

**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-7		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): 20 Years	j. Number of transponders offered on a common carrier basis: 0
c. Construction Completion Date:		g. Total Number of Transponders: 24	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) 864 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)		
5925	M	6425	M	R	Fixed Satellite Service
3700	M	4200	M	T	Fixed Satellite Service
3700	M	4200	M	T	Direct to Home in the Fixed Fixed Satellite Service

**S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:**

a. Nominal Orbital Longitude (Degrees E/W): 135 W	b. Alternate Orbital Longitude (Degrees E/W):	c. Reason for orbital location selection:	
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 g. Westernmost: h. Easternmost:	
d. Toward West:      0.05 Degrees	e. Toward East:      0.05 Degrees	i. Reason for service are selection (Optional):	

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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 initial phase angle.

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

**NO NGSO DATA FILED**

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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.
SA1	E		-10 dB contours of uplink beams CUH and CUV
SA2	E		-10 dB contours of downlink beams CDH and CDV
SA3	E		Visible Earth



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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
CUH	R	C	-135		CUH.gxt					
CUV	R	C	-135		CUV.gxt					
CDH	T	C	-135		CDH.gxt	-152.1	-151.6	-151.1	-150.7	-150.5
CDV	T	C	-135		CDV.gxt	-152.1	-151.6	-151.1	-150.7	-150.5
TLM1	T	C	-135		TLM1H.gxt	-168.1	-167.7	-167.2	-166.8	-166.6
TLM2	T	C	-135		TLM2V.gxt	-168.1	-167.7	-167.2	-166.8	-166.6
TLM3	T	C	-135		TLM3H.gxt	-169	-168.6	-168.1	-167.7	-167.5
TLM4	T	C	-135		TLM4V.gxt	-169	-168.6	-168.1	-167.7	-167.5
HOR	T	C	-135			-181.9	-181.9	-181.9	-181.9	-181.9
OMN	T	C	-135			-183.9	-183.9	-183.9	-183.9	-183.9

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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)
CU001	36000	R	5945	H	C
CU003	36000	R	5985	H	C
CU005	36000	R	6025	H	C
CU007	36000	R	6065	H	C
CU009	36000	R	6105	H	C
CU011	36000	R	6145	H	C
CU013	36000	R	6185	H	C
CU015	36000	R	6225	H	C
CU017	36000	R	6265	H	C
CU019	36000	R	6305	H	C
CU021	36000	R	6345	H	C
CU023	36000	R	6385	H	C
CU002	36000	R	5965	V	C
CU004	36000	R	6005	V	C
CU006	36000	R	6045	V	C
CU008	36000	R	6085	V	C
CU010	36000	R	6125	V	C
CU012	36000	R	6165	V	C
CU014	36000	R	6205	V	C
CU016	36000	R	6245	V	C
CU018	36000	R	6285	V	C
CU020	36000	R	6325	V	C
CU022	36000	R	6365	V	C
CU024	36000	R	6405	V	C
CU025	36000	R	5945	V	C
CU027	36000	R	5985	V	C
CU029	36000	R	6025	V	C
CU031	36000	R	6065	V	C
CU033	36000	R	6105	V	C
CU035	36000	R	6145	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
T0001	1	CU001	CUH	CD001	CDV
T0003	1	CU003	CUH	CD003	CDV
T0005	1	CU005	CUH	CD005	CDV
T0007	1	CU007	CUH	CD007	CDV
T0009	1	CU009	CUH	CD009	CDV
T0011	1	CU011	CUH	CD011	CDV
T0013	1	CU013	CUH	CD013	CDV
T0015	1	CU015	CUH	CD015	CDV
T0017	1	CU017	CUH	CD017	CDV
T0019	1	CU019	CUH	CD019	CDV
T0021	1	CU021	CUH	CD021	CDV
T0023	1	CU023	CUH	CD023	CDV
T0002	1	CU002	CUV	CD002	CDH
T0004	1	CU004	CUV	CD004	CDH
T0006	1	CU006	CUV	CD006	CDH
T0008	1	CU008	CUV	CD008	CDH
T0010	1	CU010	CUV	CD010	CDH
T0012	1	CU012	CUV	CD012	CDH
T0014	1	CU014	CUV	CD014	CDH
T0016	1	CU016	CUV	CD016	CDH
T0018	1	CU018	CUV	CD018	CDH
T0020	1	CU020	CUV	CD020	CDH
T0022	1	CU022	CUV	CD022	CDH
T0024	1	CU024	CUV	CD024	CDH
T0025	1	CU025	CUV	CD025	CDH
T0027	1	CU027	CUV	CD027	CDH
T0029	1	CU029	CUV	CD029	CDH
T0031	1	CU031	CUV	CD031	CDH
T0033	1	CU033	CUV	CD033	CDH
T0035	1	CU035	CUV	CD035	CDH

CU037	36000	R	6185	V	C
CU039	36000	R	6225	V	C
CU041	36000	R	6265	V	C
CU043	36000	R	6305	V	C
CU045	36000	R	6345	V	C
CU047	36000	R	6385	V	C
CU026	36000	R	5965	H	C
CU028	36000	R	6005	H	C
CU030	36000	R	6045	H	C
CU032	36000	R	6085	H	C
CU034	36000	R	6125	H	C
CU036	36000	R	6165	H	C
CU038	36000	R	6205	H	C
CU040	36000	R	6245	H	C
CU042	36000	R	6285	H	C
CU044	36000	R	6325	H	C
CU046	36000	R	6365	H	C
CU048	36000	R	6405	H	C
CD001	36000	T	3720	V	C
CD003	36000	T	3760	V	C
CD005	36000	T	3800	V	C
CD007	36000	T	3840	V	C
CD009	36000	T	3880	V	C
CD011	36000	T	3920	V	C
CD013	36000	T	3960	V	C
CD015	36000	T	4000	V	C
CD017	36000	T	4040	V	C
CD019	36000	T	4080	V	C
CD021	36000	T	4120	V	C
CD023	36000	T	4160	V	C
CD002	36000	T	3740	H	C
CD004	36000	T	3780	H	C
CD006	36000	T	3820	H	C
CD008	36000	T	3860	H	C
CD010	36000	T	3900	H	C
CD012	36000	T	3940	H	C
CD014	36000	T	3980	H	C
CD016	36000	T	4020	H	C
CD018	36000	T	4060	H	C

T0037		1	CU037	CUV	CD037	CDH
T0039		1	CU039	CUV	CD039	CDH
T0041		1	CU041	CUV	CD041	CDH
T0043		1	CU043	CUV	CD043	CDH
T0045		1	CU045	CUV	CD045	CDH
T0047		1	CU047	CUV	CD047	CDH
T0026		1	CU026	CUH	CD026	CDV
T0028		1	CU028	CUH	CD028	CDV
T0030		1	CU030	CUH	CD030	CDV
T0032		1	CU032	CUH	CD032	CDV
T0034		1	CU034	CUH	CD034	CDV
T0036		1	CU036	CUH	CD036	CDV
T0038		1	CU038	CUH	CD038	CDV
T0040		1	CU040	CUH	CD040	CDV
T0042		1	CU042	CUH	CD042	CDV
T0044		1	CU044	CUH	CD044	CDV
T0046		1	CU046	CUH	CD046	CDV
T0048		1	CU048	CUH	CD048	CDV
CMD1			CMD1	HORN1		
CMD2			CMD2	OMNUH		
CMD3			CMD3	OMNUV		
TLM1					TLM1	TLM1H
TLM2					TLM2	TLM2V
TLM3					TLM3	TLM3H
TLM4					TLM4	TLM4V
TLM5					TLM5	HORN2
TLM6					TLM6	HORN2
TLM7					TLM7	OMNDH
TLM8					TLM8	OMNDH

CD020	36000	T	4100	H	C
CD022	36000	T	4140	H	C
CD024	36000	T	4180	H	C
CD025	36000	T	3720	H	C
CD027	36000	T	3760	H	C
CD029	36000	T	3800	H	C
CD031	36000	T	3840	H	C
CD033	36000	T	3880	H	C
CD035	36000	T	3920	H	C
CD037	36000	T	3960	H	C
CD039	36000	T	4000	H	C
CD041	36000	T	4040	H	C
CD043	36000	T	4080	H	C
CD045	36000	T	4120	H	C
CD047	36000	T	4160	H	C
CD026	36000	T	3740	V	C
CD028	36000	T	3780	V	C
CD030	36000	T	3820	V	C
CD032	36000	T	3860	V	C
CD034	36000	T	3900	V	C
CD036	36000	T	3940	V	C
CD038	36000	T	3980	V	C
CD040	36000	T	4020	V	C
CD042	36000	T	4060	V	C
CD044	36000	T	4100	V	C
CD046	36000	T	4140	V	C
CD048	36000	T	4180	V	C
CMD1	800	R	6423.5	V	T
CMD2	800	R	6423.5	H	T
CMD3	800	R	6423.5	V	T
TLM1	300	T	3700.5	H	T
TLM2	300	T	3700.5	V	T
TLM3	300	T	4199.5	H	T
TLM4	300	T	4199.5	V	T
TLM5	300	T	3700.5	V	T
TLM6	300	T	4199.5	V	T
TLM7	300	T	3700.5	H	T
TLM8	300	T	4199.5	H	T



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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)
D1	48K6G7W	48.6						
D2	1M69G7W	1688						
D3	6M33G7W	6330						
D4	18M2G7W	18200						
D5	36M0G7W	36000						
D6	36M0G7W	36000						



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

Associated Transponder ID Range (a) Start (b) End		Modulation ID		(e) Carriers per Transponder	(f) Carrier Spacing (kHz)	(g) Noise Budget Reference (Table No.)	(h) Energy Dispersal Bandwidth (kHz)	Receive Band (Assoc. Transmit Stn)		Transmit Band (This Space Station)			
		(c) Digital (Table S11)	(d) Analog (Table S12)					(i) Assoc. Stn. Max. Antenna Gain (dBi)	Assoc. Station Transmit Power (dBW) (j) Min. (k) Max.		EIRP (dBW) (l) Min. (m) Max.		(n) Max. Power Flux Density (dBW/m <sup>2</sup> /Hz)
T0001	T0048	D1				LB1.doc					15.1		
T0001	T0048	D2				LB2.doc					27.7		
T0001	T0048	D3				LB3.doc					34		
T0001	T0048	D4				LB4.doc					42.6		
T0001	T0048	D5				LB5.doc					43.1		
T0001	T0048	D6				LB6.doc					43.1		
T0001	T0048		A1			LB7.doc					39.6		
CMD1	CMD1		A2										
CMD2	CMD3		A2										
TLM1	TLM2		A3								12.3		
TLM3	TLM4		A3								11.4		
TLM5	TLM6		A3								-3		
TLM7	TLM8		A3								-5		

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**Page 10: TT and C**

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

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Characteristics and  
Certifications

S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S16. SPACECRAFT ELECTRICAL CHARACTERISTICS:

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
<b>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.</b>						

**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-PER, 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.

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