

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

In the Matter of)
)
Request for Temporary Waiver of Sections) **WT Docket No. 12-283**
97.3(c)(5) and 97.307(f)(8) of 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)

To: The Chief, Mobility Division
Wireless Telecommunications Bureau
Via: Office of the Secretary

SECOND REQUEST FOR TEMPORARY WAIVER

ARRL, the national association for Amateur Radio, formally known as the American Radio Relay League, Incorporated (ARRL), by counsel and pursuant to Sections 1.3 and 1.925 of the Commission’s Rules (47 C.F.R. §§ 1.3 and 1.925) hereby respectfully requests that the Commission temporarily waive Sections 97.3(c)(5) and 97.307(f)(8) of the Commission’s rules insofar as those rules presently prohibit the use by Amateur Radio Service licensees of single and multiple time-slot Time Division Multiple Access (TDMA) technology, including digital voice and data emissions in Amateur allocations at VHF and above. This temporary waiver is sought on an expedited basis, and is necessary only until the final resolution of that portion of the *Notice of Proposed Rule Making* (the *Notice*), FCC 12-121, ____ FCC Rcd. ____, released October 2, 2012, proposing the modification of the same rule sections cited above to permit on a

permanent basis the relief requested herein.¹ As good cause for the requested temporary waiver, ARRL states as follows:

1. Numerous narrowband UHF repeater facilities using multiple time slot TDMA repeaters and single-slot TDMA handheld digital transceivers have recently been established in the 70 centimeter (420-450 MHz) Amateur band. There are many of these systems now in operation, most especially in the western part of the United States and in the New York City area, and as well in several Midwestern states. Because the legality of the use of these systems was drawn into question recently in the context of a technical rule analysis in an Amateur Radio online publication, Amateur Radio Service licensees who have implemented these new digital, spectrum-efficient repeater systems are now and will during the course of the instant rulemaking proceeding be relegated to using them in analog mode operation only. Installation of these systems was done in all cases with the understanding that they were in full compliance with the Commission's regulations governing permitted emissions, and all other technical rules in Part 97.

ARRL's analysis of the matter, however, led to the conclusion that the present rules did not clearly permit multiple- and single-slot TDMA emissions in the VHF and UHF Amateur Radio Service allocations. ARRL therefore filed contemporaneously with its

¹ This is the second Request for Temporary Waiver filed by ARRL seeking the same relief. ARRL filed on or about March 15, 2011, contemporaneously with its Petition for Rule Making, RM-11625, a waiver request seeking temporary waiver of Sections 97.3(c)(5) and 97.307(f)(8) of the Commission's rules so as to permit the use by Amateur Radio Service licensees of single and multiple time-slot Time Division Multiple Access (TDMA) during the pendency of its Petition for Rule Making. The Commission took no action on that Request until the issuance of the Notice in this proceeding, in which, at paragraph 29 thereof, the Commission dismissed the Request. It did so, according to the Notice, solely because ARRL failed to file an amendment to the Request to include emission F7E to the emissions ARRL asked to be permitted for Amateurs to utilize *pendent lite* (i.e. FXE and FXD emissions). The Notice stated that the omission would not result in the authorization that ARRL sought with respect to the waiver, because it would not permit the use of TDMA emissions for voice operation on repeaters associated with mobile units, but rather only on the mobile units themselves. The failure to file an amendment to ARRL's earlier Request for Temporary Waiver was due to a miscommunication between undersigned counsel and Commission staff. It is remedied herein. It is respectfully requested that the Commission revisit the temporary waiver request during the pendency of the instant docket proceeding, and to expeditiously grant the same.

March 15, 2011 waiver request a Petition for Rule Making, proposing to amend Sections 97.3(c) (5) and 97.307(f)(8) of the Commission's rules, in order to permit Amateur Radio Service licensees to utilize single time-slot and multiple time-slot TDMA technology in Amateur allocations at VHF and above. As a practical matter, this required the addition of FXD, FXE and F7E emissions to those already authorized for Amateur operation at VHF and above. The Commission has now proposed to authorize FXD and FXE emissions in the Amateur Service and has asked in the Notice whether additional emissions, such as F7E should be authorized as well.

2. The use of digital repeater systems in the Amateur Service is expanding in the United States. Some Amateur licensees use the D-Star or P-25 technology. Others have begun to utilize TDMA technology, an example of which is a Motorola TDMA system marketed commercially (to land mobile licensees) as "MotoTRBO". Motorola's TDMA product conforms to the Digital Mobile Radio (DMR) Tier 2 Standard (a published, open standard; *See*, ETSI TS 102-361, parts 1-4). It is two-slot TDMA technology (as to the repeater; the associated portable and mobile transceivers use single-slot TDMA emissions). It is compatible with existing Amateur repeater channelization plans, and thus contributes to a gradual migration to digital communications in the Amateur Service.

3. The Motorola TDMA product specifies emission designators 7K60FXE in voice mode and 7K60FXD for data. It also, for repeaters, specifies, *inter alia*, a 7K60F7E emission. The problem with this is that neither the "7" nor the "X" symbol in the second space defining the emission is included in Section 97.3(c) in defining either "phone" (i.e. telephony) or "data". Specifically, with respect to phone emissions, Section 97.3(c)(5) includes in the definition speech and other sound emissions having the symbols 1, 2 or 3

as the second symbol (and thus excluding the symbols “7” or “X”). Section 97.3 does not prohibit or permit the use of any specific emission. It simply lists what is included in the broad classifications of emissions authorized per Amateur band in Section 97.305, and as authorized by Sections 97.307 and 97.309 of the Amateur rules.

4. In September, 2010, an article appeared in an Amateur Radio online publication which addressed the use of “TDMA type APCO P-25 transceivers and repeaters” which were “originally intended for use on the UHF public safety (sic) band” (i.e. 450-512 MHz). The article, in question-and-answer format, asked whether emission type 7K60FXE is allowed in the Amateur bands, thus to permit the use of TDMA radios and repeaters in digital mode in the Amateur 70 cm band. The author of the article concluded that, though Section 97.305 of the Commission’s rules authorizes MCW, phone, image, RTTY, data, SS, CW and test emissions in the entire 70 cm band, Section 97.3(c) of the Commission’s Rules does not include FXE among the “terms that are used for specifying emission types” with respect to either phone or data emissions. The author concluded that single slot TDMA in the Amateur Service is not presently authorized. This article created widespread concern among Amateur Radio operators using the TDMA equipment in digital mode. Now, while the instant Notice is pending, some interim relief is justified in order to permit these efficient systems to continue to operate in digital mode *pendente lite*.

5. Section 97.307(f)(8) of the Amateur Radio Service rules, lists additional data emissions permitted in the bands 6 meters and above. It reads as follows:

(8) 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.

Nothing in 97.307(f) (8) authorizes single time-slot TDMA either, though it does permit the F7D emission, covering the TDMA repeaters in data mode. In order to permit the use of single- slot TDMA equipment in data mode in the VHF and UHF bands pending action on the Notice, temporary waiver of this Section is necessary, in addition to the waiver of Section 97.3(c)(5) to allow use of the emissions FXD, FXE and F7E.

6. The situation is anomalous in that the Motorola TDMA repeaters, which employ multiple time-slot TDMA emissions in the digital mode, utilize an F7E or F7D emission, and therefore those repeaters can be used in the Amateur bands with an F7D emission at and above 6 meters per Section 97.307(f)(8) of the Commission's rules. However, Section 97.3(c)(5) of the Commission's rules, because of the wording of that subsection, does not now permit F7E emissions. Therefore, neither the portable and mobile transceivers associated with the Motorola TDMA system, which use an FXE or FXD emission, nor the repeaters, which use an F7E emission in digital voice mode, can be operated in digital mode. This situation, pending final action by the Commission in response to the Notice proposals, is counter to the Commission's well-established intent to provide flexibility in the implementation of spectrum-efficient digital technologies in the Amateur Service. The spectrum-efficient, narrowband systems that are now in place using TDMA technology, and which are reportedly not causing interference, should be permitted to continue to operate in digital mode while the Commission is considering the Notice proposals.

7. The Commission may waive a rule for good cause shown. 47 C.F.R. § 1.3. Waiver is appropriate if special circumstances warrant a deviation from the general rule and such deviation would better serve the public interest than would strict adherence to

the general rule. *Northeast Cellular*, 897 F. 2d 1164, 1166 (D.C. Cir. 1990). Generally, the Commission may grant a waiver of its rules in a particular case if the relief requested would not undermine the policy objective of the rule in question and would otherwise serve the public interest. *WAIT Radio v. FCC*, 418 F2d 1153, (DC Cir 1969); *Dominion Video Satellite, Inc., Order and Authorization*, 14 FCC Rcd 8182 (Int'l Bur. 1999). In *WAIT Radio*, it was held that even if the overall objectives of a general rule have been adjudged to be in the public interest, it is possible that application of the rule to a specific case may not serve the public interest if an applicant's proposal does not undermine the public interest policy served by the rule. 418 F. 2d at 1157. In discussing the treatment of requests for waivers of established rules, the court in *WAIT Radio* emphasized that the agency's discretion in applying general rules is intimately linked to the existence of "a safety valve procedure" to permit consideration of an application for exemption based on special circumstances. *Id.* Indeed, the court considered a rule most likely to be undercut if it does not take into account "consideration of hardship, equity, or more effective implementation of overall policy..." *Id.* at 1159. The Commission's waiver authority, per Section 1.925 of the Commission's Rules, 47 C.F.R. § 1.925, allows the Commission to 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) if there are unique or unusual factual circumstances in a specific case where application of the rule would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.

8. In this case, some Amateur Radio operators have adapted commercially available spectrum-efficient narrowband digital equipment for Amateur use, and it is capable of operation now, in digital mode without any disruption of incumbent wider bandwidth analog equipment. More of them can be successfully coordinated without raising new coordination issues. The same equipment is in regular daily use by Part 90 licensees in the private land mobile radio service. In introducing this spectrum-efficient technology into the Amateur Radio Service, its initial adopters were not aware of the peculiarity that the Commission's Part 97 rules which effectively prohibits the use of the two-slot TDMA repeaters and single slot TDMA portable and mobile units in digital mode.

9. Strict compliance with the definitional rules in Section 97.3(c) of the Commission's rules and with the limited emissions permitted by Section 97.307(f)(8) is unnecessary pending Commission action on a very minor rule change as proposed in the Notice, which could take a considerably long time. The temporary waiver in this case is necessary therefore to permit the enhancement of emergency and public service communications via Amateur Radio using modern, spectrum efficient equipment on a temporary basis. It is suggested that the strict application of the rule in this instance would be inequitable, unduly burdensome and contrary to the public interest.

10. ARRL would suggest the incorporation of a non-interference condition on the waiver, and accepts that the waiver would be in force only until final adjudication of this issue in the Notice in this proceeding.

Therefore, the foregoing considered, ARRL, the national association for Amateur Radio, respectfully requests that the Commission temporarily waive Sections 97.3(c)(5)

and 97.307(f)(8) of the Commission's Rules, so as to permit the use of single and multiple time-slot TDMA emissions in the portions of the VHF and UHF Amateur bands at and above 6 meters where repeater operation is permitted; that operation pursuant to such waiver be on a non-interference basis; and that TDMA systems operated by licensed radio amateurs pursuant to this waiver in digital mode be required to comply with all other applicable Part 97 rules. Finally, such waiver would be in place only until final adjudication of the portion of the Commission's Notice of Proposed Rule Making on the same subject in this proceeding.

Respectfully submitted,

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