

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

a. Space Station or Satellite Network Name: SUPERBIRD-C	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): 12 Years	j. Number of transponders offered on a common carrier basis:
c. Construction Completion Date:	g. Total Number of Transponders: 24	k. Total Common Carrier Transponder Bandwidth: MHz
d. Estimated Launch Date: 7/28/1997	h. Total Transponder Bandwidth (no. transponders x Bandwidth) 792 MHz	i. Orbit Type: Mark all boxes that apply: <input 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	G	14.5	G	R	Fixed Satellite Service
11.902	G	11.938	G	T	Fixed Satellite Service
11.9895	G	12.0165	G	T	Fixed Satellite Service
12.0495	G	12.0765	G	T	Fixed Satellite Service
12.1095	G	12.1365	G	T	Fixed Satellite Service
12.25	G	12.75	G	T	Fixed Satellite Service

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

a. Nominal Orbital Longitude (Degrees E/W): 143.95 E	b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection:  This position was granted by Japanese administration. Under this application, we are only seeking authority to provide service to the U.S. territories in this bands(14-14.5 GHz and 11.7-12.5 GHz).
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	0.1 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.
1	S	SA_1.gxt	J,USA

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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				
										(k) Input Losses (dB)	(l) Effective Output Power (W)	(m) Max. EIRP (dBW)	(n) System Noise Temp (k)	(o) G/T Max. Gain Pt.	(p) Min. Saturation Flux Density (dBW/m2)	Input Attenuator (dB)	
		(q) Max. Value	(r) Step Size														
JHR	R	40	25	0.1	0	33	N	12	1				457	13.4	-108	30	1
JHR	R	40	25	0.1	0	33	N	-78	1				457	13.4	-108.6	30	1
HTH	T	41.6	38.4	0.1	0	30	N	-78	1	1.8	17.8	52.3					
JTV	T	41.6	26.6	0.1	0	33	N	12	1	1.6	63.1	58					
JTH	T	41.6	26.6	0.1	0	33	N	-78	1	1.6	63.1	58					

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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
JHR	R	C	143.95	JHRH_C.PDF	JHRH.gxt					
JHR	R	X	143.95	JHRH_X.PDF	JHRH_X.gxt					
JHR	R	C	143.95	JHRV_C.PDF	JHRV.gxt					
JHR	R	X	143.95	JHRV_X.PDF	JHRV_X.gxt					
JTV	T	C	143.95	JTV_C.PDF	JTV.gxt					
JTV	T	X	143.95	JTV_X.PDF	JTV_X.gxt					
JTH	T	C	143.95	JTH_C.PDF	JTH.gxt					
JTH	T	X	143.95	JTH_X.PDF	JTH_X.gxt					
HTH	T	C	143.95	HTH_C.PDF	HTH.gxt					
HTH	T	X	143.95	HTH_X.PDF	HTH_X.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)
T1	54000	T	12320	H	C
T2	54000	T	12380	H	C
T3	36000	T	12430	H	C
T4	36000	T	11920	H	C
T5	27000	T	12523	H	C
T6	27000	T	12003	H	C
T7	27000	T	12583	H	C
T8	27000	T	12063	H	C
T9	27000	T	12643	H	C
T10	27000	T	12123	H	C
T11	27000	T	12703	H	C
T12	27000	T	12733	H	C
T13	54000	T	12320	V	C
T14	54000	T	12380	V	C
T15	36000	T	12430	V	C
T16	36000	T	12470	V	C
T17	27000	T	12508	V	C
T18	27000	T	12538	V	C
T19	27000	T	12568	V	C
T20	27000	T	12598	V	C
T21	27000	T	12628	V	C
T22	27000	T	12658	V	C
T23	27000	T	12688	V	C
T24	27000	T	12718	V	C
R1	54000	R	14050	V	C
R2	54000	R	14110	V	C
R3	36000	R	14160	V	C
R4	36000	R	14200	V	C
R5	27000	R	14253	V	C
R6	27000	R	14283	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
1	133.7	R1	JHRH	T1	JTV
2	133.7	R2	JHRH	T2	JTV
3	133.7	R3	JHRH	T3	JTV
4	133.7	R4	JHRH	T4	HTH
5	133.7	R5	JHRH	T5	JTV
6	133.7	R6	JHRH	T6	HTH
7	133.7	R7	JHRH	T7	JTV
8	133.7	R8	JHRH	T8	HTH
9	133.7	R9	JHRH	T9	JTV
10	133.7	R10	JHRH	T10	HTH
11	133.7	R11	JHRH	T11	JTV
12	133.7	R12	JHRH	T12	JTV
13	133.7	R13	JHRV	T13	JTH
14	133.7	R14	JHRV	T14	JTH
15	133.7	R15	JHRV	T15	JTH
16	133.7	R16	JHRV	T16	JTH
17	133.7	R17	JHRV	T17	JTH
18	133.7	R18	JHRV	T18	JTH
19	133.7	R19	JHRV	T19	JTH
20	133.7	R20	JHRV	T20	JTH
21	133.7	R21	JHRV	T21	JTH
22	133.7	R22	JHRV	T22	JTH
23	133.7	R23	JHRV	T23	JTH
24	133.7	R24	JHRV	T24	JTH

R7	27000	R	14313	V	C
R8	27000	R	14343	V	C
R9	27000	R	14373	V	C
R10	27000	R	14403	V	C
R11	27000	R	14433	V	C
R12	27000	R	14463	V	C
R13	54000	R	14050	H	C
R14	54000	R	14110	H	C
R15	36000	R	14160	H	C
R16	36000	R	14200	H	C
R17	27000	R	14238	H	C
R18	27000	R	14268	H	C
R19	27000	R	14298	H	C
R20	27000	R	14328	H	C
R21	27000	R	14358	H	C
R22	27000	R	14388	H	C
R23	27000	R	14418	H	C
R24	27000	R	14448	H	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)
1	76K8G7W	100	4	64	0.5		5.7	17.9
2	615KG7W	750	4	512	0.5		5.7	17.9
3	2M46G7W	2900	4	2048	0.5		5.7	17.9
4	7M38G7W	9000	4	8493	0.75		6.8	19
5	14M8G7W	18000	8	22648	0.6666667		10.5	22.7
6	26M9G7W	36000	8	41227	0.6666667		11.5	23.7
7	35M8G7W	36000	4	41227	0.75		7.4	19.6





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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)		EIRP (dBW)		(n) Max. Power Flux Density (dBW/m <sup>2</sup> /Hz)
						(j) Min.	(k) Max.		(l) Min.	(m) Max.			
1	24	1		360		LINK_BUDGET		46.5	3.9	13.9	27.2	36.4	24.2
1	24	2		48		LINK_BUDGET		46.5	12.7	22.7	36	44.2	24.2
1	24	3		16		LINK_BUDGET		46.5	15.4	15.4	38.8	49.1	24.2
1	24	4		12		LINK_BUDGET		46.5	22.6	22.6	45.8	53.8	30.4
1	24	5		4		LINK_BUDGET		55.7	20.4	20.4	49.5	56	30.4
1	24	6		2		LINK_BUDGET		58.8	20.2	20.2	52.8	56	34.6
1	24	7		1		LINK_BUDGET		58.8	20.2	20.2	52.8	56	34.6
4	10	1		360		LINK_BUDGET		58.8	20.2	8.6	52.8	56	34.6
4	10	2		48		LINK_BUDGET		46.5	-2.7	7.3	31.5	37.5	24.2
4	10	3		16		LINK_BUDGET		46.5	2	12	36.2	41.4	24.2
4	10	4		12		LINK_BUDGET		55.7	2.9	12.9	42.3	48.1	30.4
4	10	5		4		LINK_BUDGET		55.7	5.9	15.9	45.3	51	30.4
4	10	6		2		LINK_BUDGET		58.8	5.8	15.8	48.3	51	34.6
4	4	7		1		LINK_BUDGET		58.8	5.8	15.8	48.3	51	34.6

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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

**Remote Control (TT C) Location(s):**

S14a: Street Address: Oomiya-kogyodanchi 60			
S14b. City: Ibaraki	S14c. County:	S14d. State/Country	S14e. Zip Code: 319-2143
S14f. Telephone Number: 81295524111		S14g. Call Sign of Control Station (if appropriate):	

**Remote Control (TT C) Location(s):**

S14a: Street Address: 3-1,ogi-cyo			
S14b. City: Yamaguchi	S14c. County:	S14d. State/Country	S14e. Zip Code: 753-0002
S14f. Telephone Number: 81839213220		S14g. Call Sign of Control Station (if appropriate):	

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S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S15a. Mass of spacecraft without fuel (kg): 1416	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15b. Mass of fuel and disposables at launch (kg): 1673		
S15c. Mass of spacecraft and fuel at launch (kg): 3089	S15f. Length (m): 26.2	S15i. Payload: 0.85
S15d. Mass of fuel, in orbit, at beginning of life (kg): 439	S15g. Width (m): 2.6	S15j. Bus: 0.8
S15e. Deployed Area of Solar Array (square meters): 44	S15h. Height (m): 8.2	S15k. Total: 0.68

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): 3919	(f): 3919	(k): 3919	(p): 3919
Bus (Watts):	(b): 291	(g): 275	(l): 291	(q): 275
Total (Watts):	(c): 4209	(h): 4194	(m): 4209	(r): 4194
Solar Array (Watts):	(d): 5470	(i): 4844	(n): 5002	(s): 4557
Depth of Battery Discharge (%):	(e) 80 %	(j) 0 %	(o) 80 %	(t) 0 %

S17. CERTIFICATIONS:

a. Are the power flux density limits of § 25.208 met?	<input 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 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 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.**