

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 World Radiocommunication Conference (Geneva, 2012)(WRC-12), Other Allocation Issues, and Related Rule Updates

Comments regarding ET Docket No. 15-99

The Commission's Granting Authority.

Pursuant to authority delegated by congressional statutes the FCC (The Commission) may issue legislative rulings to issue, modify, or rescind rules, and for several reasons including receipt of a Petition for rulemaking by the public.

Now come several petitions by the public, including petitions by the ARRL and others for assignment of an amateur band in the LF (Low Frequency) wavelength and MW (Medium Wave) bands, in the vicinity of 472 to 479 kHz (and elsewhere) following the WRC-12 (World Radiocommunication Conferences of 2012) decision to create additional amateur bands such as at 630 meters.

Petitioner/Commenter Position re: ET Docket No. 15-99

Petitioner/commenter is in favor of the allocation of LF and MW amateur bands as per WRC-12 and ARRL petitions. Some reasons *for* granting Part 97 authorization for operating on LF and MW bands are given below.

Towards a 630 meter amateur band

Restating an ARRL dispatch: Amateur Radio allocation in all other areas of the radio spectrum, providing for experimentation in virtually all types of radio frequency communications. "Technical self-training and furtherance of radiocommunications development in the Amateur Service (which is in essence an experimental radio service) would be greatly enhanced by an LF allocation and an allocation in the lower portion of the medium-frequency (MF) range,"

Filing fees, continued use of Experimental License for 'regular' operation.

To those unfamiliar, application or 'filing fees' for a (nominal) 2-year duration experimental license run on the order of sixty some dollars due at the time of filing. For occasional or 'seasonal use' this may represent a barrier to entry for some operators or individuals interested in less formal/more casual MW band and LF radio experimenting.

It should also be noted that continued renewals unto perpetuity does not seem to 'fit' the idea behind an experimental license (and, indeed, I have seen comments by the Commission in the OET's ELS notes section on applications that such use seems to be discouraged when suitable wavelenghts or frequency spectrum and service allocations are available.)

Low power testing technically requires licensing.

Excitation of an antenna structure for impedance measurement, let alone gain, pattern and field strength measurement all require active excitation of said antenna structure with an RF signal, even if that RF level is "instrumentation" level (on the order of 1 to 10 milliwatts or 0 to +10 dBm) from test equipment. Excitation of a structure at even the 0.1 milliwatt (-10 dBm) could result in "emissions" exceeding FCC PART 15 emission limits IF those emissions are not licensed.

It is to be noted that in The Commission's OET ELS (Experimental Licensing System) database numerous license applications (and grants for same) for the use of test instrumentation 'power levels' (0 to perhaps +10 dBm) have been made.

Antenna Height restrictions, for various reasons, goals.

I write the following as one having experience in performing a number of "FAA tower filings" and as well as having commissioned "FAA Air Space studies" on behalf of what used to be called an A-band cell phone carrier in the Dallas-Ft. Worth MSA.

I would like to state that I see no need to place limits on the height of antennas within FCC Part 97 regulations, as their are requirments already existing with regard to a) antenna heights exceeding a 200 feet threshold as to lighting and painting, and b) there are requirements existing as to what heights are allowed" for towers in the vicinity of airports or aerodromes as well as what heights are allowed in the glide path for airport runway approach and departure 'paths'.

Placing an arbitray limit of say 200 feet may *still* present an issue as a structure at 200 feet may obstuct an approach and departure glide slopes should an operator construct a structure complaint with PArt 97 height restrictions but non-complaint with FAA regulations.

If the intent is to in some way 'control' antenna efficiency through an arbitray height limit, it is noteworthy to note that the a 'Kinstar' style vertical radiator can approach the efficiency of a full size quarter-wavelength vertical while being on the order of one-third the normal required physical height.

And furthermore, to place an arbitrary limit on the height on a transmitting antenna may limit the fortuitous use of an abandoned AM broadcast facility or some other pre-existing structure that may lend itself for use on the amateur bands (including the proposed 630 meter band).

Closing.

Commenter has been a Commission licensee for over 30 years. Licenses include amateur, FCC General Radiotelephone and a Part 5 Experimental license for 630 meter wavelengths.

Commenter also has design and development experience of high performance RF hardware including Heliac-cable based 2M and 6M duplexers, the design of the original "AM Broadcast-band BrickWall" filter (160m in-line 100W-capable High-pass filter) which included extensive numerical modeling and performance characterization including field testing by select, solicited operators.

Respectfully submitted

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