

To: Christopher Bjornson  
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From: Leann Nguyen  
Date: October 25, 2016

Subject: Request for Info - File # 1440-EX-ST-2016

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Message:

IB/SD has reviewed the subject request and have the following questions.

The experimental application exhibit describes a signal bandwidth of 150 MHz and that an unmodulated CW tone will be transmitted. In addition, we note that the frequency band 27950 - 28050 MHz only contains 100 MHz

- 1) Is the CW tone signal will sweep across the 100 MHz in the 27950 - 28050 MHz band?
- 2) Is the transmit signal will be only from the aircraft to the ground in the 27950 - 28050 MHz band?
- 3) Is there any transmission from the ground to the aircraft in the 27950 - 28050 MHz band?
- 4) Will the antenna on the aircraft only point towards the ground?
- 5) Will the antenna on the aircraft point toward the earth horizon or at a higher elevation?

On the FCC Form 442, we note the transmit power value is .02 Watt (-17 dBW) and in the exhibit is shows the antenna gain value as 29 dBi.

Calculating the EIRP and ERP, our calculation is EIRP = 12 dBW (15.8 Watts) and ERP = 9.85 dBW (9.7 Watts). However, Form 442 has the ERP value as 0.36 Watts. To achieve the 0.36 Watt (ERP) value with an antenna gain of 29 dBi, the transmit power value would need to be 0.000743 Watts.

- 6) Please provide an technical explanation how the ERP value of .36 Watt with transmit power of .02 watt and antenna gain 29 dBi is achieve or verify your calculations.

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 30 days of October 25, 2016 may result in application dismissal pursuant to Section 5.67 and forfeiture of the filing fee pursuant to Section 1.1108.

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