

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Amendment of Part 97 of the Commission’s Rules Governing the Amateur Radio Services	)	WT Docket No. 04-140
	)	
	)	RM-10313, RM-10352, RM-10353, RM-10354, RM-10355, RM-10412, RM-10413, RM-10492, RM-10521, RM-10582, RM-10620, RM-10621
	)	
Amendment of Section 97.111 of the Amateur Radio Service Rules to Limit Transmissions of Information Bulletins	)	
	)	
	)	
Conforming Amendments to Part 97 of the Commission’s Rules to Implement the World Radio Conference 1997 Final Acts	)	
	)	
	)	
Amendment of Part 97 to Provide Color-coded License Documents	)	
	)	
	)	
Amendment of Part 97 to Allow Instant Temporary Licensing	)	
	)	
	)	
Amendment of the Amateur Service Rules to Limit One-Way Voice Broadcasting on Frequencies Allocated to the Amateur Service	)	
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	)	
Amendment of Sections 97.111 and 97.113 of the Commission’s Rules to Curb Certain Abuses in the Amateur Radio Service	)	
	)	
	)	
Amendment of Section 97.3(a)(26) to Establish Two Classifications of Information Bulletins	)	
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	)	
Amendment of Section 97.305(c) to Authorize Image Emissions in Additional High Frequency Segments	)	
	)	
	)	

**REPORT AND ORDER**

**Adopted: October 4, 2006**

**Released: October 10, 2006**

By the Commission:

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### I. INTRODUCTION

1. In this *Report and Order (R&O)*, we address comments received in response to a *Notice of Proposed Rulemaking (NPRM)*, released by the Commission on April 15, 2004, which sought comment on certain proposed revisions to the Commission's Amateur Radio Service rules.<sup>1</sup> The *NPRM* was issued in response to the filing of nineteen petitions for rulemaking and one informal request for Commission action.<sup>2</sup> Generally, the *NPRM* proposed to (1) revise the frequency segments of certain High Frequency<sup>3</sup> (HF) bands on which amateur stations are authorized to transmit voice communications; (2) authorize amateur stations to transmit certain emission types on additional amateur service bands or frequency segments; (3) amend the rules for the amateur service vanity call sign system; and (4) eliminate unnecessary restrictions imposed on manufacturers of certain types of equipment that may be used at amateur stations.

2. As discussed below, this *R&O* implements many of the specific proposals set forth in the *NPRM*. It also implements rule amendments proposed in the *NPRM* but modified to

<sup>1</sup> Amendment of Part 97 of the Commission's Rules Governing the Amateur Radio Services, *Notice of Proposed Rulemaking and Order*, WT Docket No. 04-140, 19 FCC Rcd 7293 (2004) (*NPRM*).

<sup>2</sup> See *id.* at 7294 ¶ 1 & n.2.

<sup>3</sup> The HF amateur service bands are located between 3000 kHz and 30,000 kHz. See 47 C.F.R. § 2.101.

incorporate suggestions raised in the comments, and other conforming amendments to the amateur service rules. This *R&O* furthers the public interest by allowing amateur service licensees to use the spectrum more efficiently, and by allowing amateur service stations to operate with fewer restrictions. Moreover, we believe that these changes will (1) provide licensees with greater flexibility in the utilization of amateur service frequencies, (2) promote efficient use of the Amateur Radio Service spectrum by authorizing communications that include both analog and digital emission types to be transmitted on currently-authorized amateur service spectrum, and (3) eliminate unnecessary requirements that may limit the flexibility of the amateur service license examination system.

## II. EXECUTIVE SUMMARY

3. In this *R&O*, we amend the Part 97 Amateur Radio Service rules<sup>4</sup> as follows:
- revise the operating privileges<sup>5</sup> of amateur radio operators to allow more spectrum in four currently-authorized amateur service HF bands to be used for voice communications;
  - permit auxiliary stations<sup>6</sup> to transmit on additional amateur service bands;
  - permit amateur stations to transmit spread spectrum communications on the 1.25 meter (m) band;
  - permit amateur stations to retransmit communications from the International Space Station;
  - permit amateur service licensees to designate the amateur radio club to receive their call sign *in memoriam*;
  - prohibit an applicant from filing more than one application for a specific vanity call sign;
  - eliminate certain restrictions on equipment manufacturers that are no longer necessary;
  - permit amateur radio stations operating in Alaska and surrounding waters more flexibility in providing emergency communications; and
  - remove certain restrictions in the amateur service license examination system that are no longer necessary.

## III. BACKGROUND

4. In the Commission's Part 97 Rules, the Amateur Radio Service is defined as "the amateur service, the amateur-satellite service, and the radio amateur civil emergency service

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<sup>4</sup> 47 C.F.R Part 97.

<sup>5</sup> In the amateur service, "operating privileges" generally refer to the frequency bands available to the control operator of an amateur station and to the emission types an amateur station may transmit.

<sup>6</sup> An auxiliary station is an amateur station, other than in a message forwarding system, that is transmitting communications point-to-point within a system of cooperating amateur stations. 47 C.F.R. § 97.3(a)(7).

(RACES).<sup>7</sup> The amateur service is available for use by persons who are interested in radio technique solely with a personal aim and without pecuniary interest.<sup>8</sup> It presents an opportunity for individuals to self-train in radio and communications technology, intercommunicate, and carry out technical investigations.<sup>9</sup> Amateur radio operators also engage in voluntary, noncommercial communications with other amateur radio operators located in the United States and in foreign countries,<sup>10</sup> and form a group of trained operators who have the ability to provide essential communications links and to facilitate relief actions on a purely voluntary basis when a disaster strikes or is likely to occur.<sup>11</sup>

5. In 1999, the Commission adopted the *License Restructure Report and Order*,<sup>12</sup> which simplified the amateur service operator license structure to three classes of operator licenses -- the Technician Class, General Class, and Amateur Extra Class -- and streamlined the amateur radio operator examination system.<sup>13</sup> In that proceeding, the Commission declined to consider a comprehensive restructuring of operating privileges,<sup>14</sup> stating that the amateur service community should have an opportunity to complete ongoing discussions concerning implementation of new and more modern communications technologies, and to possibly reach a consensus regarding implementation of these technologies before the Commission considered comprehensive restructuring measures.<sup>15</sup>

6. On April 15, 2004, the Commission released the *NPRM* in this proceeding, and sought comment regarding rule amendments proposing to change operating privileges for amateur service licensees, among other issues.<sup>16</sup> Specifically, the Commission proposed to (a) increase the amount of spectrum that amateur stations could use for voice communications;<sup>17</sup> (b) amend its rules relating to the types of communications an amateur station may transmit; (c)

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<sup>7</sup> See 47 C.F.R. § 97.3(a)(2). The amateur service and the amateur satellite service are separate services in the international *Radio Regulations*; RACES is a domestic radio service using amateur stations for civil defense communications during periods of local, regional or national civil emergencies. See *World Radiocommunication Conference Final Acts (Geneva, 2003)*, Article 25, 47 C.F.R. § 97.3(a)(37). Hereafter, the term "amateur service" is used to include all of the amateur radio services.

<sup>8</sup> See 47 C.F.R. § 97.3(a)(4).

<sup>9</sup> See 47 C.F.R. § 97.1.

<sup>10</sup> See 47 C.F.R. § 97.111(a)(1).

<sup>11</sup> See 47 C.F.R. § 97.401.

<sup>12</sup> See 1998 Biennial Regulatory Review -- Amendment of Part 97 of the Commission's Amateur Service Rules, *Report and Order*, WT Docket No. 98-143, 15 FCC Rcd 315 (1999) (*License Restructure Report and Order*) and *Errata*, April 19, 2000; *Memorandum Opinion and Order*, 16 FCC Rcd 8076 (2001). The rule changes adopted in the *License Restructure Report and Order* became effective April 15, 2000.

<sup>13</sup> See *License Restructure Report and Order*, 15 FCC Rcd at 316 ¶ 3. Previously, the amateur service operator license structure consisted of six classes of operator licenses: the Novice, Technician, Technician Plus, General, Advanced, and Amateur Extra Class operator licenses. To transition to the three-class license structure, the Commission grandfathered then-current Novice, Technician Plus, and Advanced Class licensees, and decided that no new Novice or Advanced Class licenses would be issued. The Commission also decided to renew Technician Plus Class licenses as Technician Class licenses.

<sup>14</sup> See *id.* at 325 ¶ 17.

<sup>15</sup> See *id.*

<sup>16</sup> See *NPRM*, 19 FCC Rcd at 7300 ¶ 11.

<sup>17</sup> See *id.*

revise the vanity and special event call sign systems, and (d) revise certain rules applicable to the amateur service operator licensing system.<sup>18</sup> The Commission also proposed amendments to the amateur service rules to conform them to the international *Radio Regulations*<sup>19</sup> and to reflect recent changes in Commission organization and practices.<sup>20</sup> In response to the *NPRM*, we received over 150 timely filed comments and reply comments.

#### IV. DISCUSSION

##### A. Amateur Station Frequency Privileges

7. Emission Frequency Segments. *Background*. Currently, the Commission's rules authorize amateur stations to transmit radio frequency emissions in nine HF bands.<sup>21</sup> The Rules also subdivide all but two of these bands<sup>22</sup> into a frequency segment in which amateur stations may transmit only emissions that require a narrow bandwidth, such as telegraphy, data or radio teletype (RTTY) emissions, and a frequency segment in which amateur stations may also transmit emissions that require more bandwidth, such as voice or image emissions.<sup>23</sup> The class of operator license determines the frequency band, or segment of a frequency band, on which an amateur radio licensee may operate a station.<sup>24</sup> Currently, our Part 97 rules authorize amateur stations to transmit phone emissions on certain HF bands as follows:<sup>25</sup>

75 Meter Amateur Band (3750-4000 kHz).<sup>26</sup>

- An Amateur Extra Class licensee may control an amateur station transmitting a phone emission on any frequency within the band.<sup>27</sup>
- An Advanced Class licensee may control an amateur station transmitting a phone emission on the 3775-4000 kHz segment of the band.<sup>28</sup>
- A station controlled by a General Class licensee may transmit phone emissions on the 3850-4000 kHz segment of the band.<sup>29</sup>

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<sup>18</sup> *See id.*

<sup>19</sup> *See Final Acts of the World Radiocommunication Conference (WRC-97)*, Geneva, 1997, and *Final Acts of the World Radiocommunication Conference (WRC-2000)*, Istanbul, 2000, (*Radio Regulations*).

<sup>20</sup> *See NPRM*, 19 FCC Rcd at 7294 ¶ 1.

<sup>21</sup> *See* 47 C.F.R. § 97.305.

<sup>22</sup> *See* 47 C.F.R. §§ 97.303(s), 97.305. In the 30 m amateur service band, an amateur station may transmit only narrow bandwidth emission types; in the 60 m amateur service band, amateur stations may transmit only voice communications using upper sideband, suppressed carrier emission.

<sup>23</sup> *See* 47 C.F.R. § 97.305. *See* 47 C.F.R. § 97.3(c) for definitions of terms used to indicate emission types. Amateur radio operators commonly refer to the segment of an amateur service band used for narrow bandwidth emission types as the "CW segment" of the band because this frequency segment is used for, among other things, Morse code telegraphy emissions. The frequency segment authorized for voice or image emissions is commonly referred to as the "phone segment" of the band.

<sup>24</sup> *See* 47 C.F.R. §§ 97.105(b), 97.301.

<sup>25</sup> *See* 47 C.F.R. §§ 97.301, 97.305.

<sup>26</sup> *See* 47 C.F.R. § 97.305(c).

<sup>27</sup> 47 C.F.R. § 97.301(b).

<sup>28</sup> 47 C.F.R. § 97.301(c).

40 Meter Amateur Band (7000-7300 kHz).<sup>30</sup>

- Amateur Extra Class and Advanced Class licensees may control an amateur station transmitting a phone emission on any frequency within the 7150-7300 kHz segment.<sup>31</sup>
- A station controlled by a General Class licensee may transmit phone emissions on the 7225-7300 kHz segment.<sup>32</sup>

15 Meter Amateur Band (21,000-21,450 kHz).<sup>33</sup>

- An Amateur Extra Class licensee may control an amateur station transmitting a phone emission on any frequency within the 21,200-21,450 kHz frequency segment.<sup>34</sup>
- An Advanced Class licensee may control an amateur station transmitting a phone emission on the 21,225-21,450 kHz segment of the band.<sup>35</sup>
- A station controlled by a General Class licensee may transmit a phone emission on the 21,300-21,450 kHz segment of the band.<sup>36</sup>

8. In addition, a Novice Class licensee or a Technician Class licensee who has received credit for passing a Morse code examination<sup>37</sup> currently is permitted to control an amateur station transmitting messages using the international Morse code on certain HF bands as follows:

80 Meter Amateur Band (3500-3750 kHz): the 3675-3725 kHz frequency segment.

40 Meter Amateur Band: the 7100-7150 kHz frequency segment.

15 Meter Amateur Band: the 21,100-21,200 kHz frequency segment.

10 Meter Amateur Band (28,000-29,700 kHz): the 28,100-28,300 kHz frequency segment.<sup>38</sup>

9. The *NPRM* sought comment on whether the Commission should eliminate the frequency segments in the 80, 40, and 15 m amateur bands currently authorized to Novice and Technician Plus Class licensees so that additional spectrum to transmit phone communications

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(...continued from previous page)

<sup>29</sup> 47 C.F.R. § 97.301(d).

<sup>30</sup> See 47 C.F.R. § 97.305(c).

<sup>31</sup> 47 C.F.R. § 97.301(b), (c).

<sup>32</sup> 47 C.F.R. § 97.301(d).

<sup>33</sup> See 47 C.F.R. § 97.305(c).

<sup>34</sup> 47 C.F.R. § 97.301(b).

<sup>35</sup> 47 C.F.R. § 97.301(c).

<sup>36</sup> 47 C.F.R. § 97.301(d).

<sup>37</sup> Technician Class licensees who have received credit for passing a Morse code examination are referred to as “Technician Plus” Class licensees within the amateur radio community.

<sup>38</sup> 47 C.F.R. § 97.301(e). These licensees also are authorized to control an amateur station transmitting a RTTY or data emission on the 28,100-28,300 kHz frequency segment.

could be authorized to General, Advanced, and Amateur Extra Class licensees in these bands.<sup>39</sup> To provide spectrum for Novice and Technician Plus Class licensees to replace the telegraphy frequency segments currently authorized for these licensees, at the request of the American Radio Relay League, Inc. (ARRL),<sup>40</sup> the Commission also sought comment on whether these licensees should be authorized to transmit privileges in any portion of the 80, 40, and 15 m amateur service bands that provide for telegraphy operation by General Class licensees.<sup>41</sup> With regard to the division of the "refarmed"<sup>42</sup> spectrum among General, Advanced, and Amateur Extra Class licensees, the Commission sought comment on ARRL's request that (1) in the 75 m band, the spectrum authorized for phone communications be expanded by 25 kHz, and that Amateur Extra Class licensees be authorized 3725-4000 kHz, Advanced Class licensees be authorized 3750-4000 kHz, and General Class licensees be authorized 3800-4000 kHz; (2) in the 40 m band, spectrum authorized for phone communications be expanded by 25 kHz and that Amateur Extra and Advanced Class licensees be authorized 7125-7300 kHz, and General Class licensees be authorized 7175-7300 kHz; and (3) in the 15 m band, the spectrum authorized for General Class licensees for phone communications be expanded by 25 kHz by authorizing these licensees the frequency segment 21275-21450 kHz for phone communications.<sup>43</sup> In response to the ARRL's request, the Commission also sought comment on whether to authorize stations of Novice and Technician Class licensees to transmit in the 28000-28300 kHz frequency segment additional emission types.<sup>44</sup> The Commission noted that the proposed rule revisions would result in no licensee losing any spectrum privileges, and that General, Advanced, and Amateur Extra Class licensees would gain access to additional spectrum for phone communications, one of the most popular operating activities on the HF bands.<sup>45</sup>

10. *Decision.* Based on the record before us, we believe that authorizing additional spectrum for voice communications is warranted. We agree with the majority of commenters that such an authorization will address a current need for more spectrum to accommodate phone communications, and that benefits will accrue and efficiencies will be gained by this action.<sup>46</sup> A few commenters oppose reserving amateur service spectrum for narrowband or telegraphy communications on the grounds that we should not favor a particular type of communications use.<sup>47</sup> Others oppose allowing additional spectrum to be used for voice communications in the 40 m amateur service band on the grounds that this band already is well-allocated among

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<sup>39</sup> See *NPRM*, 19 FCC Rcd at 7300 ¶ 11.

<sup>40</sup> See *ARRL Petition for Rulemaking*, RM-10413 (ARRL Petition) at 5.

<sup>41</sup> See *NPRM*, 19 FCC Rcd at 7300 ¶ 11.

<sup>42</sup> "Refarming" is a term used in many comments to describe the re-allocation of frequency bands currently authorized to Novice and Technician Plus Class licensees to frequency bands that may be used to transmit voice communications.

<sup>43</sup> See *NPRM*, 19 FCC Rcd at 7300 ¶ 11.

<sup>44</sup> See *id.*

<sup>45</sup> See *id.*

<sup>46</sup> See, e.g., ARRL Comments at 5-6; Timothy J. Peters Comments at 1; Steve Joachim Comments at 1; Dale Gagnon Comments at 1; Frederick L. Stiles Comments at 1; Steve Bockman Comments at 1; William F. Klepser Comments at 1; Bill Kleronomos Comments at 1; Ron Pieman Comments at 1; Woodrow Olsen Comments at 1; James P. Wilhite Comments at 1.

<sup>47</sup> See Paul Courson Reply Comments at 1; Robert C. Stout Comments at 1.

operating interests and license classes.<sup>48</sup> We are persuaded, however, by ARRL's contention that increasing the amount of spectrum for voice communications will reduce interference among stations using voice communications, thereby benefiting all licensees, and that authorizing more spectrum for voice communications will more closely reflect licensees' operating preferences, thereby resulting in more efficient use of amateur service spectrum.<sup>49</sup> Additionally, we are persuaded that increasing the spectrum for voice communications is consistent with our observation that additional frequency privileges for higher class licensees are an incentive for licensees to advance their communications and technical skills,<sup>50</sup> thereby providing greater incentive for licensees to advance or "upgrade"<sup>51</sup> to a higher class operator license, and will better reflect the communication technology preferences of amateur radio operators.<sup>52</sup>

11. Further, based on the record in this proceeding, we are persuaded that we should authorize more spectrum in the 80 m band for voice communications than was proposed in the *NPRM*. Indeed, a number of commenters argue that the *NPRM* proposal to increase the amount of spectrum permitted for voice communications would still not meet the demand for voice communication spectrum in the HF bands, particularly in the 80 m band.<sup>53</sup> As a result, some commenters request that the 80 m allocation be extended downward to include 3600-4000 kHz,<sup>54</sup> 3650-4000 kHz,<sup>55</sup> or 3675-4000 kHz for voice communications,<sup>56</sup> believing that expanding the band more than the Commission proposed is justified because the CW band "is grossly underused and represents a huge waste in spectrum."<sup>57</sup> Further, the record suggests that additional spectrum for voice communications would relieve "the overcrowding [amateur operators] are experiencing,"<sup>58</sup> and that because the Commission's proposal was to provide additional spectrum for voice communications by eliminating the Novice Class telegraphy sub-bands so "the 80 m Novice class telegraphy sub-band should be reallocated for voice use."<sup>59</sup> We conclude that these requests are reasonable, and that authorizing 3600-4000 kHz for voice

<sup>48</sup> See Scott McMullen Comments at 1; Alvin Berglund Comments at 1.

<sup>49</sup> See ARRL Comments at 5-6.

<sup>50</sup> See Amendment of Part 97 of the Commission's Rules To Implement WRC-03 Regulations Applicable to Requirements for Operator Licenses in the Amateur Radio Service, *Notice of Proposed Rule Making and Order*, WT Docket No. 05-235, 20 FCC Rcd 13247, 13251 ¶ 8 (2005) (*WRC-03 Implementation NPRM*).

<sup>51</sup> See 47 C.F.R. § 97.503. In the amateur service license structure, an individual advances to a higher class of operator license by passing examinations that demonstrate increased telegraphy proficiency and/or more technical expertise than what the individual's present license class requires.

<sup>52</sup> See, e.g., Donald B. Chester Comments at 3; James P. Wilhite Comments at 1; Steve Bockman Comments at 1; Ron Pieman Comments at 1.

<sup>53</sup> See David J. Humbertson Comments at 1; Paul Goodman Comments at 1, John Fitzsimmons Comments at 1; Robert S. Greenstein Comments at 1.

<sup>54</sup> See Donald B. Chester Comments at 3; Paul Goodman Comments at 1; David J. Humbertson Comments at 1; Steve Bockman Comments at 1; Tony M. Cypert Comments at 1; Michael K. Wingfiels Comments at 1.

<sup>55</sup> See Karl W. Zuege Comments at 1.

<sup>56</sup> See Dale Gagnon Comments at 1.

<sup>57</sup> See David J. Humbertson Comments at 1; see also Dale Gagnon Comments at 1; John Fitzsimmons Comments at 1.

<sup>58</sup> See Tony M. Cypert Comments at 1; see also Paul Courson Reply Comments at 3.

<sup>59</sup> See Dale Gagnon Comments at 1.



communications will result in a more equitable division of spectrum between users of narrowband and wideband modes.<sup>60</sup> Accordingly, we will authorize amateur stations to transmit a phone emission in the frequency segment 3600-4000 kHz by amending Section 97.301(b) the Commission's Rules.<sup>61</sup>

12. Regarding the division among license classes of the spectrum on which we today authorize phone emissions, we adopt the Commission's proposal to authorize stations of General Class licensees to transmit voice emissions in the 3800-4000 kHz frequency segment, thereby increasing by 50 kHz the spectrum for voice communications by these stations. Because we have decided to authorize more 75 m spectrum for voice communications than was proposed in the *NPRM*, we also authorize stations of Advanced Class licensees to transmit voice emissions in the 3700-4000 kHz frequency segment, thereby increasing by 75 kHz the amount of spectrum for voice communications by these stations. We also authorize stations of Amateur Extra Class licensees to transmit voice emissions in the 3600-4000 kHz frequency segment, thereby increasing by 150 kHz the spectrum authorized to these stations for voice communications. In the 40 m and 15 m bands, we adopt the Commission's proposal to authorize stations of Amateur Extra and Advanced Class licensees 7125-7300 kHz, stations of General Class licensees 7175-7300 kHz, and stations of General Class licensees 21275-21450 kHz for phone communications.<sup>62</sup>

13. With regard to whether Novice and Technician Plus Class licensees should be authorized telegraphy privileges in spectrum in the 80, 40 and 15 m amateur service bands that General Class licensees are allowed to use for telegraphy operation and whether we should authorize Novice and Technician Plus Class licensees additional emission privileges in the 28000-28300 kHz frequency segment of the 10 m band, based on the record before us, we adopt these changes as set forth in the *NPRM*.<sup>63</sup> In this connection, we note that the comments generally support maintaining HF frequency allocations for Novice and Technician Plus Class licensees stating, for example, that the Commission's proposal "would simplify the band plans and ... also provide Novice and Technician Class licensees the opportunity to contact a greater number of other amateur operators."<sup>64</sup> Other commenters support the Commission's proposal on the grounds that it would "increase utilization of the three bands involved"<sup>65</sup> and "generate and continue the effective and efficient use of valuable and priceless spectrum, generate experimentation, and further the advance of the industry."<sup>66</sup> Other commenters urge that, in addition to allowing Novice and Technician Plus Class licensees spectrum in the 80, 40, and 15 m amateur service bands as the Commission proposed, these licensees should also be allowed

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<sup>60</sup> See also Donald B. Chester Comments at 3, noting that this division would result in two hundred channels for stations transmitting telegraphy and other narrowband emissions and one hundred thirty three channels for stations transmitting voice and other wideband emissions.

<sup>61</sup> 47 C.F.R. § 97.301(b).

<sup>62</sup> See *NPRM*, 19 FCC Rcd at 7300 ¶ 11.

<sup>63</sup> See para. 9, *supra*.

<sup>64</sup> See David Drumheller Comments at 1.

<sup>65</sup> See William F. Osler Comments at 1.

<sup>66</sup> See Paul F. Bransztet, Jr. Comments at 1.

data, RTTY, and some voice privileges;<sup>67</sup> or, that we afford these licensees the same frequency privileges in the 10 m band that other licensees are presently authorized for voice communications on the grounds that eliminating the 10 m Novice band would “increase the use of this band and the diversity of operating modes therein.”<sup>68</sup> Other commenters contend that allowing these licensees to use the 28.3-29.7 MHz frequency segment for voice communications would “drastically improve the efficiency of 10 m phone band usage,”<sup>69</sup> “would reduce interference between adjacent stations even during crowded contest conditions,”<sup>70</sup> and would open the 10 m band to many new opportunities for new entry level licensees who would have HF phone privileges because “there are AM and FM operations above 28.5 MHz as well as nets and 10 Meter repeaters.”<sup>71</sup>

14. Based on our review of the record in this proceeding, we are not persuaded that we should authorize Novice and Technician Class licensees additional frequency privileges in the 10 m band beyond those proposed. In this regard, we do not believe we should reduce the incentive for amateur radio operators to advance their communication and technical skills. Rather, we note that Novice and Technician Class licensee can upgrade to the General Class operator license by passing only one or two written examinations, thereby qualifying for the same frequency privileges in the 10 m band that other licensees are presently authorized. Accordingly, we do not believe that authorizing Novice and Technician Class licensees additional frequency privileges in the 10 m band is necessary.

15. Image Emissions. Background. Amateur radio operators have recently been using personal computers with sound cards and software to develop new communication systems and technologies that are capable of transmitting both image and data emission types. One system in use, for instance, combines a digital emission and a narrowband facsimile (FAX) emission.<sup>72</sup> Another system, sometimes referred to as the “Hellschreiber” system, uses transmitted pulses to directly write images on paper or a computer screen. Amateur radio operators worldwide have been using these new communications systems without causing harmful interference<sup>73</sup> to other amateur service communications. Such use appears to be consistent with one of the purposes of amateur service, namely, to contribute to the advancement of the radio art.<sup>74</sup> Nevertheless, our Part 97 rules do not now authorize amateur stations to transmit both image and data emission types on any HF frequency segments,<sup>75</sup> though they do

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<sup>67</sup> See John S. Rippey Comments at 1; Karl W. Zuege Comments at 1. We note that the Commission’s rules currently authorize these licensees voice privileges on the 28,300-28,500 kHz frequency segment. See 47 C.F.R. § 97.305(c).

<sup>68</sup> See William F. Osler Comments at 1.

<sup>69</sup> Duane Mantick Comments at 5.

<sup>70</sup> See *id.* at 3.

<sup>71</sup> See *id.* at 6.

<sup>72</sup> Emission type F2C (Facsimile (FAX)) is an image emission type using frequency modulation of the main carrier. See 47 C.F.R. §§ 2.201, 97.3(c)(3).

<sup>73</sup> “Harmful interference” is interference that endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs, or repeatedly interrupts a radiocommunication service operating in accordance with the ITU *Radio Regulations*. See 47 C.F.R. § 2.1.

<sup>74</sup> See 47 C.F.R. § 97.1(b).

<sup>75</sup> See 47 C.F.R. § 97.305(c).

authorize image emission types to be transmitted on frequency segments also authorized for phone communications.<sup>76</sup>

16. In the *NPRM*, the Commission sought comment<sup>77</sup> on whether it should revise the definition of data emission types contained in Section 97.3(c) of our Rules to include emission types A1C and F2C.<sup>78</sup> This would permit amateur stations to transmit FAX emissions having an occupied bandwidth of 500 Hz or less on the frequency segments used for data communications.<sup>79</sup> The *NPRM* also noted that limiting the occupied bandwidth of image emissions in data segments of the HF bands to 500 Hz or less would provide the amateur service community greater flexibility in developing communication systems and communications technology, thereby furthering that purpose of the amateur service while maintaining the narrow bandwidth nature of the data emission band segments.<sup>80</sup>

17. *Decision.* All commenters who addressed this issue support the *NPRM* proposal to revise the definition of data in the amateur service rules. We agree that permitting images to be transmitted on data emission frequency segments will “allow amateur radio to make the most of new [software] programs”<sup>81</sup> thereby “advanc[ing] its technology.”<sup>82</sup>

18. We agree with the majority of commenters that analog emissions should not categorically be excluded from the definition of data emission types because the frequency segments authorized for data emissions also are authorized for certain analog emission types.<sup>83</sup> Although ARRL agrees with the concept of permitting images to be transmitted in HF segments where data emissions are currently allowed, it requests that we exclude analog image emissions from the definition of data, because it asserts that analog emissions “would be inhomogeneous with the digital emissions in the segments in which CW, RTTY, and data emissions are permitted.”<sup>84</sup> However, many other commenters request that we include emission designators J2C and J3C in the definition of data so that data communications transmitted by amateur stations may include narrow bandwidth analog images.<sup>85</sup> We also note that no commenter has claimed that interference occurs between these different types of emissions and that many

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<sup>76</sup> See 47 C.F.R. § 97.307(f).

<sup>77</sup> See *NPRM*, 19 FCC Rcd at 7302 ¶ 16.

<sup>78</sup> See 47 C.F.R. §§ 2.201, 2.202 for the rules that apply to emission types. A1C signifies double-sideband facsimile transmissions on a single channel containing quantized or digital information without the use of a modulating sub-carrier, excluding time-division multiplex. F2C signifies frequency-modulated facsimile transmissions on a single channel containing quantized or digital information with the use of a modulating sub-carrier, excluding time-division multiplex.

<sup>79</sup> See *NPRM*, 19 FCC Rcd at 7302 ¶ 16.

<sup>80</sup> See *id.*

<sup>81</sup> See, e.g., Reed E. Triplett Comments at 1.

<sup>82</sup> See, e.g., Michael K. Flowers Comments at 1.

<sup>83</sup> See 47 C.F.R. § 97.305(c).

<sup>84</sup> See ARRL Comments at 8.

<sup>85</sup> See, e.g., Reed E. Triplett Comments at 1; Donald E. Dallmann Comments at 2; Woodbury Pride Comments at 1; Jack Heller Comments at 1; Arthur J. Trenchi Comments at 1; Mark Miller Reply Comments at 1. J2C (facsimile or FAX) is an image emission type that uses single sideband suppressed carrier modulation of a single channel containing digital information. J3C (FAX) is an image emission type that uses single sideband suppressed carrier modulation of a single channel containing analog information. See 47 C.F.R. §§ 2.201, 97.3(c).

commenters support allowing narrow bandwidth analog image emissions in digital frequency segments. Based on the record before us, we believe that we should allow amateur stations to transmit narrow bandwidth analog image emissions in digital frequency segments. Accordingly, we revise the definition of data to include emission designators J2C and J3C. We also include emission type F1C, because F1C is the emission type that amateur stations transmit when they are using multiple frequency shift keying (MFSK).<sup>86</sup>

19. ARRL also requests that we not impose a 500 Hz bandwidth limitation in the definition of data emissions, arguing that this limitation would have unintended consequences because the limitation also applies to amateur service bands in which a higher symbol rate or bandwidth is permitted.<sup>87</sup> We understand ARRL's concern, but we note that eliminating or relaxing the bandwidth limitation would *de facto* eliminate the separation of narrow bandwidth and wide bandwidth emissions.<sup>88</sup> We believe that separation of emission types by bandwidth is accepted in the amateur service as a reasonable means to minimize interference on shared frequencies and bands<sup>89</sup> and, therefore, we will not replace the 500 Hz bandwidth limitation with a 3 kHz bandwidth limitation. To accommodate the concern raised by ARRL, however, we will revise our rules to clarify that the 500 Hz limitation applies only to the emission types we are adding to the definition of data when transmitted on amateur service frequencies below 30 MHz. By amending the rule in this manner, the 500 bandwidth limitation will not apply to other data emission types or amateur service bands in which a higher symbol rate or bandwidth currently is permitted.<sup>90</sup>

20. Auxiliary stations. *Background.* As currently defined by the amateur service rules, an auxiliary station is an amateur station, other than a station in a message forwarding system,<sup>91</sup> that is transmitting point-to-point communications within a system of cooperating amateur stations.<sup>92</sup> Under the current Part 97 rules, an auxiliary station is restricted to transmitting only on the 1.25 m and shorter wavelength bands, with exceptions for certain frequency segments.<sup>93</sup> The underlying purpose of limiting auxiliary stations to these frequency

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<sup>86</sup> See Jan A. Tarsala Comment at 2. In MFSK, a transmitter shifts between multiple pre-determined frequencies to transmit information.

<sup>87</sup> See ARRL Comments at 8-9.

<sup>88</sup> See Mark Miller Reply Comments at 1.

<sup>89</sup> Separation of emission types by bandwidth minimizes or reduces interference because it protects narrow signals from interference from wide signals. Amateur licensees have accepted this division of spectrum as a method for minimizing interference for as long as the amateur service has been regulated, and no commenter in this proceeding requests eliminating emission segmentation based on bandwidth.

<sup>90</sup> See 47 C.F.R. §§ 97.305(c), 97.307(f)(3)-(8), (13).

<sup>91</sup> A "message forwarding system" is a "voluntary, cooperative, interactive arrangement" of amateur stations whereby "communications are sent from the control operator of an originating station to the control operator of one or more destination stations by one or more forwarding stations." 47 C.F.R. § 97.3(a)(31). Examples of amateur service message forwarding systems include linked repeater systems and packet radio message forwarding systems.

<sup>92</sup> See 47 C.F.R. § 97.3(a)(7).

<sup>93</sup> See 47 C.F.R. § 97.201(b). Auxiliary stations do not have authorization to use the 219-220 MHz, 222.000-222.150 MHz, 431-433 MHz and 435-438 MHz frequency segments. *Id.*

bands has been to minimize the possibility of harmful interference to other amateur service stations and operations, particularly “weak signal”<sup>94</sup> activity in the 2 m (144-148 MHz) band.<sup>95</sup>

21. In the *NPRM*, in response to a request from Kenwood Communications Corporation, the Commission sought comment on whether it should revise Section 97.201(b) of the Commission’s Rules<sup>96</sup> to allow auxiliary stations to transmit on the 2 m band above 144.5 MHz, except 145.8-146.0 MHz,<sup>97</sup> in addition to the frequency segments previously authorized.<sup>98</sup> In the *NPRM*, the Commission noted that there was no apparent basis to conclude that allowing auxiliary stations to transmit on the 2 m band would cause harmful interference to other stations’ communications.<sup>99</sup> It was also noted that user coordination would be possible, and that the additional frequency segments proposed for auxiliary station use do not affect the frequency segments currently authorized to automatically controlled beacon stations, space stations, Earth stations or those frequency segments that amateur radio operators have voluntarily agreed to use for simplex and weak signal communications.<sup>100</sup>

22. *Decision.* We agree with the commenters who support allowing the 2 m band to be used by auxiliary stations,<sup>101</sup> because such use could result in the expansion of amateur service communication systems that incorporate voice over internet protocol operations<sup>102</sup> or other sophisticated amateur radio communications systems,<sup>103</sup> enhance communications capabilities for emergency communications supporting disaster relief efforts,<sup>104</sup> or permit direct communication with HF radio networks using commonly available radios, such as 144/440 MHz handheld transceivers.<sup>105</sup> Additionally, we agree with ARRL and others who contend that

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<sup>94</sup> “Weak signal” communications are primarily Morse code telegraphy and single sideband voice messages transmitted over very long distances in the Very High Frequency (VHF) and Ultra High Frequency (UHF) amateur service bands.

<sup>95</sup> See *Deregulation of Part 97 of the Commission’s Rules to Simplify the Licensing and Operation of Complex Systems of Stations and Modify Repeater Subbands in the Amateur Radio Service*, *Report and Order*, Docket No. 21033, 66 F.C.C. 2d 207, 215 ¶ 6 (1977). In 1986, the Commission reaffirmed this interference-minimization approach by rejecting a proposal to eliminate the frequency restrictions applicable to auxiliary stations. See *Amendment of the Amateur Service Rules to Allow Auxiliary Operation on All Amateur Service Frequencies*, except 431-433 MHz and 435-438 MHz, *Order*, PR Docket 85-1215, 60 Rad. Reg. 2d (P & F) 249 (1986).

<sup>96</sup> 47 C.F.R. § 97.201(b).

<sup>97</sup> Such an exclusion would protect amateur radio satellites that receive communications (uplink) in the 145.8-146.0 MHz frequency segment.

<sup>98</sup> See *NPRM*, 19 FCC Rcd at 7305 ¶ 22. Kenwood argued that this proposed rule change would increase the flexibility of amateur radio licensees without adversely affecting other services or amateur radio stations that use the 2 m band, and would promote the development and use of new technology.

<sup>99</sup> See *id.*

<sup>100</sup> See *id.*

<sup>101</sup> See Daniel Monge Comments at 1; Ken Rogers Comments at 1; John McCabe Comments at 1; William F. Osler Comments at 1; ARRL Comments at 10; Marcial D. Sorrel Comments at 1; Richard Illaman Comments at 1.

<sup>102</sup> See Daniel Monge Comments at 1; Ken Rogers Comments at 1; John McCabe Comments at 1; William F. Osler Comments at 1.

<sup>103</sup> See ARRL Comments at 10.

<sup>104</sup> See Marcial D. Sorrel Comments at 1; Ken Rogers Comments at 1; Richard Illaman Comments at 1; John McCabe Comments at 1.

<sup>105</sup> See John McCabe Comments at 1.

allowing auxiliary stations to transmit on the 2 m band would provide amateur stations with additional flexibility to utilize remote control facilities.<sup>106</sup>

23. We disagree with the concern of one commenter that transmissions by auxiliary stations should only be allowed on the UHF bands because these transmissions may "consume a frequency for hours on end."<sup>107</sup> There is no rule limiting the length of time an amateur station may engage in communications on a particular frequency and amateur stations have the ability to switch among numerous channels when one channel is in use, thereby minimizing interference among stations. Likewise, we do not believe the fact that other frequency bands already are approved for auxiliary stations<sup>108</sup> provides a sufficient reason alone to maintain the restriction prohibiting auxiliary stations from transmitting on the 2 m band. In this regard, we note that auxiliary stations were limited to bands above 220 MHz in order to minimize the possibility of harmful interference to other amateur service operations, particularly weak signal activity, an outcome some commenters believe may still occur.<sup>109</sup> We note, however, that other commenters argue that additional interference, if any, from allowing auxiliary stations to transmit on the 2 m band would only be "slight" in areas of the country where large segments of the 2 m band are underutilized<sup>110</sup> or where unused spectrum is available in the 2 m band to permit auxiliary station operation.<sup>111</sup> We agree with these commenters and note that under our current rules, willful interference is prohibited.<sup>112</sup> In addition, we believe that other safeguards such as voluntary frequency coordination and the requirement in the Commission's rules that stations use the minimum necessary power for the auxiliary link also minimize the possibility of harmful interference between auxiliary stations and other amateur stations.<sup>113</sup> We also agree that in areas where segments of the 2 m band are underutilized or spectrum is otherwise available, interference is unlikely. We conclude, based on the above, that we no longer need to limit auxiliary stations to amateur service bands above 220 MHz. Accordingly, we amend Section 97.201(b), as proposed, to allow auxiliary stations to transmit on the 2 m band.

24. Spread spectrum. Background. Currently, amateur stations are authorized to transmit spread spectrum (SS) emission types on any amateur service frequency above 420 MHz, and not below.<sup>114</sup> This frequency limitation was adopted in 1985 to reduce potential interference from transmission of SS emissions.<sup>115</sup> In 1999, the Commission amended Section

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<sup>106</sup> See ARRL Comments at 10; John McCabe Comments at 1.

<sup>107</sup> See Richard Linder Comments at 1.

<sup>108</sup> See Bruce Ferry Comments at 1.

<sup>109</sup> See William Tynan Comments at 3; Richard Linder Comments at 1; Bruce Ferry Comments at 1.

<sup>110</sup> See William F. Osler Comments at 1.

<sup>111</sup> See John McCabe Comments at 1.

<sup>112</sup> See 47 C.F.R. § 97.101(d).

<sup>113</sup> See John McCabe Comments at 1. See also, 47 C.F.R. § 97.313(a).

<sup>114</sup> See 47 C.F.R. § 97.305(c). A spread spectrum system is an information bearing communications system in which information is conveyed by modulation of a carrier by some conventional means, and the bandwidth is deliberately widened by means of a spreading function over that which would be needed to transmit the information alone. See 47 C.F.R. § 2.1.

<sup>115</sup> See Amendment of Parts 2 and 97 of the Commission's Rules and Regulations to Authorize Spread Spectrum Techniques in the Amateur Radio Service, *Report and Order*, Gen. Docket No. 81-414, 101 FCC 2d 419 (1985).

97.311(c)<sup>116</sup> to permit amateur stations greater flexibility in the types of SS emissions that could be transmitted, subject to transmitter power restrictions when the station is transmitting such emissions.<sup>117</sup> The frequency bands authorized for transmission of SS emissions, however, were not changed. In the *NPRM*, the Commission sought comment on whether it should revise Section 97.305(c) of its rules to allow SS emission types to be transmitted on VHF frequencies, specifically, the 6 m, the 2 m, and part of the 1.25 m amateur service bands.<sup>118</sup>

25. *Decision.* Based on the record before us, we believe that authorizing amateur stations to transmit SS emissions in the frequency segment 222-225 MHz is warranted. We agree with the commenters who support expanding frequencies available for spread spectrum to include the 222-225 MHz band because such expansion could increase experimentation<sup>119</sup> and improve utilization of the band.<sup>120</sup> Such a result would further the experimental purpose of the amateur service.<sup>121</sup> Accordingly, we amend Section 97.305(c) to authorize amateur stations to transmit SS emission in the 222-225 MHz frequency segment.

26. With respect to the 6 and 2 m bands, however, we conclude that authorizing SS transmissions is not warranted at this time and note that our decision is supported by the amateur radio community. As ARRL and others address in their comments, the 6 and 2 m bands are used extensively for weak signal communications over long propagation paths, and we are concerned about raising the noise floor in the band or otherwise hindering and/or adversely affecting experimentation.<sup>122</sup> It appears that the 6 and 2 m bands also are heavily used for other types of communications,<sup>123</sup> and that there are fewer opportunities for frequency reuse in these bands than in the 222-225 MHz frequency segment.<sup>124</sup> The record also supports the view that if SS emissions were allowed in the 6 m band, these transmissions “may compromise safe operations of radio control model aircraft operating in this frequency band ... which could cause injury or damage if control were to be lost.”<sup>125</sup> Because of these concerns over the compatibility of SS emission types and other amateur radio operations in the 6 and 2 m band, we decline to authorize amateur stations to transmit SS emissions in the 6 and 2 m amateur service bands.

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<sup>116</sup> See 47 C.F.R. § 97.311(c).

<sup>117</sup> See Amendment of the Amateur Service Rules to Provide For Greater Use of Spread Spectrum Communication Technologies, *Report and Order*, WT Docket No. 97-12, 15 FCC Rcd 1481 (1999).

<sup>118</sup> See *NPRM*, 19 FCC Rcd at 7307 ¶ 25. The 6 m band is located at 50-54 MHz; the 2 m band is located at 144-148 MHz; and the affected part of the 1.25 m band is located at 222-225 MHz.

<sup>119</sup> See ARRL Comments at 11; Patrick Jankowiak Comments at 1.

<sup>120</sup> See Steven R. Sampson Comments at 1; ARRL Comments at 11; Richard Illaman Comments at 1; Bruce Ferry Comments at 1.

<sup>121</sup> See 47 C.F.R. § 97.1.

<sup>122</sup> See ARRL Comments at 11; Richard Illaman Comments at 1; William Tynan Comments at 3.

<sup>123</sup> See Richard Linder Comments at 1.

<sup>124</sup> See ARRL Comments at 11.

<sup>125</sup> See George W. Slad Comments at 1. Radio control model aircraft may be operated on amateur service frequencies pursuant to Section 97.215 of our Rules, 47 C.F.R. § 97.215.

## B. Retransmission of Space Station Communications

27. *Background.* Currently, our rules prohibit amateur stations from retransmitting programs or signals emanating from any other type of radio station, with certain exceptions.<sup>126</sup> One of these exceptions allows amateur stations to retransmit communications originating on United States Government frequencies between a space shuttle spacecraft and associated Earth stations.<sup>127</sup> In the *NPRM*, the Commission sought comment on whether to revise Section 97.113(e) of our Rules<sup>128</sup> to allow amateur stations to retransmit communications from additional types of manned spacecraft, such as the International Space Station (ISS).<sup>129</sup>

28. *Decision.* Based on our review of the record, we are persuaded that we should adopt the rule amendment as proposed. We agree with commenters who assert that because there is no distinction in the nature of communications between Earth stations and a space shuttle, and between Earth stations and the ISS, there should be no distinction in our treatment of retransmissions of these communications.<sup>130</sup> We also agree that retransmissions of ISS communications will not cause any significant increase in harmful interference to other amateur stations' transmissions<sup>131</sup> because few amateur station licensees appear interested in using their stations to re-transmit such communications. Moreover, we agree with ARRL that allowing retransmission of communications from the ISS, a permanent space structure, "resolves a technicality" in the rules.<sup>132</sup> Further, we agree that retransmission of space communications is a public service that may be used as an educational resource.<sup>133</sup> Accordingly, we will revise Section 97.113(e) of our Rules to allow amateur stations to retransmit communications from manned spacecraft originating on United States Government frequencies.

## C. Amateur Station Vanity Call Sign System

29. When an individual operator or amateur radio club is initially licensed, the Commission assigns the station call sign sequentially from an alphabetized list corresponding to the geographical region of the licensee's mailing address and the operator class of the licensee or trustee.<sup>134</sup> A licensee may then request the assignment of a specific call sign, provided that the

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<sup>126</sup> See 47 C.F.R. § 97.113(e).

<sup>127</sup> See *id.* Prior approval for shuttle retransmissions must be obtained from the National Aeronautics and Space Administration. *Id.*

<sup>128</sup> 47 C.F.R. § 97.113(e).

<sup>129</sup> See *NPRM*, 19 FCC Rcd at 7312 ¶ 38.

<sup>130</sup> See ARRL Comments at 12; Jet Propulsion Laboratory Amateur Radio Club Comments at 2.

<sup>131</sup> See ARRL Comments at 12; Patrick Jankowiak Comments at 1.

<sup>132</sup> See ARRL Comments at 12. The exception for retransmitting space shuttle communications was adopted in 1989. See Reorganization and Deregulation of Part 97 of the Rules Governing the Amateur Radio Service, PR Docket No. 88-139, *Report and Order*, 4 FCC Rcd 4719, 5073 ¶ 7 (1989). The ISS commenced operation in 2000. Thus, there is no reason to believe that the Commission intended to exclude the ISS from the rule permitting retransmission of space shuttle communications.

<sup>133</sup> See Richard Illman Comments at 1; Jet Propulsion Laboratory Amateur Radio Club Comments at 1.

<sup>134</sup> See 47 C.F.R. § 97.3(a)(11)(i). This is known as the sequential call sign system.



call sign is unassigned and otherwise available.<sup>135</sup> This is known as a vanity call sign.<sup>136</sup> Generally, a previously assigned call sign becomes available for reassignment as a vanity call sign two years after a license expires or is otherwise terminated, including by the death of the licensee.<sup>137</sup> Applicants who are eligible to request a call sign prior to the call sign becoming available for assignment to other licensees include a former holder of a call sign, a relative of a deceased former holder of a call sign, or a club station's license trustee requesting a deceased member's call sign *in memoriam*.<sup>138</sup>

30. *In memoriam* provisions. *Background.* The procedures of the vanity call sign system provide that a club station's license trustee may, with written consent from a relative of a former member, request that a former member's call sign be assigned to the club before the call sign becomes generally available for assignment to other licensees.<sup>139</sup> After receiving this consent, the trustee then applies for the call sign of the former member to be assigned as the call sign of the club station. Our current rules do not permit the licensee of an amateur station, while living, to designate the club that the licensee desires to apply for his or her call sign *in memoriam*. In the *NPRM*, the Commission sought comment on whether to revise Section 97.19(c)(3) of our Rules to allow currently licensed amateur radio operators to designate a specific amateur radio club to acquire their call sign *in memoriam*.<sup>140</sup>

31. *Decision.* Based on our review of the record, we are persuaded that we should adopt the rule amendment as proposed. We concur with Mr. Johnston that the current rule excludes the most qualified person -- the licensee -- from expressing a desire as to which radio club should receive his or her call sign *in memoriam*,<sup>141</sup> and we agree with other commenters that, because relatives may not be familiar with the amateur service or be able to make a decision with which the former licensee necessarily would agree,<sup>142</sup> we should amend the rules to allow a licensee to express, *ante mortem*, his or her desire as to which radio club should receive his or her call signs *in memoriam*.<sup>143</sup> Allowing the licensee him- or herself to express this preference would not render a Commission-assigned call sign chattel, as the ARRL argues,<sup>144</sup> because a licensee-indicated preference would not, by itself, result in the transfer of the call sign to the designated club. For the club to receive the former member's call sign, the licensee must be the holder of the call sign at the time of his or her death, and the club station trustee must file an

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<sup>135</sup> See Amendment of the Amateur Service Rules to Implement a Vanity Call Sign System, *Report and Order*, PR Docket No. 93-305, 10 FCC Rcd 1039 (1995); *Memorandum Opinion and Order*, 10 FCC Rcd 11135 (1995); *Second Memorandum Opinion and Order*, 11 FCC Rcd 5283 (1996).

<sup>136</sup> See 47 C.F.R. § 97.3(a)(11)(ii). In addition to sequential and vanity call signs, the amateur radio community administers a system for assigning "special event" call signs. See 47 C.F.R. § 97.3(a)(11)(iii).

<sup>137</sup> See 47 C.F.R. § 97.19(c).

<sup>138</sup> See 47 C.F.R. § 97.19(c)(3). The relative may be a spouse, child, grandchild, stepchild, parent, grandparent, stepparent, brother, sister, stepbrother, stepsister, aunt, uncle, niece, nephew, or in-law of the deceased licensee.

<sup>139</sup> *Id.*

<sup>140</sup> See *NPRM*, 19 FCC Rcd at 7317 ¶ 51.

<sup>141</sup> See John B. Johnston Comments at 2.

<sup>142</sup> See Robert G. Rightsell Comments at 6.

<sup>143</sup> See Richard B. Blanchard Comments at 1; Robert G. Rightsell Comments at 6.

<sup>144</sup> See ARRL Comments at 14.

application requesting the call sign, which must be the first processable application that we receive.<sup>145</sup> Additionally, we believe that allowing licensees to indicate which club they desire to receive their call sign *in memoriam* is consistent with the filing priorities already incorporated in the vanity call sign system as well as the Commission's determination to maintain a fair and equitable vanity call sign assignment system. Accordingly, we will amend Section 97.19(c)(3) as proposed.

32. Multiple Applications. *Background.* As noted above, previously assigned call signs generally become available for reassignment as a vanity call sign two years after termination of the previous license. When multiple processable applications requesting the same vanity call sign as their first choice are received by the Commission on the same day, we use a lottery mechanism to select the first application to be processed.<sup>146</sup> Under current Commission rules and procedures, an applicant seeking a vanity call sign is not precluded from filing multiple applications requesting the same vanity call sign, provided that the attendant filing fee is paid for each application filed.<sup>147</sup> Thus, applicants who file multiple applications requesting the same vanity call sign as their first choice have a greater chance that one of their applications will be selected versus an applicant who files a single application. Applicants who file applications that do not receive a requested call sign are eligible to request a refund of the filing fee.<sup>148</sup> In the *NPRM*, the Commission observed that some members of the amateur radio community believe that permitting multiple applications is inequitable and favors wealthy applicants.<sup>149</sup> The *NPRM* sought comment on whether to revise Section 97.19(d)(1) to provide that we will consider only one application per applicant per vanity call sign on a receipt date.<sup>150</sup>

33. *Decision.* The commenters support a prohibition against filing multiple applications for a specific vanity call sign.<sup>151</sup> ARRL argues that filing multiple applications is "a manipulative process that clearly should be discouraged."<sup>152</sup> ARRL and others request, therefore, that we amend our rules to limit applicants to filing one application on any one day for one particular call sign.<sup>153</sup> Mr. Gibson suggests that we accept for processing only the last-filed same-day application from an applicant, arguing that because the Universal Licensing System does not allow same-day changes to applications, accepting the last-filed application would allow applicants to make changes to earlier-filed applications.<sup>154</sup>

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<sup>145</sup> See 47 C.F.R. § 97.19(c)(3); see also John B. Johnston Reply Comments at 1.

<sup>146</sup> See 47 U.S.C. § 309(i).

<sup>147</sup> See 47 C.F.R. § 97.19(b).

<sup>148</sup> See 47 C.F.R. § 1.1160.

<sup>149</sup> See *NPRM*, 19 FCC Rcd at 7318 ¶¶ 53-54.

<sup>150</sup> *Id.* at 7318 ¶ 54.

<sup>151</sup> See, e.g., Robert G. Rightsell Comments at 6; William F. Klepser Comments at 1; Francis A. Dohanich Comments at 1.

<sup>152</sup> See ARRL Comments at 16.

<sup>153</sup> See ARRL Comments at 16; Richard B. Blanchard Comments at 1; Ernest C. Bennett Comments at 1; Alvin Berglund Comments at 1. The commenters argue that such a rule would prevent "gaming of the system" because applicants could always file multiple applications with different unassignable call signs as the first choice on each application, and then request the desired call sign repetitively listed as the second choice on each application.

<sup>154</sup> See Comment of Dean Gibson at 1.

34. We are persuaded that we should adopt rule amendments to discourage multiple vanity call sign applications, and we believe that a one-application-per-day-per-applicant rule, as requested by ARRL and others, will eliminate multiple applications requesting the same assignable call sign on the same day. We also note that limiting applicants to one application per day will not prevent an individual from requesting multiple vanity call signs *per se*, because an individual may request, in order of preference, up to twenty-five call signs on one application.<sup>155</sup> To implement this rule, we will process only the first application received by our licensing system from an individual on a given receipt date. Additional vanity call sign applications received from the same licensee on the same day will be rejected. We believe that using these processing procedures will result in a more effective and equitable licensing mechanism for all applicants seeking to receive requested call signs and, additionally, will reduce the time and expense of processing vanity call sign applications and requests for refunds of fees associated with unsuccessful vanity call sign applications. Accordingly, we are amending Section 1.934 of our Rules<sup>156</sup> to reflect that we will dismiss all but one application from an individual for a vanity call sign received on a particular receipt date. In addition, we are amending Section 97.19(d)(1) of our Rules<sup>157</sup> to reflect that we will process only the first processable application received when we receive more than one vanity call sign application from an applicant on a given day.

#### **D. Amateur Station Operation on the 902-928 MHz Band**

35. *Background.* Section 97.303(g)(1) of our Rules prohibits amateur station operation in the 33 cm band (902-928 MHz) in certain areas of Colorado and Wyoming.<sup>158</sup> In 1990, a partial waiver of this rule was granted, for an indefinite term, to permit amateur station operation on certain segments of the 33 cm band.<sup>159</sup> The Commission determined, after consultation with Federal Government users of the spectrum, that amateur stations could use this limited portion of the 33 cm band without causing interference.<sup>160</sup> In the *NPRM*, the Commission sought comment on whether it should amend Section 97.303(g)(1) to incorporate the terms of this waiver in our Rules, noting that regularizing the use of this portion of the 33 cm band in certain areas of Colorado and Wyoming and stating the allowable frequencies in the Commission's rules would increase awareness of the availability of these frequency segments for amateur station operation.<sup>161</sup>

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<sup>155</sup> See 47 C.F.R. § 97.19(d). Regarding Mr. Gibson's concern that this rule would prevent an applicant from changing his or her preference list of call signs or correcting a typographical error once the application is submitted, we note that an applicant in such a situation can delete the first-filed application, whereupon he or she will be able to file another vanity call sign application that day.

<sup>156</sup> 47 C.F.R. § 1.934.

<sup>157</sup> 47 C.F.R. § 97.19(d)(1).

<sup>158</sup> See 47 C.F.R. § 97.303(g)(1); *see also* 47 C.F.R. § 2.106 n.US267. The purpose of the restriction is to prevent interference to certain federal Government operations.

<sup>159</sup> See Waiver of Parts 2 and 97 of the Rules Concerning Frequency Sharing Requirements Applicable to the Amateur Service in Portions of Colorado and Wyoming, *Order*, 5 FCC Rcd 3041, 3041 ¶ 4 (PRB/CE 1990) (amateur stations may transmit on the 902.0-902.4 MHz, 902.6-904.3 MHz, 904.7-925.3 MHz, 925.7-927.3 MHz, and 927.7-928 MHz frequency segments in the restricted area).

<sup>160</sup> *Id.*

<sup>161</sup> See *NPRM*, 19 FCC Rcd at 7324 ¶ 68.

36. *Decision.* We agree with ARRL that updating Section 97.303(g)(1) would make the operating provision in Colorado and Wyoming better known to all amateur radio licensees, so more licensees may avail themselves of the ability to use these frequency segments.<sup>162</sup> Accordingly, we revise Section 97.303(g)(1) as proposed.

#### **E. Space Station Launch Notification**

37. *Background.* An amateur service space station is an amateur station that is located more than fifty kilometers above the Earth's surface.<sup>163</sup> Amateur radio operators are authorized to transmit communications to and through space stations, subject to the privileges of the license the control operator holds.<sup>164</sup> Currently, our rules require that the space station licensee file certain notifications with the International Bureau at least twenty-seven months and five months before the space station initiates transmissions.<sup>165</sup> Our Rules also require that the space station licensee file notifications no later than seven days after the space station initiates transmissions, and no later than three months after termination of transmissions through the space station.<sup>166</sup> In the *NPRM*, the Commission sought comment on whether it should amend Section 97.207 of our Rules to simplify the notification requirements.<sup>167</sup> Specifically, the Commission sought comment as to whether it should require that pre-space notification be submitted within thirty days after the launch vehicle is determined, but no later than ninety days before the space station is integrated into the launch vehicle,<sup>168</sup> and whether it should consolidate the notification requirements contained in Section 97.207.<sup>169</sup>

38. *Decision.* Based on our review of the record before us, we believe that revising the space station notification requirements is warranted. Comments support amending Section 97.207 of our Rules<sup>170</sup> and indicate that for non-manned space flights, ninety days prior notification should not, by itself, pose a significant problem for or burden on licensees.<sup>171</sup> ARRL argues that reducing prior notification for flights to ninety days could reduce the need for waivers because launch commitments for amateur service satellites rarely become known earlier than ninety days before the launch date.<sup>172</sup> AMSAT requests, however, that we require, at most, a sixty-day notification for manned flights due to the "fluid scheduling associated with such

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<sup>162</sup> See ARRL Comments at 17.

<sup>163</sup> See 47 C.F.R. § 97.3(a)(40). To date, amateur space stations have been either satellites in low earth orbit or stations aboard the space shuttles or the International Space Station.

<sup>164</sup> See 47 C.F.R. §§ 97.207(a), 97.209(a).

<sup>165</sup> See 47 C.F.R. § 97.207(g).

<sup>166</sup> See 47 C.F.R. § 97.207(h), (i).

<sup>167</sup> See *NPRM*, 19 FCC Rcd at 7327 ¶ 76.

<sup>168</sup> See *id.*

<sup>169</sup> See *id.* The Commission also sought comment on what actions it should take if it is presented with an orbital debris mitigation plan that is deficient in some way as to the debris mitigation practices of an amateur service space station. *Id.* at 7327 ¶ 77. We note that the issue of orbital debris mitigation plans was addressed last year and, therefore, the issue raised in the *NPRM* is moot. See Mitigation of Orbital Debris, *Second Report and Order*, IB Docket No. 02-54, 19 FCC Rcd 11567 (2004), *recon. pending*.

<sup>170</sup> See AMSAT Comments at 3; ARRL Comments at 18.

<sup>171</sup> See AMSAT Comments at 4.

<sup>172</sup> See ARRL Comments at 19 (noting that amateur service satellites invariably fly as secondary payloads).

missions."<sup>173</sup> We decline to adopt different notification requirements for space station operation of manned and unmanned space stations, because whether a space station is manned or unmanned is unrelated to the transmissions from the space station.<sup>174</sup> Rather, whether a space station is manned or unmanned appears to relate more to the control methods available to the licensee that may be used to control the space station.<sup>175</sup>

#### **F. Third Party Communications**

39. *Background.* Third party communications are messages from the control operator of an amateur station to another amateur station control operator on behalf of a third party.<sup>176</sup> Typically, the third party is an individual who is not eligible to be the operator of an amateur station, either because the individual is not a licensee in the amateur service or because the individual does not hold an amateur radio operator license that permits the person to control an amateur station on the transmitting frequency in use. The third party is permitted to “participate in stating the message” unless he or she had an amateur license revoked or suspended.<sup>177</sup> In the *NPRM*, the Commission sought comment on whether it should revise Section 97.115 of our Rules<sup>178</sup> to add “a former licensee whose license was not renewed after a hearing” to the existing list of individuals who may not participate in the call.<sup>179</sup> The Commission also proposed to clarify that only a station transmitting a RTTY or data emission may be automatically controlled while transmitting third party communications.<sup>180</sup>

40. *Decision.* We agree with ARRL that an individual whose license is not renewed after a hearing is similarly situated to an individual whose license has been revoked,<sup>181</sup> in that in both cases, the Commission rescinded formerly authorized operating authority, and that neither individual would be able to continue using amateur service frequencies for exchanging messages. Accordingly, we will revise the rule as proposed. Also, no commenter opposed the proposal to clarify that only a station transmitting a RTTY or data emission may be automatically controlled while transmitting third party communications. We believe that this amendment will simplify the rules and make them easier for licensees to understand and apply. Accordingly, we will amend Section 97.115 of our Rules to include third party communications transmitted by automatically controlled digital stations.

#### **G. Limitations Imposed on Manufacturers.**

41. *Background.* Currently, our rules prohibit commercial manufacturers from marketing RF power amplifiers that are capable of transmitting on the 12 m and 10 m<sup>182</sup> amateur

<sup>173</sup> See AMSAT Comments at 3.

<sup>174</sup> We note that both manned and unmanned space stations may transmit, among other things, voice, image, and data communications to Earth stations. See 47 C.F.R. § 97.307(c).

<sup>175</sup> See 47 C.F.R. § 97.207(b).

<sup>176</sup> See 47 C.F.R. § 97.3(a)(46).

<sup>177</sup> See 47 C.F.R. § 97.115(b)(2).

<sup>178</sup> See 47 C.F.R. § 97.115.

<sup>179</sup> See *NPRM*, 19 FCC Rcd at 7329 ¶ 84.

<sup>180</sup> *Id.*

<sup>181</sup> See ARRL Comments at 20-21.

<sup>182</sup> The 12 m band is 24.89-24.99 MHz and the 10 m band is 28.0-29.7 MHz.

service bands,<sup>183</sup> as a way to prevent use of these amplifiers by Citizens Band (CB) Radio Service users.<sup>184</sup> In the *NPRM*, the Commission requested comment on whether it should amend Sections 97.315 and 97.317 of our Rules<sup>185</sup> to clarify and simplify those restrictions.<sup>186</sup> Specifically, the Commission requested comment on whether it should eliminate the disparate restrictions imposed on manufacturers (as compared to the restrictions imposed on amateur service licensees), whether it should allow manufacturers to market equipment in the United States that they may market overseas, and whether we should eliminate the requirements in our Rules<sup>187</sup> that a manufacturer must design an amplifier to (1) use a minimum of fifty watts drive power and (2) not be capable of operating on any frequency between 24 MHz and 35 MHz.<sup>188</sup> Additionally, the Commission requested comment on whether it should eliminate the definition of an external RF power amplifier kit in Section 97.3(a)(19) of our Rules.<sup>189</sup> In this regard, the Commission noted that an amateur radio operator may find it difficult to determine if a group of electronic parts he or she purchases or possesses will be defined by the Commission as an external RF power amplifier kit, and that this rule has created uncertainty because any group of electronic parts, particularly if supplemented by additional parts, could be assembled to make a power amplifier or part of a RF power amplifier.<sup>190</sup>

42. *Decision.* We believe that clarifying and simplifying Sections 97.315 and 97.317 of our Rules is warranted. We agree with ARRL that the requirements imposed on amateur radio operators by the current rule are unnecessary because, under the present rules, "the equipment, once authorized, can be modified to transmit on all amateur service frequency allocations,"<sup>191</sup> and that revising the rule "will enhance use of the 12 and 10 m amateur bands, and allow amateur radio operators to construct equipment without unnecessary restrictions."<sup>192</sup> We also note that ARRL is correct when it observes that before a manufacturer could market an amplifier capable of transmitting on the 12 or 10 m amateur service band,<sup>193</sup> it would need to have the amplifier

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<sup>183</sup> See 47 C.F.R. §§ 2.815(b), 2.1060(c), 97.315, 97.317. We note that the rules do not impose a similar limitation on amateur service licensees who build, modify, purchase, use or otherwise obtain an RF power amplifier, or prohibit commercial manufacturers from marketing RF power amplifiers capable of transmitting on the 12 m and 10 m amateur service bands to amateur radio operators in foreign countries.

<sup>184</sup> See Amendment of Part 2 of the Commission's Rules to prohibit the marketing of external radio frequency amplifiers capable of operation on any frequency from 24 to 35 MHz, *Report and Order*, 67 F.C.C. 2d 939, 940 ¶¶ 5-10 (1978). Section 95.411 of our Rules, 47 C.F.R. § 95.411, prohibits, under any circumstances, an individual from attaching to a CB transmitter an external RF power amplifier or any device capable of amplifying the transmitter's output.

<sup>185</sup> 47 C.F.R. §§ 97.315, 97.317.

<sup>186</sup> See *NPRM*, 19 FCC Rcd at 7329 ¶ 85.

<sup>187</sup> See 47 C.F.R. § 97.317(a)(3), (b), (c).

<sup>188</sup> See *NPRM*, 19 FCC Rcd at 7329 ¶ 85.

<sup>189</sup> 47 C.F.R. § 97.3(a)(19); see *NPRM*, 19 FCC Rcd at 7330 ¶ 86. An external RF power amplifier kit is defined as "a number of electronic parts which, when assembled, is an external RF power amplifier, even if additional parts are required to complete assembly." 47 C.F.R. § 97.3(a)(19).

<sup>190</sup> See *NPRM*, 19 FCC Rcd at 7330 ¶ 86.

<sup>191</sup> See ARRL Comments at 21; see also Ken Rogers Comments at 1.

<sup>192</sup> See ARRL Comments at 21.

<sup>193</sup> See ARRL Comments at 21; 47 C.F.R. § 95.315(a).

certificated under our Part 2 equipment authorization rules.<sup>194</sup> Other commenters also support revising the rule, arguing that eliminating the minimum fifty watt drive requirement may "permit more flexibility in the operation of low powered transceivers"<sup>195</sup> or that it "will reduce the cost and complexity of commercially produced amateur service amplifiers because manufacturers will not have to make a domestic model and an export model of the same product."<sup>196</sup>

43. We also believe it is appropriate to revise our rules to allow manufacturers of amateur radio equipment to market RF power amplifiers that are capable of operating in the 12m and 10m amateur bands but still require that they design such products to avoid operation on CB Radio Service frequencies.<sup>197</sup> We observe that since these rules were adopted, methods of preventing RF equipment from transmitting on frequencies other than those intended have been developed and we have approved amplifiers incorporating such limitations on transmit frequencies for use in the amateur service.<sup>198</sup> We note, however, that the Commission still receives complaints of interference to television service that is attributable to overpower operation by CB radio operators. In order to prevent the use of amateur radio amplifiers by CB operators, we find that it is necessary to continue to require that manufacturers of amateur radio amplifiers design their products to avoid operation on the CB frequencies. We will, therefore, retain the requirement that amplifiers exhibit no amplification capability between 26 MHz and 28 MHz and require manufacturers to certify that amplifiers are not capable of amplification between 26 MHz and 28 MHz and are not easily modifiable to operate between 26 MHz and 28 MHz prior to the grant of an equipment certification.<sup>199</sup> Accordingly, we will amend Sections 97.315 and 97.317 of our Rules to permit the marketing of linear amplifiers for use at amateur radio stations as discussed above, provided that the equipment complies with our rules.

44. We also concur with ARRL's assertion that the definition of an external RF power amplifier kit "has always been difficult conceptually, as any collection of parts might be deemed a kit, even if the purpose of the collection was for a different device entirely."<sup>200</sup> We agree that the definition can be applied to any collection of electronic parts and requires a determination of intent on the licensee's part and, therefore, is vague and does not serve the intended regulatory purpose. We also do not see any indication that RF amplifier kits are generally used on CB frequencies. Accordingly, we conclude that the definition of an external RF power amplifier kit is no longer needed in Part 97.

## H. Public Service Communications

45. *Background.* Currently, our Rules limit amateur station transmissions in support of relief actions to disaster situations when normal communications systems are overloaded,

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<sup>194</sup> 47 C.F.R. Part 2, Subpart J.

<sup>195</sup> See Albert J. Schramm Comments at 1.

<sup>196</sup> See Timothy J. Peters Comments at 1.

<sup>197</sup> See, e.g., Steve Sims Comments at 1; Chuck Adkins Comments at 1; Neil J. Nitzberg Comments at 1.

<sup>198</sup> See, e.g., ACOM International, Inc. Approval FCC ID: OITAA2000.

<sup>199</sup> See 47 C.F.R. § 0.111(a)(4). See, e.g., Hightech CB Shop, *Forfeiture Order*; File No. EB-05-TP-066, 20 FCC Rcd 12514 (EB 2005); Eugene Dezanett d.b.a. Pro Class Electronics, *Citation*, File No. EB-05-NY-045 (EB rel. Mar. 8, 2005); Russell A. Sims, Jr., *Notice of Apparent Liability for Forfeiture*, File No. EB-04-TP-499 (EB rel. July 25, 2005); Chad Jolley, *Citation*, File No. EB-05-AT-023 (EB rel. Oct. 14, 2005).

<sup>200</sup> See ARRL Comments at 21.

damaged or disrupted.<sup>201</sup> In the *NPRM*, the Commission requested comment on whether it should clarify that amateur stations may, at all times and on all channels authorized to the control operator, make transmissions necessary to meet essential communications needs and to facilitate relief actions by amending Section 97.111(a) of our Rules<sup>202</sup> to include these transmissions as an authorized transmission.<sup>203</sup>

46. *Decision.* Based on our review of the record in this proceeding and our continuing efforts to ensure that reliable communications are available during emergencies and other times of crisis, we conclude that the public interest would be furthered by a decision not to place restrictions on the type of emergency communications that amateur stations may transmit, and that this proposed rule amendment should be adopted.<sup>204</sup> In this connection, we recognize that one of the key purposes of the amateur service is providing emergency communications to the public.<sup>205</sup> Further, we are concerned that general restrictions on emergency assistance by amateur radio operators may run counter to an important purpose of the amateur service and may adversely affect the current level of emergency communications by raising questions that might discourage turning to amateur radio in emergencies.<sup>206</sup> Accordingly, we will revise Section 97.111(a) to clarify that amateur stations may, at all times and on all frequencies authorized to the control operator, make transmissions necessary to meet essential communication needs and to facilitate relief actions.

#### **I. Alaska Emergency Frequency**

47. *Background.* Currently, Section 97.401(d) of our Rules<sup>207</sup> authorizes an amateur station in Alaska, or at a location within 92.6 kilometers of Alaska where we regulate the amateur service, to transmit communications during emergencies on 5.1675 MHz (the Alaska Emergency Frequency), but not communications for training drills and tests.<sup>208</sup> In the *NPRM*, the Commission requested comment on whether it should also authorize an amateur station in or near Alaska to transmit communications during tests and drills on 5.1675 MHz.<sup>209</sup>

48. *Decision.* Based on the record before us, we believe allowing an amateur station in, or within 92.6 kilometers of, Alaska to transmit communications during drills and tests on 5.1675 MHz is warranted. We note that ARRL supports the proposed changes, stating that “the use of the frequency in Alaska is less valuable unless radio amateurs are prepared for its use in emergencies.”<sup>210</sup> In this regard ARRL argues that amateur stations conduct “serious, and

<sup>201</sup> See 47 C.F.R. § 97.401(a).

<sup>202</sup> See 47 C.F.R. § 97.111(a).

<sup>203</sup> See *NPRM*, 19 FCC Rcd at 7331 ¶ 87.

<sup>204</sup> See ARRL Comments at 23.

<sup>205</sup> See 47 C.F.R. § 97.1(a).

<sup>206</sup> See ARRL Comments at 22.

<sup>207</sup> See 47 C.F.R. § 97.401(d).

<sup>208</sup> See Amendment of the rules to implement changes in the Alaska Fixed Service, PR Docket No. 83-464, *Report and Order*, FCC 84-379, 49 Fed. Reg. 32194 (1984); see also Amendment of the Rules Governing the Maritime Radio Services, *Report and Order*, PR Docket No. 85-145, 60 Rad. Reg. 2d (P & F) 1550, 51 Fed. Reg. 31213 (1986) (Alaska Fixed Service incorporated into the Maritime Radio Services).

<sup>209</sup> See *NPRM*, 19 FCC Rcd at 7331 ¶ 88.

<sup>210</sup> See ARRL Comments at 23.



extremely professional emergency drills and tests," and this new authority would be of great value to the citizens of Alaska.<sup>211</sup> Accordingly, we will revise our Rules to authorize amateur stations in or near Alaska to transmit communications for training drills and testing purposes on 5.1675 MHz, in addition to communications during emergencies, because we believe this change will enhance emergency communication capabilities, thus serving the public interest.

#### **J. Radio Amateur Civil Emergency Service (RACES)**

49. *Background.* RACES was established in 1952.<sup>212</sup> It authorizes specific frequency bands for amateur service stations to use for providing civil defense communications in the event that amateur service use of the radio spectrum is suspended due to war or other national emergency.<sup>213</sup> Currently, Section 97.407(b) of our Rules authorizes RACES stations and amateur stations participating in RACES to transmit on certain specified frequency segments during periods of wartime emergency.<sup>214</sup> Section 97.407(b) does not indicate, however, that such authorization is subject to procedures for the use and coordination of the radio spectrum during such emergencies specified in, among other places, Parts 201 and 214 of Title 47 of the Code of Federal Regulations.<sup>215</sup> These procedures specify that during certain periods of wartime emergency,<sup>216</sup> the Director of the Office of Science and Technology Policy (OSTP) will serve as the central authority over the Nation's telecommunications facilities, systems and services,<sup>217</sup> and will authorize, modify, or revoke the continuance of all frequency authorizations issued by the Commission.<sup>218</sup> Additionally, these procedures authorize the Director, OSTP to issue policy guidance, rules, regulations, procedures, and directives to assure effective frequency usage during wartime emergency conditions.<sup>219</sup> In the *NPRM*, the Commission sought comment on whether it should amend Section 97.407(b) of our Rules to delete the frequency bands and segments specified therein and to clarify that during certain emergencies the frequency segments available to RACES stations and amateur stations participating in RACES would be authorized pursuant to Part 214 of our Rules, in light of the authority presently granted the Director, OSTP.<sup>220</sup>

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<sup>211</sup> *See id.*

<sup>212</sup> *See* Providing a Radio Amateur Civil Emergency Service, *Memorandum Opinion and Order*, Docket No. 10102, 42 F.C.C. 224 (1952). Frequency segments for this service were established in cooperation with the Civil Defense Administration. *See* Frequencies Available For Amateur Participation In Civil Defense Communication, *Public Notice*, FCC 51-35 (rel. January 17, 1951) (RACES *Public Notice*). RACES, an organization of amateur radio operators who volunteer to provide essential communications and warning links to supplement State and local government assets during emergencies, currently is sponsored by the Federal Emergency Management Agency. *See* <http://www.fema.gov/library/civilpg.shtm>.

<sup>213</sup> *See* RACES *Public Notice* at 1; *see also* 47 C.F.R. § 97.407(b).

<sup>214</sup> *See* 47 C.F.R. § 97.407(b).

<sup>215</sup> *See* 47 C.F.R. Parts 201, 214.

<sup>216</sup> *See* 47 U.S.C. § 606.

<sup>217</sup> *See* 47 C.F.R. § 201.3(g).

<sup>218</sup> *See* 47 C.F.R. § 214.4(a), (b)(1).

<sup>219</sup> *See* 47 C.F.R. § 214.5(a), (b).

<sup>220</sup> *See NPRM*, 19 FCC Rcd at 7332 ¶ 90.

50. *Decision.* Based on the record before us, we believe that deleting the frequency bands and segments specified for RACES stations is warranted. We agree with ARRL that, because the Director, OSTP has authority over RACES operations in terms of frequencies to be used, the specification of RACES bands during a wartime emergency is unnecessary and duplicative, and can be eliminated, provided that there is a cross-reference to Part 214 of the Commission's Rules in Section 97.407.<sup>221</sup> Accordingly, we will revise Section 97.407(b) as proposed.

51. Mr. DiGennaro notes that local emergency management agencies look to the amateur service to provide essential communications and facilitate relief actions in times of emergencies.<sup>222</sup> He believes the public interest would be better served if we "clarify the limitations imposed on an amateur station operating in RACES" and whether such limitations apply to all RACES operation or only when RACES operates after the Presidential War Emergency Powers have been invoked.<sup>223</sup> Specifically, he argues that if the restrictions of Section 97.407(c) and (d)<sup>224</sup> are interpreted to apply to all RACES operation, and not just when the Presidential War Emergency Powers have been invoked, then the rule should be revised because "[t]he current interpretation of the rules creates an environment of isolation between RACES and other amateur emergency entities [that] is not effective or efficient in serving the public interests."<sup>225</sup> The *NPRM* did not propose changes to the communications RACES stations may transmit or the stations with which RACES stations may exchange messages. We therefore conclude that this proposal is beyond the scope of this proceeding. Moreover, we note that this proposed rule change would significantly alter the nature of RACES, which was originally envisioned to be a temporary service that would allow only RACES stations to continue radio communication for civil defense purposes when all amateur stations were directed to cease transmitting.<sup>226</sup> In response to Mr. DiGennaro's request for clarification, we confirm that the

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<sup>221</sup> See ARRL Comments at 23.

<sup>222</sup> See Nelson DiGennaro Comments at 2.

<sup>223</sup> See *id.* at 2-3.

<sup>224</sup> 47 C.F.R. § 97.407(c), (d). Section 97.407(c) permits RACES station to communicate only with an amateur station registered with a civil defense organization or stations authorized by the FCC or the United States Government to communicate with RACES stations. Section 97.407(d) permits an amateur station registered with a civil defense organization to communicate only with a RACES station licensed to that civil defense organization and other stations as authorized by an official of that civil defense organization.

<sup>225</sup> See Nelson DiGennaro Comments at 2.

<sup>226</sup> See 1998 Biennial Regulatory Review – Amendment of Part 97 of the Commission's Amateur Service Rules, *Report and Order*, WT Docket No. 98-143, 15 FCC Rcd 315, 350 ¶ 61 (1999) (*Biennial Review*). We note that a similar proposal requesting that Section 97.407 be amended to permit intercommunication between RACES participants and other amateur stations actively providing communications related to an emergency or disaster situation was rejected on the grounds that the proposal conflicted with the intended purpose of RACES. See Amendment of Parts 2 and 97 of the Commission's Rules Governing the Amateur Service to Authorize Operations on Additional Frequency Bands in American Samoa, *Order*, 14 FCC Rcd 20595, 20602 ¶ 14 (WTB PSPWD 1999) (*1999 Order*). We also note that the Commission has decided to phase out RACES station licenses by granting no new licenses and not renewing current licenses. *Biennial Review*, 15 FCC Rcd at 350-51 ¶¶ 61-63. The Commission concluded that RACES station licenses are unnecessary for amateur stations and amateur service licensees to provide emergency communications, and duplicate the communications that primary, club, and military recreational stations are authorized to transmit. *Id.* Consequently, any subsequent petition suggesting this or similar amendments to the RACES rules should explain why current circumstances warrant reevaluation of this issue.

restrictions of Section 97.407(c) and (d) apply to all RACES operation, and not only when the Presidential War Emergency Powers have been invoked.

52. Mr. DiGennaro also requests that we amend Section 97.113 our Rules, which prohibits “[c]ommunications for hire or for material compensation, direct or indirect, paid or promised,” by amateur stations,<sup>227</sup> to clarify that amateur licensees who, by virtue of their employment, are directly involved in facilitating relief and recovery in times of disaster are not prohibited from effecting emergency communications using amateur radio.<sup>228</sup> We conclude that the proposed rule change is not necessary, however, because Section 97.113 does not prohibit amateur radio operators who are emergency personnel engaged in disaster relief from using the amateur service bands while in a paid duty status.<sup>229</sup> These individuals are not receiving compensation for transmitting amateur service communications; rather, they are receiving compensation for services related to their disaster relief duties and in their capacities as emergency personnel.<sup>230</sup>

### K. Qualifying Examination System Rules

53. Public announcement requirements. *Background.* In the *NPRM*, the Commission sought comment on whether to delete the requirement set forth in Section 97.509(a) of our Rules<sup>231</sup> that volunteer examiners (VEs) administering examinations, or the VE session manager, must ensure that a public announcement is made giving the location and time of the examination session.<sup>232</sup> Specifically, the Commission sought comment on whether it should eliminate Section 97.509(a), given that test locations and times are given adequate coverage on club and Volunteer-Examiner Coordinator (VEC) websites, in newsletters, and in other media, and that requiring public announcements serves no useful purpose when the examination location is not accessible to the general public (such as a military base).<sup>233</sup>

54. *Decision.* We believe that deleting the requirement for public announcement of test locations and times is warranted based on the record before us. The National Conference of Volunteer Examiner Coordinators (NCVEC) supports the proposal, agreeing that adequate announcements are already on club and VEC websites, in newsletters and in other media.<sup>234</sup> NCVEC also notes that public announcements could still be made; they just would not be required by our Rules.<sup>235</sup> We are not persuaded by arguments in the record of this proceeding that public announcement is required "to preclude private, unannounced examination sessions as

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<sup>227</sup> See 47 C.F.R. § 97.113(a)(2); see also 47 C.F.R. § 97.113(a)(2) (prohibiting “[c]ommunications in which the station licensee or control operator has a pecuniary interest, including communications on behalf of an employer”).

<sup>228</sup> See Nelson DiGennaro Comments at 3-4.

<sup>229</sup> See 1999 Order, 14 FCC Rcd at 20600 ¶ 9.

<sup>230</sup> *Id.*

<sup>231</sup> See 47 C.F.R. § 97.509(a).

<sup>232</sup> See *NPRM*, 19 FCC Rcd at 7332 ¶ 91.

<sup>233</sup> *Id.*

<sup>234</sup> See NCVEC Comments at 5.

<sup>235</sup> See *id.*

a means of preventing abuses,<sup>236</sup> because there is no rule that prohibits VEs from arranging examination sessions on short notice or for only one or a few individuals. Additionally, because the rule does not require that "public announcement" be made at any particular time prior to an examination session, we are not persuaded by the argument that the requirement assists newcomers to become aware of examination opportunities.<sup>237</sup> Rather, we believe that, because there are many other methods that newcomers may use to become aware of examination opportunities, such as club and VEC websites and newsletters, it is unnecessary to specify a particular method in the Part 97 rules. Accordingly, we will revise the rule as proposed. While we are eliminating the public announcement requirement from our Rules, we hereby clarify that VECs may require such an announcement in their individual programs as a condition of coordinating an examination session, if they so choose.<sup>238</sup>

55. Examination credit. Background. In the *NPRM*, the Commission sought comment on whether it should require VEs to give examination credit for the five words-per-minute (wpm) telegraphy examination element to an examinee who holds an expired Technician Class license document granted after February 14, 1991, and who also has documentation showing he or she has passed a telegraphy examination.<sup>239</sup> Currently, Section 97.505(a)(9) of our Rules<sup>240</sup> requires that VEs give this examination credit to an examinee who holds an expired Technician Class license document granted before February 14, 1991, but not to an examinee who holds an expired Technician Class license document granted after February 14, 1991, and who also has documentation showing he or she has passed the telegraphy examination element.

56. Decision. We concur with commenters that giving telegraphy examination credit to an examinee who holds an expired Technician Class license document granted after February 14, 1991 and who has passed a telegraphy examination is warranted because these examinees have demonstrated the same level of competence as other former Technician Class examinees who passed the telegraphy examination, but who were licensed before February 14, 1991.<sup>241</sup> Additionally, we agree with Mr. Mastro and NCVEC<sup>242</sup> that we should extend examination credit for the telegraphy examination to General, Advanced, and Amateur Extra Class licensees who have allowed their licenses to expire, because they too have passed at least a five wpm telegraphy examination. Accordingly, we will revise Section 97.505(a)(9) of our Rules to require telegraphy examination credit be given, in addition to examinees who hold an expired FCC-issued Technician Class operator license granted before February 14, 1991, to examinees who hold an expired FCC-issued Technician Class operator license granted after February 14, 1991 and present documentation showing they have passed a telegraphy examination, and to examinees who hold an expired General, Advanced, or Amateur Extra Class license document.

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<sup>236</sup> See ARRL Comments at 23-24; Dean Gibson Comment at 2; Puerto Rico Amateur Radio League Comments at 3.

<sup>237</sup> See ARRL Comments at 23-24.

<sup>238</sup> See Bruce Moyer Comments at 1.

<sup>239</sup> See *NPRM*, 19 FCC Rcd at 7333 ¶ 92.

<sup>240</sup> See 47 C.F.R. § 97.505(a)(9).

<sup>241</sup> See William F. Klepser Comments at 1; Puerto Rico Amateur Radio League Comments at 3-4.

<sup>242</sup> See James Mastro Comments at 1; NCVEC Comments at 5.

57. Application submission deadlines. *Background.* In the *NPRM*, the Commission sought comment on whether it should eliminate from our Rules<sup>243</sup> the mandated ten-day time period during which VEs and VECs must submit or forward applications for new or modified amateur operator licenses, in light of the requirement<sup>244</sup> that VECs file these applications electronically with the Commission.<sup>245</sup> Currently, Sections 97.509(m) and 97.519(b) require that application documents must be submitted within ten days of the examination to the VEC or to the Commission.<sup>246</sup> The Commission also sought comment regarding whether there are other unnecessary rules applicable to the amateur service qualifying examination system that we should eliminate, and whether there are other rules we should amend to conform to actual practices in the examination system.<sup>247</sup>

58. *Decision.* NCVEC supports eliminating the mandated ten-day filing time rule, noting that VECs file applications electronically.<sup>248</sup> ARRL opposes this proposal, arguing that we should retain mandated submission times because it "still requires its VE teams to send hard copy documents to the ARRL-VEC before the examination session will be coordinated" and that the present rule allows the ARRL-VEC to "impress on the VE teams that they are in violation of FCC rules by taking more than ten days to remit the documents to the VEC."<sup>249</sup> We have considered the comments regarding this proposal and conclude that there is no need for the ten-day filing time rule in Part 97. We clarify, however, that VECs may require VE teams to submit applications to them within a specified time period as a condition of coordinating an examination session.<sup>250</sup> Regarding the argument that we should retain the rule so that VEs and VECs could not delay the process of submitting applications,<sup>251</sup> we note that if this were to occur on a regular basis, a VEC could decertify the dilatory VE on the basis that the person is not competent to perform the VE function, pursuant to Section 97.525(a)(3).<sup>252</sup> Accordingly, we will revise Sections 97.509(m) and 97.519(b) as proposed.

59. With regard to the Commission's inquiry as to whether there are other unnecessary rules in the examination system that should be eliminated or conformed with actual practices in the examination system,<sup>253</sup> NCVEC requests that we amend our Rules to require that Morse code tests use "most, rather than all," of the letters in the alphabet as well as numbers and other characters, arguing that it is somewhat difficult to prepare a code test using all of the letters in the alphabet, numbers and other characters.<sup>254</sup> We reject this suggestion. The term "most" is

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<sup>243</sup> See 47 C.F.R. §§ 97.509(m), 97.519(b).

<sup>244</sup> See 47 C.F.R. § 97.519(b)(3).

<sup>245</sup> See *NPRM*, 19 FCC Rcd at 7333 ¶ 93.

<sup>246</sup> See 47 C.F.R. §§ 97.509(m), 97.519(b).

<sup>247</sup> See *NPRM*, 19 FCC Rcd at 7333 ¶ 93.

<sup>248</sup> NCVEC Comments at 6.

<sup>249</sup> ARRL Comments at 24.

<sup>250</sup> See Bruce Moyer Comments at 1.

<sup>251</sup> See Timothy J. Peters Comments at 1; Puerto Rico Amateur Radio League Comments at 3.

<sup>252</sup> 47 C.F.R. § 97.525(a)(3).

<sup>253</sup> See Timothy J. Peters Comments at 1; Puerto Rico Amateur Radio League Comments at 3.

<sup>254</sup> See NCVEC Comments at 6.

vague. Without further elaboration, we believe that the prudent course of action regarding this issue is to maintain the status quo. This belief is confirmed by the fact that VECs have been successfully preparing these examinations for over twenty years without unreasonable difficulty.

60. We also conclude that it is not necessary to amend our rules to allow use of documents other than licenses to grant examination credit, as suggested by NCVEC,<sup>255</sup> because there is no rule that prohibits VEs from doing so. In this regard, we note that the Commission's rules require only that credit must be given if an examinee presents a license document; the rules do not prohibit VEs from accepting other documents that they believe credibly show that an examinee has held a particular class of operator license in the past. Further, we note that NCVEC states that all VECs currently accept *Callbook Magazine*<sup>256</sup> and old databases to verify former licensure,<sup>257</sup> thereby convincing us that such a rule amendment is not necessary at this time.

61. Additionally, we are updating additional rule sections to reflect a change in Commission organization.<sup>258</sup> Specifically, we are revising Sections 97.103(c), 97.203(f), and 97.309(b) of the Commission's Rules<sup>259</sup> to replace the term "Engineer-In-Charge" (EIC) with "District Director" because the EIC function in the Enforcement Bureau (EB) is now performed by a District Director.

62. In summary, we believe that the public interest will be served by revising the amateur service rules as indicated above. We believe that these rule changes will allow amateur service licensees to better fulfill the purpose of the amateur service and will enhance the usefulness of the amateur service to its licensees and the public.

## V. PROCEDURAL MATTERS

### A. Final Regulatory Flexibility Certification.

63. The Regulatory Flexibility Act of 1980, as amended (RFA),<sup>260</sup> requires a regulatory flexibility analysis to be prepared for notice and comment rulemaking proceedings, unless the agency certifies that "the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities."<sup>261</sup> The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."<sup>262</sup> In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.<sup>263</sup> A "small

<sup>255</sup> See *id.* at 7.

<sup>256</sup> *Callbook Magazine* is a directory listing each amateur radio operator's call sign, name, address, and class of operator license.

<sup>257</sup> See *id.*

<sup>258</sup> See *NPRM*, 19 FCC Rcd at 7335 ¶ 96.

<sup>259</sup> 47 C.F.R. §§ 97.103(c), 97.203(f), 97.309(b).

<sup>260</sup> See 5 U.S.C. § 603. The RFA, see 5 U.S.C. § 601–612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

<sup>261</sup> See 5 U.S.C. § 605(b).

<sup>262</sup> See 5 U.S.C. § 601(6).

<sup>263</sup> See 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after

(continued....)

business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).<sup>264</sup>

64. In this *Report and Order*, we amend the rules that specify how an individual who has qualified for an amateur service operator license can use an amateur radio station consistent with the basis and furthering the purpose of the amateur service.<sup>265</sup> The amended rules apply exclusively to individuals who are licensees in the amateur radio service. Given the definition of a "small entity,"<sup>266</sup> none of these individuals are small entities as the term is used in the RFA.

65. In addition, the amended rules reflected in this *Report and Order* potentially could affect manufactures of amateur radio equipment. Based on requests that the Commission has received for certification of amplifiers under Part 97 of the Rules,<sup>267</sup> we estimate that there are between five and ten manufactures of amateur radio amplifiers and that by the relevant SBA standard<sup>268</sup> none of these manufactures are small entities.<sup>269</sup> We also note that the rule changes will apply to amateur radio licensees and control operators of amateur radio stations and will not have a necessary impact on manufactures of amplifiers that may be used at amateur radio stations. Therefore, we certify that the rules reflected in this *Report and Order* will not have a significant economic impact on a substantial number of small entities. The Commission will send a copy of the *Report and Order*, including a copy of this Final Regulatory Flexibility Certification, to the Chief Counsel for Advocacy of the SBA.<sup>270</sup> This certification will also be published in the Federal Register.<sup>271</sup>

#### **B. Paperwork Reduction Act of 1995 Analysis**

66. This *Report and Order* has been analyzed with respect to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13, and found to contain no information collection. In addition, it does not contain any new or modified “information collection burden for small business concerns with fewer than 25 employees,” pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. § 3506(c)(4).

#### **C. Congressional Review Act**

67. The Commission will send a copy of this *Report and Order* in a report to be sent to Congress and the General Accounting Office pursuant to the Congressional Review Act, *see* 5 U.S.C. § 801(a)(1)(A).

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(...continued from previous page)

opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

<sup>264</sup> *See* 15 U.S.C. § 632.

<sup>265</sup> *See* 47 C.F.R. § 97.1

<sup>266</sup> *See* para. 63 *supra*.

<sup>267</sup> *See* Office of Engineering and Technology Equipment Authorization database.

<sup>268</sup> *See* 13 C.F.R. § 121.201.

<sup>269</sup> *See* NAICS code 334310.

<sup>270</sup> *See* 5 U.S.C. § 605(b).

<sup>271</sup> *See id.*

**D. Alternative Formats**

68. To request materials in alternative formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to <[FCC504@fcc.gov](mailto:FCC504@fcc.gov)> or call the Consumer and Government Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (TTY). This *Report and Order* also may be downloaded from the Commission's web site at <<http://www.fcc.gov/>>.

69. For further information, contact William T. Cross, Mobility Division, Wireless Telecommunications Bureau, (202) 418-0620, or TTY (202) 418-7233.

**VI. ORDERING CLAUSES**

70. IT IS ORDERED that, pursuant to Sections 4(i), 303(f), 303(r), and 332 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154 (i), 303(f), 303(r) and 332, this *Report and Order* IS ADOPTED.

71. IT IS FURTHER ORDERED that Part 1, Part 2 and Part 97 of the Commission's Rules ARE AMENDED as specified in the Appendix, effective [**30 days after publication in the Federal Register**].

72. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this REPORT AND ORDER, including the Final Regulatory Flexibility Certification, to the Chief Counsel for Advocacy of the Small Business Administration.

**FEDERAL COMMUNICATIONS  
COMMISSION**

Marlene H. Dortch  
Secretary



**APPENDIX****RULE CHANGES**

Chapter 1 of Title 47 of the Code of Federal Regulations is amended as follows:

**PART 1 – Application Requirements and Procedures**

The authority citation for part 1 continues to read as follows:

AUTHORITY: 47 U.S.C. 151, 154(i), 154(j), 155, 225, 303(r), 309 and 325(e).

1. Section 1.934 is amended by adding a new paragraph (d)(5) to read as follows:

**§ 1.934 Defective applications and dismissal.**

\* \* \* \* \*

(d) \* \* \*

(5) It requests a vanity call sign and the applicant has pending another vanity call sign application with the same receipt date.

\* \* \* \* \*

**PART 2 – Frequency Allocations and Radio Treaty Matters; General Rules And Regulations**

The authority citation for part 2 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 302a, 303, and 336, unless otherwise noted.

1. Section 2.106 is amended by revising United States footnotes US212 and US267 to read as follows:

**§ 2.106 Table of Frequency Allocation.**

\* \* \* \* \*

US212 In, or within 92.6 km (50 nautical miles) of, the State of Alaska, the carrier frequency 5167.5 kHz (assigned frequency 5168.9 kHz) is designated for emergency communications. This frequency may also be used in the Alaska-Private Fixed Service for calling and listening, but only for establishing communications before switching to another frequency. The maximum power is limited to 150 watts peak envelope power (PEP).

\* \* \* \* \*

US267 In the band 902-928 MHz, amateur radio stations shall transmit only on the frequency segments 902.0-902.4, 902.6-904.3, 904.7-925.3, 925.7-927.3, and 927.7-928.0 MHz within the States of Colorado and Wyoming, bounded by the area of latitude 39°N. to 42°N. and longitude 103°W. to 108°W.

\* \* \* \* \*

2. Section 2.815 is amended by removing paragraphs (c), (d), and (e) and the notes to paragraphs (b) and (c), and revising paragraph (b) to read as follows:

**§ 2.815 External radio frequency power amplifiers.**

\* \* \* \* \*

(b) No person shall manufacture, sell or lease, offer for sale or lease (including advertising for sale or lease) or import, ship or distribute for the purpose of selling or leasing or offering for sale or lease, any external radio frequency power amplifier capable of operation on any frequency or frequencies below 144 MHz unless the amplifier has received a grant of certification in accordance with subpart J of this part and other relevant parts of this chapter. These amplifiers shall comply with the following:

(1) The external radio frequency power amplifier shall not be capable of amplification in the frequency band 26-28 MHz.

(2) The amplifier shall not be capable of easy modification to permit its use as an amplifier in the frequency band 26-28 MHz.

(3) No more than 10 external radio frequency power amplifiers may be constructed for evaluation purposes in preparation for the submission of an application for a grant of certification.

(4) If the external radio frequency power amplifier is intended for operation in the Amateur Radio Service under Part 97 of this Part, the requirements of Sections 97.315 and 97.317 of this chapter shall be met.

3. Section 2.1060 is amended by removing paragraph (c), redesignating paragraph (d) as paragraph (c) and revising paragraph (c) to read as follows:

**§ 2.1060 Equipment for use in the amateur radio service.**

\* \* \* \* \*

(c) Certification of external radio frequency power amplifiers may be denied when denial would prevent the use of these amplifiers in services other than the Amateur Radio Service.

**PART 97 – Amateur Radio Service**

The authority citation for part 97 continues to read as follows:

AUTHORITY: 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303. Interpret or apply 48 Stat. 1064-1068, 1081-1105, as amended; 47 U.S.C. 151-155, 301-609, unless otherwise noted.

1. Section 97.3 is amended by removing and reserving paragraph (a)(19) and revising paragraph (c)(2) to read as follows:

**§ 97.3 Definitions.**

\* \* \* \* \*

(c) \*\*\*

(2) Data. Telemetry, telecommand and computer communications emissions having designators with A, C, D, F, G, H, J or R as the first symbol; 1 as the second symbol; D as the third symbol, and emissions A1C, F1C, F2C, J2C, J3C, and J2D having an occupied bandwidth of 500 Hz or less when transmitted on an amateur service frequency below 30 MHz. Only a digital code of a type specifically authorized in this part may be transmitted.

\* \* \* \* \*

2. Section 97.19 is amended by revising paragraphs (c)(3) and (d)(1) to read as follows:

**§ 97.19 Application for a vanity call sign.**

\* \* \* \* \*

(c) \* \* \*

(3) Except for an applicant who is the spouse, child, grandchild, stepchild, parent, grandparent, step-parent, brother, sister, stepbrother, stepsister, aunt, uncle, niece, nephew, or in-law, and except for an applicant who is a club station license trustee acting with a written statement of consent signed by either the licensee *ante mortem* but who is now deceased or by at least one relative, as listed above, of the person now deceased, the call sign shown on the license of the person now deceased is not available to the vanity call sign system for 2 years following the person's death, or for 2 years following the expiration of the license grant, whichever is sooner.

(d) \* \* \*

(1) The applicant must request that the call sign shown on the license grant be vacated and provide a list of up to 25 call signs in order of preference. In the event that the Commission receives more than one application requesting a vanity call sign from an applicant on the same receipt day, the Commission will process only the first such application entered into the Universal Licensing System. Subsequent vanity call sign applications from that applicant with the same receipt date will not be accepted.

\* \* \* \* \*

3. Section 97.103 is amended by revising paragraph (c) to read as follows:

**§ 97.103 Station licensee responsibilities.**

\*\*\*\*\*

(c) The station licensee must make the station and the station records available for inspection upon request by an FCC representative. When deemed necessary by a District Director to assure compliance with the FCC Rules, the station licensee must maintain a record of station operations containing such items of information as the District Director may require in accord with §0.314(x) of the FCC Rules.

4. Section 97.111 is amended by redesignating paragraphs (a)(2) through (a)(4) as (a)(3) through (a)(5), respectively, and adding a new paragraph (a)(2) to read as follows:

**§ 97.111 Authorized transmissions.**

(a) \* \* \*

(2) Transmissions necessary to meet essential communication needs and to facilitate relief actions.

\* \* \* \* \*

5. Section 97.113 is amended by revising paragraph (e) to read as follows:

**§ 97.113 Prohibited transmissions.**

\* \* \* \* \*

(e) No station shall retransmit programs or signals emanating from any type of radio station other than an amateur station, except propagation and weather forecast information intended for use by the general public and originated from United States Government stations, and communications, including incidental music, originating on United States Government frequencies between a manned spacecraft and its associated Earth stations. Prior approval for manned spacecraft communications retransmissions must be obtained from the National Aeronautics and Space Administration. Such retransmissions must be for the exclusive use of amateur radio operators. Propagation, weather forecasts, and manned spacecraft communications retransmissions may not be conducted on a regular basis, but only occasionally, as an incident of normal amateur radio communications.

\* \* \* \* \*

6. Section 97.115 is amended by revising paragraph (b)(2), redesignating paragraph (c) as paragraph (d), and adding a new paragraph (c), to read as follows:

**§ 97.115 Third party communications.**

\* \* \* \* \*

(b) \* \* \*

(2) The third party is not a prior amateur service licensee whose license was revoked or not renewed after hearing and re-licensing has not taken place; suspended for less than the balance of the license term and the suspension is still in effect; suspended for the balance of the license term and re-licensing has not taken place; or surrendered for cancellation following notice of revocation, suspension or monetary forfeiture proceedings. The third party may not be the subject of a cease and desist order which relates to amateur service operation and which is still in effect.

(c) No station may transmit third party communications while being automatically controlled except a station transmitting a RTTY or data emission.

\* \* \* \* \*

7. Section 97.201 is amended by revising paragraph (b) to read as follows:

**§ 97.201 Auxiliary station.**

\* \* \* \* \*

(b) An auxiliary station may transmit only on the 2 m and shorter wavelength bands, except the 144.0-144.5 MHz, 145.8-146.0 MHz, 219-220 MHz, 222.00-222.15 MHz, 431-433 MHz, and 435-438 MHz segments.

\* \* \* \* \*

8. Section 97.203 is amended by revising paragraph (f) to read as follows:

**§ 97.203 Beacon station.**

\*\*\*\*\*

(f) A beacon must cease transmissions upon notification by a District Director that the station is operating improperly or causing undue interference to other operations. The beacon may not resume transmitting without prior approval of the District Director.

\*\*\*\*\*

9. Section 97.207 is amended by revising paragraph (g) and removing paragraphs (h) and (i) to read as follows:

**§ 97.207 Space station.**

\* \* \* \* \*

(g) The license grantee of each space station must make the following written notifications to the International Bureau, FCC, Washington, DC 20554.

(1) A pre-space notification within 30 days after the date of launch vehicle determination, but no later than 90 days before integration of the space station into the launch vehicle. The notification must be in accordance with the provisions of Articles 9 and 11 of the International Telecommunication Union (ITU) Radio Regulations and must specify the information required

by Appendix 4 and Resolution No. 642 of the ITU Radio Regulations. The notification must also include a description of the design and operational strategies that the space station will use to mitigate orbital debris, including the following information:

(i) A statement that the space station licensee has assessed and limited the amount of debris released in a planned manner during normal operations, and has assessed and limited the probability of the space station becoming a source of debris by collisions with small debris or meteoroids that could cause loss of control and prevent post-mission disposal;

(ii) A statement that the space station licensee has assessed and limited the probability of accidental explosions during and after completion of mission operations. This statement must include a demonstration that debris generation will not result from the conversion of energy sources on board the spacecraft into energy that fragments the spacecraft. Energy sources include chemical, pressure, and kinetic energy. This demonstration should address whether stored energy will be removed at the spacecraft's end of life, by depleting residual fuel and leaving all fuel line valves open, venting any pressurized system, leaving all batteries in a permanent discharge state, and removing any remaining source of stored energy, or through other equivalent procedures specifically disclosed in the application;

(iii) A statement that the space station licensee has assessed and limited the probability of the space station becoming a source of debris by collisions with large debris or other operational space stations. Where a space station will be launched into a low-Earth orbit that is identical, or very similar, to an orbit used by other space stations, the statement must include an analysis of the potential risk of collision and a description of what measures the space station operator plans to take to avoid in-orbit collisions. If the space station licensee is relying on coordination with another system, the statement must indicate what steps have been taken to contact, and ascertain the likelihood of successful coordination of physical operations with, the other system. The statement must disclose the accuracy – if any – with which orbital parameters of non-geostationary satellite orbit space stations will be maintained, including apogee, perigee, inclination, and the right ascension of the ascending node(s). In the event that a system is not able to maintain orbital tolerances, *i.e.*, it lacks a propulsion system for orbital maintenance, that fact should be included in the debris mitigation disclosure. Such systems must also indicate the anticipated evolution over time of the orbit of the proposed satellite or satellites. Where a space station requests the assignment of a geostationary-Earth orbit location, it must assess whether there are any known satellites located at, or reasonably expected to be located at, the requested orbital location, or assigned in the vicinity of that location, such that the station keeping volumes of the respective satellites might overlap. If so, the statement must include a statement as to the identities of those parties and the measures that will be taken to prevent collisions;

(iv) A statement detailing the post-mission disposal plans for the space station at end of life, including the quantity of fuel – if any – that will be reserved for post-mission disposal maneuvers. For geostationary-Earth orbit space stations, the statement must disclose the altitude selected for a post-mission disposal orbit and the calculations that are used in deriving the disposal altitude. The statement must also include a casualty risk assessment if planned post-mission disposal involves atmospheric re-entry of the space station. In general, an assessment should include an estimate as to whether portions of the spacecraft will survive re-entry and reach the surface of the Earth, as well as an estimate of the resulting probability of human casualty.

(v) If any material item described in this notification changes before launch, a replacement pre-space notification shall be filed with the International Bureau no later than 90 days before integration of the space station into the launch vehicle.

(2) An in-space station notification is required no later than 7 days following initiation of space station transmissions. This notification must update the information contained in the pre-space notification.

(3) A post-space station notification is required no later than 3 months after termination of the space station transmissions. When termination of transmissions is ordered by the FCC, the notification is required no later than 24 hours after termination of transmissions.

10. Section 97.301 is amended by:

a. Revising the second and third entries to the table following paragraph (b),

b. Revising the second, third, ninth, and tenth entries to the table following paragraph (c),

c. Revising the second, third, fourth, fifth, tenth, and eleventh entries to the table following paragraph (d), and by

d. Revising the first, second, third, and fourth entries to the table following paragraph (e).

The revisions read as follows:

**§ 97.301 Authorized frequency bands.**

\* \* \* \* \*

(b) \* \* \*

Wavelength band	ITU Region 1	ITU Region 2	ITU Region 3	Sharing requirements See § 97.303, (Paragraph)
-----------------	--------------	--------------	--------------	--

\* \* \* \* \*

<u>HF</u>	<u>MHz</u>	<u>MHz</u>	<u>MHz</u>	
80 m	3.50-3.60	3.50-3.60	3.50-3.60	(a)
75 m	3.60-3.80	3.60-4.00	3.60-3.90	(a)

\* \* \* \* \*

(c) \* \* \*

Wavelength band	ITU Region 1	ITU Region 2	ITU Region 3	Sharing requirements See § 97.303, (Paragraph)
-----------------	--------------	--------------	--------------	--

\* \* \* \* \*

<u>HF</u>	<u>MHz</u>	<u>MHz</u>	<u>MHz</u>	
80 m	3.525-3.60	3.525-3.60	3.525-3.60	(a)
75 m	3.70-3.80	3.70-4.00	3.700-3.90	(a)

\*\*\*\*\*

15 m	21.025-21.20	21.025-21.20	21.025-21.20
-Do-	21.225-21.45	21.225-21.45	21.225-21.45

\*\*\*\*\*

(d) \*\*\*

Wavelength band	ITU Region 1	ITU Region 2	ITU Region 3	Sharing requirements See § 97.303, (Paragraph)
-----------------	--------------	--------------	--------------	--

\*\*\*\*\*

<u>HF</u>	<u>MHz</u>	<u>MHz</u>	<u>MHz</u>	
80 m	3.525-3.60	3.525-3.725	3.525-3.725	(a)
75 m	---	3.80-4.00	3.80-3.90	(a)
40 m	7.025-7.125	7.025-7.125	7.025-7.125	(a)
-Do-	---	7.175-7.300	---	(a)

\*\*\*\*\*

15 m	21.025-21.20	21.025-21.20	21.025-21.20
-Do-	21.275-21.45	21.275-21.45	21.275-21.45

\*\*\*\*\*

(e) \*\*\*

Wavelength band	ITU Region 1	ITU Region 2	ITU Region 3	Sharing requirements See § 97.303, (Paragraph)
-----------------	--------------	--------------	--------------	--

<u>HF</u>	<u>MHz</u>	<u>MHz</u>	<u>MHz</u>	
80 m	3.525-3.60	3.525-3.60	3.525-3.60	(a)
40 m	7.025-7.075	7.025-7.125	7.025-7.075	(a)
15 m	21.025-21.20	21.025-21.20	21.025-21.20	
10m	28.0-28.5	28.0-28.5	28.0-28.5	

\*\*\*\*\*

11. Section 97.303 is amended by revising paragraph (g)(1) to read as follows:

**§ 97.303 Frequency sharing requirements.**

\*\*\*\*\*

(g) \*\*\*

(1) In the States of Colorado and Wyoming, bounded by the area of latitude 39°N. to 42°N. and longitude 103°W. to 108°W., an amateur station may transmit in the 902 MHz to 928 MHz band only on the frequency segments 902.0-902.4, 902.6-904.3, 904.7-925.3, 925.7-927.3, and 927.7-



928.0 MHz. This band is allocated on a secondary basis to the amateur service subject to not causing harmful interference to, and not receiving any interference protection from, the operation of industrial, scientific and medical devices, automatic vehicle monitoring systems, or Government stations authorized in this band.

\* \* \* \* \*

12. Section 97.305 is amended by revising paragraph (a) and the fifth, sixth, seventh, eighth, and twenty-sixth entries to the table following paragraph (c) to read as follows:

**§ 97.305 Authorized emission types.**

(a) Except as specified elsewhere in this part, an amateur station may transmit a CW emission on any frequency authorized to the control operator.

(b) \* \* \*

(c) \* \* \*

Wavelength	Frequencies band	Emission types authorized	Standards See § 97.307(f), (Paragraph)
* * * * *			
HF			
* * * * *			
40 m	7.000-7.075 MHz	RTTY, data .....	(3), (9)
40 m	7.075-7.100 MHz	Phone, image .....	(1), (2), (9), (11)
40 m	7.100-7.125 MHz	RTTY, data .....	(3), (9)
40 m	7.125-7.300 MHz	Phone, image .....	(1), (2)
* * * * *			
VHF			
* * * * *			
1.25 m	219-220 MHz	Data .....	(13)
-Do-	222-225 MHz	RTTY, data, test MCW, phone, SS, image.....	(2), (6), (8)
* * * * *			

13. Section 97.309 is amended by revising paragraph (b) to read as follows:

**§ 97.309 RTTY and data emission codes.**

\*\*\*\*\*

(b) Where authorized by Sections 97.305(c) and 97.307(f) of this part, a station may transmit a RTTY or data emission using an unspecified digital code, except to a station in a country with which the United States does not have an agreement permitting the code to be used. RTTY and data emissions using unspecified digital codes must not be transmitted for the purpose of obscuring the meaning of any communication. When deemed necessary by an District Director to assure compliance with the FCC Rules, a station must:

\*\*\*\*\*

14. Section 97.313 is amended by revising paragraph (c) introductory text, (c)(1) and (c)(2) to read as follows:

**§ 97.313 Transmitter power standards.**

\* \* \* \* \*

(c) No station may transmit with a transmitter power exceeding 200 W PEP:

(1) On the 10.10-10.15 MHz segment;

(2) When the control operator is a Novice Class operator or a Technician Class operator who has received credit for proficiency in telegraphy in accordance with the international requirements;  
or

\* \* \* \* \*

15. Section 97.315 is revised to read as follows:

**§ 97.315 Certification of external RF power amplifiers.**

(a) Any external RF power amplifier (see Section 2.815 of the FCC Rules) manufactured or imported for use at an amateur radio station must be certificated for use in the amateur service in accordance with subpart J of part 2 of the FCC Rules. No amplifier capable of operation below 144 MHz may be constructed or modified by a non-amateur service licensee without a grant of certification from the FCC.

(b) The requirement of paragraph (a) does not apply if one or more of the following conditions are met:

(1) The amplifier is constructed or modified by an amateur radio operator for use at an amateur station.

(2) The amplifier was manufactured before April 28, 1978, and has been issued a marketing waiver by the FCC, or the amplifier was purchased before April 28, 1978, by an amateur radio operator for use at that operator's station.

(3) The amplifier is sold to an amateur radio operator or to a dealer, the amplifier is purchased in used condition by a dealer, or the amplifier is sold to an amateur radio operator for use at that operator's station.

(c) Any external RF power amplifier appearing in the Commission's database as certificated for use in the amateur service may be marketed for use in the amateur service.

16. Section 97.317 is revised to read as follows:

**§ 97.317 Standards for certification of external RF power amplifiers.**

(a) To receive a grant of certification, the amplifier must:

(1) Satisfy the spurious emission standards of Sec. 97.307(d) or (e) of this part, as applicable, when the amplifier is operated at the lesser of 1.5 kW PEP or its full output power and when the amplifier is placed in the “standby” or “off” positions while connected to the transmitter.

(2) Not be capable of amplifying the input RF power (driving signal) by more than 15 dB gain. Gain is defined as the ratio of the input RF power to the output RF power of the amplifier where both power measurements are expressed in peak envelope power or mean power.

(3) Exhibit no amplification (0 dB gain) between 26 MHz and 28 MHz.

(b) Certification shall be denied when:

(1) The Commission determines the amplifier can be used in services other than the Amateur Radio Service, or

(2) The amplifier can be easily modified to operate on frequencies between 26 MHz and 28 MHz.

17. Section 97.401 is revised to read as follows:

**§ 97.401 Operation during a disaster.**

A station in, or within 92.6 km (50 nautical miles) of, Alaska may transmit emissions J3E and R3E on the channel at 5.1675 MHz (assigned frequency 5.1689 MHz) for emergency communications. The channel must be shared with stations licensed in the Alaska-Private Fixed Service. The transmitter power must not exceed 150 W PEP. A station in, or within 92.6 km of, Alaska may transmit communications for tests and training drills necessary to ensure the establishment, operation, and maintenance of emergency communication systems.

18. Section 97.407 is amended by removing paragraphs (b)(1), (2), and (3), and revising paragraph (b) to read as follows:

**§ 97.407 Radio amateur civil emergency service.**

(a) \* \* \*

(b) The frequency bands and segments and emissions authorized to the control operator are available to stations transmitting communications in RACES on a shared basis with the amateur service. In the event of an emergency which necessitates invoking the President's War Emergency Powers under the provisions of Section 706 of the Communications Act of 1934, as amended, 47 U.S.C. 606, RACES stations and amateur stations participating in RACES may only transmit on the frequency segments authorized pursuant to part 214 of this chapter.

\* \* \* \* \*

19. Section 97.505 is amended by revising paragraph (a)(9) to read as follows:

**§ 97.505 Element credit.**

(a) \* \* \*

(9) An expired FCC-granted Technician Class operator license document granted before February 14, 1991; an expired FCC-granted Technician Class operator license document granted after February 14, 1991 accompanied by documentation showing the examinee has passed a telegraphy examination; or an expired FCC-granted General, Advanced, or Amateur Extra Class operator license document:

Element 1.

\* \* \* \* \*

20. Section 97.509 is amended by revising paragraphs (a) and (m) to read as follows:

**§ 97.509 Administering VE requirements.**

(a) Each examination for an amateur operator license must be administered by a team of at least 3 VEs at an examination session coordinated by a VEC. The number of examinees at the session may be limited.

\* \* \* \* \*

(m) After the administration of a successful examination for an amateur operator license, the administering VEs must submit the application document to the coordinating VEC according to the coordinating VEC's instructions.

21. Section 97.519 is amended by revising paragraph (b) introductory text to read as follows:

**§ 97.519 Coordinating examination sessions.**

\* \* \* \* \*

(b) At the completion of each examination session, the coordinating VEC must collect applicant information and test results from the administering VEs. The coordinating VEC must:

\* \* \* \* \*