

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

In the Matter of)
)
Amendment of Parts 2, 15, 80, 90, 97, and)
101 of the Commission's Rules Regarding)
Implementation of the Final Acts of the) ET Docket No. 15-99
World Radiocommunication Conference)
(Geneva, 2012) (WRC-12), Other Allocation)
Issues, and Related Rule Updates)
)

To the Commission:

Comments of Steven Mierisch
Amateur Radio General Class Licensee KG4JWU

I support the Commission's proposal to allocate the 2200 Meter (135.7-137.8 kHz) and 630 Meter (472-479 kHz) Bands to the Amateur Service. I believe the current record demonstrates that amateur radio operators can share both bands with existing users, including PLC systems. In response to the Commission's proposed service rules, I submit the following comments:

168. The Commission proposes limiting amateur stations to operations at fixed locations only. I believe this restriction is redundant to achieve the Commission's purposes. As a practical matter, antenna systems in the 135.7-137.8 kHz and 472-479 kHz bands are very large. In order to generate an appreciable signal on either band, a mobile station would have to transport either an antenna tens of meters tall or generate a very high transmitter power output. Only a maritime mobile amateur station would be capable of carrying a large antenna system or a means of generating a high TPO, without significant difficulty.

Additionally, the Commission does not clearly define what constitutes a "fixed location", with respect to the Amateur Service. Lacking a definition, one is left to assume what this statement means. It is not clear if stations must be permanently affixed to stationary structures, or if stations may be movable, provided they only operate while not in motion.

Amateur radio operators routinely establish "field" or "portable" stations in open

areas. These are run either in support of emergency operations or for practice and emergency drills. Many of these operations involve erecting temporary antenna towers and/or hanging antennas from tall trees or other existing support structures. These stations take time to setup and take down, and they can not be moved while in operation. Thus, they are inherently fixed in nature, yet they can be relocated when necessary. The Commission's proposal doesn't not make it clear if this kind of operation will be permissible.

The 472-479 kHz band is particularly attractive for field station operation, as it is suitable for ground-wave based, message forwarding stations within disaster struck regions. Antennas in that band would be reasonably small enough to carry and deploy, and such stations could carry messages in and out of a region, even during periods of poor HF propagation. One of the Amateur Service's fundamental purposes is providing emergency communications, so I encourage the Commission to make it clear, in any adopted rules, that such field stations are allowed.

If the Commission desires to limit station movement, I suggest instead of implementing an ambiguous "fixed locations only" rule, amateur stations on these bands should be prohibited from transmitting while in motion. Further, the Commission could limit stations, designed to be transported, to a lower transmitter power output than stations which are permanently installed on stationary structures. This would ensure that movable stations could only achieve a higher EIRP, by using an antenna system too unwieldy to use while in motion.

As they would be far removed from power lines, exceptions could be made for amateur stations, aboard US registered vessels, which are operating in international waters. Maritime stations could also be allowed some specified separation distance from power lines or from the shore. The Commission's proposed rules would prohibit all potential amateur maritime mobile operations, even those which would pose no risk to PLC systems.

This combination of rules would allow for greater flexibility in amateur operations, while keeping land-based stations in a fixed position. The rules would also be in plain language, and thus less subject to confusion or misinterpretation.

180. I do not believe a bandwidth limitation nor establishing sub-bands are necessary or appropriate for 135.7-137.8 kHz and 472-479 kHz bands. A bandwidth limit would restriction experimentation within the bands, and sub-bands would limit the ability of amateur stations to move off frequency should a

primary user operate in the bands. I agree with the Commission's assessment that "amateur interest in the band[s] will continue to be limited and specialized." Amateur use of these bands will be light, therefore there will be periods of times in which stations can experiment with wide-band signals, without interfering with other amateurs. Thus, I propose allowing CW, RTTY, data and phone emissions in the bands.

I believe the bands can support experimentation with phone emissions over short distances or during periods of poor conditions. Due to it's size, phone emissions in the 135.7-137.8 kHz band would be practically limited to digital voices modes.

In order to address concerns over sharing between narrow band modes and phone emissions within the bands, the Commission could limit phone emissions (or wide bandwidth modes in general) to operation on a non-interference basis with other amateur stations. This would make it clear such modes are allowed, but only when they will not prevent multiple stations from using the bands.

A similar precedent exists on the bands above 222 MHz for spread-spectrum emissions. §97.311(b) allows spread-spectrum emissions, which may occupy the entire band, provided they do not cause interference to other amateur modes, and stations using spread-spectrum must accept interference from other amateur modes. I believe this situation to be analogous to wide bandwidth emissions on the 135.7-137.8 kHz and 472-479 kHz bands, due to the band's light expected use and the lower spectral density of wider bandwidth modes.

In summary, I support the allocation of 135.7-137.8 kHz and 472-479 kHz to the Amateur Service on a secondary basis. I also encourage the Commission to implement easy to understand rules, which promote flexibility and experimentation within the Amateur Service, and I believe such flexibility is achievable, while protecting the needs of all users of the band, including PLC systems. Finally, I appreciate the Commission's consideration of my comments.

Respectfully Submitted,
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