



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

Name: Intelsat License LLC

Call Sign: KA258

Authorization Type: Modification of License

File Number: SES-MOD-20170725-00803

Non Common Carrier

Grant date: 09/13/2017

Expiration Date: 03/31/2024



Nature of Service: Fixed Satellite Service

Class of Station: Fixed Earth Stations

**A) Site Location(s)**

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
1)	MTN-K91	17625 TECHNOLOGY BLVD HAGERSTOWN, WASHINGTON, MD 21740	39°35'54.6"N	77°45'33.0"W	174.65	83

Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209

*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 March 31, 2009 (3 AM Eastern Standard Time) and ending March 31, 2024 (3 AM Eastern Standard Time) . The required date of completion of construction and commencement of operation is September 13, 2018 (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)	17300.0000-17800.0000	H, V, L, R	2M00F2D	Tx	83.30	56.30	1		TT&C
2)	17300.0000-17800.0000	H, V, L, R	400KF2D	Tx	76.30	56.30	1		TT&C
3)	14498.0000-14498.0000	H	950KG7D	Tx	74.50	51.00	1		TT&C
4)	14494.5000-14494.5000	H, V, L, R	850KF7D	Tx	73.20	49.90	1		TT&C
5)	14000.5000-14000.5000	H, V, L, R	850KF7D	Tx	73.20	49.90	1		TT&C
6)	14000.0000-14500.0000	H, V, L, R	NON	Tx	51.10	51.10	1		IOT
7)	14000.0000-14500.0000	H, V, L, R	2M00F9D	Tx	78.10	51.10	1		TT&C
8)	14000.0000-14500.0000	H, V, L, R	400KF9D	Tx	71.10	51.10	1		TT&C
9)	14000.0000-14500.0000	H, V, L, R	56K0G7W	Tx	62.60	51.10	1		DIGITAL DATA, VOICE AND VIDEO SERVICE



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10)	14000.0000-14500.0000	H, V, L, R	72M0G7W	Tx	88.00	45.40	1		DIGITAL DATA, VOICE AND VIDEO SERVICE
11)	13778.0000-14000.0000	H, V, L, R	850KF9D	Tx	87.00	63.70	1		TT&C
12)	13750.0000-13770.0000	H, V, L, R	850KF9D	Tx	87.00	63.70	1		TT&C
13)	13249.5000-13249.5000	V	950KG7D	Tx	87.50	64.00	1		TT&C
14)	13246.5000-13246.5000	H, V, L, R	850KF2D	Tx	87.00	63.70	1		TT&C
15)	12200.0000-12700.0000	H, V, L, R	2M00F2D	Rx			1		TT&C
16)	12200.0000-12700.0000	H, V, L, R	400KF2D	Rx			1		TT&C
17)	11702.0000-11702.0000	H, V, L, R	850KF7D	Rx			1		TT&C
18)	11700.5000-11700.5000	H, V, L, R	850KF7D	Rx			1		TT&C
19)	11700.0000-12200.0000	H, V, L, R	56K0G7W	Rx			1		DIGITAL DATA, VOICE AND VIDEO SERVICE
20)	11700.0000-12200.0000	H, V, L, R	72M0G7W	Rx			1		DIGITAL DATA, VOICE AND VIDEO SERVICE
21)	11450.0000-12200.0000	H, V, L, R	800KF9D	Rx			1		TT&C
22)	11450.0000-12200.0000	H, V, L, R	800KG9D	Rx			1		TT&C
23)	11450.0000-12200.0000	H, V, L, R	NON	Rx	0.00	0.00	1		IOT
24)	11450.0000-12200.0000	H, V, L, R	200KF3N	Rx			1		DATA, VOICE AND VIDEO SERVICE
25)	11450.0000-12200.0000	H, V, L, R	2M00F3N	Rx			1		DATA, VOICE AND VIDEO SERVICE
26)	11447.0000-11447.0000	V	500KG7D	Rx			1		TT&C
27)	11446.5000-11446.5000	V	500KG7D	Rx			1		TT&C
28)	11443.5000-11443.5000	V	500KG7D	Rx			1		TT&C
29)	11443.0000-11443.0000	V	500KG7D	Rx			1		TT&C
30)	10950.0000-11200.0000	H, V, L, R	NON	Rx	0.00	0.00	1		IOT
31)	10950.0000-11200.0000	H, V, L, R	800KF9D	Rx	0.00	0.00	1		TT&C



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**B) Particulars of Operations**

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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
32)	10950.0000-11200.0000	H, V, L, R	800KG9D	Rx	0.00	0.00	1		TT&C
33)	10950.0000-11200.0000	H, V, L, R	2M00F3N	Rx			1		DATA, VOICE AND VIDEO SERVICE
34)	10950.0000-11200.0000	H, V, L, R	200KF3N	Rx			1		DIGITAL DATA, VOICE AND VIDEO SERVICE

**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)	13750.0000-14000.0000	6.0W	-149.0W	05.3	-05.7	101.9	-257.8	11.6	1
2)	14000.0000-14500.0000	6.0W	-149.0W	05.3	-05.7	101.9	-257.8	-1	1
3)	17300.0000-17800.0000	6.0W	-149.0W	05.3	-05.7	101.9	-257.8	4.2	1
4)	13246.5000-13246.5000	6.0W	-149.0W	05.3	-05.7	101.9	-257.8	11.6	1
5)	10950.0000-11200.0000	6.0W	-149.0W	05.3	-05.7	101.9	-257.8		1
6)	11450.0000-12700.0000	6.0W	-149.0W	05.3	-05.7	101.9	-257.8		1
7)	13249.5000-13249.5000	6.0W	-149.0W	05.3	-05.7	101.9	-257.8	9.48	1

**D) Points of Communications**

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

- 1) MTN-K91 to Permitted Space Station List
- 2) MTN-K91 to INTELSAT 11 @ 43.0 W.L. satellite(s) of the INTELSAT system (U.S.-licensed)
- 3) MTN-K91 to IS 16 @ 58 W.L. satellite(s) of the INTELSAT system (U.S.-licensed)
- 4) MTN-K91 to PANAMSAT 1R (PAS-1R ) @ 45.0 W.L. (U.S.-licensed domestic satellite)
- 5) MTN-K91 to INTELSAT 30 (S2887) @ 95.05 degrees W.L. (U.S.-licensed)
- 6) MTN-K91 to INTELSAT 31 (S2924) @ 95.05 degrees W.L. (U.S.-licensed)
- 7) MTN-K91 to SKY-B1 (S2922) satellite @ 43.15 degrees W.L. satellite
- 8) MTN-K91 to INTELSAT 9 (S2380) @ 29.5 W.L. (U.S.-licensed)



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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)
MTN-K91	1	1	14.2	TIW	14.2 METER	174.65	17.05 AGL/ 191.7 AMSL	
Max Gains (s):		65.1 dBi @	14.2500 GHz	62.0 dBi @	11.4500 GHz	65.4 dBi @	13.2500 GHz	
		17.0000 GHz	64.5 dBi @	13.2460 GHz	65.1 dBi @	13.2500 GHz		
Maximum total input power at antenna flange (Watts) =					195.00			
Maximum aggregate output EIRP for all carriers (dBW) =					88.00			

**G) Antenna Structure marking and lighting requirements:**

None unless otherwise specified under Special and General Provisions

**H) Special and General Provisions**

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

- 4 --- Licensee must ensure that a current listing of the name, title, mailing address, email address, and telephone number of the responsible point of contact are on file at the FCC. Any changes must be filed electronically in the International Bureau Filing System (IBFS) in the "Other Filings" tab within 10 days of the change.
- 5 --- Licensee must notify the Commission when an earth station is no longer operational or when it has not been used to provide any service during any 6-month operation.
- 6 --- Licensee must comply with the license modification and notification requirements of 47 CFR § 25.118 to change the coordinates of its authorized earth station.

3415 --- The licensee shall take extraordinary measures to ensure that antenna does not create potential exposure to radiofrequency radiation in the region between the antenna feed and the reflector. Antenna shall be surrounded by a physical barrier or fence at least 2 meters tall with a locked gate, to prevent human exposure in excess of the FCC-specified safety limit of 1 mW/cm<sup>2</sup>. Warning signs, such as those discussed in the FCC's OET Bulletin 65, shall be posted informing members of the public to keep outside the physical barrier or the locked area.

3461 --- Licensee shall coordinate the frequency and power usage with all existing satellites in orbit, which use the same frequency bands, and which could be adversely affected by the TT&C and in-orbit-testing (IOT) operations of this earth station. The Licensee shall provide all potentially affected satellite operators with an emergency phone number where the licensee (or his operators) can be immediately reached in the event that harmful interference occurs.

5241 --- The use of the frequency bands 10950 - 11200 and 11450 - 11700 MHz in the fixed satellite service is limited to international service.



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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:

- 6628 --- SES-MFS-20141212-00891 is authorized to conduct command operation on 13.7505 GHz and 14.0035 GHz (Earth-to-space) frequencies and telemetry on 11.198 GHz and 11.1985 GHz or 11.19925 GHz and 11.19975 GHz (space-to-Earth) frequencies for Intelsat 30 (S2887) pursuant to FCC file number SAT-LOA-20121025-00187.
- 6629 --- SES-MFS-20141212-00891 is authorized to conduct command operation on 13.9985 GHz and 14.006 GHz (Earth-to-space) and telemetry on 11.19425 GHz and 11.1955 GHz or 11.19625 GHz and 11.19675 GHz (space-to-Earth) for Intelsat 31 (S2924) pursuant to FCC file number SAT-LOA-20140410-00038.
- 6649 --- Intelsat's request for waiver of footnote NG52 of the United States Table of Allocations, 47 C.F.R. § 2.106, to use the 10.95-11.2 GHz frequency band for the limited purpose of TT&C on an unprotected, non-interference basis in the United States is GRANTED, as conditioned. We find that waiver of footnote NG52 does not undermine the purpose of the rules because the waiver involves only earth stations that are receive-only in the 10.95-11.2 GHz frequency band and thus are not capable of causing interference into fixed stations operating in this band. Furthermore, because Intelsat has agreed to accept any level of interference from fixed stations into its receive-only earth stations' operations in these bands, fixed station operators will not be required to coordinate their station operations with the space station operator's receive-only earth stations' operations. Under these circumstances, we determine that an additional coordination burden is not placed upon fixed station operators and their ability to expand service in the future would not be restricted in any manner. Grant of this waiver is consistent with prior Commission precedent.
- 90051 --- Operations in the bands 12.2-12.7 GHz (space-to-Earth) and 17.3-17.8 GHz (Earth-to-space) are conditionally granted for support of Direct Broadcast Service only and require prior coordination with DBS space station operators.
- 90397 --- Telemetry, tracking and command (TT&C) operations identified in part B, Particulars of Operation in this authorization may be transmitted within the assigned bands that are not at a band edge only if the transmissions cause no greater interference and require no greater protection from harmful interference than the communications traffic on the satellite network or have been coordinated with operators of authorized co-frequency space stations at orbital locations within six degrees of the assigned orbital location. Frequencies, polarization, and coding of telemetry, tracking, and command transmissions must be selected to minimize interference into other satellite networks.
- 90398 --- Changes to previously authorized transmitting facilities, operations and devices regulated by the Commission that may have significant environmental impact, and are not excluded by §1.1306, require the preparation of an Environmental Assessment (EA) by the licensee. (See 47 C.F.R. §§1.1307, 1.1308 and 1.1311)
- 90399 --- The licensee shall, at all times, take all necessary measures to ensure that operation of this (these) authorized earth station(s) 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. Physical 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](http://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.



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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:

900407 --- The Permitted Space Station List (Permitted List) is a list of all geostationary space stations providing fixed-satellite service pursuant to a Commission license or grant of U.S. market access. The Permitted List currently includes the following frequency bands per §25.103 and §25.115(k)(1):

- 3600-4200 MHz (space-to-Earth)
- 5850-6725 MHz (Earth-to-space)
- 10.95-11.2 GHz (space-to-Earth)
- 11.45-12.2 GHz (space-to-Earth)
- 13.75-14.5 GHz (Earth-to-space)
- 18.3-18.8 GHz (space-to-Earth)
- 19.7-20.2 GHz (space-to-Earth)
- 24.75-25.25 GHz (Earth-to-space)
- 28.35-28.6 GHz (Earth-to-space)
- 29.25-30.0 GHz (Earth-to-space).

Earth stations with "Permitted List" designated as a point of communication may access any space station on the Permitted List, provided the operations comply with the applicable "routine" uplink and downlink limits, are within the specific frequency bands authorized in the earth station license, have completed coordination with terrestrial stations pursuant to §25.203, and otherwise comply with all terms and conditions of both the earth station license and the space station grant.



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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.

