

**S1. GENERAL INFORMATION** Complete for all satellite applications.

a. Space Station or Satellite Network Name: AMC-16		e. Estimated Date of Placement into Service: 7/1/2005		i. Will the space station(s) operate on a Common Carrier Basis: N	
b. Construction Commencement Date:		f. Estimated Lifetime of Satellite(s): 15 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		i. 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)		
14000	M	14500	M	R	Feeder Link for Broadcasting Satellite Service in FSS
11700	M	12200	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): 118.75 W		b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection:  The 118.7°W.L orbital location is consistent with the Trilateral Agreement reached between Canada, Mexico and the United States of America in 1988. It is proposed to operate the AMC-16 satellite 0.05° to the west to facilitate operation with the collocated Anik E2 satellite.			
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): <u>      Degrees      </u> <u>      E/W      </u>	
d. Toward West:	0.05 Degrees	e. Toward East:	0.05 Degrees			g. Westernmost:	h. Easternmost:
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.
SAUP	S		CONUS, Hawaii
SADN	S		CONUS

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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			Input Attenuator (dB)	
										(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)	(q) Max. Value	(r) Step Size
		(c) Peak (dBi)	(d) Edge (dBi)														
NAL	R	33.3	26.3	0.15		30	Y	0	SAUP				594	5.6	-98.6	18	1
NALV	R	33.3	26.3	0.15		30	Y	90	SAUP				594	5.6	-98.6	18	1
NAC	T	37.1	26.7	0.15		30	Y		SADN	2.3	83.2	56.3					
NAC	T	37.1	26.7	0.15		30	Y		SADN	2.3	83.2	56.3					

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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
NAL	R	C	-118.75		NALH.gxt					
NALV	R	C	-118.75		NALV.gxt					
NAC	T	C	-118.75		NACL.gxt					
NAC	T	C	-118.75		NACR.gxt					

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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)
UH001	36000	R	14020	H	C
UH003	36000	R	14060	H	C
UH005	36000	R	14100	H	C
UH007	36000	R	14140	H	C
UH009	36000	R	14180	H	C
UH011	36000	R	14220	H	C
UH013	36000	R	14260	H	C
UH015	36000	R	14300	H	C
UH017	36000	R	14340	H	C
UH019	36000	R	14380	H	C
UH021	36000	R	14420	H	C
UH023	36000	R	14460	H	C
UV002	36000	R	14040	V	C
UV004	36000	R	14080	V	C
UV006	36000	R	14120	V	C
UV008	36000	R	14160	V	C
UV010	36000	R	14200	V	C
UV012	36000	R	14240	V	C
UV014	36000	R	14280	V	C
UV016	36000	R	14320	V	C
UV018	36000	R	14360	V	C
UV020	36000	R	14400	V	C
UV022	36000	R	14440	V	C
UV024	36000	R	14480	V	C
DR001	36000	T	11720	R	C
DR003	36000	T	11760	R	C
DR005	36000	T	11800	R	C
DR007	36000	T	11840	R	C
DR009	36000	T	11880	R	C
DR011	36000	T	11920	R	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	130	UH001	NALH	DR001	NACR
T0003	130	UH003	NALH	DR003	NACR
T0005	130	UH005	NALH	DR005	NACR
T0007	130	UH007	NALH	DR007	NACR
T0009	130	UH009	NALH	DR009	NACR
T0011	130	UH011	NALH	DR011	NACR
T0013	130	UH013	NALH	DR013	NACR
T0015	130	UH015	NALH	DR015	NACR
T0017	130	UH017	NALH	DR017	NACR
T0019	130	UH019	NALH	DR019	NACR
T0021	130	UH021	NALH	DR021	NACR
T0023	130	UH023	NALH	DR023	NACR
T0002	130	UV002	NALV	DL002	NACL
T0004	130	UV004	NALV	DL004	NACL
T0006	130	UV006	NALV	DL006	NACL
T0008	130	UV008	NALV	DL008	NACL
T0010	130	UV010	NALV	DL010	NACL
T0012	130	UV012	NALV	DL012	NACL
T0014	130	UV014	NALV	DL014	NACL
T0016	130	UV016	NALV	DL016	NACL
T0018	130	UV018	NALV	DL018	NACL
T0020	130	UV020	NALV	DL020	NACL
T0022	130	UV022	NALV	DL022	NACL
T0024	130	UV024	NALV	DL024	NACL

DR013	36000	T	11960	R	C
DR015	36000	T	12000	R	C
DR017	36000	T	12040	R	C
DR019	36000	T	12080	R	C
DR021	36000	T	12120	R	C
DR023	36000	T	12160	R	C
DL002	36000	T	11740	L	C
DL004	36000	T	11780	L	C
DL006	36000	T	11820	L	C
DL008	36000	T	11860	L	C
DL010	36000	T	11900	L	C
DL012	36000	T	11940	L	C
DL014	36000	T	11980	L	C
DL016	36000	T	12020	L	C
DL018	36000	T	12060	L	C
DL020	36000	T	12100	L	C
DL022	36000	T	12140	L	C
DL024	36000	T	12180	L	C

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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	31M2G7W	31200	4	35940	0.691		6.1	18.3





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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)	(o) Assoc. Stn Rec. G/T (dB/K)
T0001	T0024	D1		1		LB1.doc		63.2	11.4	19.4	42.3	52.3	-145	15.1

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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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S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S15a. Mass of spacecraft without fuel (kg): 1952	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15b. Mass of fuel and disposables at launch (kg): 2133		
S15c. Mass of spacecraft and fuel at launch (kg): 4065	S15f. Length (m): 27	S15i. Payload: 0.7897
S15d. Mass of fuel, in orbit, at beginning of life (kg): 680	S15g. Width (m): 7	S15j. Bus: 0.882
S15e. Deployed Area of Solar Array (square meters): 71.33	S15h. Height (m): 4.5	S15k. Total: 0.6965

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): 7503	(f): 7503	(k): 7503	(p): 7503
Bus (Watts):	(b): 551.7	(g): 541.9	(l): 548.6	(q): 533.7
Total (Watts):	(c): 8054.7	(h): 8044.9	(m): 8051.6	(r): 8036.7
Solar Array (Watts):	(d): 12425	(i): 11070	(n): 10520	(s): 9440
Depth of Battery Discharge (%):	(e) 72.6 %	(j) %	(o) 75.4 %	(t) %

S17. CERTIFICATIONS:

a. Are the power flux density limits of § 25.208 met?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input checked="" 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.**