpm.

21. The comments, however, relate largely to the speed at which telegraphy examinations ought to be conducted, as did the Commission's Notice, and the comments urge one, two, or three tiers of telegraphy examination. The League's restructuring proposal reduces the telegraphy speeds to 5 and 12 WPM. This is preferable to a single 5 wpm element because it offers a reasonably achievable incentive to increase operating proficiency at the Advanced Class level, and at the same time eliminate any significant disincentive to upgrade from a Technician class license to a General Class license. If all amateur operating privileges are available to General Class licensees with only a 5 wpm telegraphy examination on most portions of each HF band, a series of benefits accrue. First, the incentive to upgrade one's license class from Technician to General is facilitated, and the path to technical self-training is cleared. Second, the ability to progress from 5 wpm to 12 wpm in upgrading to the higher class is made less daunting. Third, the incentive to abuse the physician's exemption procedure as a means of avoiding the General class telegraphy examination is greatly reduced, and concerns about abuses of the procedure would largely abate. The comments generally do not discount the desirability of a higher speed telegraphy requirement for the more advanced classes of license.

22. The League's proposed 12 WPM speed is equivalent to the highest telegraphy speed requirement for full-privilege licenses in many other countries especially in Europe, and it equates to 60 characters per minute, or one per second, based on five-letter code groups. This is a reasonable level of proficiency for anyone seeking full amateur privileges, and the higher levels of accomplishment in Amateur Radio. It encourages self-training, without constituting a barrier to enjoyment of full amateur privileges. The League suggests that telegraphy requirements in excess of the 12 wpm level constitute, today, and for the future, an overemphasis on telegraphy as an examination requirement. Higher speed telegraphy ability should remain a matter of personal achievement, and the League will continue to

urge operating proficiency in telegraphy as a benchmark of achievement in operating skills through various programs and awards. In short, the League believes that it has arrived at a reasonable middle ground in telegraphy examination requirements that balances the continued relevance of Morse telegraphy as a useful and necessary communications tool for HF operating, and the need to eliminate unnecessary obstacles to both entry to Amateur Radio and upgrading of existing licensees.

23. ICOM America, Inc. stated that it supports a 5 wpm proficiency requirement for General class licensees, and that "maintaining higher code requirement for Advanced and Extra Class licensees provides a legitimate incentive for General Class operators to increase their skills, and be rewarded for it." ICOM also states that it "support(s) the ARRL proposal to permit Technicians to operate Morse Code in the General class band without prior testing." This proposal of the League received no significant opposition in the comments, and in fact was supported by commenters such as Nicholas Leggett, who stated that the Commission should implement the proposal, and called it a "good idea" if it could be done consistently with the International Radio Regulations. The League suggests that it can. Administrations are required to mandate that their licensees prove the ability to send correctly by hand and to receive correctly by ear texts in Morse Code signals. The purpose of the proposal to permit Technician Class licensees to operate using manual telegraphy on the General class HF telegraphy subbands is so that they can achieve proficiency in that mode, and can do so in a comfortable and interesting, interactive environment. The international requirement is obviously self-effectuated in such cases. One counterargument was that Technician licensees could use machine-sent and received telegraphy, thus sidestepping the self-proving nature of the telegraphy ability demonstration and violating the spirit of the international regulation. The Commission might simply mandate that Technicians must manually send and receive telegraphy on the General class HF

subbands, if in the opinion of the Commission, the magnitude of the concern warrants such.

### **V. Telegraphy and Written Examination Administration**

24. The comments did not, in general, address the League's proposal that the means of telegraphy testing should be specified in the rules, to insure examination uniformity and fairness to all examination candidates. The League had proposed that the Commission's rules be modified to require (other than for examinations for disabled persons requiring special accommodation) that a passing grade for any telegraphy examination shall be either 70 percent correct answers to 10 fill-in-the-blank questions, or one minute of solid copy of text out of five minutes sent. Multiple choice tests should not be permitted for telegraphy examinations, because they are not as effective a gauge of the ability to copy telegraphy text. The comments of Chapter 138 of the Quarter Century Wireless Association suggested that all telegraphy examinations should be based on one minute of perfect copy out of five minutes sent. Murray State University Amateur Radio Club urged that multiple choice examinations can be administered as an accurate test of knowledge, if the examinations are well-crafted, but those type examinations should not be used at the higher license classes. An implicit acknowledgement of the same problem, but a different solution to examination administration concerns, was stated by CQ Communications, which offers the suggestion that "activity certifications" should be included, in lieu of formerly required "time in grade" restrictions. Jay Jackson's comments would create a similar provision at the highest class of amateur license. Unfortunately, the means by which these entitlements would be evaluated would be by inherently subjective determinations of volunteers in the VE program. The League could not support any subjective requirements, which could not be administered in a manner guaranteed to be fair to all, despite the best efforts of those who are asked to do so.

25. NCVEC suggests that there is no change needed to the examination requirements, and that

if there is a need to make the examinations more "difficult", more questions could be added. This misses the point entirely. The concern is whether or not the present examinations can be compromised by memorization of question pools; whether multiple-choice examinations are an accurate measure of telegraphy knowledge; and whether, for example, multiple-choice distractors are so obviously incorrect as to lead the examinee to the correct answer regardless of knowledge of the material being tested. Those amateurs who expressed an opinion on this subject generally urged that the examinations be regulated more closely to insure the integrity of the examinations.

26. The comments were also largely silent on the issue of the content of examinations. The Commission had proposed to delete the syllabus for amateur examinations set forth in Section 97.503, which is the basis for the VECs, cooperatively, to prepare the examination question pools. The League insists that the syllabus, which provides the only element of standardization in the examination process, is the minimum requirement to insure that amateur examinations are fairly prepared and administered among the VECs. Some version of it must remain in the rules. The NCVEC did not suggest the elimination of the syllabus in the rules, but did request more "flexibility" in determining examination topics. The current syllabus, however, is amply flexible, and the League, which administers two-thirds of all examinations in the VE system, can find no unnecessary limitations in the syllabus as it stands now, other than as specified in the League's comments.

## **VI. Conclusions**

27. The comments in this proceeding show little consensus on the proper total configuration for restructuring the licensing in the Amateur Service, but there are some trends that offer the Commission some guidance. The League's comprehensive proposal provides the best means of accommodating the diverse views of the parties filing comments in this proceeding relative to the

number of license classes, the privileges which should be accorded to each, and the proper emphasis on telegraphy in the examination process. The comments, as did the League's survey, support reduction of the license classes from six to three or four, with substantial quantities of support for both configurations. However, it is clear that the means of arriving at four license classes would be by eliminating the Novice and Technician Class licenses, a procedure that almost all the commenters support. The means by which proponents of three license classes would arrive at that level is by additionally consolidating the Advanced and Extra classes, and combining the Advanced and Extra Class license examinations. This would create an extremely strong disincentive to upgrade from General to Extra Class, because of the volume of material that must be learned and on which a candidate must be examined, in the process.<sup>19</sup> Four classes of license would provide an opportunity to increase one's knowledge and progress in reasonable, encouraging increments.

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<sup>19</sup> The same problem would be created if there were a consolidation of the General and Advanced class licenses and examinations.

28. The Commission must also provide a reasonable transition between the Technician and the General Class licenses, which it can do by adoption of the League's comprehensive plan for license restructuring. The General Class license should be achievable with a 5 wpm telegraphy examination, and the current Novice and Technician Plus licensees should be granted General Class licenses as of the effective date of an order in this proceeding. The comments overall support the League's proposal to reform the present HF subbands on which Novice and Technician Plus licensee operate. It is a plan which allows the Commission to offer additional operating privileges to each remaining class, as an incentive to licensees to upgrade their amateur license class. Eliminating the 13 and 20 WPM telegraphy examinations, without a substitute in written examinations as proposed by the League, is ill-advised, and is unnecessary as a solution to any identified regulatory goal or issue.

29. The comments support reducing the number of license classes to a manageable number which will reflect an individual's incremental growth in the technical and operating self-training components of Amateur Radio and the reformatting of the HF subbands set aside for Novice use, thus to make more efficient use of amateur HF allocations. The comments also support correcting an overemphasis on Morse telegraphy over other communications techniques, while at the same time retaining a minimal level of proficiency in a still-relevant, internationally universal communications skill. Some comments support only a 5 wpm telegraphy examination element, but a substantial number support some combination of a 5 wpm speed for the General and a higher proficiency requirement for the Extra Class license. The League's proposal is a reasonable middle ground among the different configurations reflected in the comments.

30. The Commission should retain telegraphy examination requirements, but modify them, reducing the requisite code speeds in accordance with the League's restructuring proposal to 5 and 12 WPM. Telegraphy continues to have an important place in amateur communications on HF bands, and all radio amateurs who communicate internationally should have the ability to do so via Morse telegraphy, but the requirements should be such as to encourage, not discourage, license upgrading and the self-training that is accommodated thereby. Just as important as specifying the speed of telegraphy examination elements, the Commission must specify the means by which those examinations are administered. Elimination of multiple choice testing will improve the examinations and better fulfill the purpose of the examination process.

Therefore, the foregoing considered, the American Radio Relay League, Incorporated again respectfully requests that the Commission adopt the League's license restructuring proposal set forth in its Comments in this proceeding, and enact the regulations proposed by the League in the Appendix attached thereto.

Respectfully submitted,

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