



**UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION
RADIO STATION AUTHORIZATION**

Name: Ligado Networks Subsidiary LLC

Call Sign: E980179

Authorization Type: Modification of License

File Number: SES-MFS-20150605-00325

Common Carrier

Grant date: 09/16/2015

Expiration Date: 11/30/2024



Nature of Service: Mobile Satellite Service

Class of Station: Mobile Earth Station

A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
1)	1	100,000 Full-duplex METs & "EMS" half-duplex data METs VARIOUS,			0	NA

Subject to the provisions of the Communications Act of 1934, The Communications Satellite Act of 1962, subsequent acts and treaties, and all present and future regulations made by this Commission, and further subject to the conditions and requirements set forth in this license, the grantee is authorized to construct, use and operate the radio facilities described below for radio communications for the term beginning November 30, 2009 (3 AM Eastern Standard Time) and ending November 30, 2024 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is September 16, 2016 (3 AM Eastern Standard Time). Grantee must file with the Commission a certification upon completion of construction and commencement of operation.

B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands.

The General Provision 1900 applies to all transmitting frequency bands.

For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
1)	1626.5000-1660.5000	R	5K00G7W	Tx	12.50	11.50	A1		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
2)	1626.5000-1660.5000	R	5K00G7W	Tx	12.50	11.50	A1		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
3)	1626.5000-1660.5000	R	5K00G7W	Tx	12.50	11.50	A1		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)



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4)	1525.0000-1559.0000	R	5K00G7W	Rx			A1		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
5)	1525.0000-1559.0000	R	5K00G7W	Rx			A1		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
6)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A10		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
7)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A10		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
8)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A10		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
9)	1525.0000-1559.0000	R	5K00G7W	Rx			A10		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
10)	1525.0000-1559.0000	R	5K00G7W	Rx			A10		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
11)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A11		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)



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12)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A11		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
13)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A11		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
14)	1525.0000-1559.0000	R	5K00G7W	Rx			A11		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
15)	1525.0000-1559.0000	R	5K00G7W	Rx			A11		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
16)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A12		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
17)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A12		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
18)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A12		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
19)	1525.0000-1559.0000	R	5K00G7W	Rx			A12		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)



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20)	1525.0000-1559.0000	R	5K00G7W	Rx			A12		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
21)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A13		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
22)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A13		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
23)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A13		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
24)	1525.0000-1559.0000	R	5K00G7W	Rx			A13		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
25)	1525.0000-1559.0000	R	5K00G7W	Rx			A13		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
26)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A14		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
27)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A14		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps



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28)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A14		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
29)	1525.0000-1559.0000	R	5K00G7W	Rx	0.00		A14		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
30)	1525.0000-1559.0000	R	5K00G7W	Rx	0.00		A14		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
31)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A15		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
32)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A15		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
33)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A15		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
34)	1525.0000-1559.0000	R	5K00G7W	Rx			A15		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
35)	1525.0000-1559.0000	R	5K00G7W	Rx			A15		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps



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36)	1626.5000-1660.5000	R	5K00G7W	Tx	17.50	16.50	A16		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
37)	1626.5000-1660.5000	R	5K00G7W	Tx	17.50	16.50	A16		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
38)	1626.5000-1660.5000	R	5K00G7W	Tx	17.50	16.50	A16		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
39)	1525.0000-1559.0000	R	5K00G7W	Rx			A16		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
40)	1525.0000-1559.0000	R	5K00G7W	Rx			A16		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
41)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A17		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
42)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A17		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
43)	1626.5000-1660.0000	R	5K00G7W	Tx	16.50	15.50	A17		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps



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44)	1525.0000-1559.0000	R	5K00G7W	Rx			A17		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
45)	1525.0000-1559.0000	R	5K00G7W	Rx			A17		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
46)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A18		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
47)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A18		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
48)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A18		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
49)	1525.0000-1559.0000	R	5K00G7W	Rx			A18		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
50)	1525.0000-1559.0000	R	5K00G7W	Rx			A18		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
51)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A19		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)



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#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
52)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A19		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
53)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A19		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
54)	1525.0000-1559.0000	R	5K00G7W	Rx			A19		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
55)	1525.0000-1559.0000	R	5K00G7W	Rx			A19		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
56)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A2		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
57)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A2		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
58)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A2		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
59)	1525.0000-1559.0000	R	5K00G7W	Rx			A2		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)



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#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
60)	1525.0000-1559.0000	R	5K00G7W	Rx			A2		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
61)	1626.5000-1660.5000	R	5K00G7W	Tx	15.00	14.00	A20		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
62)	1626.5000-1660.5000	R	5K00G7W	Tx	15.00	14.00	A20		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
63)	1626.5000-1559.0000	R	5K00G7W	Tx	15.00	14.00	A20		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
64)	1525.0000-1559.0000	R	5K00G7W	Rx			A20		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
65)	1525.0000-1559.0000	R	5K00G7W	Rx			A20		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
66)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A21		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
67)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A21		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps



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68)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A21		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
69)	1525.0000-1559.0000	R	5K00G7W	Rx			A21		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
70)	1525.0000-1559.0000	R	5K00G7W	Rx			A21		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
71)	1626.5000-1660.5000	R	5K00G7W	Tx	11.00	10.00	A22		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
72)	1626.5000-1660.5000	R	5K00G7W	Tx	11.00	10.00	A22		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
73)	1626.5000-1660.5000	R	5K00G7W	Tx	11.00	10.00	A22		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
74)	1525.0000-1559.0000	R	5K00G7W	Rx			A22		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
75)	1525.0000-1559.0000	R	5K00G7W	Rx			A22		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps



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76)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A23		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
77)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A23		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
78)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A23		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
79)	1525.0000-1559.0000	R	5K00G7W	Rx			A23		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
80)	1525.0000-1559.0000	R	5K00G7W	Rx			A23		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
81)	1626.5000-1660.5000	R	5K00G7W	Tx	16.00	16.00	A24		FDMA communications channel (voice or data)
82)	1525.0000-1559.0000	R	5K00G7W	Rx			A24		FDMA communications channel (voice or data)
83)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A3		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
84)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A3		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps



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85)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A3		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
86)	1525.0000-1559.0000	R	5K00G7W	Rx			A3		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
87)	1525.0000-1559.0000	R	5K00G7W	Rx			A3		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
88)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A4		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
89)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A4		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
90)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A4		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
91)	1525.0000-1559.0000	R	5K00G7W	Rx			A4		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
92)	1525.0000-1559.0000	R	5K00G7W	Rx			A4		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps



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Common Carrier

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B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands.

The General Provision 1900 applies to all transmitting frequency bands.

For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
93)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A5		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
94)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A5		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
95)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A5		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
96)	1525.0000-1559.0000	R	5K00G7W	Rx			A5		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
97)	1525.0000-1559.0000	R	5K00G7W	Rx			A5		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
98)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A6		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
99)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A6		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
100)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A6		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)



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B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands.

The General Provision 1900 applies to all transmitting frequency bands.

For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
101)	1525.0000-1559.0000	R	5K00G7W	Rx			A6		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
102)	1525.0000-1559.0000	R	5K00G7W	Rx			A6		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
103)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A7		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
104)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A7		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
105)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A7		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
106)	1525.0000-1559.0000	R	5K00G7W	Rx			A7		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
107)	1525.0000-1559.0000	R	5K00G7W	Rx			A7		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
108)	1626.5000-1660.5000	R	5K00G7W	Tx	15.00	14.00	A8		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)



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B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands.
 The General Provision 1900 applies to all transmitting frequency bands.
 For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
109)	1626.5000-1660.5000	R	5K00G7W	Tx	15.00	14.00	A8		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
110)	1626.5000-1660.5000	R	5K00G7W	Tx	15.00	14.00	A8		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
111)	1525.0000-1559.0000	R	5K00G7W	Rx			A8		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)
112)	1525.0000-1559.0000	R	5K00G7W	Rx			A8		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
113)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A9		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
114)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A9		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
115)	1626.5000-1660.5000	R	5K00G7W	Tx	16.50	15.50	A9		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
116)	1525.0000-1559.0000	R	5K00G7W	Rx			A9		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)



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B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands.

The General Provision 1900 applies to all transmitting frequency bands.

For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
117)	1525.0000-1559.0000	R	5K00G7W	Rx			A9		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps
118)	1626.5000-1660.5000	R	5K00G7D	Tx	16.50	15.50	D1		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-DT-data)
119)	1626.5000-1660.5000	R	5K00G7D	Tx	16.50	15.50	D1		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-DRr-data or MT-DRd-data)
120)	1525.0000-1559.0000	R	5K00G7D	Rx			D1		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (DH-D-data)
121)	1626.5000-1660.5000	R	5K00G7D	Tx	13.80	12.80	D2		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-DT-data)
122)	1626.5000-1660.5000	R	5K00G7D	Tx	13.80	12.80	D2		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-DRr-data or MT-DRd-data)
123)	1525.0000-1559.0000	R	5K00G7D	Rx			D2		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (DH-D-data)
124)	1626.5000-1660.5000	R	5K00G7D	Tx	16.00	15.00	D3		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-DT-data)



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B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands.
The General Provision 1900 applies to all transmitting frequency bands.
For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
125)	1626.5000-1660.5000	R	5K00G7D	Tx	16.00	15.00	D3		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-DRr-data or MT-DRd-data)
126)	1525.0000-1559.0000	R	5K00G7D	Rx			D3		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (DH-D-data)
127)	1626.5000-1660.5000	R	5K00G7D	Tx	16.00	15.00	D4		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-DT-data)
128)	1626.5000-1660.5000	R	5K00G7D	Tx	16.00	15.00	D4		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-DRr-data or MT-DRd-data)
129)	1525.0000-1559.0000	R	5K00G7D	Rx			D4		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (DH-D-data)
130)	1626.5000-1660.5000	R	5K00G7D	Tx	11.50	10.50	D5		TDMA signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-ST-data)
131)	1626.5000-1660.5000	R	5K00G7D	Tx	11.50	10.50	D5		Slotted Aloha signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (MT-SR-data)
132)	1525.0000-1559.0000	R	5K00G7D	Rx			D5		TDM signaling channel using differentially encoded QPSK at a transmission rate of 3375 bps (GC-S-data)



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B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands.
 The General Provision 1900 applies to all transmitting frequency bands.
 For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
133)	1525.0000-1559.0000	R	5K00G7D	Rx			D5		FDMA communications channel (voice or data) using differentially encoded QPSK at a transmission rate of 3375 bps

C) Frequency Coordination Limits

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.)		Elevation (Degrees)		Azimuth (Degrees)		Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
		East Limit	West Limit	East Limit	West Limit	East Limit	West Limit		
1)	1626.5000-1660.5000	106.5W	106.5W						A2
2)	1525.0000-1559.0000	106.5W	106.5W						A2
3)	1626.5000-1660.5000	106.5W	106.5W						A3
4)	1525.0000-1559.0000	106.5W	106.5W						A3
5)	1626.5000-1660.5000	106.5W	106.5W						A4
6)	1525.0000-1559.0000	106.5W	106.5W						A4
7)	1626.5000-1660.5000	106.5W	106.5W						A5
8)	1525.0000-1559.0000	106.5W	106.5W						A5
9)	1626.5000-1660.5000	106.5W	106.5W						D3
10)	1525.0000-1559.0000	106.5W	106.5W						D3
11)	1626.5000-1660.5000	106.5W	106.5W						D4
12)	1525.0000-1559.0000	106.5W	106.5W						D4
13)	1626.5000-1660.5000	106.5W	106.5W						A1
14)	1525.0000-1559.0000	106.5W	106.5W						A1
15)	1626.5000-1660.5000	106.5W	106.5W						A6
16)	1525.0000-1559.0000	106.5W	106.5W						A6
17)	1626.5000-1660.5000	106.5W	106.5W						A7
18)	1525.0000-1559.0000	106.5W	106.5W						A7
19)	1525.0000-1559.0000	106.5W	106.5W						A8
20)	1626.5000-1660.5000	106.5W	106.5W						A8
21)	1525.0000-1559.0000	106.5W	106.5W						A9
22)	1626.5000-1660.5000	106.5W	106.5W						A9



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C) Frequency Coordination Limits

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.)		Elevation (Degrees)		Azimuth (Degrees)		Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
		East Limit	West Limit	East Limit	West Limit	East Limit	West Limit		
23)	1626.5000-1660.5000	106.5W	106.5W						A10
24)	1525.0000-1559.0000	106.5W	106.5W						A10
25)	1626.5000-1660.5000	106.5W	106.5W						A11
26)	1525.0000-1559.0000	106.5W	106.5W						A11
27)	1626.5000-1660.5000	106.5W	106.5W						A19
28)	1525.0000-1559.0000	106.5W	106.5W						A19
29)	1626.5000-1660.5000	106.5W	106.5W						A20
30)	1525.0000-1559.0000	106.5W	106.5W						A20
31)	1626.5000-1660.5000	106.5W	106.5W						A21
32)	1525.0000-1559.0000	106.5W	106.5W						A21
33)	1626.5000-1660.5000	106.5W	106.5W						A22
34)	1525.0000-1559.0000	106.5W	106.5W						A22
35)	1626.5000-1660.5000	106.5W	106.5W						A23
36)	1525.0000-1559.0000	106.5W	106.5W						A23
37)	1626.5000-1660.5000	106.5W	106.5W						A12
38)	1525.0000-1559.0000	106.5W	106.5W						A12
39)	1626.5000-1660.5000	106.5W	106.5W						A13
40)	1525.0000-1559.0000	106.5W	106.5W						A13
41)	1626.5000-1660.5000	106.5W	106.5W						D1
42)	1525.0000-1559.0000	106.5W	106.5W						D1
43)	1626.5000-1660.5000	106.5W	106.5W						D2
44)	1525.0000-1559.0000	106.5W	106.5W						D2
45)	1626.5000-1660.5000	106.5W	106.5W						D5
46)	1525.0000-1559.0000	106.5W	106.5W						D5
47)	1626.5000-1660.5000	106.5W	106.5W						A14
48)	1525.0000-1559.0000	106.5W	106.5W						A14
49)	1626.5000-1660.5000	106.5W	106.5W						A15
50)	1525.0000-1559.0000	106.5W	106.5W						A15
51)	1626.5000-1660.5000	106.5W	106.5W						A16
52)	1525.0000-1559.0000	106.5W	106.5W						A16
53)	1626.5000-1660.5000	106.5W	106.5W						A17
54)	1525.0000-1559.0000	106.5W	106.5W						A17
55)	1626.5000-1660.5000	106.5W	106.5W						A18
56)	1525.0000-1559.0000	106.5W	106.5W						A18



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C) Frequency Coordination Limits

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.)		Elevation (Degrees)		Azimuth (Degrees)		Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
		East Limit	West Limit	East Limit	West Limit	East Limit	West Limit		
57)	1525.0000-1559.0000	62.0W	139.0W	05.0	05.0	-360.0		5	A24
58)	1626.5000-1660.5000	62.0W	139.0W	05.0	05.0	-360.0		5	A24

D) Points of Communications

The following stations located in the Satellite orbits consistent with Sections B and C of this Entry:

- 1) 1 to MSAT-2 satellite (AMSC-1) @ 103.3 degrees W.L. satellite (U.S.-licensed)
- 2) 1 to SKYTERRA 1 satellite @ 101.3 degrees W.L. satellite(s) of the (U.S.-licensed)
- 3) 1 to MSAT-1 @ 107.5 degrees W.L. (Canadian Licensed) (Non-U.S.-licensed)

E) Antenna Facilities

Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
1	A1		0	WESTINGHOUSE / WEC Mast	CD-JL01080, P-1000	0	3 AGL	
Max Gains(s): 7.7 dBi @ 1660.5000 GHz 7.0 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = 3.00 Maximum aggregate output EIRP for all carriers (dBW) = 12.50								
1	A10		0.35	MITSUBISHI / MELCO Briefcase	ST151	0	1 AGL	
Max Gains(s): 14.1 dBi @ 1660.5000 GHz 14.0 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = 1.70 Maximum aggregate output EIRP for all carriers (dBW) = 16.50								
1	A11		0.25	MITSUBISHI / MELCO Omniquest	ST251	0	1 AGL	
Max Gains(s): 11.0 dBi @ 1660.5000 GHz 10.2 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = 3.50 Maximum aggregate output EIRP for all carriers (dBW) = 16.50								



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E) Antenna Facilities

Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
1	A12		0	CAL / Calquest	CQ100	0	0 AGL	
Max Gains(s):		12.3 dBi @ 1660.5000 GHz		12.3 dBi @ 1559.0000 GHz				
Maximum total input power at antenna flange (Watts) =				2.60				
Maximum aggregate output EIRP for all carriers (dBW) =				16.50				
1	A13		0	MITSUBISHI / MELCO Transportation Dome	AU400A	0	3 AGL	
Max Gains(s):		12.0 dBi @ 1660.5000 GHz		12.0 dBi @ 1559.0000 GHz				
Maximum total input power at antenna flange (Watts) =				2.80				
Maximum aggregate output EIRP for all carriers (dBW) =				16.50				
1	A14		0.46	MITSUBISHI / MELCO Omniquest Fixed	OQFAU, ST251	0	3 AGL	
Max Gains(s):		16.1 dBi @ 1660.5000 GHz		16.1 dBi @ 1559.0000 GHz				
Maximum total input power at antenna flange (Watts) =				1.10				
Maximum aggregate output EIRP for all carriers (dBW) =				16.50				
1	A15		0.85	MITSUBISHI / MELCO Fixed	AU601B,ST221M	0	3 AGL	
Max Gains(s):		20.0 dBi @ 1660.5000 GHz		20.0 dBi @ 1559.0000 GHz				
Maximum total input power at antenna flange (Watts) =				.45				
Maximum aggregate output EIRP for all carriers (dBW) =				16.50				
1	A16		0.46	EMS/GETS	0955-A-0100	0	4.3 AGL	
Max Gains(s):		13.0 dBi @ 1660.5000 GHz		13.0 dBi @ 1559.0000 GHz				
Maximum total input power at antenna flange (Watts) =				2.80				
Maximum aggregate output EIRP for all carriers (dBW) =				17.50				
1	A17		0.46	WESTINGHOUSE/WEC M-1075 MARITIME	M-1075, D-100HF	0	3 AGL/ 6 AMSL	
Max Gains(s):		14.8 dBi @ 1660.5000 GHz		14.6 dBi @ 1559.0000 GHz				
Maximum total input power at antenna flange (Watts) =				1.48				
Maximum aggregate output EIRP for all carriers (dBW) =				16.50				



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Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
1	A18		0	WESTINGHOUSE/WEC D DOME	CD-JL01003, .D-1000H	0	3 AGL	
Max Gains(s): 11.7 dBi @ 1660.5000 GHz 9.5 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = 3.00 Maximum aggregate output EIRP for all carriers (dBW) = 16.50								
1	A19		0	WEC D-1000MH MARITIME DOME	CDJL01003-G02 0	0	3 AGL/ 6 AMSL	
Max Gains(s): 11.7 dBi @ 1660.5000 GHz 9.5 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = 3.00 Maximum aggregate output EIRP for all carriers (dBW) = 16.50								
1	A2		0	WESTINGHOUSE / WEC Contour Dome	CD-JL01003, D-1000	0	3 AGL	
Max Gains(s): 11.7 dBi @ 1660.5000 GHz 9.5 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = 3.00 Maximum aggregate output EIRP for all carriers (dBW) = 16.50								
1	A20		0	mitsubishi / MELCO DOME	AU201A, ST-211D 0		3 AGL	
Max Gains(s): 9.0 dBi @ 1660.5000 GHz 9.0 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = 4.00 Maximum aggregate output EIRP for all carriers (dBW) = 15.00								
1	A21		0.6	MITSUBISHI / MELCO Fixed	AU601A,ST-221 0		3 AGL	
Max Gains(s): 17.0 dBi @ 1660.5000 GHz 17.0 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = .89 Maximum aggregate output EIRP for all carriers (dBW) = 16.50								
1	A22		0.3	KVH TRACPHONE	AU900A, ST131 0		3 AGL/ 6 AMSL	
Max Gains(s): 12.5 dBi @ 1660.5000 GHz 12.5 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = 2.50 Maximum aggregate output EIRP for all carriers (dBW) = 16.50								



UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION

RADIO STATION AUTHORIZATION

Name: Ligado Networks Subsidiary LLC

Call Sign: E980179

Authorization Type: Modification of License

File Number: SES-MFS-20150605-00325

Common Carrier

Grant date: 09/16/2015

Expiration Date: 11/30/2024

E) Antenna Facilities

Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
1	A23		0	MITSUBISHI / MELCO MAST	AU110A, ST111	0	3 AGL	
Max Gains(s): 7.7 dBi @ 1660.5000 GHz 7.0 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = 2.10 Maximum aggregate output EIRP for all carriers (dBW) = 11.00								
1	A24	100000	0.274	HUGHES NETWORK SYSTEMS	MSAT-G2	0	2 AGL/ 2 AMSL	
Max Gains(s): 9.5 dBi @ 1559.0000 GHz 10.0 dBi @ 1660.5000 GHz Maximum total input power at antenna flange (Watts) = 4.00 Maximum aggregate output EIRP for all carriers (dBW) = 16.00								
1	A3		0.92	WESTINGHOUSE / WEC Fixed Site (0.92 m)	CD-JL01083, F-1000	0	3 AGL	
Max Gains(s): 21.8 dBi @ 1660.5000 GHz 21.5 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = .30 Maximum aggregate output EIRP for all carriers (dBW) = 16.50								
1	A4		0.76	WESTINGHOUSE / WEC Fixed Site (0.76 m)	CD-JL01083, F-1000	0	3 AGL	
Max Gains(s): 19.9 dBi @ 1660.5000 GHz 19.8 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = .46 Maximum aggregate output EIRP for all carriers (dBW) = 16.50								
1	A5		0	WESTINGHOUSE / WEC Maritime Contour Dome	CD-JL01003-G02	0	3 AGL/ 6 AMSL	
Max Gains(s): 11.7 dBi @ 1660.5000 GHz 9.5 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = 3.00 Maximum aggregate output EIRP for all carriers (dBW) = 16.50								
1	A6		1.2	WESTINGHOUSE / WEC Mult. Fixed Site	F-1000MC	0	3 AGL	
Max Gains(s): 24.2 dBi @ 1660.5000 GHz 24.0 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = 1.36 Maximum aggregate output EIRP for all carriers (dBW) = 25.50								



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Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
1	A7		0.46	WESTINGHOUSE / KVH SC Maritime	M-1015, D-100HF 0		3 AGL/ 6 AMSL	
Max Gains(s): 14.8 dBi @ 1660.5000 GHz 14.6 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = 1.48 Maximum aggregate output EIRP for all carriers (dBW) = 16.50								
1	A8		0	MITSUBISHI / MELCO Dome	AU200A, ST-111D 0		3 AGL	
Max Gains(s): 9.0 dBi @ 1660.5000 GHz 9.0 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = 4.00 Maximum aggregate output EIRP for all carriers (dBW) = 15.00								
1	A9		0.6	MITSUBISHI / MELCO Fixed Site	AU500A, ST-121 0		3 AGL	
Max Gains(s): 17.0 dBi @ 1660.5000 GHz 17.0 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = .89 Maximum aggregate output EIRP for all carriers (dBW) = 16.50								
1	D1		0	WESTINGHOUSE / WEC Contour Dome	CD-JL01003 0		3 AGL	
Max Gains(s): 11.7 dBi @ 1660.5000 GHz 9.5 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = 3.00 Maximum aggregate output EIRP for all carriers (dBW) = 16.50								
1	D2		0.415	NARROWBAND / Narrowband Fixed Site	RST 2000 0		3 AGL	
Max Gains(s): 15.5 dBi @ 1660.5000 GHz 15.5 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = .68 Maximum aggregate output EIRP for all carriers (dBW) = 13.80								
1	D3		0	NARROWBAND / Narrowband Mobile	MDT 1000 0		3 AGL	
Max Gains(s): 12.0 dBi @ 1660.5000 GHz 12.0 dBi @ 1559.0000 GHz Maximum total input power at antenna flange (Watts) = 2.50 Maximum aggregate output EIRP for all carriers (dBW) = 16.00								



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H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

- 1900 --- Applicable to all transmitting frequency bands. Authority is granted to transmit any number of RF carriers with the specified parameters on any discrete frequencies within associated band in accordance with the other terms and conditions of this authorization, subject to any additional limitations that may be required to avoid unacceptable levels of inter-satellite interference.
- 2916 --- Transmitter(s) must be turned off during antenna maintenance to ensure compliance with the FCC-specified safety guidelines for human exposure to radiofrequency radiation in the region between the antenna feed and the reflector. Appropriate measures must also be taken to restrict access to other regions in which the earth station's power flux density levels exceed the specified guidelines.
- 3219 --- All existing transmitting facilities, operations and devices regulated by the Commission must be in compliance with the Commission's radiofrequency (RF) exposure guidelines, pursuant to Section 1.1307(b)(1) through (b)(3) of the Commission's rules, or if not in compliance, file an Environmental Assessment (EA) as specified in Section 1.1311. See 47 CFR § 1.1307 (b) (5).
- 3465 --- This authorization is subject to the policies adopted in the Report and Order, "Amendment of the Commission's Regulatory Policies to allow Non-US-Licensed Space Stations to provide Domestic and International Satellite Services in the United States," IB Docket 96-111, FCC 97-399 (Released November 26, 1997). (DISCO II)
- 3848 --- The authorized frequency band(s) has (have) been cleared with the National Telecommunications and Information Administration.
- 5011 --- The Licensee(s) shall maintain on file with the Commission a current list or plan of the precise frequencies in use at the station, specifying for each frequency the RF center frequency, polarization, emission designator, nominal EIRP (in dBW) and maximum EIRP density (in dBW/4kHz). This list or plan may be submitted either on a station-by-station basis or on a system-wide basis and shall be updated within seven (7) days of any changes in frequency usage at this station. The Licensee(s) need not notify the Commission of temporary usage of frequencies for periods of less than seven (7) days. However, the Licensee(s) shall maintain accurate station records of the times and particulars of such temporary frequency usage.
- 5012 --- The authority granted here is limited to the operation of the facilities described above and does not include any authority to install and operate channelizing equipment or any other authority under Section 214 of the Communications Act of 1934, as amended, to establish channels of communications.
- 5017 --- Operation of this station is governed by the terms, conditions and limitations in Part 25 of the Commission's Rules and Regulations and the following additional conditions: 1. This license shall not vest in the Licensee(s) any right to operate the station or any right in the use of the frequencies designated in the license beyond its term or in any other manner than authorized in the license; 2. Neither the license nor the right granted under it shall be assigned or otherwise transferred in violation of the Commission's Rules and Regulations issued under it; and 3. This station is subject to the right of use or control conferred by Section 706 of the Communications Act of 1934, as amended.



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H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

- 5208 --- The licensee shall take all necessary measures to ensure that the antenna does not create potential exposure of humans to radiofrequency radiation in excess of the FCC exposure limits defined in 47 CFR 1.1307(b) and 1.1310 wherever such exposures might occur. Measures must be taken to ensure compliance with limits for both occupational/controlled exposure and for general population/uncontrolled exposure, as defined in these rule sections. Compliance can be accomplished in most cases by appropriate restrictions, such as fencing. Requirements for restrictions can be determined by predictions based on calculations, modeling, or by field measurements. The FCC's OET Bulletin 65 (available on-line at www.fcc.gov/oet/rfsafety) provides information on predicting exposure levels and on methods for ensuring compliance, including the use of warning and alerting signs and protective equipment for workers.
- 5215 --- All operations shall be on a common carrier basis.
- 5747 --- Licensee's mobile earth station terminals operating on board aircraft shall comply with all applicable Federal Aviation Administration and International Civil Aviation Organization (ICAO) rules and regulations and all other international agreements in forces to which the United States is a party.
- 5748 --- Licensee's mobile earth station terminals operating on board maritime vessels shall comply with all applicable U.S. Coast Guard and International Maritime Organization (IMO) rules and regulations and all other international agreements in force to which the United States is a party.
- 5749 --- Licensee's mobile earth station terminals operating on board aircraft shall comply with the Section 87.147(d) of the Commission's Rules. See 47 C.F.R. Section 87.147(d).
- 5750 --- This authorization is subject to the conditions and terms set forth in the Commission's Order and Authorization, FCC 99-344, released November 30, 1999.
- 5779 --- Upon completion of construction each licensee must file with the Commission a certification including the following information: name of the licensee, file number of the application, call sign of the antenna, date of the license and certification that construction of the facility as authorized has been completed, and that the station is operational including the date of commencement of service, and will remain operational during the license period unless the license is submitted for cancellation.
- 5800 --- This authorization is issued pursuant to and subject to the conditions and terms set forth in the Commission's Order released December 11, 2000 (DA 00-2350).
- 5853 --- The Licensee is not authorized to operate in the 1544-1545 MHz and 1645.5-1646.5 MHz bands that are limited in the United States exclusively for use for distress and safety communications. See 47 C.F.R. Section 2.106nn.S5.356, S5.375.



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H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

- 90222 --- LightSquared's request for waiver of Section 25.283(c) of the Commission's rules, 47 C.F.R. § 25.283(c), IS GRANTED. Section 25.283(c) requires discharge of all stored energy sources when a space station is retired from service. MSAT-1 is a Boeing 601 model spacecraft, which has a liquid propulsion system that includes two helium pressurant tanks and two pairs of fuel and oxidizer tanks. The fuel and oxidizer tanks will be vented in the end-of-life shutdown procedure. The helium tanks were sealed by firing pyrotechnic valves shortly after launch in 1996, and contain an estimated mass of approximately 130 grams of helium in each tank, with each tank having a volume of 43.42 liters. We waive Section 25.283(c) in light of the fact that the action taken to seal the helium tanks was taken prior to the adoption of this rule, and compliance would require direct retrieval of the spacecraft.
- 90223 --- LightSquared's request for partial waiver of Section 25.114(c) of the Commission's rules, 47 C.F.R. § 25.114(c), IS GRANTED. The information provided satisfies the relevant informational requirements.
- 90224 --- Authorized communications with MSAT-1 are limited to frequencies within the L band (1525-1559 MHz and 1626.5-1660.5 MHz).
- 90225 --- We waive Sections 25.137(c) and 25.157 of the Commission's rules, 47 C.F.R. §§ 25.137(c), 25.157, on our own motion, to permit consideration of LightSquared's application outside of a modified processing round. LightSquared seeks to communicate with the Canadian-licensed MSAT-1 geostationary space station in the mobile-satellite service following its relocation from the 106.5° W.L. orbital location to the 107.5° W.L. orbital location. We grant this waiver in light of the fact that LightSquared will not be authorized to communicate with MSAT-1 using additional frequencies following the relocation and the coverage of MSAT-1 over the United States will be similar.



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B) This RADIO STATION AUTHORIZATION is granted subject to the additional conditions specified below:

This authorization is issued on the grantee's representation that the statements contained in the application are true and that the undertakings described will be carried out in good faith.

This authorization shall not be construed in any manner as a finding by the Commission on the question of marking or lighting of the antenna system should future conditions require. The grantee expressly agrees to install such marking or lighting as the Commission may require under the provisions of Section 303(q) of the Communications Act. 47 U.S.C. § 303(q).

Neither this authorization nor the right granted by this authorization shall be assigned or otherwise transferred to any person, firm, company or corporation without the written consent of the Commission. This authorization is subject to the right of use or control by the government of the United States conferred by Section 706 of the Communications Act. 47 U.S.C. § 706. Operation of this station is governed by Part 25 of the Commission's Rules. 47 C.F.R. Part 25.

This authorization shall not vest in the licensee any right to operate this station nor any right in the use of the designated frequencies beyond the term of this license, nor in any other manner than authorized herein.

This authorization is issued on the grantee's representation that the station is in compliance with environmental requirements set forth in Section 1.1307 of the Commission's Rules. 47 C.F.R. § 1.1307.

This authorization is issued on the grantee's representation that the station is in compliance with the Federal Aviation Administration (FAA) requirements as set forth in Section 17.4 of the Commission's Rules. 47 C.F.R. § 17.4.

The following condition applies when this authorization permits construction of or modifies the construction permit of a radio station.

This authorization shall be automatically forfeited if the station is not ready for operation by the required date of completion of construction unless an application for modification of authorization to request additional time to complete construction is filed by that date, together with a showing that failure to complete construction by the required date was due to factors not under control of the grantee.

Licensees are required to pay annual regulatory fees related to this authorization. The requirement to collect annual regulatory fees from regulatees is contained in Public Law 103-66, "The Omnibus Budget Reconciliation Act of 1993." These regulatory fees, which are likely to change each fiscal year, are used to offset costs associated with the Commission's enforcement, public service, international and policy and rulemaking activities. The Commission issues a Report and Order each year, setting the new regulatory fee rates. Receive only earth stations are exempt from payment of regulatory fees.

