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Tuesday, March 21, 2023

TO: FCC

Applicant: Systems & Technology Research

File Number: 0363-EX-ST-2023

Correspondence Reference Number: 76004

Date of Original Email: 03/08/2023

Dear sir,

STR received notification that, "*a federal agency is requesting agency additional information on the emissions and spectral masking.*" STR offers the below information detailing masking for our operations regarding this Special Temporary Authorization.

Masking is derived from both FIXED STATIONS and LAND and MOBILE STATIONS as defined in NTIA Ch.5 §2.2.2 and Ch.5 §5.5.2 as these are the only bands within the NTIA Ch.5 associated with STR bands of interest.

STR will ensure the mean power of any emission supplied to the antenna transmission line, as compared with the mean power of the fundamental, is in accordance with the following:

1. On any frequency removed from the assigned frequency by more than 75 percent, up to and including 150 percent, of the authorized bandwidth, at least 25 decibels attenuation;

2. On any frequency removed from the assigned frequency by more than 150 percent, up to and including 300 percent, of the authorized bandwidth, at least 35 decibels attenuation; and

3. On any frequency removed from the assigned frequency by more than 300 percent of the authorized bandwidth:

a. For transmitters with mean power of 5 kilowatts or greater, attenuation shall be at least 80 decibels.

b. For transmitters with mean power less than 5 kilowatts, spurious output will not exceed 50 microwatts (i.e., 43+10 log(pY)) decibels attenuation except for frequency modulated maritime mobile radiotelephone equipment above 30 MHz as follows:

   i. The mean power of modulation products falling in any other international maritime mobile channel will not exceed 10 microwatts for mean transmitter power 20 watts or less.

   ii. The mean power of any other unwanted emission on any discrete frequency within the international maritime mobile band will not exceed 2.5 microwatts for transmitters with mean power of 20 watts or less.

4. The levels of all emissions at the antenna input will be no greater than the values obtainable from the curve in Figure 2 on page 5-27. At the frequencies B(–40 dB)/2 displaced from F_0, the level will be at least 40 dB below the maximum value. Between the –40 dB and –X dB frequencies, the level shall be below the 20 dB per decade (S=20) rolloff lines in Figure 2 on page 5-27. At and beyond the frequencies B(X dB)/2 from F_0, the level shall be at least 60 dB below the maximum level of the signal contained within B(–40 dB).

Of note – all transmissions from STR equipment will be less than 30sec in duration and will repeat a maximum of 4 times for a total ON time of less than 2min.
If more information is required, please let us know.

Sincerely,

Rob Chesebrough
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