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

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

EXPERIMENTAL	WE2XUS
(Nature of Service)	(Call Sign)
XC FX MO	0056-EX-ML-2014
(Class of Station)	(File Number)

NAME Composite Engineering Inc. (CEi)

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(b) of the Commission's Rules

Station Locations

(1) Sacramento (SACRAMENTO), CA - NL 38-39-55; WL 121-25-46
(2) MOBILE: The antenna will be mouted on an Unmanned Aerial Vehicle (UAV), which will be tested inside the testing facility., within 1 km, centered around NL 38-39-55; WL 121-25-46
(3) MOBILE: The antenna will be mouted on an Unmanned Aerial Vehicle (UAV), which will be tested inside the testing facility., within 1 km, centered around NL 38-39-55; WL 121-25-46
(4) MOBILE: The antenna will be mouted on an Unmanned Aerial Vehicle (UAV), which will be tested inside the testing facility., within 1 km, centered around NL 38-39-55; WL 121-25-46
(5) MOBILE: The antenna will be mouted on an Unmanned Aerial Vehicle (UAV), which will be tested inside the testing facility., within 1 km, centered around NL 38-39-55; WL 121-25-46
(6) MOBILE: The antenna will be mouted on an Unmanned Aerial Vehicle (UAV), which will be tested inside the testing facility., within 1 km, centered around NL 38-39-55; WL 121-25-46
(7) MOBILE: This is a handheld device that will be used inside the testing facility., within 0.5 km, centered around NL 38-39-55; WL 121-25-46
(8) MOBILE: , within 1 km, centered around NL 38-39-55; WL 121-25-46
(9) MOBILE: 1, within 1 km, centered around NL 38-39-55; WL 121-25-46
(10) MOBILE: 1, centered around NL 38-39-55; WL 121-25-46
(11) MOBILE: 1, centered around NL 38-39-55; WL 121-25-46
(12) MOBILE: 1, within 1 km, centered around NL 38-39-55; WL 121-25-46
(13) MOBILE: 1, within 1 km, centered around NL 38-39-55; WL 121-25-46

This authorization effective April 17, 2014 and
will expire 3:00 A.M. EST May 01, 2014

FEDERAL COMMUNICATIONS COMMISSION

Frequency Information

Sacramento (SACRAMENTO), CA - NL 38-39-55; WL 121-25-46

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1575.42 MHz	FX	20M4W7D	40 pW (ERP)	0.1 %

MOBILE: The antenna will be mouted on an Unmanned Aerial Vehicle (UAV), which will be tested inside the testing facility., within 1 km, centered around NL 38-39-55; WL 121-25-46

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1090 MHz	MO	6M00M3N	2 W (ERP)	0.28 %

MOBILE: The antenna will be mouted on an Unmanned Aerial Vehicle (UAV), which will be tested inside the testing facility., within 1 km, centered around NL 38-39-55; WL 121-25-46

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2200-2300 MHz	MO	5M40F1D	5 W (ERP)	0.002 %

MOBILE: The antenna will be mouted on an Unmanned Aerial Vehicle (UAV), which will be tested inside the testing facility., within 1 km, centered around NL 38-39-55; WL 121-25-46

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2431.5 MHz	MO	21M4P0N	4 W (ERP)	0.001 %
2433.4 MHz	MO	21M4P0N	4 W (ERP)	0.001 %

Frequency Information

MOBILE: The antenna will be mouted on an Unmanned Aerial Vehicle (UAV), which will be tested inside the testing facility., within 1 km, centered around NL 38-39-55; WL 121-25-46

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
3245 MHz	MO	150KP0N	250 mW (ERP)	0.6 %

MOBILE: The antenna will be mouted on an Unmanned Aerial Vehicle (UAV), which will be tested inside the testing facility., within 1 km, centered around NL 38-39-55; WL 121-25-46

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
4300 MHz	MO	45M0P3N	46 mW (ERP)	0.35 %

MOBILE: This is a handheld device that will be used inside the testing facility., within 0.5 km, centered around NL 38-39-55; WL 121-25-46

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1030 MHz	MO	5M00P0N	63 mW (ERP)	0.00001 %

MOBILE: , within 1 km, centered around NL 38-39-55; WL 121-25-46

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
914.5-915.5 MHz	MO	500KM1D	4 W (ERP)	0.00001 %

Frequency Information

MOBILE: 1, within 1 km, centered around NL 38-39-55; WL 121-25-46

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
435-450 MHz	MO	25M0F1D	38 W (ERP)	0.0001 %

MOBILE: 1, centered around NL 38-39-55; WL 121-25-46

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
380-400 MHz	MO	25M0F1D	130 W (ERP)	0.00015 %

MOBILE: 1, centered around NL 38-39-55; WL 121-25-46

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
380-400 MHz	MO	25M0F1D	4 W (ERP)	0.00015 %

MOBILE: 1, within 1 km, centered around NL 38-39-55; WL 121-25-46

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
380-400 MHz	MO	25M0F1D	40 W (ERP)	0.00015 %

Frequency Information

MOBILE: 1, within 1 km, centered around NL 38-39-55; WL 121-25-46

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
358-380 MHz	MO	25M0F1D	40 W (ERP)	0.00015 %

Special Conditions:

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

(2) 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.

(3) A Stop Buzzer contact shall be available at 916-612-8162 during testing to address any issues related to potential interference, including immediate shut down until any issues are resolved: Primary Chris Watson at (916) 992-5253 or (916) 504-5510; Secondary Gus Ruiz at (916) 915-2353 or (916) 991-1990

(4) Licensee shall post signs on doors to the test area notifying that, "GPS re-radiator is in use and the GPS information you receive may be in error."

(5) ON 1090 MHz, FACILITY ALTITUDE SETTING IS REQUIRED TO BE FORCED TO EITHER BELOW SEA LEVEL OR ABOVE 9000 FT TO PREVENT FALSE ALERT FROM AIRCRAFTS FLYING NEARBY

(6) ON 1030 MHz:
1. USE OF THIS FREQUENCY IS SUBJECT TO FURTHER COORDINATION WITH THE FAA WESTERN COORDINATOR, LOS ANGELES, CALIFORNIA , AS NECESSARY TO ENSURE COMPATIBILITY WITH EXISTING USES

2. FACILITY UNIT MUST BE OPERATED UNDER A HOOD WITH A DUMMY LOAD, OR DIRECTLY CONNECTED VIA CABLE TO THE AIRCRAFT RECEIVER TO REDUCE FREE SPACE RADIATION. MODE C RESPONSE MUST INDICATE AN ALTITUDE BELOW SEA LEVEL OR ABOVE 90K FEET IF THE UNIT IS NOT DIRECTLY CONNECTED VIA CABLE TO THE RECEIVER.