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

JUN - 5 1997

Federal Communications Commission
Office of Secretary

In the Matter of

Amendment of the Amateur Service)	
Rules to Provide For Greater)	WT Docket No. 97-12
Use of Spread Spectrum)	RM-8737
Communications Technologies)	

To: The Commission

**REPLY COMMENTS
OF
METRICOM, INC.**

Metricom, Inc. ("Metricom"), by its attorneys, hereby submits these Reply Comments to the Comments filed in response to the Notice of Proposed Rule Making released on March 3, 1997, in the above-captioned proceeding (the "Notice").^{1/} Metricom submits that the Comments filed in this proceeding continue to illustrate that there is not full support for the Commission's proposal in the record of this proceeding, even among the amateur community.

I. AMATEUR OPERATIONS IN THE ISM BANDS SHOULD BE LIMITED TO PART 15 POWER LEVELS.

1. As indicated in its Comments, Metricom does not oppose the proposal to allow amateurs greater flexibility for spread spectrum operations. However, Metricom strongly opposes allowing amateur operations at up to 100 watts output power and unlimited antenna gain in the Industrial, Scientific and Medical ("ISM")

^{1/} Amendment of the Amateur Service Rules to Provide For Greater Use of Spread Spectrum Communication Technologies, WT Docket 97-12, Notice of Proposed Rule Making, released March 3, 1997.

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bands. Part 15 operations provide numerous valuable services to the public (e.g., cordless phones, remote meter reading, two-way (local and wide area) data transmission and security systems) using only 1 watt of output power. Accordingly, if amateurs were permitted to operate in the same band, with up to 100 watts output power, Part 15 operations would be subjected to an extremely high level of harmful interference. In the past, the Commission has been careful to create rules that will allow both licensed and unlicensed operations to coexist in the same band.^{2/} There is no reason why the Commission could not continue that balance while still allowing amateurs to provide spread spectrum operations in the ISM bands. Furthermore, allowing amateurs to operate at 100 watts output power and unlimited antenna gain in the ISM bands would be contrary to the balance the Commission has carefully created through its rules because not only Part 15 operations but also the newly created UNII operations and some Part 90 licensed services could foreseeably be harmed by these operations.^{3/}

2. The Commission should not disrupt the carefully crafted delicate balance created in the ISM and Part 15 bands in order to adopt rules that do not have strong record support or the full

^{2/} See, e.g., Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, PR Docket No. 93-61, 10 FCC Rcd 4695 (1995).

^{3/} See Comments of Metricom, Inc. in WT Docket No. 97-12, pp. 3-4.

support of the amateur community.^{4/} Instead, the Commission should allow amateurs to transmit spread spectrum communications in the ISM bands at the same power levels as those governed by Part 15 of the Commission's Rules, as Metricom advocated in its Comments in this proceeding. Such operations would provide for unlimited amateur spread spectrum operations in the ISM bands, while preserving the delicate balance established by the Commission for these bands.

3. It is simply not good public policy for the Commission to ignore the fact that it has encouraged the development of new and innovative technology in certain Part 15 frequency bands, and that millions of Part 15 devices are operating in these bands and serving the needs of millions of American consumers. The Commission must continue to attempt to balance the needs of competing spectrum interests to reach a positive result that serves the public interest. Furthermore, the Commission should not accept the arguments of the American Radio Relay League and William A. Tynan W3X0 -- that Part 15 operations operate at sufferance to licensed services in certain bands and are not entitled to any protection^{5/} -- without weighing the consequences of allowing very high powered amateur spread spectrum operations in Part 15 bands.

^{4/} See, e.g., Comments of the Radio Amateur Satellite Corporation in WT Docket No. 97-12; Comments of The Central States VHF Society in WT Docket No. 97-12.

^{5/} Comments of the American Radio Relay League, Inc. in WT Docket No. 97-12, p.3; Comments of William A. Tynan W3X0 in WT Docket No. 97-12, p. 5.

II. AUTOMATIC POWER CONTROL IS NOT A COMPLETE SOLUTION TO INTERFERENCE PROBLEMS.

4. As stated in its Comments, Metricom does not believe the Commission's proposal for automatic power control ("APC") set forth in the Notice will have the intended effect of limiting interference to Part 15 operations.^{6/} Similarly, several Commenters in this proceeding have indicated that APC will have a minimal, if any, effect on the impact of amateur spread spectrum operations on other, even amateur, services.^{7/} Still other Commenters would like to see the APC eliminated altogether.^{8/} Metricom continues to believe that amateur spread spectrum power should be limited to Part 15 levels in the ISM bands.

5. In the alternative, if the Commission refuses to limit amateur spread spectrum power to Part 15 limits in the ISM bands, Metricom would urge the Commission to adopt, at a minimum, the APC provisions as set forth in the Notice. The APC provisions would provide some, albeit limited, protection to Part 15 operations by requiring that the amateur equipment include power control circuitry. This requirement would, at a minimum, limit the proliferation of high powered spread spectrum amateur transmitters by precluding amateurs from simply purchasing off-the-shelf Part 15

^{6/} See Comments of Metricom, Inc. in WT Docket No. 97-12, pp. 6-7, and Attachment 1 thereto.

^{7/} See Comments of The Central States VHF Society in WT Docket No. 97-12, p. 6; Comments of William A. Tynan W3XO in WT Docket No. 97-12, pp. 6-7.

^{8/} See Comments of Tucson Amateur Packet Radio Corp. in WT Docket No. 97-12, p. 3; Comments of Philip R. Karn, Jr., KA9Q in WT Docket No. 97-12, p. 3.

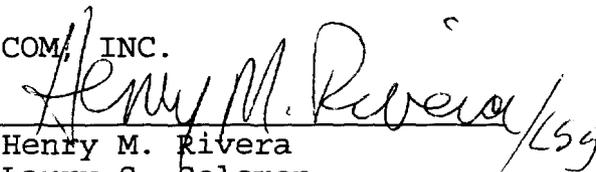
spread spectrum equipment and modifying that equipment using inexpensive power amplifiers to boost the output power to the maximum permissible level.

III. CONCLUSION

6. Metricom encourages the Commission to continue to allow the successful coexistence of users in the ISM bands by limiting amateur spread spectrum operations in the ISM bands to Part 15 power limits or, in the alternative, requiring amateurs to install automatic power control circuitry in their spread spectrum equipment.

Respectfully submitted,

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