



9-17-21

To: Federal Communications Commission

From: M.K. James, Director JGW International, FCC Call Sign W59XGH

Subject: Exhibit 1 - File # 1417-EX-ST-2021 Frequency Interference Management Capabilities Statement

The following is provided in support of JGW International's application number 1417-EX-ST-2021 seeking approval for the utilization of 16.2GHZ – 17.2GHZ in support of Blighter Radar Systems A-400 demonstrations in the vicinity of 34°32'31"N - 086° 28'40"W to be conducted between October 16-22, 2021.

Previous applications for this bandwidth have been restricted to 16.87GHZ - 17.2GHZ due to NTIA's Office of Spectrum Management concerns. In support of our previous demonstration, we communicated with Mr. Ben Ghaffari, (Experimental Licensing Branch, OE&T) who directed us to communicate directly with NTIA. In doing so, we spoke with NTIA OSMC representative Mr. Gregory Mills determined that the radar being tested poses little to no interference threat and that its ability to automatically detect interference combined with robust STOP BUZZER protocols, should be sufficient for the system to be cleared to operate within the full bandwidth of 16.2GHZ to 17.2GHZ.

The following factors were discussed and apply:

1. The Blighter A-400 radar is a medium range air security radar designed specifically to detect and report micro, mini, or standard drone types as well as ground and coastline targets. For this demonstration, the system will be focus on sUAS detection at ranges of less than 10km (6.3 miles)
2. The A-400, by virtue of being a FMCW radar, steers it's beams by sweeping through discrete channels within the 16.2-17.2 Ku frequency range. The radars transmit on a single discrete 26MHz channel at any given moment in time. The receiver listens only for returns from within this channel's frequency range.
3. This scan behavior makes it highly unlikely that a Blighter radar might suffer from interference from other systems. Equivalently, it is also unlikely that a Blighter radar will

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cause interference on other systems, in part due to the radars' low (nominal 4 watt) transmitter output power.

4. Additionally, all Blighter radar software includes a continually operational interference detection feature, which will produce a visual and audible alert to an operator in the unlikely event that interference is detected.
5. The radars can also be operated in a receive-only, or 'sniff' mode. This mode can be activated to scan the area for any interfering signals before the radar transmitter is even activated. This process will be conducted prior to activating the radar.
6. JGW will institute continuous monitoring of internal interference detection capabilities and will immediately cease operations if interference is detected until such time that the interference is resolved. We will also institute continuous STOP BUZZER response protocols which, if activated, will result in the immediate deactivate of all active transmissions until cleared to resume activity. STOP BUZZER communications with a minimum of two direct points of contact may be accomplished via cellular phone, text, and email communications.
7. Radar transmission will be conducted 0800 and 1600 daily starting Monday 18 October and ending no later than Friday, 22 October.

We are confident that the system, if approved to operate within the requested bandwidth, will do so with little or no risk to other operations in the test area. Please feel free to contact me at any time with questions or for additional input.

Respectfully,

Marshall K. James

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