

**FCC 312
 Schedule 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-1		e. Estimated Date of Placement into Service:		i. Will the space station(s) operate on a Common Carrier Basis: N	
b. Construction Commencement Date:		f. Estimated Lifetime of Satellite(s): 19.5 Years		j. Number of transponders offered on a common carrier basis: 0	
c. Construction Completion Date:		g. Total Number of Transponders: 48		k. Total Common Carrier Transponder Bandwidth: 0 MHz	
d1. Est Launch Date Begin:	d2. Est Launch Date End:	h. Total Transponder Bandwidth (no. transponders x Bandwidth) 1728 MHz		l. Orbit Type: Mark all boxes that apply: <input checked="" type="checkbox"/> GSO <input type="checkbox"/> 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.

Frequency Band Limits				e. T/R Mode	f. Nature of Service(s): List all that apply to this band
Lower Frequency (Hz)		Upper Frequency (Hz)			
a. Numeric	b. Unit (K/M/G)	c. Numeric	d. Unit (K/M/G)		
14.0	G	14.5	G	R	Fixed Satellite Service
11.7	G	12.2	G	T	Fixed Satellite Service
5.925	G	6.425	G	R	Fixed Satellite Service
3.7	G	4.2	G	T	Fixed Satellite Service
11.7	G	12.2	G	T	Direct to Home in the Fixed Fixed Satellite Service

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude (Degrees E/W): 129.15 W		b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection: Relocating to 129.15W nominal orbital location to provide services over the contiguous US, Alaska, Hawaii, Mexico, and parts of Canada and the Caribbean.	
Longitudinal Tolerance or E/W Station-Keeping:		f. Inclination Excursion or N/S Station-Keeping Tolerance:		Range of orbital are in which adequate service can be provided (Optional): Degrees E/W	
d. Toward West:	0.05 Degrees	0.13 Degrees	g. Westernmost: h. Easternmost:	NOTE: The N/S station-keeping range is 0.13 to 6.4 degrees.	
e. Toward East:	0.05 Degrees				
i. Reason for service are selection (Optional):					

**FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
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 Plane No.	(f) No. of Satellites in Plane	(g) Inclination Angle (degrees)	(h) Orbital Period (Seconds)	(i) Apogee (km)	(j) Perigee (km)	(k) Right Ascension of the Ascending Node (Deg.)	(l) Argument of Perigee (Degrees)	Active Service Arc Range (Degrees)		
								(m) Begin Angle	(n) End Angle	(o) Other

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

**FEDERAL COMMUNICATIONS COMMISSION
 SATELLITE SPACE STATION AUTHORIZATIONS
 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)	(c) Service Area Diagram File Name (GXT File)	(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.
KUL	S		Contiguous US, Alaska, Hawaii, Mexico, and parts of Canada and the Caribbean
KDL	S		Contiguous US, Alaska, Hawaii, Mexico, and parts of Canada and the Caribbean
CUL	S		Contiguous US, Alaska, Hawaii, Mexico, and parts of Canada and the Caribbean
CDL	S		Contiguous US, Alaska, Hawaii, Mexico, and parts of Canada and the Caribbean
GBL	S		Visible Earth

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

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

(a) Beam ID	(b) T/R Mode	Isotropic Antenna Gain		(e) Pointing Error (Degrees)	(f) Rotational Error (Degrees)	(g) Min. Cross- Polar Iso- lation (dB)	(h) Polar- ization Switch- able? (Y/N)	(i) Polarization Alignment Rel. Equatorial Plane (Degrees)	(j) Service Area ID	Transmit			Receive				
										(k) Input Losses (dB)	(l) Effective Output Power (W)	(m) Max. EIRP (dBW)	(n) System Noise Temp (k)	(o) G/T Max. Gain Pt. (db/K)	(p) Min. Saturation Flux Density (dBW/m2)	Input Attenuator (dB)	
		(q) Max. Value	(r) Step Size														
KRV	R	34.1	28.1	0.15	0	30	Y	90	KUL				1	7.2	-95.9	1	1
KRH	R	34.2	28.2	0.15	0	30	Y	0	KUL				1	6.6	-96.9	1	1
KTV	T	33.9	27.9	0.15	0	30	Y	90	KDL	1	1	50.4					
KTH	T	33.1	27.1	0.15	0	30	Y	0	KDL	1	1	49.8					
CRV	R	33.3	27.3	0.15	0	30	Y	90	CUL				1	5.5	-101.1	1	1
CTV	T	30.4	24.4	0.15	0	30	Y	90	CDL	1	1	15					
CTH	T	30.4	24.4	0.15	0	30	Y	0	CDL	1	1	15					
GBL	R	10.3	9.3	0.15	0	30	Y	0	GBL				1	-12.6	-90	1	1
GBLT	T	11.3	10.3	0.15	0	30	Y	90	GBL	1	1	6					

**FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
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) Beam ID	(b) T/R Mode	(c) Co-or Cross Polar Mode ("C" or" X")	(d) GSO Ref. Orbital Longitude (Deg. E/W)	(e) NGSO Antenna Gain Contour Description (Figure/Table/ Exhibit)	(f) GSO Antenna Gain Contour Data (GXT File)	Max. Power Flux Density (dBW/M2/Hz)				
						At Angle of Arrival above horizontal (for emission with highest PFD)				
						(g) 5 Deg	(h) 10 Deg	(i) 15 Deg	(j) 20 Deg	(k) 25 Deg
KRV	R	C	-129.15		D-1 (129.15W) GIMS.r					
KRH	R	C	-129.15		D-1 (129.15W) GIMS.r					
CRV	R	C	-129.15		D-1 (129.15W) GIMS.r					
KTV	T	C	-129.15		D-1 (129.15W) GIMS.r	-153.1	-152.9	-152.4	-151.7	-151.4
KTH	T	C	-129.15		D-1 (129.15W) GIMS.r	-153.6	-153.5	-153.3	-153.1	-152.8
CTV	T	C	-129.15		D-1 (129.15W) GIMS.r	-167.3	-167.2	-167	-166.8	-166.7
CTH	T	C	-129.15		D-1 (129.15W) GIMS.r	-168.5	-168.4	-168.3	-168.2	-167.9
GBLT	T	C	-129.15			-176	-175.9	-175.8	-175.7	-175.6
GBL	R	C	-129.15							

**FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
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) Channel No.	(B) Assigned Bandwidth (kHz)	(c) T/R Mode	(d) Center Frequency (MHz)	(e) Polarization (H, V, L, R)	(f) TTC or Comm Channel (T or C)
KR001	36000	R	14020	V	C
KR002	36000	R	14040	H	C
KR003	36000	R	14060	V	C
KR004	36000	R	14080	H	C
KR005	36000	R	14100	V	C
KR006	36000	R	14120	H	C
KR007	36000	R	14140	V	C
KR008	36000	R	14160	H	C
KR009	36000	R	14180	V	C
KR010	36000	R	14200	H	C
KR011	36000	R	14220	V	C
KR012	36000	R	14240	H	C
KR013	36000	R	14260	V	C
KR014	36000	R	14280	H	C
KR015	36000	R	14300	V	C
KR016	36000	R	14320	H	C
KR017	36000	R	14340	V	C
KR018	36000	R	14360	H	C
KR019	36000	R	14380	V	C
KR020	36000	R	14400	H	C
KR021	36000	R	14420	V	C
KR022	36000	R	14440	H	C
KR023	36000	R	14460	V	C
KR024	36000	R	14480	H	C
KT001	36000	T	11720	H	C
KT002	36000	T	11740	V	C
KT003	36000	T	11760	H	C
KT004	36000	T	11780	V	C
KT005	36000	T	11800	H	C
KT006	36000	T	11820	V	C

(a) Transponder ID	(b) Transponder Gain (dB)	Receive Band		Transmit Band	
		(c) Channel No.	(d) Beam ID	(e) Channel No.	(f) Beam ID
K0001	1	KR001	KRH	KT001	KTV
K0002	1	KR002	KRV	KT002	KTH
K0003	1	KR003	KRH	KT003	KTV
K0004	1	KR004	KRV	KT004	KTH
K0005	1	KR005	KRH	KT005	KTV
K0006	1	KR006	KRV	KT006	KTH
K0007	1	KR007	KRH	KT007	KTV
K0008	1	KR008	KRV	KT008	KTH
K0009	1	KR009	KRH	KT009	KTV
K0010	1	KR010	KRV	KT010	KTH
K0011	1	KR011	KRH	KT011	KTV
K0012	1	KR012	KRV	KT012	KTH
K0013	1	KR013	KRH	KT013	KTV
K0014	1	KR014	KRV	KT014	KTH
K0015	1	KR015	KRH	KT015	KTV
K0016	1	KR016	KRV	KT016	KTH
K0017	1	KR017	KRH	KT017	KTV
K0018	1	KR018	KRV	KT018	KTH
K0019	1	KR019	KRH	KT019	KTV
K0020	1	KR020	KRV	KT020	KTH
K0021	1	KR021	KRH	KT021	KTV
K0022	1	KR022	KRV	KT022	KTH
K0023	1	KR023	KRH	KT023	KTV
K0024	1	KR024	KRV	KT024	KTH
TC1		TC101	CRV		
TC2		TC102	GBLRH		
TM1				TM101	CTV
TM3				TM201	GBLTV
TM4				TM202	CTH
TM5				TM301	KTH

KT007	36000	T	11840	H	C
KT008	36000	T	11860	V	C
KT009	36000	T	11880	H	C
KT010	36000	T	11900	V	C
KT011	36000	T	11920	H	C
KT012	36000	T	11940	V	C
KT013	36000	T	11960	H	C
KT014	36000	T	11980	V	C
KT015	36000	T	12000	H	C
KT016	36000	T	12020	V	C
KT017	36000	T	12040	H	C
KT018	36000	T	12060	V	C
KT019	36000	T	12080	H	C
KT020	36000	T	12100	V	C
KT021	36000	T	12120	H	C
KT022	36000	T	12140	V	C
KT023	36000	T	12160	H	C
KT024	36000	T	12180	V	C
TC101	800	R	6423.5	V	T
TC102	800	R	6423.5	H	T
TM101	300	T	3700.5	V	T
TM201	300	T	4199.5	V	T
TM202	300	T	4199.5	H	T
TM301	300	T	12198	H	T

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

S11. DIGITAL MODULATION PARAMETERS For each digital emission provide:

(a) Digital Mod. ID	(b) Emission Designator	(c) Assigned Bandwidth (kHz)	(d) No. of Phases	(e) Uncoded Data Rate (kbps)	(f) FEC Error Correction Coding Rate	(g) CDMA Processing Gain (dB)	(h) Total C/N Performance Objective (dB)	(i) Single Entry C/I Objective (dB)
KU_1	1M20G7W	1200						
KU_2	36M0G7W	36000						
KU_3	100KG7W	100						
KU_4	36M0G7W	36000						
KU_5	4M50G7W	4500						
KU_6	36M0G7W	36000						

**FEDERAL COMMUNICATIONS COMMISSION
 SATELLITE SPACE STATION AUTHORIZATIONS
 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): Yes

Remote Control (TT C) Location(s):

S14a. Street Address:			
S14b. City:	S14c. County:	S14d. State/Country	S14e. Zip Code:
S14f. Telephone Number:		S14g. Call Sign of Control Station (if appropriate):	

Remote Control (TT C) Location(s):

S14a. Street Address:			
S14b. City:	S14c. County:	S14d. State/Country	S14e. Zip Code:
S14f. Telephone Number:		S14g. Call Sign of Control Station (if appropriate):	

**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:

S15a. Mass of spacecraft without fuel (kg):	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15b. Mass of fuel and disposables at launch (kg):		
S15c. Mass of spacecraft and fuel at launch (kg):	S15f. Length (m):	S15i. Payload:
S15d. Mass of fuel, in orbit, at beginning of life (kg):	S15g. Width (m):	S15j. Bus:
S15e. Deployed Area of Solar Array (square meters):	S15h. Height (m):	S15k. Total:

S16. SPACECRAFT ELECTRICAL CHARACTERISTICS:

Spacecraft Subsystem	Electrical Power (Watts) At Beginning of Life		Electrical Power (Watts) At End of Life	
	At Equinox	At Solstice	At Equinox	At Solstice
Payload (Watts):	(a):	(f):	(k):	(p):
Bus (Watts):	(b):	(g):	(l):	(q):
Total (Watts):	(c):	(h):	(m):	(r):
Solar Array (Watts):	(d):	(i):	(n):	(s):
Depth of Battery Discharge (%):	(e) %	(j) %	(o) %	(t) %

S17. CERTIFICATIONS:

a. Are the power flux density limits of § 25.208 met?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
b. Are the appropriate service area coverage requirements of § 25.143(b)(ii) and (iii), or § 25.145(c)(1) and (2) met?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> 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?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/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.

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

The public reporting estimate for this collection of information includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERF, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to PERM@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

Remember - You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0678.

THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.