



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

Name: Comsat, Inc.

Call Sign: E000280

Authorization Type: Modification of License

File Number: SES-MOD-20151009-00751

Common Carrier

Grant date: 04/25/2016

Expiration Date: 10/09/2026



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	1000 Inmarsat M-4 full-duplex METs in the United States VARIOUS,				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 October 9, 2011 (3 AM Eastern Standard Time) and ending October 9, 2026 (3 AM Eastern Standard Time) . The required date of completion of construction and commencement of operation is April 25, 2017 (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	L,R	20K0G1X	Tx	17.00	10.00	1		SIGNALLING BPSK
2)	1626.5000-1660.5000	L,R	5K00G1E	Tx	17.00	16.00	1		VOICE, DATA AND FAX O-QPSK
3)	1626.5000-1660.5000	L,R	40K0G1W	Tx	25.00	15.00	1		64KBPS ISDN channel, DATA 16-QAM
4)	1525.0000-1559.0000	L,R	20K0G1X	Rx			1		SIGNALLING BPSK
5)	1525.0000-1559.0000	L,R	5K00G1E	Rx			1		VOICE, DATA AND FAX O-QPSK
6)	1525.0000-1559.0000	L,R	40K0G1W	Rx			1		64KBPS ISDN channel, DATA 16-QAM
7)	1626.5000-1660.5000	L,R	20K0G1X	Tx	17.00	10.00	2		SIGNALLING BPSK
8)	1626.5000-1660.5000	L,R	5K00G1E	Tx	17.00	16.00	2		VOICE, DATA AND FAX O-QPSK



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9)	1626.5000-1660.5000	L,R	40K0G1W	Tx	25.00	15.00	2		64KBPS ISDN channel, DATA 16-QAM
10)	1525.0000-1559.0000	L,R	20K0G1X	Rx			2		SIGNALLING BPSK
11)	1525.0000-1559.0000	L,R	5K00G1E	Rx			2		VOICE, DATA AND FAX O-QPSK
12)	1525.0000-1559.0000	L,R	40K0G1W	Rx			2		64KBPS ISDN channel, DATA 16-QAM

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			05.0-90.0		360.0-360.0		15	1
2)	1525.0000-1559.0000			05.0-90.0		360.0-360.0			1
3)	1626.5000-1660.5000								1
4)	1525.0000-1559.0000								1
5)	1525.0000-1559.0000								1
6)	1626.5000-1660.5000								1
7)	1525.0000-1559.0000								2
8)	1626.5000-1660.5000								2
9)	1525.0000-1559.0000								2
10)	1626.5000-1660.5000								2
11)	1525.0000-1559.0000								2
12)	1626.5000-1660.5000								2

D) Points of Communications

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

- 1) 1 to INMARSAT 4F2 satellite(s) @52.75 W.L. in AOR-EAST (United Kingdom-licensed)
- 2) 1 to INMARSAT Ltd.-3 satellite(s) @ 15.5 W.L. in AOR-E (United Kingdom-licensed) (Non-U.S.-licensed)
- 3) 1 to INMARSAT Ltd.-3 satellite(s) @ 178 E.L. in POR (United Kingdom-licensed) (Non-U.S.-licensed)



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D) Points of Communications

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

4) 1 to All Inmarsat satellites on "ISAT List" authorized to access U.S. in the L-Band

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	1	0	0	NERA (80cm x 35cm)	WORLD COMMUNICATOR		2 AGL	167
Max Gains(s):		18.0 dBi @	1.5250 GHz	18.5 dBi @	1.6435 GHz			
Maximum total input power at antenna flange (Watts) =					5.00			
Maximum aggregate output EIRP for all carriers (dBW) =					25.50			
1	2	0	0	THRANE & THRANE (0.753m x0.414m)	TT-3080A		2 AGL	167
Max Gains(s):		18.0 dBi @	1.5250 GHz	18.5 dBi @	1.6435 GHz			
Maximum total input power at antenna flange (Watts) =					5.00			
Maximum aggregate output EIRP for all carriers (dBW) =					25.50			

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:

167 --- This authorization is limited to the total number of terminals listed in Section A of this license for this Site ID.

214 --- Authority IS GRANTED pursuant to Section 25.210(j) of the Commission's rules, to permit operations of earth stations with the Inmarsat 4F2 satellite, maintained at ±.10 degree of the 52.75° W.L., subject to the condition that this waiver and the operations it permits shall terminate in the event that a satellite is launched into a location such that its stationkeeping volume would overlap the Inmarsat 4F2 satellite's ± 0.10 degree stationkeeping volume, but would not overlap the Inmarsat 4F2 satellite's ±0.05° degree stationkeeping volume, unless Inmarsat has successfully coordinated its physical operations with those of the other spacecraft.

215 --- Operations via the Inmarsat 4F2 satellite using a north-south inclination of as much as three degrees ARE GRANTED, conditioned on operations of the 4F2 complying with the inclined orbit requirements set forth in Sections 25.280(b)(1)-(3) of the Commission's rules



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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:

- 216 --- Operations in the 1544-1545/1645.5-1646.5 MHz frequency bands ARE LIMITED to distress and safety communications, in accordance with International Footnotes 5.356 and 5.375 of the ITU Radio Regulations.
- 1010 --- Applicable to all receiving frequency bands. Emission designator indicates the maximum bandwidth of received signal at associated station(s). Maximum EIRP and maximum EIRP density are not applicable to receive operations.
- 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.
- 2325 --- Antennas and all antenna supporting structures used under this authorization shall not exceed 20 feet in height.
- 2627 --- All services are interconnected to the Public Switched Network.
- 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.
- 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 Commissions or otherwise transferred in violation of the Communications Act of 1934, as amended, or 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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A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

- 5018 --- This license shall be forfeited automatically if this station is not ready for operation within the time specified unless, prior to the expiration date of this license, the Commission receives an Application for Additional Time to Construct a Radio Station (FCC Form 701) filed by the Licensee(s) showing good cause why the Licensee(s) could not complete construction on time.
- 5202 --- Use of this facility to provide international service on a common carrier basis will require appropriate authorization under Section 214 of the Communication Act of 1934, as amended.
- 5215 --- All operations shall be on a common carrier basis.
- 5630 --- International services shall be consistent with this emission designator, the underlying title III application(s) and the acquisition of any necessary Section 214 authority.
- 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.
- 5830 --- This authorization is subject to the conditions and terms set forth in the Commission's Memorandum Opinion, Order and Authorization, FCC 01-272, released October 9, 2001 (INMARSAT Ltd. Order).
- 5957 --- Licensees must comply with the terms of any L-band operator-to-operator coordination agreement. In the absence of a continuing L-band operator-to-operator coordination agreement, operations of METs in the 1525-1559 and 1626.5-1660.5 MHz bands will be on a non-harmful interference basis until a future operator-to-operator agreement is concluded. In this instance, each licensee must notify the other operators in these frequency bands that it will be operating on a non-harmful interference basis. Each licensee must notify its customers that its operations are on a non-harmful interference basis.



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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.

