Approved by OMB
3060−0678

Date & Time Filed: Jan 16 2004 1:27:01:466PM
File Number: SES−MOD−INTR2004−00108

FCC APPLICATION FOR SPACE AND EARTH STATION:MOD OR AMD − MAIN FORM FCC 312 MAIN FORM FOR OFFICIAL USE ONLY	FCC Use Only

APPLICANT INFORMATION
Enter a description of this application to identify it on the main menu:
Modification seeks to add antennas from various manufacturers

1−8. Legal Name of Applicant

Name:	Mainstream Data, Inc.	**Phone Number:**	801−584−2800
DBA Name:		**Fax Number:**	801−584−2831
Street:	375 Chipeta Way	**E−Mail:**	mrasmussen@mainstreamdata.com
	Suite B		
City:	Salt Lake City	**State:**	UT
Country:	USA	**Zipcode:**	84108 −
Attention:	Mr Mitchell J Rasmussen		

9−16. Name of Contact Representative (If other than applicant)

Name:	Robert Chamberlin	**Phone Number:**	410 573 4700
Company:	Lightspeed Communications, Inc.	**Fax Number:**	410 573 4879
Street:	1921 Generals Hwy.	**E−Mail:**	bcham@lightspeedcomm.com
City:	Annapolis	**State:**	MD
Country:	USA	**Zipcode:**	21401−6718
Contact Title:	VP Engineering	**Relationship:**	Engineer

CLASSIFICATION OF FILING

17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.

- (●) a1. Earth Station
- ( ) a2. Space Station

(N/A) b1. Application for License of New Station
(N/A) b2. Application for Registration of New Domestic Receive−Only Station
( ) (N/A) b3. Amendment to a Pending Application
(●) (N/A) b4. Modification of License or Registration
b5. Assignment of License or Registration
b6. Transfer of Control of License or Registration
( ) (N/A) b7. Notification of Minor Modification
(N/A) b8. Application for License of New Receive−Only Station Using Non−U.S. Licensed Satellite
(N/A) b9. Letter of Intent to Use Non−U.S. Licensed Satellite to Provide Service in the United States
( ) (N/A) b10. Other (Please specify)

17c. Is a fee submitted with this application?

(●) If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R.Section 1.1114).

( ) Governmental Entity ( ) Noncommercial educational licensee

( ) Other(please explain):

17d.

Fee Classification A CGV − Fixed Satellite VSAT System

18. If this filing is in reference to an existing station, enter:	19. If this filing is an amendment to a pending application enter both fields, if this filing is a modification please enter only the file number:	
(a) Call sign of station: E920589	(a) Date pending application was filed:	(b) File number: SESMOD2002121202213

TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Select all that apply:

- [x] a. Fixed Satellite
- [ ] b. Mobile Satellite
- [ ] c. Radiodetermination Satellite
- [ ] d. Earth Exploration Satellite
- [ ] e. Direct to Home Fixed Satellite
- [ ] f. Digital Audio Radio Service
- [ ] g. Other (please specify)

21. STATUS: Choose the button next to the applicable status. Choose only one.

○ Common Carrier ◉ Non−Common Carrier

22. If earth station applicant, check all that apply.

- [x] Using U.S. licensed satellites
- [ ] Using Non−U.S. licensed satellites

23. If applicant is providng INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities:

○ Connected to a Public Switched Network ◉ Not connected to a Public Switched Network ○ N/A

24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all applicable frequency band(s).

- [ ] a. C−Band (4/6 GHz)
- [x] b. Ku−Band (12/14 GHz)
- [ ] c.Other (Please specify upper and lower frequencies in MHz.)

Frequency Lower: Frequency Upper: (Please specify additional frequencies in an attachment)

TYPE OF STATION

25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.

- (●) a. Fixed Earth Station
- ( ) b. Temporary−Fixed Earth Station
- ( ) c. 12/14 GHz VSAT Network
- ( ) d. Mobile Earth Station
- ( ) e. Geostationary Space Station
- ( ) f. Non−Geostationary Space Station
- ( ) g. Other (please specify)

26. TYPE OF EARTH STATION FACILITY:

(●) Transmit/Receive ( ) Transmit−Only ( ) Receive−Only ( ) N/A

"For Space Station applications, select N/A."

PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an 'X' in the box(es) next to all that apply.)

- [x] a −− authorization to add new emission designator and related service
- [ ] b −− authorization to change emission designator and related service
- [x] c −− authorization to increase EIRP and EIRP density
- [ ] d −− authorization to replace antenna
- [x] e −− authorization to add antenna
- [ ] f −− authorization to relocate fixed station
- [ ] g −− authorization to change frequency(ies)
- [ ] h −− authorization to add frequency
- [ ] i −− authorization to add Points of Communication (satellites & countries)
- [ ] j −− authorization to change Points of Communication (satellites & countries)
- [ ] k −− authorization for facilities for which environmental assessment and radiation hazard reporting is required
- [ ] l −− authorization to change orbit location
- [ ] m −− authorization to perform fleet management
- [ ] n −− authorization to extend milestones
- [ ] o −− Other (Please specify)

ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. 1.1308 and 1.1311, as an exhibit to this application.A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments.	○ Yes ◉ No ExhibitB2A

ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30−34.

29. Is the applicant a foreign government or the representative of any foreign government?	○ Yes ◉ No ○ N/A
30. Is the applicant an alien or the representative of an alien?	○ Yes ◉ No ○ N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	○ Yes ◉ No ○ N/A
32. Is the applicant a corporation of which more than one−fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	○ Yes ◉ No ○ N/A

33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one−fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	○ Yes ◉ No ○ N/A
34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.	ExhibitB3

BASIC QUALIFICATIONS

35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules? If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.	○ Yes ◉ No ExhibitB2
36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explination of circumstances.	○ Yes ◉ No Schedule

37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explination of circumstances.	○ Yes	◉ No
38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attemptiing unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition?If Yes, attach as an exhibit, an explanation of circumstances	○ Yes	◉ No
39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhinit, an explanation of the circumstances.	○ Yes	◉ No
40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer.		

41. By checking Yes, the undersigned certifies, that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti−Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application" for these purposes.	(●) Yes ( ) No
42a. Does the applicant intend to use a non−U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43.	( ) Yes (●) No
42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station?	

43. Description. (Summarize the nature of the application and the services to be provided). (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

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Modification seeks to add antennas from various manufacturers,  and increase maximum
transmit power on some antennas.  Two antennas, a 98 cm Prodelin and a 96 cm Channel
Master are not fully compliant with FCC25.209 but include coordination affidavits from the
Satellite Operator and adjacent Satellite operators.
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Exhibit B1

CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

44. Applicant is a (an): (Choose the button next to applicable response.)

- ○ Individual
- ○ Unincorporated Association
- ○ Partnership
- ◉ Corporation
- ○ Governmental Entity
- ○ Other (please specify)

45. Name of Person Signing	46. Title of Person Signing
Mitchell J Rasmussen	COO/CEO Mainstream Data, Inc.

47. Please supply any need attachments.

Attachment 1: ExhibitB2B	Attachment 2:	Attachment 3:

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT
(U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION
(U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

SATELLITE EARTH STATION AUTHORIZATIONS
FCC Form 312 − Schedule B:(Technical and Operational Description)
FOR OFFICIAL USE ONLY

Location of Earth Station Site

E1: Site Identifier:	REM CM24	E5. Call Sign:	E920589
E2: Contact Name	David Frymire	E6. Phone Number:	801 584 2838
E3. Street:	375 Chipeta Way	E7. City:	Salt Lake City
	Salt Lake City, UT	E8. County:	Salt Lake
E4. State	UT	E9. Zip Code	84108
E10. Area of Operation:		CONUS, AK, HI, PR, USVI	
E11. Latitude:	0 °0 ’0.0 "		
E12. Longitude:	0 °0 ’0.0 "		
E13. Lat/Lon Coordinates are:		○ NAD−27	○ NAD−83 ◉ N/A
E14. Site Elevation (AMSL):		0.0 meters	

E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer’s qualification measurement? If NO, provide as a technical analysis showing compliance with two−degree spacing policy.	◉ Yes ○ No ○ N/A

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non−geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	○ Yes ○ No ◉ N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	◉ Yes ○ No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as	○ Yes ◉ No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	○ Yes ◉ No
E20. FAA Notification − (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and/or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	○ Yes ◉ No

POINTS OF COMMUNICATION

Satellite Name: PERMITTED LIST If you selected OTHER, please enter the following:	
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

POINTS OF COMMUNICATION (Destination Points)

E25. Site Identifier: REM CM24	

E26. Common Name:	E27. Country: USA

ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size<meters>	E41/42. Antenna Gain Transmint and/or Recieve (____dBi at _____GHz)
REM CM24	REM CM24	250	Channel Master	224 Ku	2.4	47.6 dBi at 11.95
						49.2 dBi at 14.25

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)	E36. Above Sea Level(meters)	E37. Building Height Above Ground Level (meters)	E38. Total Input Power at antenna flange (Watts)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for al carriers(dBW)
REM CM24	2.4/2.4	0.0	0.0	0.0	4.0	0.0	55.2

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V, L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
REM CM24	11700 12200	R	Horizontal and Vertical	54M0G7D	0.0	0.0

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

DVB/MPE DATA FROM HUB1

REM CM24	14000 14500	T	Horizontal and Vertical	1M60G7D	55.2	29.2

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

REM CM24	14000 14500	T	Horizontal and Vertical	200KG7D	52.2	35.2

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

REM CM24	14000 14500	T	Horizontal and Vertical	400KG7D	55.2	35.2

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

REM CM24	14000 14500	T	Horizontal and Vertical	800KG7D	55.2	32.2

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

FREQUENCY COORDINATION

E28. Antenna Id	**E51. Satellite Orbit Type**	**E52/53. Frequency Limits(MHz)**	**E54/55. Range of Satellite Arc Eastern/Western Limit**	**E56. Earth Station Azimuth Angle Eastern Limit**	**E57. Antenna Elevation Angle Eastern Limit**	**E58. Earth Station Azimuth Angle Western Limit**	**E59. Antenna Elevation Angle Western Limit**	**E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)**
REM CM24	Geostationary	14 14.5	60.0/143.0	0.0	10.0	0.0	10.0	−7.0

REMOTE CONTROL POINT LOCATION

E61. Call Sign E920589 NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.	E66. Phone Number 801 584 2800
E62. Street Address 375 Chipeta Way Suite 200	

E63. City Salt Lake City	E68. County Salt Lake	E67/68. State/Country UT/ USA	E64. Zip Code 84108

SATELLITE EARTH STATION AUTHORIZATIONS
FCC Form 312 − Schedule B:(Technical and Operational Description)
FOR OFFICIAL USE ONLY

Location of Earth Station Site

E1: Site Identifier:	REM PR24	E5. Call Sign:	E920589
E2: Contact Name	David Frymire	E6. Phone Number:	801 584 2800
E3. Street:	375 Chipeta Way	E7. City:	Salt Lake City
	Suite 200	E8. County:	Salt Lake
E4. State	UT	E9. Zip Code	84108
E10. Area of Operation:		CONUS, AK, HI, PR, USVI	
E11. Latitude:	0 °0 ’0.0 "		
E12. Longitude:	0 °0 ’0.0 "		
E13. Lat/Lon Coordinates are:	○ NAD−27	○ NAD−83	◉ N/A
E14. Site Elevation (AMSL):	0.0 meters		

E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer’s qualification measurement? If NO, provide as a technical analysis showing compliance with two−degree spacing policy.	◉ Yes ○ No ○ N/A
E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non−geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer’s qualification measurements?	○ Yes ○ No ◉ N/A

E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	◉ Yes ○ No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as	○ Yes ◉ No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	○ Yes ◉ No
E20. FAA Notification − (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and/or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	○ Yes ◉ No

POINTS OF COMMUNICATION

Satellite Name: PERMITTED LIST If you selected OTHER, please enter the following:	
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

POINTS OF COMMUNICATION (Destination Points)

E25. Site Identifier: REM PR24	
E26. Common Name:	E27. Country: USA

ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size<meters>	E41/42. Antenna Gain Transmint and/or Recieve (____dBi at _____GHz)
REM PR24	REM PR24	250	PRODELIN	1251	2.4	47.8 dBi at 11.95
						49.3 dBi at 14.25

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)	E36. Above Sea Level(meters)	E37. Building Height Above Ground Level (meters)	E38. Total Input Power at antenna flange (Watts)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for al carriers(dBW)
REM PR24	2.4/2.4	0.0	0.0	0.0	0.0	0.0	55.3

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V, L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
REM PR24	11700 12200	R	Horizontal and Vertical	54M0G7D	0.0	0.0

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

DVB/MPE DATA FROM HUB1

REM PR24	14000 14500	T	Horizontal and Vertical	1M6G7D	55.3	29.3

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK DATA

REM PR24	14000 14500	T	Horizontal and Vertical	200KG7D	52.3	35.3

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK DATA

REM PR24	14000 14500	T	Horizontal and Vertical	400KG7D	55.3	35.3

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK DATA

REM PR24	14000 14500	T	Horizontal and Vertical	800KG7D	55.3	32.3

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK DATA

FREQUENCY COORDINATION

E28. Antenna Id	**E51. Satellite Orbit Type**	**E52/53. Frequency Limits(MHz)**	**E54/55. Range of Satellite Arc Eastern/Western Limit**	**E56. Earth Station Azimuth Angle Eastern Limit**	**E57. Antenna Elevation Angle Eastern Limit**	**E58. Earth Station Azimuth Angle Western Limit**	**E59. Antenna Elevation Angle Western Limit**	**E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)**
REM PR24	Geostationary	14000 14500	60.0/143.0	0.0	10.0	0.0	10.0	−7.0

REMOTE CONTROL POINT LOCATION

E61. Call Sign E920589 NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.	E66. Phone Number 801 584 2800

E62. Street Address
375 CHIPETA WAY
SUITE 200

E63. City Salt Lake City	E68. County Salt Lake	E67/68. State/Country UT/ USA	E64. Zip Code 84108

SATELLITE EARTH STATION AUTHORIZATIONS
FCC Form 312 − Schedule B:(Technical and Operational Description)
FOR OFFICIAL USE ONLY

Location of Earth Station Site

E1: Site Identifier:	REM PR18	E5. Call Sign:	E920589
E2: Contact Name	David Frymire	E6. Phone Number:	801 584 2800
E3. Street:	375 Chipeta Way	E7. City:	Salt Lake City
	Sutie 200	E8. County:	Salt Lake
E4. State	UT	E9. Zip Code	84108
E10. Area of Operation:		CONUS, AK, HI, PR, USVI	
E11. Latitude:	0 °0 ’0.0 "		
E12. Longitude:	0 °0 ’0.0 "		
E13. Lat/Lon Coordinates are:	○ NAD−27	○ NAD−83	◉ N/A
E14. Site Elevation (AMSL):	0.0 meters		

E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer’s qualification measurement? If NO, provide as a technical analysis showing compliance with two−degree spacing policy.	◉ Yes ○ No ○ N/A

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non−geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	○ Yes ○ No ◉ N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	◉ Yes ○ No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as	○ Yes ◉ No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	○ Yes ◉ No
E20. FAA Notification − (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and/or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	○ Yes ◉ No

POINTS OF COMMUNICATION

Satellite Name: PERMITTED LIST If you selected OTHER, please enter the following:	
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country: USA

POINTS OF COMMUNICATION (Destination Points)

E25. Site Identifier: REM PR18	

E26. Common Name:	E27. Country: USA

ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size<meters>	E41/42. Antenna Gain Transmint and/or Recieve (____dBi at _____GHz)
REM PR18	REM PR18	1500	PRODELIN	180TX	1.8	45.0 dBi at 11.95
						46.5 dBi at 14.25

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)	E36. Above Sea Level(meters)	E37. Building Height Above Ground Level (meters)	E38. Total Input Power at antenna flange (Watts)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for al carriers(dBW)
REM PR18	1.8/1.8	0.0	0.0	0.0	4.0	0.0	52.5

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V, L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
REM PR18	11700 12200	R	Horizontal and Vertical	54M0G7D	0.0	0.0

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

DVB/MPE Data from HUB1

REM PR18	14000 14500	T	Horizontal and Vertical	1M6G7D	52.5	26.5

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

REM PR18	14000 145000	T	Horizontal and Vertical	200KG7D	49.5	32.5

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

REM PR18	14000 145000	T	Horizontal and Vertical	400KG7D	52.5	32.5

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

REM PR18	14000 145000	T	Horizontal and Vertical	800KG7D	52.5	29.5

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

FREQUENCY COORDINATION

E28. Antenna Id	**E51. Satellite Orbit Type**	**E52/53. Frequency Limits(MHz)**	**E54/55. Range of Satellite Arc Eastern/Western Limit**	**E56. Earth Station Azimuth Angle Eastern Limit**	**E57. Antenna Elevation Angle Eastern Limit**	**E58. Earth Station Azimuth Angle Western Limit**	**E59. Antenna Elevation Angle Western Limit**	**E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)**
REM PR18	Geostationary	14000 14500	60.0/143.0	0.0	10.0	0.0	10.0	−7.0

REMOTE CONTROL POINT LOCATION

E61. Call Sign E920589 NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.		E66. Phone Number 801 584 2800	
E62. Street Address 375 Chipeta Way Suite 200			
E63. City Salt Lake City	E68. County Salt Lake	E67/68. State/Country UT/ USA	E64. Zip Code 84108

SATELLITE EARTH STATION AUTHORIZATIONS
FCC Form 312 − Schedule B:(Technical and Operational Description)
FOR OFFICIAL USE ONLY

Location of Earth Station Site

E1: Site Identifier:	REM CM18	E5. Call Sign:	E920589
E2: Contact Name	David Frymire	E6. Phone Number:	801 584 2800
E3. Street:	375 Chipeta Way	E7. City:	Salt Lake City
	Suite 200	E8. County:	Salt Lake
E4. State	UT	E9. Zip Code	84108
E10. Area of Operation:		CONUS, AK, HI, PR, USVI	
E11. Latitude:	0 °0 ’0.0 "		
E12. Longitude:	0 °0 ’0.0 "		
E13. Lat/Lon Coordinates are:		○ NAD−27	○ NAD−83 ◉ N/A
E14. Site Elevation (AMSL):		0.0 meters	

E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer’s qualification measurement? If NO, provide as a technical analysis showing compliance with two−degree spacing policy.	◉ Yes ○ No ○ N/A
E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non−geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer’s qualification measurements?	○ Yes ○ No ◉ N/A

E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	◉ Yes ○ No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as	○ Yes ◉ No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	○ Yes ◉ No
E20. FAA Notification − (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and/or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	○ Yes ◉ No

POINTS OF COMMUNICATION

Satellite Name: PERMITTED LIST If you selected OTHER, please enter the following:	
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country: USA

POINTS OF COMMUNICATION (Destination Points)

E25. Site Identifier: REM CM18	
E26. Common Name:	E27. Country: USA

ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size<meters>	E41/42. Antenna Gain Transmint and/or Recieve (____dBi at _____GHz)
REM CM18	REM CM18	2500	CHANNEL MASTER	180TX	1.8	45.3 dBi at 11.95
						46.8 dBi at 14.25

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)	E36. Above Sea Level(meters)	E37. Building Height Above Ground Level (meters)	E38. Total Input Power at antenna flange (Watts)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for al carriers(dBW)
REM CM18	1.8/1.8	0.0	0.0	0.0	4.0	0.0	52.8

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V, L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
REM CM18	11700 12200	R	Horizontal and Vertical	54M0G7D	0.0	0.0

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

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DVB/MPE Data from HUB1
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REM CM18	14000 14500	T	Horizontal and Vertical	1M6G7D	52.8	26.8

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

REM CM18	14000 14500	T	Horizontal and Vertical	200KG7D	49.8	32.8

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

REM CM18	14000 14500	T	Horizontal and Vertical	400KG7D	52.8	32.8

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

REM CM18	14000 14500	T	Horizontal and Vertical	800KG7D	52.8	29.8

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

FREQUENCY COORDINATION

E28. Antenna Id	**E51. Satellite Orbit Type**	**E52/53. Frequency Limits(MHz)**	**E54/55. Range of Satellite Arc Eastern/Western Limit**	**E56. Earth Station Azimuth Angle Eastern Limit**	**E57. Antenna Elevation Angle Eastern Limit**	**E58. Earth Station Azimuth Angle Western Limit**	**E59. Antenna Elevation Angle Western Limit**	**E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)**
REM CM18	Geostationary	14000 14500	60.0/143.0	0.0	10.0	0.0	10.0	−7.0

REMOTE CONTROL POINT LOCATION

E61. Call Sign E920589 NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.		E66. Phone Number 801 584 2800	
E62. Street Address 375 Chipeta Way Suite 200			
E63. City Salt Lake City	E68. County Salt Lake	E67/68. State/Country UT/ USA	E64. Zip Code 84108

SATELLITE EARTH STATION AUTHORIZATIONS
FCC Form 312 − Schedule B:(Technical and Operational Description)
FOR OFFICIAL USE ONLY

Location of Earth Station Site

E1: Site Identifier:	REM PR12	E5. Call Sign:	E920589
E2: Contact Name	David Frymire	E6. Phone Number:	801 584 2800
E3. Street:	375 Chipeta Way	E7. City:	Salt Lake City
	Suite 200	E8. County:	Salt Lake
E4. State	UT	E9. Zip Code	84108
E10. Area of Operation:		CONUS, AK HI PR USVI	
E11. Latitude:	0 °0 ’0.0 "		
E12. Longitude:	0 °0 ’0.0 "		
E13. Lat/Lon Coordinates are:	○ NAD−27	○ NAD−83	◉ N/A
E14. Site Elevation (AMSL):	0.0 meters		

E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer’s qualification measurement? If NO, provide as a technical analysis showing compliance with two−degree spacing policy.	◉ Yes ○ No ○ N/A

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non−geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	○ Yes ○ No ◉ N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	◉ Yes ○ No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as	○ Yes ◉ No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	○ Yes ◉ No
E20. FAA Notification − (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and/or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	○ Yes ◉ No

POINTS OF COMMUNICATION

Satellite Name: PERMITTED LIST If you selected OTHER, please enter the following:	
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country: USA

POINTS OF COMMUNICATION (Destination Points)

E25. Site Identifier: REM PR12	

E26. Common Name:	E27. Country: USA

ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size<meters>	E41/42. Antenna Gain Transmint and/or Recieve (____dBi at _____GHz)
REM PR12	REM PR12	5000	PRODELIN	1134	1.2	41.5 dBi at 11.95
						43.0 dBi at 14.25

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)	E36. Above Sea Level(meters)	E37. Building Height Above Ground Level (meters)	E38. Total Input Power at antenna flange (Watts)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for al carriers(dBW)
REM PR12	1.2/1.2	0.0	0.0	0.0	4.0	0.0	49.0

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V, L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
REM PR12	11700 12200	T	Horizontal and Vertical	54M0G7D	0.0	0.0

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

DVB/MPE Data from HUB1

REM PR12	14000 145000	T	Horizontal and Vertical	1M6G7D	49.0	23.0

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

REM PR12	14000 14500	T	Horizontal and Vertical	200KG7D	46.0	29.0

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

REM PR12	14000 14500	T	Horizontal and Vertical	400KG7D	49.0	29.0

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

REM PR12	14000 14500	T	Horizontal and Vertical	800KG7D	49.0	26.0

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

FREQUENCY COORDINATION

E28. Antenna Id	**E51. Satellite Orbit Type**	**E52/53. Frequency Limits(MHz)**	**E54/55. Range of Satellite Arc Eastern/Western Limit**	**E56. Earth Station Azimuth Angle Eastern Limit**	**E57. Antenna Elevation Angle Eastern Limit**	**E58. Earth Station Azimuth Angle Western Limit**	**E59. Antenna Elevation Angle Western Limit**	**E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)**
REM PR12	Geostationary	14000 14500	60.0/143.0	0.0	10.0	0.0	10.0	−7.0

REMOTE CONTROL POINT LOCATION

E61. Call Sign E920589 NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.		E66. Phone Number 801 584 2800	
E62. Street Address 375 Chipeta Way Suite 200			
E63. City Salt Lake City	E68. County Salt Lake	E67/68. State/Country UT/ USA	E64. Zip Code 84108

SATELLITE EARTH STATION AUTHORIZATIONS
FCC Form 312 − Schedule B:(Technical and Operational Description)
FOR OFFICIAL USE ONLY

Location of Earth Station Site

E1: Site Identifier:	REM CM12	E5. Call Sign:	E920589
E2: Contact Name	David Frymire	E6. Phone Number:	801 584 2800
E3. Street:	375 Chipeta Way	E7. City:	Salt Lake City
	Suite 200	E8. County:	Salt Lake
E4. State	UT	E9. Zip Code	84108
E10. Area of Operation:		CONUS AK HI PR USVI	
E11. Latitude:	0 °0 ’0.0 "		
E12. Longitude:	0 °0 ’0.0 "		
E13. Lat/Lon Coordinates are:	○ NAD−27	○ NAD−83	◉ N/A
E14. Site Elevation (AMSL):	0.0 meters		

E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer’s qualification measurement? If NO, provide as a technical analysis showing compliance with two−degree spacing policy.	◉ Yes ○ No ○ N/A
E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non−geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer’s qualification measurements?	○ Yes ○ No ◉ N/A

E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	◉ Yes ○ No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as	○ Yes ◉ No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	○ Yes ◉ No
E20. FAA Notification − (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and/or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	○ Yes ◉ No

POINTS OF COMMUNICATION

Satellite Name: PERMITTED LIST If you selected OTHER, please enter the following:	
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country: USA

POINTS OF COMMUNICATION (Destination Points)

E25. Site Identifier: REM CM12	
E26. Common Name:	E27. Country: USA

ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size<meters>	E41/42. Antenna Gain Transmint and/or Recieve (____dBi at _____GHz)
REM CM12	REM CM12	5000	CHANNEL MASTER	123/124	1.2	41.8 dBi at 11.95
						43.3 dBi at 14.25

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)	E36. Above Sea Level(meters)	E37. Building Height Above Ground Level (meters)	E38. Total Input Power at antenna flange (Watts)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for al carriers(dBW)
REM CM12	1.2/1.2	0.0	0.0	0.0	4.0	0.0	49.3

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V, L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
REM CM12	11700 12200	R	Horizontal and Vertical	54M0G7D	0.0	0.0

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

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DVB/MPD data from HUB1
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REM CM12	14000 14500	T	Horizontal and Vertical	1M6G7D	49.3	23.3

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

REM CM12	14000 14500	T	Horizontal and Vertical	200KG7D	46.3	29.3

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

REM CM12	14000 14500	T	Horizontal and Vertical	400KG7D	49.3	29.3

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

REM CM12	14000 14500	T	Horizontal and Vertical	800KG7D	49.3	26.3

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

FREQUENCY COORDINATION

E28. Antenna Id	**E51. Satellite Orbit Type**	**E52/53. Frequency Limits(MHz)**	**E54/55. Range of Satellite Arc Eastern/Western Limit**	**E56. Earth Station Azimuth Angle Eastern Limit**	**E57. Antenna Elevation Angle Eastern Limit**	**E58. Earth Station Azimuth Angle Western Limit**	**E59. Antenna Elevation Angle Western Limit**	**E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)**
REM CM12	Geostationary	14000 14500	60.0/143.0	0.0	10.0	0.0	10.0	−7.0

REMOTE CONTROL POINT LOCATION

E61. Call Sign NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.			E66. Phone Number
E62. Street Address			
E63. City	E68. County	E67/68. State/Country /	E64. Zip Code

SATELLITE EARTH STATION AUTHORIZATIONS
FCC Form 312 − Schedule B:(Technical and Operational Description)
FOR OFFICIAL USE ONLY

Location of Earth Station Site

E1: Site Identifier:	REM PR98	E5. Call Sign:	E920589
E2: Contact Name	David Frymire	E6. Phone Number:	801 584 2800
E3. Street:	375 Chipeta Way	E7. City:	Salt Lake Ciy
	Suite 200	E8. County:	Salt Lake
E4. State	UT	E9. Zip Code	84108
E10. Area of Operation:		CONUS AK HI PR USVI	
E11. Latitude:	0 °0 ’0.0 "		
E12. Longitude:	0 °0 ’0.0 "		
E13. Lat/Lon Coordinates are:		○ NAD−27	○ NAD−83 ◉ N/A
E14. Site Elevation (AMSL):		0.0 meters	

E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer’s qualification measurement? If NO, provide as a technical analysis showing compliance with two−degree spacing policy.	○ Yes ◉ No ○ N/A

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non−geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	○ Yes ○ No ◉ N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	◉ Yes ○ No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as	○ Yes ◉ No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	○ Yes ◉ No
E20. FAA Notification − (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and/or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	○ Yes ◉ No

POINTS OF COMMUNICATION

Satellite Name: OTHER If you selected OTHER, please enter the following:	
E21. Common Name: GALAXY IIIC	E22. ITU Name: GALAXY IIIC
E23. Orbit Location: 95 w	E24. Country: USA

POINTS OF COMMUNICATION (Destination Points)

E25. Site Identifier: REM PR98	

E26. Common Name:	E27. Country: USA

ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size<meters>	E41/42. Antenna Gain Transmint and/or Recieve (____dBi at _____GHz)
REM PR98	REM PR98	7000	PRODELIN	1981	0.98	39.8 dBi at 11.95
						41.3 dBi at 14.25

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)	E36. Above Sea Level(meters)	E37. Building Height Above Ground Level (meters)	E38. Total Input Power at antenna flange (Watts)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for al carriers(dBW)
REM PR98	0.98/0.98	0.0	0.0	0.0	2.0	0.0	44.3

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V, L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
REM PR98	11700 12200	R	Horizontal and Vertical	54M0G7D	0.0	0.0

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

DVB/MPD data from HUB1

REM PR98	14000 14500	T	Horizontal and Vertical	200KG7D	44.3	27.3

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

REM PR98	14000 14500	T	Horizontal and Vertical	400KG7D	44.3	24.3

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

FREQUENCY COORDINATION

E28. Antenna Id	**E51. Satellite Orbit Type**	**E52/53. Frequency Limits(MHz)**	**E54/55. Range of Satellite Arc Eastern/Western Limit**	**E56. Earth Station Azimuth Angle Eastern Limit**	**E57. Antenna Elevation Angle Eastern Limit**	**E58. Earth Station Azimuth Angle Western Limit**	**E59. Antenna Elevation Angle Western Limit**	**E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)**
REM PR98	Geostationary	14000 14500	60.0/143.0	0.0	10.0	0.0	10.0	−7.0

REMOTE CONTROL POINT LOCATION

E61. Call Sign E920589 NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.			E66. Phone Number 801 584 2800
E62. Street Address 375 Chipeta Way Suite 200			
E63. City Salt Lake City	E68. County Salt Lake	E67/68. State/Country UT/ USA	E64. Zip Code 84108

SATELLITE EARTH STATION AUTHORIZATIONS
FCC Form 312 − Schedule B:(Technical and Operational Description)
FOR OFFICIAL USE ONLY

Location of Earth Station Site

E1: Site Identifier:	REM CM96	E5. Call Sign:	E920589
E2: Contact Name	David Frymire	E6. Phone Number:	801 584 2800
E3. Street:	375 Chipeta Way	E7. City:	Salt Lake City
	Suite 200	E8. County:	Salt Lake
E4. State	UT	E9. Zip Code	84108
E10. Area of Operation:		CONUS AK HI PR USVI	
E11. Latitude:	0 °0 ’0.0 "		
E12. Longitude:	0 °0 ’0.0 "		
E13. Lat/Lon Coordinates are:		○ NAD−27	○ NAD−83 ◉ N/A
E14. Site Elevation (AMSL):		0.0 meters	

E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer’s qualification measurement? If NO, provide as a technical analysis showing compliance with two−degree spacing policy.	○ Yes ◉ No ○ N/A
E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non−geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer’s qualification measurements?	○ Yes ○ No ◉ N/A

E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	◉ Yes ○ No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as	○ Yes ◉ No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	○ Yes ◉ No
E20. FAA Notification − (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and/or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	○ Yes ◉ No

POINTS OF COMMUNICATION

Satellite Name: OTHER If you selected OTHER, please enter the following:	
E21. Common Name: Galaxy IIIc	E22. ITU Name: GALAXY IIIC
E23. Orbit Location: 95 W	E24. Country: USA

POINTS OF COMMUNICATION (Destination Points)

E25. Site Identifier: REM CM96	
E26. Common Name:	E27. Country: USA

ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size<meters>	E41/42. Antenna Gain Transmint and/or Recieve (____dBi at _____GHz)
REM CM96	REM CM96	7000	CHANNEL MASTER	960TX	0.96	39.7 dBi at 11.95
						41.2 dBi at 14.25

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)	E36. Above Sea Level(meters)	E37. Building Height Above Ground Level (meters)	E38. Total Input Power at antenna flange (Watts)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for al carriers(dBW)
REM CM96	0.96/0.96	0.0	0.0	0.0	2.0	0.0	44.2

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V, L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
REM CM96	11700 12200	R	Horizontal and Vertical	54M0G7D	0.0	0.0

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

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DVB/MPE data from HUB1
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REM CM96	14000 14500	T	Horizontal and Vertical	200KG7D	44.2	27.2

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

REM CM96	14000 14500	T	Horizontal and Vertical	400KG7D	44.2	24.2

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

QPSK – DATA

FREQUENCY COORDINATION

E28. Antenna Id	**E51. Satellite Orbit Type**	**E52/53. Frequency Limits(MHz)**	**E54/55. Range of Satellite Arc Eastern/Western Limit**	**E56. Earth Station Azimuth Angle Eastern Limit**	**E57. Antenna Elevation Angle Eastern Limit**	**E58. Earth Station Azimuth Angle Western Limit**	**E59. Antenna Elevation Angle Western Limit**	**E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)**
REM CM96	Geostationary	14000 14500	60.0/143.0	0.0	10.0	0.0	10.0	−7.0

REMOTE CONTROL POINT LOCATION

E61. Call Sign E920589 NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.		E66. Phone Number 801 584 2800	
E62. Street Address 375 Chipeta Way Suite 200			
E63. City Salt Lake City	E68. County Salt Lake	E67/68. State/Country UT/ USA	E64. Zip Code 84108

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