Date & Time Filed: Oct 4 2007 5:08:52:526PM File Number: SES-MFS-20071004-01376

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

APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu: Modification Application for E020248

Modification Applicat	11011 101 E020248		
1–8. Legal Name of Ap	plicant		
Name:	EchoStar Satellite Operating Corporation	Phone Number:	303-723-1000
DBA Name:		Fax Number:	303-723-1699
Street:	9601 South Meridian Boulevard	E-Mail:	linda.kinney@echostar.com
City:	Englewood	State:	CO
Country:	USA	Zipcode:	80112 –
Attention:	Linda Kinney – (202) 293–0981		

9–16. Name of Contact Representative

Name: Pantelis Michalopoulos Phone Number: 202–429–6494

Company: Steptoe & Johnson LLP Fax Number: 202–429–3902

Street: 1330 Connecticut Ave., N.W. E-Mail: pmichalo@steptoe.com

City: Washington State: DC

Country: USA **Zipcode:** 20036–1795

Attention: Relationship: Legal Counsel

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

b3. Amendment to a Pending Application

b4. Modification of License or Registration

b5. Assignment of License or Registration

b6. Transfer of Control of License or Registration

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)

(N/A) b11. Application for Earth Station to Access a Non–U.S.satellite Not Currently Authorized to Provide the Proposed Service in the Proposed Frequencies in the United States

(N/A) b12. Application for Database Entry

b13. Amendment to a Pending Database Entry Application

b14. Modification of Database Entry

 17c. Is a fee submitted with this application If Yes, complete and attach FCC Form Governmental Entity Other(please explain): 	159. If No, indicate reason for fee exemption (see	ee 47 C.F.R.Section 1.1114).
17d. Fee Classification CGX – Fixed Satellite Testation	Fransmit/Receive Earth	
18. If this filing is in reference to an existing station, enter:(a) Call sign of station: E020248	19. If this filing is an amendment to a pending an modification please enter only the file number: (a) Date pending application was filed:	opplication enter both fields, if this filing is a (b) File number: SESMOD2007080101013

TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide	e or use the following type(s) of service(s): Select all that apply:
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) DBS	
_	
21. STATUS: Choose the button next to the applicable status. Choose	22. If earth station applicant, check all that apply.
only one.	■ Using U.S. licensed satellites
Common Carrier Non–Common Carrier	Using Non–U.S. licensed satellites
23. If applicant is providing INTERNATIONAL COMMON CARRIER s facilities:	service, see instructions regarding Sec. 214 filings. Choose one. Are these
Connected to a Public Switched Network Not connected to a	Public Switched Network
24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all a	pplicable frequency band(s).
a. C–Band (4/6 GHz) b. Ku–Band (12/14 GHz)	
c.Other (Please specify upper and lower frequencies in MHz.)	
Frequency Lower: 12200 Frequency Upper: 17800	(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.)
a — authorization to add new emission designator and related service
b — authorization to change emission designator and related service
c — authorization to increase EIRP and EIRP density
d — authorization to replace antenna
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 & Double
j — authorization to change Points of Communication (satellites & Double of Communication)
k — authorization for facilities for which environmental assessment and
radiation hazard reporting is required
1 — authorization to change orbit location
m — authorization to perform fleet management
n — authorization to extend milestones
o Other (Please specify)

ENVIRONMENTAL POLICY

under the laws of a foreign country?

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.		Question 28				
ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeror aeronautical fixed radio station services are not required to respond to Items 30–34.	ıautic	cal en	rou	te or	,	
29. Is the applicant a foreign government or the representative of any foreign government?	0	Yes	•	No		
30. Is the applicant an alien or the representative of an alien?	0	Yes	0	No	•	N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	0	Yes	0	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	_	Yes	_	No	_	N/A

Yes No

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

aliens or their representatives or by a foreign government or representative thereof or by any corporation organized

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?	O Y	^{'es} O	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.			
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.	Ċ	Yes	No
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	O No
	Quest	ion 36	

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 attempting 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	O 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	O No
	Question 42	
42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued coordinated or is in the process of coordinating the space station? Mexico, Canada	l, what administi	ration has

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.)

This is an application to modify E020248 to change frequencies, add emissions designators, increase input power and EIRP, add points of communications, change the site and antenna IDs, and correct the street address of the station.

43a. Geographic Service Rule Certification By selecting A, the undersigned certifies that the applicant is not subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25.	● A
By selecting B, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will comply with such requirements.	O B
By selecting C, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will not comply with such requirements because it is not feasible as a technical matter to do so, or that, while technically feasible, such services would require so many compromises in satellite design and operation as to make it economically unreasonable. A narrative description and technical analysis demonstrating this claim are attached.	o c

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 ap	oplicable response.)
O Individual	
Unincorporated Association	
Partnership	
Corporation	
Governmental Entity	
Other (please specify)	
_	
45. Name of Person Signing	46. Title of Person Signing
Linda Kinney	Vice President, Law and Regulation
>	
WILLFUL FALSE STATEMENTS MAI	DE 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 S	tation Site				
E1: Site Identifier:	ВН	E5. Call Sign:	E020248		
E2: Contact Name	Silas Cole	E6. Phone Number:	(307) 633–5225		
E3. Street:	10020 Liberty Street	E7. City:	Blackhawk		
		E8. County:	Meade		
E4. State	SD	E9. Zip Code	57718		
E10. Area of Opera	tion:	United States			
E11. Latitude:	44 °11 '14.2 "N				
E12. Longitude:	103 °20 '7.5 "W				
E13. Lat/Lon Coord	dinates are:	○ NAD-27	● NAD-83	O N/A	
E14. Site Elevation	(AMSL):	1109.4 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	O No	● N/A

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Set Satellite Service (FSS) with non–geostationary satellites, do(es) the progain patterns specified in Section 25.209(a2) and (b) as demonstrated by measurements?	posed antenna(s) comply with the antenna	● Yes	O No	O N/A
E17. Is the facility operated by remote control? If YES, provide the loca point.	ation and telephone number of the control	● Yes	0	No
E18. Is frequency coordination required? If YES, attach a frequency coordination	ordination report as Question E18		0	No
E19. Is coordination with another country required? If YES, attach the coordination contours as	name of the country(ies) and plot of	• Yes	•	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.1 have you attached a copy of a completed FCC Form 854 and/or the FAZ the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL APPLICATION.	A's study regarding the potential hazard of	Yes	٥	No
POINTS OF COMMUNICATION				
Satellite Name: ECHOSTAR 10 USABSS 26 110 W.L. If you select	cted OTHER, please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
Satellite Name: ECHOSTAR 6 USABSS 6 110 W.L. If you selecte	ed OTHER, please enter the following:			

E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
Satellite Name: ECHOSTAR 4 USABSS-10 77 W.L. If you selec	ted OTHER, please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
	•			
Satellite Name: RAINBOW1 BSS-17 61.5 W.L. If you selected C	OTHER, please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
	<u> </u>			
Satellite Name: ECHOSTAR 8 USABSS 8 110 W.L. If you select	red OTHER, please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
Satellite Name: ECHOSTAR 7 USABSS 7 119 W.L. If you select	ted OTHER, please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
Satallite Name: FCHOSTAR 5 USARSS 5 120 W.L. If you select	red OTHER please enter the following:			
E23. Orbit Location:	E24. Country:			
Satellite Name: FCHOSTAR 3 USARSS 8 61.5 W I If you calco	ted OTHER please enter the following:			
E21. Common Name: E23. Orbit Location:	E22. ITU Name: E24. Country: ted OTHER, please enter the following:			

E21. Commo	on Name:			E22. ITU Name:			
E23. Orbit L	ocation:			E24. Country:			
POINTS C	OF COMMUNICAT	ION (Destination	Points)	<u>.</u>			
E25. Site Ide	entifier:						
E26. Commo	on Name:			E27. Country:			
ANTENNA	A						
Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)	
ВН	ВН8	1	Vertex RSI	8M KU	8.0	58.0 dBi at 12.2000	
ВН	ВН8	1	Vertex RSI	8M KU	8.0	60.0 dBi at 17.8000	
ВН	BH13	1	Vertex RSI	13.2M KU	13.2	62.5 dBi at 12.2000	

E28. Antenna E.	233/34.	E35. Above	E36. Above Sea	E37. Building	E38. Total	E39. Maximum	E40. Total
Id Di	Diameter	Ground Level	Level(meters)	Height Above	Input Power at	Antenna Height	EIRP for al
M	/Iinor/Major	(meters)		Ground Level	antenna flange	Above Rooftop	carriers(dBW)
(n	meters)			(meters)	(Watts)	(meters)	

13.2M KU

13.2

Vertex RSI

65.4 dBi at

17.8000

ВН

BH13

1

ВН8	0.	0/0.0	11.6	7	1121.1	-	0.0		53.0		0.0	77.2
BH13	0.	0/0.0	17.9	ı	1127.2	2	0.0		324.0		0.0	90.5
FREQUEN	CY						<u>!</u>		<u>. </u>			· ·
E28. Anteni	na Id	E43/44. Frequency Ba (MHz)	ands	E45. T/R Me	ode	E46. Anto Polarizat L,R)		E47. E Design	mission ator	1	Maximum P per Carrier V)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
ВН8		12200 12210		R		OTHER		300KG	XD	0.0		0.0
Telem												
BH8		12200 12210		R		OTHER		800KF	3D	0.0		0.0
entirety.)	dulation	and Services	(If th	l ne complete d	escripti	on does no	t appear in	this box	x, please go to	o the e	end of the form	to view it in its
Tere	netry											

E50. Modulation entirety.)	and Services (If the	ne complete descripti	on does not appear in	n this box, please go t	to the end of the form	to view it in its
Telemetry						
ВН8	12690 12700	R	OTHER	800KF3D	0.0	0.0
E50. Modulation entirety.) Telemetry	Tana Services (II a	ic complete descripti	on does not appear in	n this box, please go t	o the chie of the form	
ВН8	12200 12700	R	Left and Right Circular	24M0M1F	0.0	0.0
E50. Modulation entirety.) Digital Co	and Services (If the ompressed Video		on does not appear in	n this box, please go t	o the end of the form	to view it in its
ВН8	17300 17310	Т	OTHER	1M50KXD	77.2	51.5

E50. Modulation entirety.)	n and Services (If t	he complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
Command						
ВН8	17300 17310	Т	OTHER	800KF3D	77.2	54.2
E50. Modulation entirety.)	n and Services (If t	he complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
Command						
ВН8	17790 17800	Т	OTHER	1M50KXD	77.2	51.5
E50. Modulation entirety.)	n and Services (If t	he complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
Command						
ВН8	17790 17800	Т	OTHER	800KF3D	77.2	54.2

E50. Modulation entirety.)	and Services (If the	ne complete descripti	on does not appear in	this box, please go to	o the end of the form	to view it in its
Command						
ВН8	17300 17800	Т	Left and Right Circular	24M0M1F	77.2	39.4
E50. Modulation entirety.) Digital Co	and Services (If the ompressed Video		on does not appear in	this box, please go to	o the end of the form	to view it in its
BH13	12200 12210	R	OTHER	300KGXD	0.0	0.0
E50. Modulation entirety.) Telemetry	and Services (If the	I ne complete descripti	I on does not appear in	this box, please go to	o the end of the form	to view it in its
BH13	12200 12210	R	OTHER	800KF3D	0.0	0.0

E50. Modulation entirety.)	and Services (If t	he complete descript	ion does not appear i	n this box, please go	to the end of the form	to view it in its
Telemetry						
BH13	12690 12700	R	OTHER	300KGXD	0.0	0.0
E50. Modulation entirety.) Telemetry	and Services (If t	ne complete descript	ion does not appear i	n this box, please go	o the end of the form	to view it in its
BH13	12690 12700	R	OTHER	800KF3D	0.0	0.0
E50. Modulation entirety.) Telemetry	,			n this box, please go		
BH13	12200 12700	R	Left and Right Circular	24M0M1F	0.0	0.0

E50. Modulation entirety.)	and Services (If the	ne complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
Digital Co	ompressed Video					
BH13	17300 17310	Т	OTHER	1M50KXD	85.1	59.4
E50. Modulation entirety.)	and Services (If the	ne complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
Command						
BH13	17300 17310	Т	OTHER	800KF3D	82.6	59.6
E50. Modulation entirety.)	and Services (If the	ne complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
Command						
BH13	17790 17800	Т	OTHER	1M50KXD	85.1	59.4

E50. Modula entirety.)	tion and Services	(If the complete d	escription does not appear	in this box, please	go to the end of the	he form to view it in its
Command						
BH13	17790 17800	Т	OTHER	800KF3D	82.6	59.6
entirety.) Command						
BH13	17300 17800	Т	Left and Right Circular	24M0M1F	85.1	47.3
entirety.)	tion and Services Compressed V		escription does not appear	in this box, please	go to the end of the	he form to view it in its

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern 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)
ВН8	Geostationary	12200 12700	33.0/174.0	104.0	5.3	256.3	5.1	0.0
	Geostationary	17300 17800	33.0/174.0	104.0	5.3	256.3	5.1	25.04
BH13	Geostationary	12200 12700	33.0/174.0	104.0	5.3	256.3	5.1	0.0
	Geostationary	17300 17800	33.0/174.0	104.0	5.3	256.3	5.1	19.64

REMOTE CONTROL POINT LOCATION

E61. Call Sign E980005 NOTE: Please enter the callsign of the contro callsign for which this application is being filed.	•	E66. Phone Number 307 633–5464		
E62. Street Address 530 Echostar Drive				
E63. City Cheyenne	E68. County Laramie		E67/68. State/Country WY/ USA	E64. Zip Code 82007

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