

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

In the Matter of	)	
	)	
AMERICAN RADIO RELAY LEAGUE, INC.	)	WT Docket No. 12-283
	)	
Request for Temporary Waiver of Sections	)	
97.3(c)(5) and 97.307(f)(8) the Commission’s	)	
Rules to Permit Use in the Amateur Radio Service	)	
of Single and Multiple Time-Slot Time Division	)	
Multiple Access Telephony and Data Emissions	)	

**ORDER**

**Adopted: March 22, 2013**

**Released: March 25, 2013**

By the Deputy Chief, Mobility Division, Wireless Telecommunications Bureau:

1. *Introduction.* This *Order* grants a request from the American Radio Relay League, Inc., (ARRL) for a temporary waiver<sup>1</sup> to allow amateur stations to use additional emission types when transmitting voice or data communications.<sup>2</sup> Specifically, ARRL requests a waiver to permit amateur stations to transmit communications on amateur service channels above 30 MHz using single time-slot Time Division Multiple Access (TDMA) systems currently on the market and used by stations in other services, pending the resolution of a related rulemaking proceeding.<sup>3</sup> For the reasons set forth below, we grant the waiver request. In addition, we dismiss as moot a previously-filed request from ARRL for clarification of the rules as they apply to TDMA digital emissions.<sup>4</sup>

2. *Background.* Amateur stations currently are authorized to transmit messages using telephony and data emissions as these terms are defined in the amateur service rules.<sup>5</sup> ARRL states that

<sup>1</sup> See Second Request for Temporary Waiver (filed October 5, 2012) (Request).

<sup>2</sup> The emission types are FXD, FXE, and F7E. An emission designator describes an emission’s characteristics. A minimum of three symbols is used to describe the basic characteristics of the radio emission. See 47 C.F.R. § 2.201. The first symbol designates the type of modulation. For example, F is used for frequency modulation. The second symbol designates the nature of the signal modulating the main carrier. For example, 7 is used for two or more channels containing quantized or digital information. The third symbol designates the type of information to be transmitted. For example, D is used for data transmission, and E is used for telephony. Where the nature of the signal modulating the main carrier or the type of information to be transmitted is not specifically listed in Section 2.201, the second or third symbol is X. See 47 C.F.R. § 2.201(c)(7), (d)(9).

<sup>3</sup> See Amendment of the Amateur Service Rules Governing Qualifying Examination Systems and Other Matters, *Notice of Proposed Rule Making and Order*, WT Docket No. 12-283, 27 FCC Rcd 12582 (2012) (NPRM).

<sup>4</sup> Letter dated December 17, 2010 from ARRL to Scot Stone, Mobility Division, Wireless Telecommunications Bureau.

<sup>5</sup> For telephony (speech and other sound emissions), emission types may have A, C, D, F, G, H, J, or R as the first symbol; 1, 2, or 3 as the second symbol; and E as the third symbol. See 47 C.F.R. § 97.3(c)(5). Permissible phone emission types also include speech emissions having B as the first symbol; 7, 8, or 9 as the second symbol; and E as the third symbol. *Id.* Data is defined as “[t]elemetry, telecommand and computer communications emissions having (i) designators with A, C, D, F, G, H, J or R as the first symbol, 1 as the second symbol, and D as the third symbol; (ii) emission J2D; and (iii) emissions A1C, F1C, F2C, J2C, and J3C having an occupied bandwidth of 500 Hz or less when transmitted on an amateur service frequency below 30 MHz.” See 47 C.F.R. § 97.3(c)(2). In addition, “[a] RTTY or data emission having designators with A, B, C, D, E, F, G, H, J or R as the first symbol; 1, 2, 7 or 9 as the second symbol; and D or W as the third symbol is also authorized.” 47 C.F.R. § 97.307(f)(8). RTTY is defined as

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amateur service licensees have recently established numerous narrowband repeater facilities<sup>6</sup> using multiple time-slot TDMA repeaters and single-slot TDMA handheld digital transceivers in the 70 centimeter (420-450 MHz) amateur service band, but the present rules do not permit amateur stations to transmit single-slot TDMA emissions on amateur service channels above 30 MHz.<sup>7</sup> Specifically, it notes that a commercially available example of TDMA technology offered by Motorola uses two-slot TDMA technology for the repeater and single-slot TDMA emissions for the associated portable and mobile transceivers,<sup>8</sup> and that the system "specifies emission designators 7K60FXE in voice operation and 7K60FXD for data. It also, for repeaters, specifies ...a 7K60F7E emission."<sup>9</sup> ARRL also notes, however, that "the "7" or "X" symbol in the second space defining the emission is not included in Section 97.3(c) in defining either phone or data" and that "[n]othing in 97.307(f)(8) authorizes single time-slot TDMA either."<sup>10</sup>

3. In 2011, ARRL filed a petition for rulemaking requesting that Sections 97.3(c) and 97.307(f)(8) be amended to authorize single time-slot TDMA transmissions.<sup>11</sup> In 2012, the Commission proposed to amend Section 97.3(c)(5) to allow emission type FXE as a phone emission and Section 97.307(f)(8) to allow emission type FXD as a data emission, and sought comment on whether any additional emission types (such as F7E) should be permitted.<sup>12</sup> Commenters in the rulemaking proceeding support permitting the use of emission types FXD, FXE, and F7E.<sup>13</sup> ARRL now requests an interim waiver to allow amateur stations to transmit these single-slot TDMA telephony and data emissions, pending the outcome of the rulemaking proceeding.<sup>14</sup>

4. *Discussion.* Section 1.925 of the Commission's Rules provides that we may grant a waiver if it is shown that (a) the underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and grant of the requested waiver would be in the public interest; or (b) in light of unique or unusual circumstances, application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest, or the applicant has no reasonable alternative.<sup>15</sup> For the reasons set forth below, we conclude that grant of the waiver request is warranted.

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"[n]arrow-band direct-printing telegraphy emissions having designators with A, C, D, F, G, H, J or R as the first symbol; 1 as the second symbol; B as the third symbol; and emission J2B." See 47 C.F.R. § 97.3(c)(7).

<sup>6</sup> A repeater in the amateur service is "an amateur station that simultaneously retransmits the transmission of another amateur station on a different channel or channels." 47 C.F.R. § 97.3(a)(40).

<sup>7</sup> See Request at 2.

<sup>8</sup> See *id.* at 3.

<sup>9</sup> *Id.*

<sup>10</sup> See *id.* at 3-4.

<sup>11</sup> See Petition for Rulemaking of the American Radio Relay League, RM-11625 (filed March 15, 2011).

<sup>12</sup> See *NPRM*, 27 FCC Rcd at 12591 ¶ 28. The Commission also denied as deficient a previous waiver request filed by ARRL. See *id.* at 12591-92 ¶ 29. The instant request cures the defects in the prior request.

<sup>13</sup> Some commenters state the proposed rule change "removes an ambiguity in Part 97 concerning the use of single slot TDMA technology" and it "enable[s] and encourage[s] the adoption of spectrally efficient narrowband technology." Comments of Robert Witte at 1; see also Comments of Walter T. Loughney, Jr., at 2, Comments of ARRL at 24 (emission type F7E should also be authorized). Other commenters state the proposed rule change "is consistent with the basis and purpose of the amateur service," and will allow "reapplication [in the amateur service] of surplus mobile relay equipment from other radio services." Comments of Joseph P. Speroni at 6, Comments of Dr. Benjamin J. Franske at 3, Comments of W. Lee McVey at 8-9.

<sup>14</sup> See Request at 4.

<sup>15</sup> 47 C.F.R. § 1.925(b)(3); see also *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

5. The purpose of specifying emission designators for the amateur service is to relegate the transmission of certain inharmonious emission types to different segments of the frequency bands,<sup>16</sup> while still allowing great flexibility in the types of emissions that may be transmitted by amateur stations.<sup>17</sup> We agree with ARRL that the digital systems amateur service licensees have recently implemented are “compatible with existing Amateur repeater channelization plans.”<sup>18</sup> We conclude, therefore, that grant of a temporary waiver to allow emission type FXE and F7E as phone emissions and emission type FXD as a data emission is unlikely to result in inharmonious emission types being used in the same segments of the frequency bands. We also conclude that allowing amateur stations to transmit these emission types is consistent with the basis and purpose of the amateur service, specifically to continue to contribute to the advancement of the radio art.<sup>19</sup> Consequently, we grant the waiver request.

6. *Conclusion.* We conclude that good cause has been shown for temporary waiver of Section 97.3(c)(5) to allow amateur stations to transmit emission types FXE and F7E as a phone emission and Section 97.307(f)(8) to allow amateur stations to transmit emission type FXD as a data emission. We therefore waive these rules accordingly, conditioned on the outcome of the pending rulemaking proceeding.<sup>20</sup>

7. Accordingly, IT IS ORDERED that, pursuant to Section 4(i) of the Communications Act of 1934, as amended, 47 U.S.C. § 154(i), and Section 1.925 of the Commission’s Rules, 47 C.F.R. § 1.925, the waiver request filed by the American Radio Relay League, Inc., on October 5, 2012 IS GRANTED, CONDITIONED on compliance with the Commission’s action in WT Docket No. 12-283.

8. IT IS FURTHER ORDERED that the request for clarification of the rules filed by the American Radio Relay League, Inc., on December 17, 2010 IS DISMISSED as moot.

9. This action is taken under delegated authority pursuant to Sections 0.131 and 0.331 of the Commission’s Rules, 47 C.F.R. § 0.131, 0.331.

FEDERAL COMMUNICATIONS COMMISSION

Scot Stone  
Deputy Chief, Mobility Division  
Wireless Telecommunications Bureau

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<sup>16</sup> See Reorganization and Deregulation of Part 97 of the Rules Governing the Amateur Radio Services, *Notice of Proposed Rule Making*, PR Docket No. 88-139, 3 FCC Rcd 2076, 2078 ¶ 19 (1988).

<sup>17</sup> See Reorganization and Deregulation of Part 97 of the Rules Governing the Amateur Radio Services, *Report and Order*, PR Docket No. 88-139, 4 FCC Rcd 4719, 4719 ¶ 2, 4720 ¶ 9 (1989).

<sup>18</sup> See Request at 3.

<sup>19</sup> See 47 C.F.R. § 97.1(b).

<sup>20</sup> That is, licensees ultimately will be subject to the rules adopted in the pending rulemaking proceeding, but will be permitted to operate pursuant to this waiver until a final decision in the rulemaking proceeding takes effect.