

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 Service ) RM-11306  
Concerning Permitted Emissions and )  
Control Requirements )

To: The Chief, Wireless Telecommunications Bureau  
VIA OFFICE OF THE SECRETARY

COMMENTS

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I have been a licensed radio amateur since August, 1959, and have held the Amateur Extra Class licence since 1963. At present, I operate my amateur station primarily on the bands between 1.8 and 29.7 MHz, using phone and cw modes. Since I was first licensed I have actively engaged in technical experimentation and self-instruction in radio technology, and amateur radio has provided a training ground that has resulted in several employment opportunities in radio and electronics. I continue to believe that Amateur Radio is more than a personal communications service; it is first and foremost a technical service.

## **I. Introduction**

I support the fundamental goal proposed in RM-11306, to expand the flexibility of the rules to allow new modes of operation not specifically mentioned in Part 97, while permitting present operating modes to continue to be used. However, it appears that RM-11306, if implemented in its proposed form, would impose new restrictions on the Amateur Service that would no longer allow amateurs the maximum flexibility to engage in experimentation and self-instruction in the radio art. In addition, the Petition proposes to remove current provisions for at least two incumbent modes of emission in the Amateur Rules, and retains another incumbent mode only by a footnote that grants an exception to the general provisions in proposed §97.307(f).

## **II. The proposed shift in regulatory philosophy is not desirable or needed**

This Petition proposes to regulate the amateur bands by maximum bandwidth rather than specific or defined emission modes. The stated purpose of the change is to make it easier for new types of emissions to be introduced compatibly among incumbent emission types, while reducing the

regulatory burden of interpreting or applying rules to new technologies in the context of the present table of authorized emission types.

There is presently no specific bandwidth limitation to emissions used in the Amateur Service. §97.101(a) of the rules specifies only a general requirement that each amateur station must be operated according to “good engineering and good amateur practice.” §97.307(a) specifies that “No amateur station transmission shall occupy more bandwidth than necessary for the information rate and emission type being transmitted, in accordance with good amateur practice.” While the Commission has, in the interest of spectrum economy, specified maximum emission bandwidths in other radio services via the rulemaking process, it was not believed necessary or desirable in the Amateur Radio Service. One of the unique features of the Service is the wide choice of emissions and operating frequencies available. Therefore, bandwidth limitations have been deliberately left vague in order to allow radio amateurs the maximum flexibility for self-training, intercommunication and technical investigation.

This philosophy of minimal regulation has been re-confirmed by the Commission on numerous occasions. In a Memorandum Opinion and Order adopted on 6 September, 1967, the Commission denied RM-365, 545, 904 and 910, petitions that requested the separation of single-sideband telephony from double-sideband telephony. On 8 August, 1978, the Commission released a Second Report and Order rejecting the bandwidth proposals of

Docket 20777, which would have deleted the emissions table entirely and substituted a table of maximum authorized bandwidths, in nearly identical fashion as the bandwidth proposals of RM-11306. In a Report and Order in the matter of PR Docket No. 88-139 in 1989, known as the “rules rewrite,” the Commission simplified the table of emission types, to refer to the modes used by amateurs by the simple words *phone*, *data*, *image*, *RTTY*, *test* and *pulse*. On 24 November, 2004, the Commission released an Order that denied a request under RM-10470 to amend the Amateur Rules to provide a specific bandwidth limit of 2.8 kHz for single side band emission, and 5.6 kHz for type A3E emission on frequencies below 28.8 MHz.

Not only is it in the public interest to allow amateur radio operators the maximum flexibility for self-training, intercommunication and technical investigation; the Commission should not be expected to expend an inordinate amount of limited federal resources to micro-manage the internal affairs of a voluntary radio service whose licensees comprise approximately 0.2 percent of the U.S. population.

### **III. Amateurs should not lose incumbent privileges**

The Petition seeks to delete references to specific emission types table in §97.305 and substitute specific figures for “maximum bandwidth.” The proposed rules specify that “bandwidth” would be defined in terms of *necessary bandwidth* rather than *occupied bandwidth*, thus avoiding the

requirement that amateurs have the means to accurately measure the bandwidths of their signals. On frequencies below 29.0 MHz, three specific bandwidth standards are proposed, 200 Hz, 500 Hz and 3.5 kHz. The proposed definition of *bandwidth* notwithstanding, three incumbent modes do not fit into the proposed bandwidth scheme: frequency modulated telephony, independent sideband emissions, and double-sideband amplitude modulation (A3E emission). It is proposed to allow DSB-AM to continue with the addition of a simple footnote in §97.307 (emission standards), that would allow bandwidths (presumably necessary bandwidth) up to 9 kHz for type A3E emission only.

It is proposed to remove the provision for Independent Sideband in the Amateur Rules, based on the questionable presumption that this emission mode has not been used in the Amateur Service for more than a decade. Furthermore, under the present §97.307f (1), “angle-modulated” emissions with a modulation index no greater than 1 at the highest modulation frequency are permitted between 1.8 and 29.0 MHz, but the Petition proposes no provision to accommodate frequency or phase modulated phone emissions, so it is to be presumed that under the proposed rules changes, those emission types would be precluded below 29.0 MHz.

The petition recognizes the fact that double-sideband amplitude modulation (type A3E emission) has a significant following in the amateur

community, and this mode is accommodated with a proposed footnote, §97.307 f (1) as revised. In the present rules, the provision for type A3E emission is fundamentally embedded in the table of authorized emission types in §97.305(c), per the definitions of emission types in §97.3c (5). Relegating this mode to a simple footnote in the rules suggests a tentative status at best, and leaves it vulnerable to be discontinued at a future time by simply deleting proposed footnote §97.307 f (1).

It appears inconsistent with the Basis and Purpose of the Amateur Radio Service, as defined in §97.1, and the stated intent in this Petition to permit present operating modes to continue to be used, to delete any privilege presently accorded under Part 97. Furthermore, it would be illogical to change rules to make something illegal because it is rarely used.

#### **IV. This petition proposes to make the US amateur subband structure overly complicated.**

The existing §97.305(c) table is proposed to be replaced with a table segmenting bands by bandwidth. The bandwidths 200 Hz, 500Hz, 2.8 kHz, 3.5 kHz, 9 kHz, 16 kHz and 100 kHz appear in the proposed Appendix. In addition, it is presumed that the present table segmenting bands by Novice, Technician, General, Advanced and Extra class operator privileges would continue in some form, although this issue is not specifically addressed in the Petition. The existing US Amateur Rules already provide what is probably the most complicated amateur subband structure that has ever existed in any

country in the world, with bands segmented by combinations of emission modes and licence class privileges. If the present segmentation by five distinct licence classes is retained, with additional segmentation by seven distinct bandwidths as proposed, in addition to several footnotes that continue to refer to specific modes of emission, the result would be an even more complex matrix of subband privileges based on combinations of bandwidth, licence class, and emission mode. This would place an undue enforcement burden on the Commission and would be inconsistent with the Commission's previously stated opinion (NPRM, PR Docket 88-139, paragraph 3) that it is appropriate to avoid to the extent possible, placing in the rules detailed regulations for the operation of amateur radio communications systems.

**V. New non-phone modes can be accommodated without imposing general bandwidth restrictions, by revising §97.307 f**

It is neither necessary nor desirable to impose specific numeric bandwidth limitations or other new restrictions to incumbent phone, CW, RTTY and data modes, in order to allow amateurs to develop, experiment with, and implement technologies not envisioned when the rules were written. New, unspecified modes can be permitted by making the following revisions to FCC Rule 97.307 f:

“(d) Uncategorized Emission Types: A station may transmit emissions not otherwise specified in this section if the frequency is authorized to the control operator's licence. On any frequency where “Image” is permitted, the bandwidth of the emission shall be subject to §97.307 f (2). On any frequency

where “RTTY, data” is permitted, the bandwidth of the emission shall be subject to §97.307 f (3), (4), (5) and (6).”

Sections §97.307 f (3), (4), (5) and (6) would be revised by deleting all references to symbol rates in bauds, and substituting specific maximum necessary bandwidths. §97.309(a) would be revised by deleting all references to specific digital codes, and substituting a requirement that all digital codes be published and that all other applicable rules be observed.

## **VI. Conclusion**

The stated intent of RM-11306 can be attained without imposing new restrictions to modes of emission already in long-time use. Therefore, the foregoing considered, I respectfully request that the Commission dismiss the Petitioner’s proposal to delete the emissions table entirely and substitute a table of maximum authorized bandwidths, and instead, accommodate new technology in the amateur service by implementing appropriate changes to the existing rules governing emission standards.

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