

RADIO STATION AUTHORIZATION

Name: Bonneville International Corporation

Authorization Type: Renewal of License

Call Sign: E020215

File Number: SES-RWL-20170915-01026

Non Common Carrier

Grant date: 09/19/2017

2017 Expiration Date:

11/14/2032



Nature of Service: Domestic Fixed Satellite Service Nature of Service: International Fixed Satellite Service

Class of Station: VSAT Network

A) Site Location(s)

# Site ID	Address	Latitude	Longitude	Elevation (Meters)	NAD	Special Provisions (Refer to Section H)
1) HUB	55 North 300 West Salt Lake City, Salt Lake, 84110	40°46'12.0"N	111°54'3.0"W	1296.9	27	
	047.70		***	3		
	N					
2) REMOTE 1	CONUS				NA	
			Kit- V			
3) REMOTE 2	CONUS				NA	
4) REMOTE 3	CONUS				NA	
5) REMOTE 4	CONUS				NA	
C) DEMORE F	COMIC				NA	•
6) REMOTE 5	CONUS				INT	



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A) Site Location(s)

# Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
7) REMOTE 6	CONUS				NA
	•		٠.		
			. •		
8) REMOTE 7	CONUS	•		e .	NA .
9) REMOTE 8	conus				NA
10) REMOTE 9	CONUS				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 14, 2017 (3 AM Eastern Standard Time) and ending November 14, 2032 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is 00/00/0000. Grantee must file with the Commission a certification upon completion of construction and commencement of operation.



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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.

For the text of these provisions, refer to Section 11.				Max	Max EIRP		Special Provisions					
#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	EIRP /Carrier (dBW)	Density /Carrier (dBW/4kHz)	Associated Antenna	(Refer to Section H)	Modul Serv			
1)	14000.0000-14500.0000	H,V	10M0G7D	Tx	68.00	34.00	HUB A1		QPSK,	COMPRESSED '	TV 4	- DATA
2)	11700.0000-12200.0000	H,V	1M60G7D	Rx	٠.		HUB A1		QPSK,	DATA		
3)	11700.0000-12200.0000	H,V	200KG7D	Rx		1.	HUB A1		QPSK,	DATA		
4)	11700.0000-12200.0000	H,V	400KG7D	Rx			HUB A1		QPSK,	DATA		
5)	11700.0000-12200.0000	H,V	800KG7D	Rx			HUB A1		QPSK,	DATA		
6)	14000.0000-14500.0000	H,V	1M60G7D	Tx	50.00	24.00	REMOTE 5		QPSK,	DATA		
7)	14000.0000-14500.0000	H,V	200KG7D	Tx	50.00	33.00	REMOTE 5		QPSK,	DATA		
8)	14000.0000-14500.0000	H,V	400KG7D	Tx	50.00	30.00	REMOTE 5		QPSK,	DATA		
9)	14000.0000-14500.0000	H,V	800KG7D	Tx	50.00	27.00	REMOTE 5		QPSK,	DATA		•
10)	11700.0000-12200.0000	H,V	10M0G7D	Rx			REMOTE 5	^	QPSK,	COMPRESSED	rv +	- DATA
11)	14000.0000-14500.0000	H,V	1M60G7D	Tx	44.00	18.00	REMOTE A1		QPSK,	DATA		
12)	14000.0000-14500.0000	H,V	200KG7D	Tx	44.00	27.00	REMOTE A1		QPSK,	DATA		
13)	14000.0000-14500.0000	H,V	400KG7D	Tx	44.00	24.00	REMOTE A1		QPSK,	DATA		
14)	14000.0000-14500.0000	H,V	800KG7D	Tx	44.00	21.00	REMOTE A1		QPSK,	DATA		
15)	11700.0000-12200.0000	H,V	10M0G7D	Rx			REMOTE A1		QPSK,	COMPRESSED 1	rv +	- DATA
16)	14000.0000-14500.0000	H,V	1M60G7D	Tx	47.00	21.00	REMOTE A2		QPSK,	DATA		
17)	14000.0000-14500.0000	H,V	200KG7D	Tx	47.00	30.00	REMOTE A2		QPSK,	DATA		
18)	14000.0000-14500.0000	H,V	400KG7D	Tx	47.00	27.00	REMOTE A2		QPSK,	DATA		
19)	14000.0000-14500.0000	H,V	800KG7D	Tx	47.00	24.00	REMOTE A2		QPSK,	DATA		
20)	11700.0000-12200.0000	H,V	10M0G7D	Rx		•	REMOTE A2		QPSK,	COMPRESSED	rv ⊣	- DATA
21)	14000.0000-14500.0000	H,V	1M60G7D	Tx	50.00	24.00	REMOTE A3		QPSK,	DATA		
22)	14000.0000-14500.0000	H,V	400KG7D	Tx	50.00	30.00	REMOTE A3		QPSK,	DATA		
23)	14000.0000-14500.0000	H,V	800KG7D	Tx	50.00	27.00	REMOTE A3		QPSK,	DATA		
24)	11700.0000-12200.0000	H,V	10M0G7D	Rx			REMOTE A3		QPSK,	COMPRESSED '	rv -	- 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.

Po	r the text of these provisions, refe	er to Section r	7.		Max EIRP	Max EIRP Density		Special Provisions		
#	Frequency (MHz)	Polarizatio Code	on Emission	Tx/Rx Mode	/Carrier	<i>'</i>	Associated Antenna	(Refer to Section H)	Modulation/ Services	
25)	14000.0000-14500.0000	H,V	1M60G7D	Tx	47.00	21.00	REMOTE A4		QPSK, DATA	
26)	14000.0000-14500.0000	H,V	200KG7D	Tx	47.00	30.00	REMOTE A4		QPSK, DATA	
27)	14000.0000-14500.0000	H,V	400KG7D	Tx	47.00	27.00	REMOTE A4		QPSK, DATA	
28)	14000.0000-14500.0000	H,V	800KG7D	Tx	47.00	24.00	REMOTE A4		QPSK, DATA	
29)	11700.0000-12200.0000	H,V	10MG0G7D	Rx			REMOTE A4		QPSK, COMPRESSED TV	+ DATA
30)	14000.0000-14500.0000	H,V	1M60G7D	Tx	53.00	27.00	REMOTE A6		QPSK, DATA	
31)	14000.0000-14500.0000	H,V	400KG7D	Tx	53.00	33.00	REMOTE A6		QPSK, DATA	
32)	14000.0000-14500.0000	H,V	800KG7D	Tx	53.00	30.00	REMOTE A6		QPSK, DATA	
33)	11700.0000-12200.0000	H,V	10M0G7D	Rx			REMOTE A6		QPSK, COMPRESSED TV	+ DATA
34)	14000.0000-14500.0000	H,V	1M60G7D	Tx	50.00	24.00	REMOTE A7		QPSK, DATA	
35)	14000.0000-14500.0000	H,V	200KG7D	Tx	50.00	33.00	REMOTE A7		QPSK, DATA	
36)	14000.0000-14500.0000	H,V	400KG7D	Tx	50.00	30.00	REMOTE A7		QPSK, DATA	
37)	14000.0000-14500.0000	H,V	800KG7D	Tx	50.00	27.00	REMOTE A7		QPSK, DATA	
38)	11700.0000-12200.0000	H;V	10M0G7D	Rx			REMOTE A7		QPSK, COMPRESSED TV	+ DATA
39)	14000.0000-14500.0000	H,V	1M60G7D	Tx	53.00	27.00	REMOTE A8		QPSK, DATA	
40)	14000.0000-14500.0000	H,V	200KG7D	Тх	53.00	36.00	REMOTE A8		QPSK, DATA	
41)	14000.0000-14500.0000	H,V	400KG7D	Tx	53.00	33.00	REMOTE A8		QPSK, DATA	
42)	14000.0000-14500.0000	H,V	800KG7D	Tx	53.00	30.00	REMOTE A8		QPSK, DATA	
43)	11700.0000-12200.0000	H,V	10M0G7D	Rx			REMOTE A8		QPSK, COMPRESSED TV	+ DATA
44)	14000.0000-14500.0000	H,V	1M60G7D	Тx	56.00	30.00	REMOTE A9		QPSK, DATA	
45)	14000.0000-14500.0000	H,V	400KG7D	Tx	56.00	36.00	REMOTE A9		QPSK, DATA	
46)	14000.0000-14500.0000	H,V	800KG7D	Тх	56.00	33.00	REMOTE A9		QPSK, DATA	
47)	11700.0000-12200.0000	H,V	10M0G7D	Rx			REMOTE A9		QPSK, COMPRESSED TV	+ DATA



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C) Frequency Coordination Limits

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.) East West Limit Limit	Elevation (Degrees) East West Limit Limit	Azimuth (Degrees) East West Limit Limit		Associated Antenna(s)
1)	11700.0000-12200.0000	65.0W-142.0W	20.0-20.0			REMOTE A9
2)	14000.0000-14500.0000	65.0W-142.0W	20.0-20.0		-11.5	REMOTE A9
3)	11700.0000-12200.0000	65.0W-142.0W	20.0-20.0	÷		REMOTE A8
4)	14000.0000-14500.0000	65.0W-142.0W	20.0-20.0		-14.5	REMOTE A8
5)	11700.0000-12200.0000	65.0W-142.0W	20.0-20.0			REMOTE A7
6)	14000.0000-14500.0000	65.0W-142.0W	20.0-20.0		-17.5	REMOTE A7
7)	11700.0000-12200.0000	65.0W-142.0W	20.0-20.0			REMOTE A6
8)	14000.0000-14500.0000	65.0W-142.0W	20.0-20.0		-11.5	REMOTE A6
9)	11700.0000-12200.0000	65.0W-142.0W	20.0-20.0			REMOTE 5
10)	14000.0000-14500.0000	65.0W-142.0W	20.0-20.0		-14.5	REMOTE 5
11)	11700.0000-12200.0000	65.0W-142.0W	20.0-20.0			REMOTE A4
12)	14000.0000-14500.0000	65.0W-142.0W	20.0-20.0		-17.5	REMOTE A4
13)	11700.0000-12200.0000	65.0W-142.0W	20.0-20.0			REMOTE A3
14)	14000.0000-14500.0000	65.0W-142.0W	20.0-20.0		-11.5	REMOTE A3
15)	11700.0000-12200.0000	65.0W-142.0W	20.0-20.0			REMOTE A2
16)	14000.0000-14500.0000	65.0W-142.0W	20.0-20.0		-14.5	REMOTE A2
17)	11700.0000-12200.0000	65.0W-142.0W	20.0-20.0			REMOTE A1
18)	14000.0000-14500.0000	65.0W-142.0W	20.0-20.0		-17.5	REMOTE Al
19)	11700.0000-12200.0000	65.0W-142.0W	23.2-33.7	121.5-221.6		HUB A1
20)	14000.0000-14500.0000	65.0W-142.0W	23.2-33.7	121.5-221.6	-13	HUB A1

D) Points of Communications

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

- 1) REMOTE 9 to Permitted Space Station List
- 2) REMOTE 8 to Permitted Space Station List
- 3) REMOTE 7 to Permitted Space Station List
- 4) REMOTE 6 to Permitted Space Station List
- 5) REMOTE 5 to Permitted Space Station List
- 6) REMOTE 4 to Permitted Space Station List
- 7) REMOTE 3 to Permitted Space Station List
- 8) REMOTE 2 to Permitted Space Station List
- 9) REMOTE 1 to Permitted Space Station List
- 10) HUB to Permitted Space Station List



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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:

- 11) HUB to Permitted Space Station List
- 12) HUB to Permitted Space Station List

F) Antenna Facilities

E) A Site	e	Antenna ID	Units	Diameter (meters)	Manufacturer	Model num	Site Elevation ber (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
HUB		HUB A1	1	4.6	Andrew	ESA 4.	6 1296.9	18.3 AGL/ 1315 AMS	L
		ns(s):				0 dBi @ 1	4.0000 GHz		
					flange (Watts) = l carriers (dBW) =	20.0 68.0			
REMOTE	5	REMOTE 5	40	1.8	CHANNEL MASTER	CM 184	1	3 AGL	
	Max Gai						4.0000 GHz		
		_	-		a flange (Watts) = .l carriers (dBW) =	2.0 50.0			
REMOTE	1	REMOTE A1	: 40	1.2	CHANNEL MASTER	CM 124	1	3 AGL	
	Max Gai	• •					4.0000 GHz		
					a flange (Watts) = l carriers (dBW) =	1.0	_		
	rariman	aggregate o	асрас .						
REMOTE	2	REMOTE A2	40	1.2	CHANNEL MASTER	CM 124	1	3 AGL	
		ns(s):					4.0000 GHz		
					flange (Watts) =	2.0 47.			
	Maximum	aggregate o	ucpuc	EIRP IOT a.	i carriers (dbw) =	±/	50		
REMOTE	3	REMOTE A3	40	1.2	CHANNEL MASTER	CM 124	1	3 AGL	
	Max Gai	• •				0 dBi @ 1	4.0000 GHz		
					flange (Watts) =	4.0			
	Maximum	aggregate o	utput 1	EIRP for a	l carriers (dBW) =	50.	00		



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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)
REMOTE 4	REMOTE A4	40	1.8	CHANNEL MASTER	CM 184		3 AGL	
Maxi			at antenna	2.0000 GHz 47 flange (Watts) = l carriers (dBW) =		000 GHz		
REMOTE 6	REMOTE A6	40	1.8	CHANNEL MASTER	CM 184	•	3 AGL	
Maxi		t power	at antenna	2.0000 GHz 47 flange (Watts) = l carriers (dBW) =	0 dBi @ 14.00 4.00 53.00	000 GHz		
REMOTE 7	REMOTE A7	40	2.4	CHANNEL MASTER	CM 244		3 AGL	
Maxi		t power	at antenna	2.0000 GHz 50 flange (Watts) = l carriers (dBW) =	.0 dBi @ 14.00 1.00 50.00	000 GHz		
	F *,							
Maxi		t power	at antenna	CHANNEL MASTER 2.0000 GHz 50 flange (Watts) = 1 carriers (dBW) =	2.00	000 GHz	3 AGL	
REMOTE 9	REMOTE A9	40	2.4	CHANNEL MASTER	CM 244	000 GW-	3 AGL	
Maxi		t power	at antenna	2.0000 GHz 50 flange (Watts) = l carriers (dBW) =	.0 dBi @ 14.00 4.00 56.00	000 GHz		

G) Antenna Structure marking and lighting requirements:

None unless otherwise specified under Special and General Provisions



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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:
 - 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.
- 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) 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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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.