FCC	312	2
Sche	dule	S

FEDERAL COMMUNICATIONS COMMISSION SATELLITE SPACE STATION AUTHORIZATIONS (Technical and Operational Description)

Page 1: General, Frequency Bands, and GSO Orbit

S1.	GENERAL	. INFORMATION	Complete for	all satellite	applications.

a. Space Station or Satellite Network Name: AMC-15	e. Estimated Date of Placement into Service:	i Will the space station(s) operate on a Common Carrier Basis:
b. Construction Commencement Date:	f. Estimated Lifetime of Satellite(s): Years	j. Number of transponders offered on a common carrier basis:
c. Construction Completion Date:	g. Total Number of Transponders:	k. Total Common Carrier Transponder Bandwidth: MHz
d. Estimated Launch Date:	h. Total Transponder Bandwidth (no. transponders x Bandwidth) MHz	I. Orbit Type: Mark all boxes that apply: X GSO NGSO

S2. OPERATING FREQUENCY BANDS Identify the frequency range and transmit/receive mode for all frequency bands in which this station will oper Also indicate the nature of service(s) for each frequency band.

ĺ	Frequency	Band Limits		
	Lower Frequency (_Hz) Upper Frequency (_Hz)		e. T/R Mode	f. Nature of Service(s): List all that apply to this band
	a. Numeric b. Unit (K/M/G)	c. Numeric d. Unit (K/M/G		

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude105	e (Degrees E/W):	b. Alternate Orbital Longitu	ide (Degrees E/W):	c. Reason for orbital location selection:			
Longitudinal Tolerance or E/d. Toward West: e. Toward East:	1 0		Range of orbital are in whicl provided (Optional): g. Westernmost: h. Easternmost:	h adequate serv <u>Degrees</u>	ice can be <u>E/W</u>		
i. Reason for service are	selection (Optional):						

Page 2: NGSO Orbits

FCC Form 312 - Schedule S: (Technical and Operational Description)

S4. ORBITAL INFORMATION FOR NON-GEOSTATIONARY SATELLITES ONLY

S4a. Total Number of Satellites in Network or System:

S4c. Celestial Reference Body (Earth, Sun, Moon, etc.):

S4b. Total Number of Orbital Planes in Network or System: S4d. Orbit Epoch Date:

For each Orbital Plane Provide:

(e) Orbital	(f) No. of	(g) Inclination	(h) Orbital	(i) Apogee (km)	(j) Perigee (km)	(k) Right Ascension	(I) Argument of	Active Se	rvice Arc Rang	e (Degrees)
Plane No.	Satellites in	Angle (degrees)	Period			of the Ascending	Perigee	(m) Begin	(n) End	(o) Other
	Plane		(Seconds)			Node (Deg.)	(Degrees)	Angle	Ångle	. ,
			(=====)			(9-)	(5,000)	,g.o	gio	

S5. INITIAL SATELLITE PHASE ANGLE For each satellite in each orbital plane, provide the intital phase angle.

(a) Orbital Plane No.	(b) Satellite Number	(c) Initial Phase Angle
		(Degrees)

NO NGSO DATA FILED

FCC Form 312 - Schedule S: (Technical and Operational Description)

S6. SERVICE AREA CHARACTERISTICS for each service area provide:

(a) Service Area ID	(b) Type of Associated Station (Earth or Space)	(d) Service Area Description. Provide list of geographic areas (state postal codes or ITU 3-ltr codes), satellites or Figure No. of Service Area Diagram.
CUS	E	Downlink CP Beams KDL & KDR -12 dB contour

Page 3: Service Areas

Page 4: Antenna Beams

FCC Form 312 - Schedule S: (Technical and Operational Description)

S7. SPACE STATION ANTENNA BEAM CHARACTERISTICS For each antenna beam provide:

(a)	(b)	Isotropic	Antenna	(e)	(f)	(g) Min.	(h) Polar-	(i) Polarization	(j) Service		Transmit				Receive		
Beam	T/R	Ga	ain	0	Rotational	Cross-	ization	Alignment Rel.	Area ID	(k)	(I) Effective	(m)	(n)	(o) G/T	(p) Min.	Input Attent	uator (dB)
ID	Mode	(c) Peak	(d) Edge	Error	-	Polar Iso-	Switch-	Equatorial		Input	Output	Max.	System	Max.	Saturation	(g) Max.	(r) Step
		(dBi)	(dBi)	(Degrees)	(Degrees)	lation (dB)		Plane (Degrees)		Losses	Power (W)	EIRP			Flux Density	Value	Size
							(Y/N)			(dB)		(dBW)	Temp (k)	(db/K)	(dBW/m2)		0.20
KDL	Т	37.6	25.6	0.15	0				CUS	2.4	80.5	56.7					
KDR	Т	37.1	25.1	0.15	0				CUS	2.3	82.2	56.3					

FCC Form 312 - Schedule S: (Technical and Operational Description)

S8. ANTENNA BEAM DIAGRAMS For each beam pattern provide the reference to the graphic image and numerical data:
Also provide the power flux density levels in each beam that result from the emission with the highest power flux density.

(a)	(b)	(c) Co-or	(d) GSO	(e) NGSO Antenna Gain	(f) GSO Antenna Gain Contour Data (GXT File)	GSO Antenna Gain (f) GSO Antenna Max. Power Flux Density (dBW/M2/Hz)							
Beam	T/R	Cross	Ref.	Contour Description		At Angle of	Arrival above he	orizontal (for em	ission with hig	hest PFD)			
ID	Mode	Mode ("C"	Orbital Longitude (Deg. E/W)	(Figure/Table/ Exhibit)		(g) 5 Deg	(h) 10 Deg	(i) 15 Deg	(j) 20 Deg	(k) 25 Deg			
KDL	Т	С	-105		KDL.gxt								
KDR	Т	С	-105		KDR.gxt								

Page 5: Beam Diagrams

Page 6: Channels and Transponders

FCC Form 312 - Schedule S: (Technical and Operational Description)

S9. SPACE STATION CHANNELS For each frequency channel provide: S10. SPACE STATION TRANSPONDERS For each transponder provide:

(a)	(B) Assigned	(c)	(d) Center	(e)	(f) TTC
Channel	Bandwidth	T/R	Frequency	Polarization	or Comm
No.	No. (kHz)		(MHz)	(H, V, L, R)	Channel
					(T or C)

(a)	(b)	Receive	Band	Transmit Band		
Transponder	Transponder	(c) Channel	(d) Beam	(e) Channel	(f) Beam ID	
ID	Gain (dB)	No.	ID	No.		

Page 7: Digital Modulation

FCC Form 312 - Schedule S: (Technical and Operational Description)

S11. DIGITAL MODULATION PARAMETERS For each digital emission provide:

ſ	(a) Digital	(b) Emission	(c) Assigned	(d) No. of	(e)Uncoded	(f) FEC Error	(g) CDMA	(h) Total C/N	(i) Single Entry
ı	Mod. ID	Designator	Bandwidth	Phases	Data Rate	Correction	Processing	Performance	C/I Objective
ı			(kHz)		(kbps)	Coding Rate	Gain (dB)	Objective (dB)	(dB)
ı									

Page 8: Analog Modulation

FCC Form 312 - Schedule S: (Technical and Operational Description)

S12. ANALOG MODULATION PARAMETERS For each analog emission provide:

(a)	(b) Emission	(c)	(d) Signal	(e)	Multi-channel Telephony				(j) Video	(k) Video	(I) Video	(m) SCPC/FM	(n) Total C/N	(o) Single
Analo Mod.		Assigned Bandwidth (kHz)	Туре	Channels per Carrier	(f) Ave. Companded Talker Level (dBm0)	(g) Bottom Baseband Freq. (MHz)		(i) RMS Modulation Index	Standard NTSC, PAL, etc.	- 3 - 3	and SCPC/FM Modulation Index	Compander, Preemphasis, and Noise Weighting (dB)	Performance Objective (dB)	Entry C/I Objective (dB)

Page 9: Typical Emissions

FCC Form 312 - Schedule S: (Technical and Operational Description)

S13. TYPICAL EMISSIONS For each planned type of emission provide:

	Associated				()	(3)	(h) Energy	Receive Band (Assoc. Transmit Stn)			Transmit Band (This Space Station)			tion)
(a) Start	er ID Range (b) End	(Table (Table S12)	per Transponder	Spacing (kHz)	Reference (Table No.)	Dispersal Bandwidth (kHz)	(i)Assoc. Stn. Max.	Assoc. Stati Power		EIRP	(dBW)	Power Flux	(o)Assoc. Stn Rec. G/T	
		S11)					, ,	Antenna Gain (dBi)	(j) Min.	(k) Max.	(I) Min.	(m) Max.	Density (dBW/m2/Hz)	(dB/K)

Page 10: TT and C

FCC Form 312 - Schedule S: (Technical and Operational Description)

S14. Is the space station(s) controlled and monitored remotely? If Yes, provide the location and telephone number of the TT and C control point(s): #Error

FEDERAL COMMUNICATIONS COMMISSION SATELLITE SPACE STATION AUTHORIZATIONS FCC Form 312 - Schedule S: (Technical and Operational Description)

Page 11: Characteristics and Certifications

S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S16. SPACECRAFT ELECTRICAL CHARACTERISTICS:

S17. CERTIFICATIONS:

a. Are the power flux density limits of § 25.208 met?:	YES	# NO	# N/A	
b. Are the appropriate service area coverage requirements of § 25.143(b)(ii) and (iii), or § 25.145(c)(1) and (20.145(c)(1))	2) met? YES	# NO	# N/A	
c. Are the frequency tolerances of § 25.202(e) and the out-of-band emission limits of § 25.202(f)(1), (2) and	(3) met? YES	# NO	# N/A	
In addition to the information required in this Form, the appearatoing applicant is required to provi	ido all the information	a anaaifiad in l	Cootion OF 111	£ 41a.a

In addition to the information required in this Form, the space station applicant is required to provide all the information specified in Section 25.114 of the Commission's rules, 47 C.F.R § 25.114.