



personal aims and without pecuniary interest.<sup>2</sup> The Commission and like regulatory authorities around the world long have recognized the enduring public interest in the Amateur Service as a voluntary, noncommercial communications service and the amateurs' proven ability to contribute to the advancement of the radio art; to expanding the reservoir of trained wireless operators, technicians, and electronics experts; and in facilitating the amateurs' unique ability to enhance international goodwill. Amateurs also are well-respected for providing essential communications links and facilitating relief actions when normal communications infrastructure is disrupted.<sup>3</sup>

The Commission is regularly called upon to review and adjust its regulations in its regulated services as practices change and new technologies supplement and replace traditional technologies. The Amateur Radio Service has the same necessity for its rules to keep up with today's fast-paced technological changes and welcomes this opportunity to make suggestions on modernizing Part 97 rules.

Today in the Amateur Service many radios are run solely or principally by software. The soldering iron and discrete physical components used in past experiments often are replaced by a personal computer and coding knowledge to experiment with new techniques and functions. While limited rules changes have been made in the past to accommodate these changes within the Service, there remain rules and policies that hamper modern wireless education and experimentation by Amateurs. Such rules require deletion or modification to better accommodate and encourage a new generation of wireless experts while still accommodating traditional technologies and techniques.

By the proposals discussed below we seek modest changes aimed at modernizing and increasing the flexibility of certain Part 97 rules to remove barriers and accommodate new modes and techniques, especially with regard to new digital modes that by-and-large did not exist when most of the current

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<sup>2</sup> See 47 C.F. R. § 97.3(a)(4).

<sup>3</sup> See 47 C.F.R. §§ 97.1(a)-(e), 97.113, 97.111(a)(1), 97.401.

rules were formulated. We propose to do this while preserving the basis for traditional modes and techniques that continue to form a significant basis for the Service.

### **Delete Symbol (Baud) Rate and Bandwidth Limitations (WT Docket No. 16-239)**

In November of 2023, the Commission adopted a Further Notice of Proposed Rulemaking (FNPRM) in which it proposed to remove the symbol (baud) rate and bandwidth limits on specific Amateur LF and VHF/UHF bands.<sup>4</sup> As set forth in its Comments and Reply Comments, ARRL supports the deletion of these unnecessary restrictions as proposed by the Commission because these limitations encumber Amateur experimentation with new modes and techniques without countervailing benefits.<sup>5</sup>

The comments filed indicate unanimous support for deleting the symbol (baud) rate as the Commission proposed. The vast majority of commenters also supported deleting bandwidth limits. Given that the comment cycle on this FNPRM was completed over a year ago, we request that the Commission act without further delay to adopt the rule changes as proposed.

### **Update and Modernize Entry Level Technician Class License Privileges (RM-11828)**

It has been many years since the privileges of the Amateur Radio entry level license have been updated. During this period digital technologies and modes have been introduced and become widely popular in the Amateur Radio Service, yet the newest entrants are denied access to the HF frequencies where these modes are employed. Limited access to these frequencies is essential to provide a window to the wonder of worldwide low-power communications. The reason for their absence simply is because entry-level privileges were adopted before the digital techniques existed that have become popular and now are widely used throughout the world.

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<sup>4</sup> Report and Order and Further Notice of Proposed Rulemaking, WT Docket No. 16-239, FCC 23-93, at paras 20-23 (released Nov. 13, 2023), 88 FedReg. 85171 (publ. Dec. 7, 2023).

<sup>5</sup> See the Comments of ARRL, WT Docket 16-239, filed on January 8, 2024 and Reply Comments of ARRL, WT Docket 16-239, filed on January 22, 2024.

The changes that ARRL proposed in its petition would measurably assist in attracting youth to the STEM subjects that are at the core of amateur radio self-training, developing improved operating capabilities, and increasing emergency communications capabilities. The youth attracted to amateur radio today will become the wireless engineers and space scientists of tomorrow that are critical to our nation's future if given a chance.

Specifically, in February of 2018 ARRL filed a petition to modernize and update the privileges accorded to Technician class licensees with the goal of attracting new youth to the STEM subjects that are at the core of the Amateur Radio experience. The proposed changes would permit the Technician Class licensees to use the new digital data transmission techniques on limited slices of desirable HF bands.<sup>6</sup> The comment period was completed, but no further action has been taken.

The requested rule changes are modest. The ARRL evaluated efforts to attract and retain amateur licensees. The results demonstrated that the increasingly rapid pace of change in communications technologies, coupled with the national need for self-training in Science, Technology, Engineering and Math (core "STEM" subjects), require adding privileges to the entry-level amateur radio class to reflect the burgeoning interest in digital technologies and social interaction.

The interests of young STEM candidates understandably lean toward digital technologies and the accompanying computer programming aspects. This is what they grow up learning, and this is where developing knowledge and expertise is most likely to lead to good job opportunities, public service, and development of future innovations and services. These purposes are at the core of amateur radio as set forth in the Commission's Rules, yet roughly one-half the amateur population cannot participate in the promise and opportunities presented on the frequencies of interest.

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<sup>6</sup> See ARRL, Petition for Rulemaking, RM-11828 (filed February 28, 2018).

In recognition that Technician is the entry level and that entrants have a wide variety of interests that are not being met by the outdated restrictions on Technician class privileges, ARRL proposed to add limited digital and voice privileges on frequencies below 30 MHz where distant connections are possible. The petition set out a balanced approach that retains substantial incentives for Technician class licensees to improve their knowledge and skills to gain additional privileges by successfully passing the more difficult General and Extra class examinations. At the same time these changes would allow new entrants to experience the possibilities inherent in worldwide digital and voice communication and emergency event training in a practical manner.

We therefore renew our request for consideration of the changes proposed in RM-11828.

#### **Modernize 80/75 Meter Subband Divisions (RM-11759)**

The widespread adoption of digital modes in the Amateur Service has resulted in a deteriorating imbalance in a portion of the amateur 80/75 meter subbands. Multiple stations are crowded into a thin sliver in one area, while otherwise useable frequencies nearby are underutilized because the subband limits drawn years ago are based on usage patterns that now are significantly changed.

Recognizing the needless interference and inefficiency in spectrum use, in 2016 the ARRL petitioned the Commission to adjust the boundaries to better accommodate the greater demand for new digital modes and thereby improve efficient use of the allocated spectrum.

In its petition, the ARRL requested that the lower edge of the phone band, 3.600 MHz, be shifted upward to 3.650 MHz; that RTTY/data be permitted in the 3.500-3.650 MHz sub band; that the ACDS sub band be shifted upward to 3.600-3.615 MHz to correspond with international uses and voluntary band plans; that grandfathered Novice and all Technician class licensees be authorized CW, RTTY and data modes in the 3.600-3.650 MHz segment; and that General and Advanced class licensees also be granted access to the 3.600-3.650 MHz segment.

This realignment is long overdue. While space in these bands will continue to be in high demand and short supply, the proposed realignment would alleviate some of the congestion and better match today's usage patterns. We recently reviewed these proposals and found that they are needed more now than ever. We therefore renew our request for consideration of the changes proposed in RM-11759.

### **Delete and Replace Obsolete Digital Code Limitations**

Section 97.309 dates to the dawn of the digital age. The limitations in subsections (a)(1) – (a)(3) are obsolete and should be deleted and replaced with provisions based upon Sections 97.309(a)(4) and 97.309(b). Doing so would better reflect the current reality of data communications and encourage rather than prohibit new experimentation by Radio Amateurs.

We request that the Commission delete the limitations identified above and instead permit radio amateurs to experiment freely with new digital codes *so long as such codes are publicly documented and decodable over the air*. Doing so would remove provisions that refer to digital codes that today are obsolete and permit the use of new digital codes as they are being created. This is the reality of the digital world today. Requiring that Amateurs use only digital codes that are unencrypted and readily receivable by others reasonably skilled in the art would preserve the core objectives of the now-outmoded limitations.

In addition, the intended application of Section 97.309(b) is puzzling insofar as it provides that amateurs can only use certain digital codes to communicate with amateurs in other countries if the United States has an agreement with the other countries permitting use of the code. This provision has proven unworkable in practice. Neither the U.S. nor any other country is known to have entered into any such agreement(s). Nor is such a requirement addressed in the ITU Radio Regulations. In practice, insofar as we can determine, other countries freely permit their radio amateurs to experiment with digital codes so long as they are not encrypted, are readily receivable by others reasonably skilled in the art, and

are used for purposes free of any pecuniary interest. Therefore, this provision should be deleted entirely from any revision as proposed above.

Finally, the obsolete limiting of subbands to only phone/image or RTTY/data emissions in sections 97.305, 97.307, and 97.119(b) should be re-worked to be compatible with today's digital reality. For example, with earlier transmission modes there is a clear distinction between "voice" and "data." That barrier is obsolete with digital modes. The same digital signal may carry voice, data, images, or any combination thereof. The current rules lead to confusion about where it is permissible to transmit a digital data signal carrying both voice and data, or whether a digital data signal carrying only voice (such as FreeDV, a digital voice mode) should be transmitted in the phone or in the data subbands. The confusion itself hampers experimentation with exciting new digital modes.

### **Implement Changes to Third Party Rules Adopted Internationally at WRC-03**

At the 2003 World Radio Conference (WRC-03), Article 25 of the International Radio Regulations (RR) that governs the Amateur Radio Service was updated and modernized. With the support of the FCC and the United States delegation to WRC-03, a rule was deleted that dated back to 1932 that had prohibited third party communications unless the amateurs' countries had agreed otherwise.

In practice, the 1932 provision had required conclusion of a formal bilateral treaty with each country willing to have its Radio Amateurs engage in third party messages.<sup>7</sup> The FCC WRC-03 Advisory Committee, the U.S. delegation at the conference, and the amateurs' International Amateur Radio Union (IARU) all supported entirely deleting the third party prohibition. However, compromise at the Conference resulted in a replacement provision being adopted, ITU RR 25.3, that reads: "Amateur stations may be used for transmitting international communications on behalf of third parties only in

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<sup>7</sup> ITU Radio Regulation 25.3 (2002).

case of emergencies or disaster relief. An administration may determine the applicability of this provision to amateur stations under its jurisdiction.”<sup>8</sup> This new provision established a right to engage in third party communications in cases of emergencies and disaster relief and also eliminated the requirement for formal bilateral agreements for times outside such events.

The Head of Delegation in her report submitted to the Secretary of State after the WRC-03 conference explained that “This should eliminate or greatly reduce the need for third-party agreements between countries”.<sup>9</sup> In an article published shortly thereafter in QST, the monthly journal of the ARRL, an amateur that had represented the IARU on this issue at the conference explained further that “... bilateral agreements are no longer required in order for international third party messages to be permitted.”<sup>10</sup>

Notwithstanding this change to the ITU RR Treaty, Section 97.115(a)(2) continues to require third-party agreements negotiated by the State Department with their counterpart Foreign Ministries in order for radio amateurs in the United States to exchange third-party messages with their cohorts in other countries. However, given the change in the ITU regulations, other countries have no need to enter into negotiations for such agreements in order to permit their amateurs to handle international third party messages, and no new agreements have been concluded since adoption of the new provision at WRC-03.

The continued requirement that remains in the FCC’s rules for third party agreements inhibits Amateur experimentation and cross-border training for emergency message handling for when it may be needed. It is unclear why this provision remains in the rules after the changes effectuated at WRC-03. It is time to implement the change adopted two decades ago at WRC-03 and delete the treaty requirement

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<sup>8</sup> ITU RR 25.3 (2024).

<sup>9</sup> See United States Delegation Report, World Radiocommunication Conference 2003, Geneva, Switzerland, June 9 – July 4, 2003, Submitted to the Secretary of State by Ambassador Janice Obuchowski, United States Head of Delegation at pp. 32-33 (2003).

<sup>10</sup> See Michael Owen, VK3KI, “New Regulations for the Amateur Services” (sidebar to an article entitled “WRC-03 from the Amateur Perspective”), QST at pp. 42-43 (September, 2003).

in Part 95.115(a)(2). This would permit and encourage cross-border communication training and operation.<sup>11</sup>

### **Delete Amplifier Drive Limitation (RM-11767)**

Over the past 20 years solid-state LDMOS devices (Laterally Diffused Metal-Oxide Semiconductor field-effect transistor) have become a common replacement for vacuum tubes in high power amateur radio RF amplifiers. These devices provide efficient and reliable performance, and are capable of higher ratios of power amplification than the tubes they replace. While tubes typically provided enough power amplification for a 50-100 watt transmitter to be increased to the 1500 watt limit permissible in Amateur Service, the new solid-state devices are capable of amplifying even a 1-5 watt transmitter to the legal 1500 watt maximum. The increased power gain increases power efficiency. It also allows for smaller and less expensive 5-watt transceivers to be boosted to the legal maximum 1500 watts without need for an intermediate amplifier.

Expert Linears America, LLC (SPE) petitioned the Commission to eliminate the restriction in Section 97.317(a)(2) that limits HF amplifier gain to 15 dB. This restriction, originally adopted in the 1970's, was intended to prevent CBers from using amateur amplifiers with 5-watt radios. That purpose no longer is pertinent, but the rule, now an artifact of times past, remains and restricts innovation in and efficiency of amateur radio equipment as well as increases the cost of amateur equipment.

ARRL supports deleting this restriction. There is no comparable gain limit in any other country that we know of and amateurs everywhere except the United States can make full use of the new, more efficient amplifier technology. U.S. radio amateurs also should be permitted to do so.

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<sup>11</sup> See, e.g., Miguel Alcaine, Representative of the ITU Area Office in Tegucigalpa, Honduras: How ITU is Strengthening Emergency Telecommunications in the Americas. ITU News (March 5, 2019).

### **Remove Non-current Personal Information in Amateur ULS records (WT Docket No. 15-81)**

In 2015, the Commission proposed removing from public view on its ULS website non-current licensing and application information. The intent was to protect the privacy of amateur and possibly other individual applicants, since home addresses often are used by these applicants when initially submitting their applications. As the Commission pointed out in its proposal as an example, although a licensee coming under personal threat might change their FCC address to a Post Office box, the original address and related information still remains viewable to the public in the FCC's ULS system.

We request that the Commission adopt this proposal so that those who wish can update their contact information in ULS and thereby protect their privacy. As it is, this personal information seems to remain publicly available "forever", and certainly far beyond the time when there is any need.

### **Delete Obsolete Identification Requirement for Special Call Signs**

The last sentence of Section 97.119(b) requires operators using a special event call sign to identify using their assigned call sign at least once per hour during such activities. This rule was adopted in the 1990's before the widespread public availability of an on-line database that clearly identifies each special event call sign by reference to the FCC authorized call sign and dates for which the special call sign is authorized for use by the identified licensee. The special event call sign database is at: <https://www.1x1callsigns.org/index.php/search-1x1-database>.

Deleting the last sentence of Section 97.119(b) will facilitate instant proper identification of the licensee responsible for the signal without the confusion that can be caused when the alternative call sign is transmitted hourly, especially when using digital and CW modes.

### **Delete Obsolete Paper License Replacement Provision**

Effective December 30, 2020, the Commission ceased mailing paper licenses to Amateur Radio licensees. However, Section 97.29 was not conformed, and still provides for an application to be

submitted to replace a physical license document. Today originals of FCC Part 97 licenses are obtained using the FCC's password-protected portion of ULS with the licensee-specific FRN and password.

Section 97.29 therefore should be deleted as obsolete.

### **Conclusion**

For the reasons stated above, the ARRL respectfully requests that the Commission proceed to act on the above matters. Technology has changed dramatically in the amateur radio domain, as it has in most other communications services, and the above requested rules deletions and modifications will foster the regulatory goals for the Amateur Service and continue to increase the amateurs' historical experimentation and service in meaningful ways.

Respectfully submitted,

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April 11, 2025