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

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)
)
Amendment of the Amateur Service) WT Docket No. 97-12
Rules to Provide for Greater use of Spread) RM-8737
Spectrum Communications Technologies)

COMMENTS OF THE PART 15 COALITION

The Part 15 Coalition ("the Coalition"), by its attorneys, submits these comments in response to the Notice of Proposed Rulemaking ("NPRM") in the above-referenced proceeding. The Coalition represents a group of companies that manufacture and market radio technologies, including many spread spectrum technologies, designed to operate in compliance with the Commission's Part 15 rules.

In the NPRM, the Commission has proposed changes to its rules that would allow amateur stations to use a wide variety of spread spectrum transmission modes, at power levels applicable to the amateur radio services (100 watts with unlimited antenna gain), in the radio bands used or shared by the amateur service over 420 MHz. The Coalition is concerned that the changes could upset the delicate balance that has been struck in the heavily-used ISM bands and that the Commission has not fully considered the full effects of the proposed change.

DISCUSSION

In the NPRM, the Commission tentatively has concluded that the expanded use of spread spectrum technologies by amateur radio stations will increase spectrum efficiency and promote technological development. Nonetheless, to help protect against harmful interference, the Commission has proposed a requirement that amateur radio stations transmitting in spread spectrum mode must use an automatic power control ("APC") device to reduce radiated power to the minimal level necessary. The Coalition is concerned that the tension between these two proposed changes is not fully explored in the NPRM.

In reality, the rule changes proposed in the NPRM could have a dramatic effect on the ability of Part 15 users and others to share spectrum with the amateur

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radio service. Although from a purely theoretical standpoint the expanded use of spread spectrum transmission technologies by amateur radio operators should not substantially increase the interference potential of these stations, the rule change could have downstream effects that, as a practical matter, could fundamentally alter the delicate balance between users of these shared bands.

For instance, by expanding the range of spread spectrum transmission modes that may be used by amateur radio stations, operators who have little or no technical knowledge will now be able simply to purchase and use Part 15 spread spectrum equipment that is widely available in the market. This clustering of radio technologies will, in turn, lead to a proliferation of operations in the bands of spectrum in which the Part 15 equipment has been manufactured to operate — the ISM bands, especially the 915 MHz and 2.4 GHz bands. Further, those who purchase Part 15 equipment for amateur radio use may choose to add power amplifiers and thereby boost the power of this equipment out of all proportion to off-the-shelf Part 15 technologies manufactured to transmit at a maximum power of 1 watt. Thus, the proposed rule change may lead to increased use by amateur radio operators of shared ISM bands and require Part 15 users to coexist with Part 15 equipment being operated at output power levels far in excess of that for which they were designed.

Although the Commission makes passing reference in the NPRM to these potential interference problems, its sole response is to propose a requirement that amateur radio stations using spread spectrum transmissions employ some form of APC to reduce transmitter power below the 100 watt maximum. It is entirely unclear from the NPRM, however, what this device will be or how it will work. Moreover, the addition of an APC does not address the more fundamental interference issues posed by the proposed rule changes. However the APC works, it will not reduce power levels to anything approaching those applicable to unlicensed Part 15 users. Thus, whether transmitting at 25, 50, or 75 watts, an amateur radio station using spread spectrum transmission and an APC will still far exceed the transmitter power of any unlicensed Part 15 technologies in its vicinity.

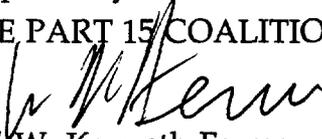
In the end, the interference issues raised by the proposed rule change involve more subtle relationships than mere transmitter power comparisons. The expansion of spread spectrum transmission by amateur radio operators as proposed in the NPRM is an example of a rule change that may upset the delicate balance that has been struck between co-users of shared spectrum. This is particularly true in the

915 MHz band, where the Commission struggled for years on how to add LMS use to a band already crowded with amateur and Part 15 users, and in the 2.4 GHz band, where the Commission has recently decided not to authorize licensed services because of the existing use.

By allowing amateur radio operators unlimited use of spread spectrum transmission technologies, the Commission will permit the use by these stations of Part 15 equipment and thereby increase the use of the ISM bands in which that equipment has been designed to operate. This will, in turn, encourage users of that equipment who have the flexibility to do so (*i.e.*, amateur stations) to increase output power to maximum permitted limits. The failure of the NPRM to address these downstream effects and to focus solely on the immediate technical impact of the transmission technology undermines the force of the Commission's tentative conclusion.

In general, the Coalition is confident that the Part 15 community, working with amateur radio interests, can continue to resolve technical and interference problems when and where they arise. It cautions, however, that future proposed rule changes affecting the Part 15 bands should be subject to careful analysis that includes both immediate technical concerns and the practical market effects of the change so that the advantages of sharing in the ISM bands can continue.

Respectfully submitted,
THE PART 15 COALITION

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