

RADIO STATION AUTHORIZATION

Name: EchoStar Broadcasting Ho	Call Sign:	E020307			
Authorization Type: Modification			File Number:	SES-MFS-20130131-00138	
Non Common Carrier	Grant date:	04/25/2013	Expiration Date:	02/03/2018	

Nature of Service: Direct Broadcast Satellite Service Nature of Service: Feeder Link for DBS in Fixed Satellite Service 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) 1	801 NORTH AMERICAN SKY BLVD. GILBERT, MARICOPA, AZ 85233	33°21'55.3"N	111°48'51.4"W	371.8	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 February 3, 2003 (3 AM Eastern Standard Time) and ending February 3, 2018 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is April 25, 2014 (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)	Polarizatio Code	on 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) 17790.0000-17800.0000	L,R	800KG2D	Tx	72.63	49.62	1		TELECOMMAND
2) 17300.0000-17800.0000	L,R	24M0G7W	Tx	87.40	49.62	1		DIGITAL VIDEO AND DATA
3) 17300.0000-17310.0000	L,R	800KG2D	Tx	72.63	49.62	1		TELECOMMAND
4) 12690.0000-12700.0000	L,R	800KG2D	Rx	0.00	0.00	1		TELEMETRY
5) 12200.0000-12700.0000	L,R	24M0G7W	Rx	0.00	0.00	1		DIGITAL VIDEO AND DATA
6) 12200.0000-12210.0000	L,R	300KG2D	Rx	0.00	0.00	1		TELEMETRY



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C) Frequency Coordination Limits

		Satellite Arc (Deg. Long.)	Elevation (Degrees)	Azimuth (Degrees)	Max EIRP Density toward	
#	Frequency Limits (MHz)	East West Limit Limit	East West Limit Limit	East West Limit Limit	Horizon (dBW/4kHz)	Associated Antenna(s)
1)	17300.0000-17800.0000	83.0W-140.0W	40.4-40.8	135.0-224.3	-22.07	1
2)	17308.2500-17309.7500	83.0W-140.0W	40.4-40.8	135.0-224.3	-22.07	1
3)	12200.0000-12700.0000	83.0W-140.0W	40.4-40.8	135.0-224.3	1	1
4)	12200.3500-12200.6500	83.0W-140.0W	40.4-40.8	135.0-224.3	1	1
5)	12202.3500-12202.6500	83.0W-140.0W	40.4-40.8	135.0-224.3	1	1
6)	12698.3500-12698.6500	83.0W-140.0W	40.4-40.8	135.0-224.3	1	1

D) Points of Communications

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

1) 1 to CIEL 2 satellite @ 128.85 degrees W.L. (CANADIAN-licensed satellite)

2) 1 to ECHOSTAR 7 @ 118.8 W.L. of the Direct Broadcast Satellite system (U.S.-licensed)

3) 1 to ECHOSTAR 11 @110 degrees W.L. satellite (U.S.-licensed)

4) 1 to ECHOSTAR 14 @ 118.9 degrees W.L. (of the Direct Broadcast satellite system (U.S.-licensed))

5) 1 to ECHOSTAR 10 @ 110.2 degrees W.L. (S2694) of the Direct Broadcast satellite system (U.S.-licensed)

6) 1 to US LICENSED Echostar and Dish satellites at 61.5, 110, and 119 WL clusters

E) Antenna Facilities

	Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Provisions (Refer to Section H)
1		1	1	13	VERTEX	13 M LMA	371.8	13 AGL/ 384.84 AMS	L
	Maximu	-	t power	at anten	12.7000 GHz na flange (Watts) all carriers (dBW		00 GHz		

G) Antenna Structure marking and lighting requirements:

None unless otherwise specified under Special and General Provisions

Snecial



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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:
 - 488 --- EchoStar's request for waiver of Section 25.114(d)(3) of the Commission's rules, 47 C.F.R. § 25.114(d)(3), IS GRANTED. Section 25.114(d)(3) requires predicted space station antenna gain contour(s) for each transmit and each receive antenna beam and nominal orbital location requested. The main purpose of the contour map is to allow evaluation of the potential for harmful interference with other operators and services in the frequency band. See SES Americom, Inc., Application for Modification of Space Station Authorization, DA 04-1581, Order and Authorization, 19 FCC Rcd. 20,377, 20,377-78 (paras. 4-8) (Int'l Bur., Sat. Div. 2004). EchoStar's application includes all of the contours identified in the rule for the spacecraft's CONUS (contiguous United States) and Canadian beams, and all but two of the specified contours for the spot beams. EchoStar states that the contours for the spot beams are so close it is difficult to distinguish among the contours , and that the -2, -4, -6, -10, and -20 dB contours provided and antenna boresight data supplied constitute sufficient information to evaluate the potential for harmful interference. We find that EchoStar provides a sufficiently complete description of the transponder characteristics of the Ciel 2 space station to enable the Commission to determine whether or not the Ciel 2 space station meets the Commission's technical requirements.
 - 489 --- EchoStar's initial license to provide direct broadcast satellite (DBS) service to the U.S. market from a Canadian-licensed satellite (EchoStar 5) at the 129° W.L. orbital location was granted pursuant to the Commission's DISCO II framework. See EchoStar Satellite LLC, Request for Special Temporary Authority for the EchoStar 5 Satellite, Order and Authorization, 20 FCC Rcd 11755 (Int'l Bur., Sat. Div. 2005). In authorizing EchoStar 5 to serve the U.S. market, we found that de jure barriers to entry in the Canadian market exist for U.S.-licensed DBS satellites. Nevertheless, we found that despite these de jure barriers, EchoStar's request for market access from EchoStar 5 provided a compelling public interest justification in that it would facilitate local-into-local service and high-definition programming with no countervailing adverse impact on competition in the U.S. market. Grant of access for the Ciel 2 satellite will similarly facilitate local-into-local service and high-definition programming with no countervailing adverse impact on competition. Thus, the Satellite Division has determined that the public interest benefits in allowing EchoStar to continue to provide DBS service to the U.S. market from the Ciel 2 satellite at the nominal 129° W.L. orbital location are compelling and warrant grant of the request.
 - 490 --- No protection from interference caused by radio stations authorized by other Administrations is guaranteed until the agreement of all affected Administrations is obtained and the frequency assignments of Ciel 2 become a part of the appropriate Region 2 BSS and feeder-link Plans. See 25.111(c) of the Commission's rules.
 - 491 --- Ciel Satellite Communications (Ciel) must operate the Ciel 2 satellite 128.85° W.L. with a ±0.05 degree longitudinal station-keeping. Ciel shall not operate the Ciel 2 satellite outside of these station-keeping limits without further authorization.
 - 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.



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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:
 - 2010 --- This authorization is issued pursuant to the Commission's Second Report and Order adopted June 16, 1972 (35 FCC 2d 844) and Memorandum, Opinion and Order adopted December 21, 1972 (38 FCC 2d 665) in Docket No. 16495 and is subject to the policies adopted in that proceeding.
 - 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.
 - 2938 --- Upon completion of construction, each licensee must file with the Commission a certification including the following information: (1) name of the licensee, (2) file number of the application, (3) call sign of the antenna, (4) date of the license, (5) certification that the facility as authorized has been completed, (6) certification that each antenna facility has been tested and is within 2 dB of the pattern specified in Section 25.209, and (7) certification 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.
 - 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).
 - 5216 --- All operations shall be on a non-common carrier 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.