Philip D'Ancona, 65 Spit Brook Road, Nashua, NH 03060

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

EXPERIMENTAL	WD2XJW
(Nature of Service)	(Call Sign)
XC FX	0047-EX-CM-2021
(Class of Station)	(File Number)

NAME BAE SYSTEMS Information and Electronic Systems Integration 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(b) of the Commission's Rules

Station Locations

(1) Merrimack (HILLSBOROUGH), NH - NL 42-48-40; WL 71-29-24

Frequency Information

Merrimack (HILLSBOROUGH), NH - NL 42-48-40; WL 71-29-24

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
500-600 MHz	FX	N0N	10 W (ERP)	
620-750 MHz	FX	N0N	10 W (ERP)	
810-822 MHz	FX	N0N	10 W (ERP)	
900-932 MHz	FX	N0N	10 W (ERP)	

This authorization effective August 09, 2021 and will expire 3:00 A.M. EST August 10, 2021

FEDERAL COMMUNICATIONS COMMISSION

Frequency Information

Merrimack (HILLSBOROUGH), NH - NL 42-48-40; WL 71-29-24

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
933-960 MHz	FX	N0N	10 W (ERP)	
1433-1500 MHz	FX	N0N	10 W (ERP)	
1620 MHz	FX	N0N	10 W (ERP)	
1670-1710 MHz	FX	N0N	10 W (ERP)	
1950-2020 MHz	FX	N0N	10 W (ERP)	
2300-2305 MHz	FX	N0N	10 W (ERP)	
2365-2600 MHz	FX	N0N	10 W (ERP)	
2900-3549 MHz	FX	N0N	10 W (ERP)	
3750 MHz	FX	N0N	10 W (ERP)	
4000 MHz	FX	N0N	10 W (ERP)	

Frequency Information

Merrimack (HILLSBOROUGH), NH - NL 42-48-40; WL 71-29-24

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
4200 MHz	FX		10 W (ERP)	
		N0N		
4400-5000 MHz	FX		10 W (ERP)	
		N0N		
		5M00G1W		
		10M0G7D		
		20M0G7D		
5250-6000 MHz	FX		10 W (ERP)	
		N0N		
		5M00G1W		
		10M0G7D		
		20M0G7D		

Special Conditions:

(1) Assignment in frequency bands 960-1400, 2700-2900, or 9000-9200 MHz was coordinated prior to authorization with the FAA New England Coordinator, Burlington, MA. Use of frequencies under the authority of this assignment is subject to such further coordination with the FAA New England Coordinator, Burlington, MA, as necessary to ensure compatibility with existing uses.

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

(5) 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.

(6) Licensee must successfully secure consents from the Upper Microwave Flexible Use Service licensees in the proposed area prior to accessing to 620-750 MHz band.

(7) Licensee must successfully secure consents from the Advanced Wireless Service licensees in the proposed area prior to accessing to the frequency range from 1670 MHz to 1710 MHz and from 1950 MHz to 2020 MHz.

Special Conditions:

(8) Licensee must successfully obtain consents from the Educational Broadband Service and Broadband Radio Service licensees prior to accessing to the frequency range from 2496 MHz to 2600 MHz.

(9) Licensee must successfully coordinate with the local Society of Broadcast Engineers frequency coordinator prior to operation in the proposed frequency bands.

(10) Licensee must successfully coordinate with Fixed Microwave Service licensees in accordance with 47 C.F.R, Part 101.103(d) prior to commencing experimental operations.

(11) This frequency assignment in one of the bands 1435-1525, 2310-2320 MHz and 2345-2390 MHz was coordinated prior to authorization with the HQ USAF Frequency Coordinator, Alexandria, VA, who also coordinated it, as appropriate, with the Aerospace and Flight Test Radio Coordinating Council. Use of this frequency under the authority of this assignment is subject to such further coordination with HQ USAF Frequency Coordinator, Alexandria, VA, as necessary to ensure compatibility with existing uses.

(12) Operations in the band 1215-2700 MHz shall be oriented with an antenna azimuth of 273 degrees referenced to true north, have a beamwidth no greater than 80 degrees, and peak power of 10 watts ERP. Within +/- 50 MHz for the frequencies of 1450 MHz, 1600 MHz, 1700 MHz, 2000 MHz, 2350 MHz, 2360 MHz, 2370 MHz, 2400 MHz, 2500 MHz, 2550 MHz can be removed this restriction.

(13) The designated point-of-contact to terminate transmissions if interference occurs is Serge Pouliot at 603-885-2449, George Moynihan at 603-689-8630 and BAE Systems Emergency Services Center at 603-885-3842.

(14) Renewal of this license is subject to prior coordination with AFTRCC Frequency Advisory Committee, PO Box 200547, Cartersville, GA 30120-9010, (770) 494-2893 and FAA Regional Office.

(15) Operation in the frequency band 5250-6000 MHz is subject to immediate cessation, if it causes harmful interference to FAA.

(16) Due to USAF assignments within 30 MIRAD, 24 hour prior coordination with Hanscom AFB Frequency Management is required.

(17) This authorization is issued for the express purpose of conducting experimental operations described in the related application and required by US Air Force, FA8620-16-G-3028. 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 ate of the contract designated in the related application and enumerated above.

(18) Operation is NOT permitted use of any public safety frequencies listed under rule 90.20.

(19) Operation is non-interference basis to flight test telemetry.

(20) Prior to commencing any operations in the 2000-2010 MHz frequency band, experimental licensee must notify licensee of GAMMA ACQUISITION L.L.C. (Call sign E060430, POC/Satellite: S2633. Name: Ms. Allison Minea, Phone Number: 202-293-1216, E-Mail: alison.minea@dish.com). The notice must include the name and contact information of the stop buzzer personnel that will be available to cease operations in the event of reported interference. The notification should include the testing parameters (specific location(s), antenna gain(s), antenna height(s), antenna orientation, EIRP, EIRP density) and day and times of each test.

Special Conditions:

(21) Prior to commencing any operations in the 2010-2020 MHz frequency band, experimental licensee must notify licensee of DBSD Services Limited. (Call sign E070272, POC/Satellite: S2651. Name: Ms. Allison Minea, Phone Number: 202-293-1216, E-Mail: alison.minea@dish.com). The notice must include the name and contact information of the stop buzzer personnel that will be available to cease operations in the event of reported interference. The notification should include the testing parameters (specific location(s), antenna gain(s), antenna height(s), antenna orientation, EIRP, EIRP density) and day and times of each test.

(22) Prior to commencing any operations in the 2483.5 - 2500 MHz frequency band, experimental licensee must notify licensee of GUSA Licensee LLC. (Call sign E970381, S2115. Name: Mr. L. Barbee Ponder IV, Phone Number: 985-335-1503 E-Mail: Barbee.Ponder@Globalstar.com). The notice must include the name and contact information of the stop buzzer personnel that will be available to cease operations in the event of reported interference. The notification should include the testing parameters (specific location(s), antenna gain(s), antenna height(s), antenna orientation, EIRP, EIRP density) and day and times of each test.

(23) Prior to commencing any operations in the frequencies below, the applicant must obtain consent from the following within 50 miles of the contours of the testing area:
•700 MHz Lower Band licensees (698-746 MHz)
•700 MHz Upper Band licensees (746-758 MHz, 775-788 MHz and 805-806 MHz)
•SMR/ESMR licensees (809-824 MHz/854-869 MHz)
•B/ILT licensees (809-824 MHz/854-869 MHz)
•SMR licensees (896-901 MHz/935-940 MHz)
•B/ILT licensees (896-901 MHz/935-940 MHz)
•Narrowband PCS licensees (901-902/930-931/940-941 MHz)
•Location & Monitoring Service licensees (902-928 MHz)
•Paging Service licensees in 929 MHz and 931 MHz
•1670-1675 MHz Band licensee (Crown Castle International), and the lessee
•Broadband PCS licensees (1850-1910 MHz/1930-1990 MHz)
•1910-1915 MHz/1990-1995 MHz Bands licensee (Sprint)
•WCS (2305-2320 MHz/2345-2360 MHz) licensee (AT&T)

(24) With respect to operations in the 3710-4200 MHz band, WTB/Mobility Division recommends that the applicant should be made aware that they must avoid causing interference to the existing Fixed Service operators and FSS earth stations in the band. For applicant’s reference, a list of registered incumbent?FSS earth stations in the band can be found at the following link: https://docs.fcc.gov/public/attachments/DA-20-823A2.xls

(25) Upon notification from the FCC, operation on this assignment is subject to immediate cessation, if it causes harmful interference to FAA.