

SATELLITE EARTH STATION AUTHORIZATIONS
FCC Form 312 - Schedule B:(Technical and Operational Description)
FOR OFFICIAL USE ONLY

Location of Earth Station Site

E1: Site Identifier:	The "Swimming Upstream" Gateway	E5: Call Sign:	
E2: Contact Name:	SpaceX NoC	E6: Phone Number:	360-780-3103
E3: Street:	5044 Lockport Junction Rd	E7: City:	Lockport
E4: State:	526226aedbb122008e0b75131f96195d	E8: County:	Niagara County
		E9: Zip Code:	14094
E10: Area of Operation:	Lockport, Niagara County, NY		
E11: Latitude:	43° 9' 58.9896"		
E12: Longitude:	78° 45' 21.423"		
E13: Lat/Lon Coordinates are:	nad-83		
E14: Site Elevation (AMSL):	190		

If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement? If NO, provide a technical analysis showing compliance with two-degree spacing policy.	N/A
If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS) or if they operate in the Fixed Satellite Service (FSS) with non-geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement?	N/A
Is Frequency Coordination required?	Yes
Is coordination with another country required?	No
Is FAA notification required?	No
Is facility operated by remote control?	Yes

POINTS OF COMMUNICATION

Satellite Name: SpaceX Gen2 (S2992/3069)	
E21. Common Name: SPACEX GEN2 (S3069)	E22. ITU Name: SpaceX GEN2 (S3069)
E23. Orbit Location: NGSO	E24. Country:

Satellite Name: SpaceX Gen1 (S2983/3018)	
E21. Common Name: SPACEX (S2983/3018)	E22. ITU Name: SPACEX (S2983/3018)
E23. Orbit Location: NGSO	E24. Country:

ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size (meters)	E41/42. Antenna Gain Transmit and/or Recieve (dBi at GHz)
The "Swimming Upstream" Gateway	CO-1	40	SpaceX	1.999m	1.999	undefined at 0

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)	E36. Above Sea Level (meters)	E37. Building Height Above Ground Level (meters)	E38. Total Input Power at Antenna Flange (Watts)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for all carriers (dBW)
CO-1	1.999/1.999	1.4	190	0	210	1.4	84.2

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization (H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
CO-1	111800 114250	T	null	1G20D7W	71.1	16.3

E50. Modulation and Services

BPSK up to 256 QAM; Digital Data

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization (H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
CO-1	92000 94000	T	null	1G44D7W	71.9	16.3

E50. Modulation and Services

BPSK up to 256 QAM; Digital Data

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization (H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
CO-1	37500 42000	R	null	1G20D7W	0	0

E50. Modulation and Services

BPSK up to 256 QAM; Digital Data

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization (H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
CO-1	81000 86000	T	null	1G20D7W	70.9	16.1

E50. Modulation and Services

BPSK up to 256 QAM; Digital Data

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization (H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
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E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization (H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
CO-1	27500 30000	T	null	480MD7W	63.9	13.1

E50. Modulation and Services
BPSK up to 256 QAM; Digital Data

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization (H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum EIRP Density per Carrier (dBW/4kHz)
CO-1	47200 50200	T	null	900MD7W	63.8	10.27

E50. Modulation and Services
BPSK up to 256 QAM; Digital Data

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization (H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum EIRP Density per Carrier (dBW/4kHz)
CO-1	50400 52400	T	null	900MD7W	63.8	10.27

E50. Modulation and Services
BPSK up to 256 QAM; Digital Data

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization (H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
CO-1	17300 20200	R	null	480MD7W	0	0

E50. Modulation and Services

BPSK up to 256 QAM; Digital Data

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization (H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
CO-1	102000 109500	T	null	1G20D7W	71.1	16.3

E50. Modulation and Services

BPSK up to 256 QAM; Digital Data

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization (H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
CO-1	71000 76000	R	null	1G20D7W	0	0

E50. Modulation and Services

BPSK up to 256 QAM; Digital Data

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc E/W Limit	E56. Earth Station Azimuth Angle Eastern/Western Limit	E57. Antenna Elevation Angle Eastern/Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
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CO-1	Non-Geostationary	71000 76000	0 / 0	0 / 360	10 / 10	16.1
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CO-1Non-Geostationary47200

502000 / 00 / 36010 / 1010.3CO-1Non-Geostationary37500

420000 / 00 / 36010 / 1010.3CO-1Non-Geostationary92000

940000 / 00 / 36010 / 1016.3CO-1Non-Geostationary102000

1095000 / 00 / 36010 / 1016.3CO-1Non-Geostationary17300

202000 / 00 / 36010 / 1013.1CO-1Non-Geostationary94100

1000000 / 00 / 36010 / 1016.3CO-1Non-Geostationary50400

524000 / 00 / 36010 / 1010.3CO-1Non-Geostationary111800

1142500 / 00 / 36010 / 1016.3CO-1Non-Geostationary81000

860000 / 00 / 36010 / 1016.1CO-1Non-Geostationary27500

300000 / 00 / 36010 / 1013.1

REMOTE CONTROL POINT LOCATION

E61. Call Sign: REDMOND		E65. Phone Number: 360-780-3103	
E62. Street Address: 23020 NE Alder Crest Drive			
E63. City: Redmond	E67. County: King	E64/68. State/Country: undefined / undefined	E66. Zip Code: 98053

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