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Federal Communications Commission
Office of the Secretary

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

In the Matter of	)	PR 92-289
	)	
Amendment of Part 97 of the Commission's Rules Governing the Amateur Radio Services Regarding Repeater and Auxiliary Operation in the 1.25 Meter Band	)))))	RM-7869

PETITION FOR RULE MAKING

The American Radio Relay League, Incorporated (the League), the national not-for-profit association of amateur radio operators in the United States, by counsel and pursuant to Section 1.401 of the Commission's rules, hereby respectfully requests that the Commission issue a Notice of Proposed Rule Making at an early date looking toward the amendment of Sections 97.201(b) and 97.205(b) of the Commission's Rules governing the Amateur Radio Service, to create a subband in the 222.000-222.150 MHz segment of the 222-225 MHz (1.25 Meter) band for narrowband, weak-signal operation and other non-repeater operation. As good cause for its petition, the League states as follows:

1. The Commission, following the reallocation of the 220-222 MHz Band in Docket 87-14,[1] caused the reduction of the amateur allocation in that band from five megahertz to three. As the

[1] See, the Report and Order, 3 FCC Rcd. 5287 (1988), Recon. denied, 4 FCC Rcd. 6407 (1989); affirmed sub nom. American Radio Relay League, Incorporated v. FCC, No. 89-1602 (D.C. Circuit 1990, unpublished opinion).

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League argued in opposition to that reallocation, the substantial reduction in the size of that band has displaced many hundreds of existing stations operating in the 220-222 MHz segment. The stations displaced included weak-signal operations, passive lunar reflection stations, and amateurs involved in propagation research, among other stations. These stations require a certain amount of co-channel and adjacent-channel protection from other types of amateur operation, including repeater and simplex FM operation due to the lower received signal strengths relative to other types of amateur operation.

2. Many commenters in Docket 87-14 noted the loss to the Amateur Service that would occur, (and now has occurred), as the result of the loss of the 220-222 MHz segment. For example, commenter William Tynan noted:

> Elimination of weak-signal activity from this very valuable and scientifically interesting part of the radio spectrum would represent a severe blow to Amateur Radio's ability to carry on experiments into various types of propagation. Sporadic E propagation is a case in point. It has been observed at 220 MHz in rare instances. However, no two-way contacts have been confirmed as yet. It would be a shame if lack of a suitable frequency allocation prevents amateurs from demonstrating, through such contacts, that this still mysterious ionospheric propagation mode is a factor in this part of the radio spectrum. Contacts via meteor scatter and aurora reflections are quite frequent at 220 MHz and are responsible for much of the long haul work reported on the band. All of this work would be sacrificed by implementation of the proposal, and the band used for little more than 50 miles or so local operation characteristic of FM.[2]

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[2] Shortly following Mr. Tynan's correspondence, the first instance of documented two-way Sporadic E communications at 220 MHz was observed. See <u>infra</u>, paragraph 5.

Nonetheless, the reallocation was made, and as of August of this year, the 220-222 MHz segment is no longer available to the Amateur Radio Service. The existing users of the band have now been compressed into, or displaced from, the remainder. In many metropolitan areas, this includes all the weak-signal users, as repeaters, and repeater operation, are and have been in place at 222-225 MHz in many areas for some time. In many areas, the band is filled to capacity with amateur repeater operation.

3. In the six meter band (50-54 MHz) and the two meter band (144-148 MHz), there exist protected segments at 50.0-50.1 MHz and 144.0-144.1 MHz where only A1A (CW) emissions are permitted. See, Section 97.305(c) of the Rules. In addition, Section 97.201 of the Rules excludes the weak-signal and satellite portions of the 420-450 MHz band and all bands below 1.25 meters from auxiliary operation, and Section 97.205 excludes, inter alia, the segments 50.0-51 MHz and 144.0-144.5 MHz, 145.5-146 MHz, 431.0-433 MHz and 435.0-438.0 MHz from repeater operation. These restrictions are intended to protect narrowband, weak-signal amateur operations, including signal propagation experimentation, and satellite operation, from interference from auxiliary and repeater operation, which are fundamentally incompatible on a co-channel or close adjacent channel basis.

4. With the proliferation of repeaters, as well as other amateur operation above 148 MHz, there now appears an increased need to protect weak-signal operation in other bands. Furthermore, until the reallocation of the 220-222 MHz segment, there was an

existing weak signal subband at 220.0-220.5 MHz; 500 kHz was thus protected against repeater and auxiliary operation. Traditionally, amateur repeater operation developed primarily at 222-225 MHz, where it had been limited prior to 1977 by regulation. Weak signal amateur stations at the low portion of 220-225 MHz have been protected from repeater and auxiliary operation. There was some room in the band for weak signal operation, and this petition merely seeks to restore what was, until August of this year, the status quo.

5. The 220 MHz weak signal subband provided a fertile ground for development of new communications techniques and propagation research. In Docket 87-14, the League commented[3] on the interesting results of Sporadic E propagation conducted by amateurs at 220 MHz in 1987. Those comments included an initial report of the first documented evidence of two-way sporadic E communications at 220 MHz, between Dallas, Texas and Jacksonville, Florida. This type of scientific investigation is uniquely suited to the Amateur Radio Service, and necessitates a protected segment in order to be successful. With the deletion of the 220-222 MHz segment, however, this type of propagation research, and other ongoing weak-signal operation that was conducted in the 220-222 MHz segment, has been completely displaced, together with other amateur uses from that segment.

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[3] See the Supplementary Reply Comments of the American Radio Relay League, Incorporated, filed July 31, 1987, in Docket 87-14, at pp. 3, 4.

6. This is not to say that repeater operations have not suffered from the loss of the 220-222 MHz segment as well. Clearly, they have, as auxiliary links for those repeaters, and even certain repeaters operating below 222 MHz in some areas, have been displaced as well. In order for a weak-signal segment of the 222-225 MHz band to be created as herein proposed, it may be necessary to relocate certain repeater operations, elsewhere in the band. A few may not be able to move, especially in Southern California, and may have to go off the air. The alternative, however, is for large numbers of weak signal stations now displaced from 220-222 MHz to cease operation entirely. The League believes it equitable, if not entirely satisfactory, for repeater operators to bear a small share of the loss of the 220-222 MHz segment in order to permit other types of amateur operation to continue in a relatively small 150 kHz segment of the 1.25 meter band.

7. The creation of a small weak signal band at 222.0-222.150 MHz is entirely consistent with the Commission's protection of small segments in the other amateur VHF bands. In fact, the 1.25 Meter band is now even smaller than those bands, and stands to be every bit as crowded as those other VHF allocations now are. In recognition of this, and of the need to protect certain weak-signal amateur communications, the League notes that the International Radio Consultative Committee (CCIR) of the ITU has made the protection of amateur weak-signal operations a technical priority of the WARC-92 conference in Torremolinos, Spain. In a CCIR Report entitled "Technical and Operational Bases for the World

Administrative Radio Conference", a formal publication of the CCIR, Section 16.6.4 thereof states, in relevant part, as follows:

> The amateur and amateur-satellite services prefer some exclusive spectrum on a primary status for weak-signal communications, including passive lunar reflection, tropospheric scatter, auroral propagation, meteor scatter and satellite communications. Any proposed sharing with the amateur or amateur-satellite service should take into account the low signal levels used in certain parts of each band and the various classes of emission used in each band. Interservice coordination may be necessary in some cases to ensure compatibility of the sharing services.

Section 16.6.5 of that Report concludes in part as follows:

> The amateur and amateur-satellite services already share with other services in some bands below 3 GHz. Any additional sharing should not introduce services, systems or stations with high signal densities into populated areas, such as high density land mobile systems and broadcasting services, and those services involving safety of life communications. Further, any additional sharing should consider the needs of the amateur and amateur-satellite services for weak signal work, in at least part of the bands.

8. The same rationale expressed by the CCIR for the protection of weak signal amateur communications applies to intra-service sharing in the newly reduced allocation at 1.25 meters. Though this will regrettably have an effect (presumably a minor one, given the relatively small size of the proposed segment in which repeater operation and auxiliary operation would be proscribed) on amateur repeater operators who have already been burdened by the loss of the 220-222 MHz segment, it would appear equitable to make accommodation for all types of amateur operation in this important VHF band, rather than exclude all but repeater operation therefrom. Nor would voluntary band-planning be sufficient to insure protection of weak-signal operation at 222 MHz, in view of the

previously entrenched nature of repeater and auxiliary operation there, and the extent of present crowding in the reduced band.

9. Consistent, therefore, with the Commission's regulatory structure applied with respect to other VHF amateur bands, and in view of the scientific benefits to be gained from creation of a small weak-signal subband at 222.0-222.150 MHz, and the benefits in terms of technical self-training, the League believes that, on balance, amendment of the rules is of critical importance in protecting the amateur weak signal users displaced from 220-222 MHz from cessation of operation, and to provide a reasonable subband for non-repeater, non-auxiliary, operation.[4]

Therefore, the foregoing considered, the American Radio Relay League, Incorporated respectfully requests that the Commission amend Sections 97.201(b) and 97.205(b) as set forth in the attached proposed Appendix, to prohibit repeater and auxiliary operation in

[4] It is noteworthy that the League does not propose herein the modification of Section 97.305(c) of the Rules, which govern permissible emissions in the various amateur allocations. All emissions presently permitted by that rule would continue to be permitted. It is not proposed herein to create a segment for CW-only operation, as is the case with the 50.0-50.1 and 144.0-144.1 MHz bands. The only proposed change is to proscribe repeater and auxiliary operation in the 150 kHz-wide segment proposed herein in the 1.25 meter band.

the 222.00-222.150 MHz segment of the 1.25 meter band by issuing a Notice of Proposed Rule Making looking toward such amendment at an early date.

Respectfully submitted,

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APPENDIX

1. Section 97.201(b) of the Commission's Rules governing auxiliary station operation would be amended to read as follows:

Section 97.201 Auxiliary Station

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(b) An auxiliary station may transmit only on the 1.25 m band above 222.150 MHz, and on shorter wavelength bands, except the 431-433 MHz and 435-438 MHz segments.

2. Section 97.205(b) of the Commission's Rules, governing repeater station operation, would be amended to read as follows:

Section 97.205 Repeater Station

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9B0 A repeater may receive and retransmit only on the 10m and shorter wavelength frequency bands except the 28.0-29.5 MHz, 50.0-51.0 MHz, 144.0-144.5 MHz, 145.5-146 MHz, 222.0-222.15 MHz, 431.0-433.0 MHz and 435.0-438.0 MHz segments.