XWING

Ryan Olson <ryan@xwing.com>

Fwd: [Non-DoD Source] AFTRCC ICN 1364-21/8843 (Xwing Inc Flt Test License/New-Concord, CA) (UNCLASSIFIED)

7 messages

Wayne Morris <5600wayne@gmail.com> Mon, Jun 14, 2021 at 9:54 AM
To: Ryan Olson <ryan@xwing.com>
Cc: "'Hankins, Danny' (dhankins@txtav.com)" <dhankins@txtav.com>, Chriss Brown <dataentry@aftrcc.org>

This email is your AFTRCC coordination.

This coordination includes this header information, DOD Area Frequency Coordinator comments and AFTRCC comments. These messages must not be separated.

This coordination is advisory only and not binding on the FCC. Applicants are advised that this coordination does not constitute a judgment that the frequency(ies) is best suited for the applicant's purpose nor that the frequency(ies) is exclusive to the applicant. Flight Test frequencies are shared and may require scheduling with other users.

In return for AFTRCC's processing of the applicant's coordination request, the applicant agrees to release and hold harmless AFTRCC, its officers, directors, agents, members, and representatives from any claims, losses or expenses that may arise from the use of the frequency.

This coordination is not an authorization to transmit. A copy of this coordination must accompany application to the FCC.

Signed:
Wayne Morris
AFTRCC Telemetry Coordinator
903-450-5942

---------- Forwarded message ---------
From: **USARMY JB San Antonio NETCOM List AFMO AFTRCC Team** <usarmy.jbsa.NETCOM.list.afmo-aftrcc-team@mail.mil>
Date: Mon, Jun 14, 2021 at 9:11 AM
Subject: RE: [Non-DoD Source] AFTRCC ICN 1364-21/8843 (Xwing Inc Flt Test License/New-Concord, CA) (UNCLASSIFIED)
To: Wayne Morris <5600wayne@gmail.com>
Cc: USARMY JB San Antonio NETCOM List AFMO AFTRCC Team <usarmy.jbsa.NETCOM.list.afmo-aftrcc-team@mail.mil>, AFTRCC GRP <coord_tm@aftrcc.org>

CLASSIFICATION: UNCLASSIFIED

AFMO-US&P CONCUR WITH AFTRCC CN 1364-21/8843 (Xwing Inc Flt Test License/New-Concord, CA).

COORDINATION NUMBER AFMO210098//GUILLO-LUIS.G.SANCHEZ10.CIV@MAIL.MIL-210-221-0454//

Note: C024 Comments: DoD database checked and shows no conflicting DoD assignments within 50 mile radius.

V/R

Guillo

Office:

COM: 210-221-0454

Fax: 2844

DEE GPS/EA email > usarmy.jbsa.NETCOM.list.afmo-usp-gps-ea

DEE AFMO Team email > usarmy.jbsa.NETCOM.list.afmo-spectrum-team

Web Page > https://army.deps.mil/netcom/sites/G357/CUOPS/SpectrumOperationsBranch/Pages/Home.aspx

From: Wayne Morris <5600wayne@gmail.com>
Sent: Saturday, June 12, 2021 7:14 PM
To: USARMY JB San Antonio NETCOM List AFMO AFTRCC Team <usarmy.jbsa.NETCOM.list.afmo-aftrcc-team@mail.mil>
Subject: [Non-DoD Source] AFTRCC ICN 1364-21/8843 (Xwing Inc Flt Test License/New-Concord, CA)

AFTRCC concurs with and requests DoD AFMO-US&P concurrence/coordination on

the following new Flight Test license request.

Applicant:

Xwing Inc.

292 Ivy St, Ste A

San Francisco, CA 94102

POC: Ryan Olsen (386-562-1213)

Frequencies: 1425.0-1525.0 MHz / 2360.0-2395.0 MHz

Station Class: MOEA

Emission: 20M0D7W

Power: 20 watts (16.8618 dBW ERP)

Location: Concord, CA (37-58-59 N 122-03-23 W)

MIRAD: 200 miles (322 KM)

Maximum flight altitude: 15000',AGL

Dates: 2021-06-15 thru 2026-06-15

AFTRCC comments: non-interference basis to current flight test operations within Radio Line-of-Sight. Any reports of interference to operating locations south of 37 degrees will result in having to preschedule operations with DoD WAFC prior to transmit. Non interference basis to DoD operations within Nevada Test and Training Range.

Please reply via return email as to concurrence, non-concurrence, scheduling, or additional comments.

Signed:
Wayne Morris

AFTRCC Telemetry Coordinator

CLASSIFICATION: UNCLASSIFIED

Hankins, Danny <dhankins@txtav.com> Mon, Jun 14, 2021 at 1:32 PM
To: Ryan Olson <ryan@xwing.com>
Cc: Chriss Brown <dataentry@aftrcc.org>, Wayne Morris <5600wayne@gmail.com>

Good afternoon Ryan,

AFTRCC needs information on your ground receive antenna in order to include it in analysis for coordinating with AT&T to protect the receiving site from RF interference from WCS cell towers transmitting in 2345-2360 MHz, and to protect from wireless microphones soon to be operating in 1435-1525 MHz. We need the following information for your receiving antenna location:

- Coordinates to nearest 0.1 seconds precision (dd-mm-ss.s North Lat, ddd-mm-ss.s W Lon)
- Antenna height AGL (specify feet or meters)
- Is the antenna fixed, or mobile?

Accuracy and precision on the above is essential to ensuring your receiving antenna can perform as expected/required.

Thanks,

Dan Hankins

AFTRCC Coordinator

dhankins@txtav.com

620.332.0432 PHONE

www.aftrcc.org

[Quoted text hidden]

Ryan Olson <ryan@xwing.com> Mon, Jun 14, 2021 at 4:31 PM
To: "Hankins, Danny" <dhankins@txtav.com>
Cc: Chriss Brown <dataentry@aftrcc.org>, Wayne Morris <5600wayne@gmail.com>

Dan,

- Antenna Coordinates: 37-58-59.6 N, 122-03-23.3 W
- Antenna Height: 34ft AGL (10ft above the highest point of the building)
- The antenna is fixed to a tower on top of our hangar

Please let me know if you have any additional questions.

Best Regards,
Ryan

[Quoted text hidden]

Hankins, Danny <dhankins@txtav.com> Tue, Jun 15, 2021 at 4:50 AM

To: Ryan Olson <ryan@xwing.com>
Cc: Chriss Brown <dataentry@aftrcc.org>, Wayne Morris <5600wayne@gmail.com>

Ryan,

That's exactly what we needed.

Thanks,

Dan

[Quoted text hidden]

Ryan Olson <ryan@xwing.com> Fri, Jun 18, 2021 at 12:47 PM
To: "Hankins, Danny" <dhankins@txtav.com>
Cc: Chriss Brown <dataentry@aftrcc.org>, Wayne Morris <5600wayne@gmail.com>

Dan,

Can you please confirm that the coordination we received was limited to the aircraft? Do you have any expectations on the timeline required for ground antenna coordination?

Thank you for your time and assistance.

Best Regards,
Ryan
[Quoted text hidden]

Hankins, Danny <dhankins@txtav.com> Fri, Jun 18, 2021 at 1:42 PM
To: Ryan Olson <ryan@xwing.com>
Cc: Chriss Brown <dataentry@aftrcc.org>, Wayne Morris <5600wayne@gmail.com>

Ryan,

Wayne will correct me if I am in error. Station class MOEA is defined in the NTIA manual per below, and this would only be for the transmitter on the aircraft.

MOEA--Aeronautical Telemetering Mobile Station: A telemetering mobile station used for transmitting data directly related to the airborne testing of the vehicle. (or major components), on which the station is installed.

The coordination I am referring to for the ground station is not to provide an FCC license for transmitting from the ground station. The ground station coordination I am referring to is for an analysis of the Power Flux Density from high power (2 kW) cellular signals transmitted in the WCS band (2345-2360 MHz) to ensure their Out-of-Band Emissions (OOBE) into 2360-2395 MHz do not exceed the levels in ITU-R M.1459 at your antenna location. AFTRCC has an agreement with AT&T that limits the received OOBE pfd at our AMT receiving sites to no more than -180 dBW/M^2/4 kHz. The cellular signals in band power are up to 2 kW, which is enough to cause problems for you at considerable separation distance if you do not have sufficient filtering to reduce the high power signals before they overload your Low Noise Amplifiers in your AMT receiving antenna.

The time line for coordinating with AT&T is expected to be several months. The coordinating is done in batches of market areas which combine to cover the entire US, and are only done a few times per year. Modification of the WCS system deployment is only permitted after AFTRCC analysis verifies they meet M.1459 OOBE limits at all AMT sites in our database. We are almost done with batch 15. We don't yet have an estimate for when batch 16 coordination will begin.

Important Note: It is the responsibility of the AMT operator to ensure filters are installed in the receive antenna feed to block the WCS in-band signals at 2345-2360 MHz. If not, you may experience what is known as front end blocking or LNA overload in your receiving antenna. These filters should also block the 1.9 GHz PCS band. If you do not have filters in place, you may not be able to operate at a satisfactory level of performance.

If you experience interference, and you have proper filters installed, notify Wayne and myself. We will see what can be done to alleviate the interference before batch 16 commenses.

Thanks,

Dan Hankins

AFTRCC Coordinator

dhankins@txtav.com

620.332.0432 PHONE

www.aftrcc.org

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Ryan Olson <ryan@xwing.com> Mon, Jun 21, 2021 at 10:41 AM
To: Evan Wilson <evan@xwing.com>, Craig Milliard <craig@xwing.com>

I'm a bit lost, but this seems like a serious problem. What do you think?
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