Jimmy J. Emerson, 5381 Raley Blvd., Sacramento, CA 95838

United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
RADIO STATION CONSTRUCTION PERMIT
AND LICENSE

EXPERIMENTAL	WK2XHI
(Nature of Service)	(Call Sign)
XC MO	0144-EX-CR-2021
(Class of Station)	(File Number)

NAME Kratos Unmanned Aerial Systems, Inc.

Subject to the provisions of the Communications Act of 1934, subsequent acts, and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions and requirements set forth in this license, the licensee hereof is hereby authorized to use and operate the radio transmitting facilities hereinafter described for radio communications in accordance with the program of experimentation described by the licensee in its application for license.

Operation: In accordance with Sec. 5.3(c) of the Commission's Rules

Station Locations

(1) MOBILE: Oklahoma City,OK. The antenna will be inside the facility, within 1 km, centered around NL 35-26-13; WL 97-38-51
(2) MOBILE: Oklahoma City,OK. The antenna will be tested inside the building., within 1 km, centered around NL 35-26-13; WL 97-38-51
(3) MOBILE: Oklahoma City,OK. The antenna will be inside the facility, within 1 km, centered around NL 35-26-13; WL 97-38-51
(4) MOBILE: Oklahoma City,OK. The antenna will be inside the facility, within 1 km, centered around NL 35-26-13; WL 97-38-51
(5) MOBILE: Oklahoma City,OK. The antenna will be inside the facility, within 1 km, centered around NL 35-26-13; WL 97-38-51
(6) MOBILE: Oklahoma City, OK. This is a handheld device used in the building., within 0.5 km, centered around NL 35-26-13; WL 97-38-51
(7) MOBILE: Oklahoma City, OK, within 1 km, centered around NL 35-26-13; WL 97-38-51
(8) MOBILE: Oklahoma City, OK, within 1 km, centered around NL 35-26-13; WL 97-38-51
(9) MOBILE: Oklahoma City, OK., within 1 km, centered around NL 35-26-13; WL 97-38-51

Frequency Information

MOBILE: Oklahoma City,OK. The antenna will be inside the facility, within 1 km, centered around NL 35-26-13; WL 97-38-51

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1090 MHz	MO	6M00M1D	2 W (ERP)	

This authorization effective April 01, 2021 and
will expire 3:00 A.M. EST April 01, 2023

FEDERAL COMMUNICATIONS COMMISSION

Frequency Information

MOBILE: Oklahoma City,OK. The antenna will be tested inside the building., within 1 km, centered around NL 35-26-13; WL 97-38-51

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2200-2300 MHz	MO	5M40F1D	5 W (ERP)	

MOBILE: Oklahoma City,OK. The antenna will be inside the facility, within 1 km, centered around NL 35-26-13; WL 97-38-51

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2431.5 MHz	MO	21M4P0N	4 W (ERP)	
2433.4 MHz	MO	21M4P0N	4 W (ERP)	

MOBILE: Oklahoma City,OK. The antenna will be inside the facility, within 1 km, centered around NL 35-26-13; WL 97-38-51

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
3245 MHz	MO	150KP0N	250 mW (ERP)	

MOBILE: Oklahoma City,OK. The antenna will be inside the facility, within 1 km, centered around NL 35-26-13; WL 97-38-51

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
4400-4500 MHz	MO	45M0P3N	46 mW (ERP)	

Frequency Information

MOBILE: Oklahoma City, OK. This is a handheld device used in the building., within 0.5 km, centered around NL 35-26-13; WL 97-38-51

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1030 MHz	MO	5M00P0N	0.063 W (ERP)	

MOBILE: Oklahoma City, OK, within 1 km, centered around NL 35-26-13; WL 97-38-51

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
442.5 MHz	MO	25M0F1D	38 W (ERP)	

MOBILE: Oklahoma City, OK, within 1 km, centered around NL 35-26-13; WL 97-38-51

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
381.175 MHz	MO	25K0F1D	5 W (ERP)	
382.2 MHz	MO	25K0F1D 25K0F1D	5 W (ERP)	
382.5 MHz	MO	25K0F1D	5 W (ERP)	

MOBILE: Oklahoma City, OK., within 1 km, centered around NL 35-26-13; WL 97-38-51

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
358.175 MHz	MO	25K0F1D 25K0F1D	5 W (ERP)	

Frequency Information

MOBILE: Oklahoma City, OK., within 1 km, centered around NL 35-26-13; WL 97-38-51

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
358.175 MHz	MO	25K0F1D 25K0F1D	5 W (ERP)	
370.5 MHz	MO	25K0F1D	5 W (ERP)	
374.6 MHz	MO	25K0F1D	5 W (ERP)	

Special Conditions:

(1) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.

(2) The station identification requirements of Section 5.115 of the Commission's Rules are waived.

(3) One or more frequency assignments were coordinated prior to authorization with FAA Headquarters, 800 Independence Avenue, S.W., Washington, DC 20591; Telephone: 202-267-8699.

(4) Licensee should be aware that other stations may be licensed on these frequencies and if any interference occurs, the licensee of this authorization will be subject to immediate shut down.

(5) This authorization is issued for the express purpose of conducting experimental operations described in the related application and required by the U.S. Government; contract number W31P4Q-17-D-0044. The use of this radio station in any other manner or for any other purpose will constitute a violation of the privileges herein authorized. Except as subsequently authorized by the Commission, this radio station shall not be operated after the expiration date of the contract designated in the related application and enumerated above.

(6) Emissions on 1030 and 1090 MHz at OKLAHOMA CITY, OK, using the Aeroflex IFR 6015 are for ground testing only of AIRCRAFT transponder.

(7) TESTS TO BE CONDUCTED USING DIRECT CONNECT METHOD WHENEVER POSSIBLE, IF RADIATION TYPE TESTING IS USED THEN SHIELDING TO BE USED AS MUCH AS POSSIBLE AND LOCAL ATC TO BE INFORMED.

(8) RADIATION TESTING to BE PERFORMED FOR A MAX PERIOD OF 15 SECONDS FOLLOWED BY A PERIOD OF AT LEAST 60 SECS OF QUIET.

(9) For 1030 MHz and 1090 MHz ONLY MODES 3/A and C are to be tested.

(10) On 1030 MHz max ERP is 0.063W.
On 1090 MHz max ERP is 2.0W.

Special Conditions:

(11) 1090 MHz, Max PRR is 235 Interrogations per second.
1030 MHz, Max PRR is 450 Interrogations per second.

(12) IF RADIATION TEST IS PERFORMED AND TRANSPONDER IS IN AIR MODE THEN MODE C MUST REPORT AN ALTITUDE THAT IS AT LEAST 600 FT BGL OR 90K FT AGL, OR IF TRANSPONDER IS IN GROUND MODE THEN MODE C MUST REPORT AN ALTITUDE OF GL.

(13) STOP BUZZERS ARE HAROLD PROSSER (PRIMARY) AT 405-248-9541 OR 916-589-7210 AND DREW KENNEDY (SECONDARY) AT 916-992-5281 OR 916-675-2141.

(14) All of the experimental devices will be under control of Kratos Unmanned Aerial Systems, Inc. and they will be retrieved by Kratos Unmanned Aerial Systems, Inc. from the participants upon completion of the experiment.