

AMATEUR SATELLITE FREQUENCY GUIDE

August 2021

Satellite ^(Notes) Mode ⁽¹⁾ Frequencies freqguide@amsat.org

AO-7 ⁽³⁾ (EYESAT/AMRAD)	V/a-Non-Inverting U/v-Inverting Analog SSB/CW	Dwn-USB	29.400	410	420	430	440	450	460	470	480	490	29.500
		Up-USB	145.850	860	870	880	890	900	910	920	930	940	145.950
		Dwn-USB	145.925	930	935	940	945	950	955	960	965	970	145.975
		Up-LSB	432.175	170	165	160	155	150	145	140	135	130	432.125
		Bcn	29.502	145.975	435.100								

AO-27 (EYESAT/AMRAD)	V/u FM Voice	Dwn	436.795	<i>Active for ~4 minutes per orbit at mid-latitudes in the northern hemisphere.</i>
		Up	145.850	

AO-73 (FUNcube-1)	U/v-Inverting Analog SSB/CW	Dwn-USB	145.950	955	960	965	145.970	<i>Check AMSAT-BB for schedule.</i>
		Up-LSB	435.160	155	150	145	435.140	
		Bcn	145.935	<i>BPSK Telemetry</i>				

AO-91 ⁽²⁾ (RadFxSat, Fox-1B)	U/v FM Voice Digital [c]	Dwn-FM	145.960	<i>Access only when in sunlight! 67.0 Hz CTCSS tone for access.</i>
		Up-FM	435.250	

AO-109 ⁽²⁾ (Fox-1E)	V/u-Inverting Analog SSB/CW Digital [d]	Dwn-USB	435.760	765	770	775	780	785	435.790
		Up-LSB	145.890	885	880	875	870	865	145.860
		Bcn	435.750						

CAS-4A ⁽²⁾	U/v - Inverting Analog SSB/CW Digital [b] [f]	Dwn-USB	145.860	865	870	875	145.880
		Up-LSB	435.230	225	220	215	435.210
		Dwn	145.835	<i>Digital telemetry</i>			
		Bcn	145.855				

CAS-4B ⁽²⁾	U/v - Inverting Analog SSB/CW Digital [b] [f]	Dwn-USB	145.915	920	925	930	145.935
		Up-LSB	435.290	285	280	275	435.270
		Dwn	145.890	<i>Digital telemetry</i>			
		Bcn	145.910				

EO-88 ⁽²⁾ (FUNcube-5, Nayif-1)	U/v-Inverting Analog SSB/CW Digital [d]	Dwn-USB	145.960	965	970	975	980	985	145.990	<i>Transponder is on when in eclipse and off when in sunlight.</i>
		Up-LSB	435.045	040	035	030	025	020	435.015	
		Bcn	145.940							

FalconSAT-3 ⁽²⁾	V/u Digital [g] [#] [*]	Dwn-FM	435.103
		Up-FM	145.840

FO-29 (JAS-2)	V/u-Inverting Analog SSB/CW	Dwn-USB	435.800	810	820	830	840	850	860	870	880	890	435.900	<i>Check AMSAT-BB for schedule.</i>
		Up-LSB	146.000	990	980	970	960	950	940	930	920	910	145.900	
		Bcn	435.795											

FO-99 ⁽²⁾ (NEXUS)	V/u-Inverting Analog SSB/CW Digital [g]	Dwn-USB	435.880	885	890	895	900	905	435.910	<i>Schedule: twitter.com/gsnihonuniv https://www.jamsat.or.jp/</i>
		Up-LSB	145.930	925	920	915	910	905	145.900	
		Bcn	437.075	<i>CW telemetry</i>						
		Bcn	435.900	<i>FSK</i>						

JO-97 (JY1SAT)	U/v-Inverting Analog SSB/CW	Dwn-USB	145.855	860	865	870	145.875
		Up-LSB	435.120	115	110	105	435.100
		Bcn	145.840				

NO-84 (PSAT)	V/v APRS A/u PSK31	Dwn-FM	145.825	<i>APRS</i>	Dwn-FM	435.350	<i>PSK31</i>
		Up-FM	145.825		Up-USB	28.120	

NO-104 (PSAT2)	V/v APRS A/u PSK31	Dwn-FM	145.825	<i>APRS</i>	Dwn-FM	435.350	<i>PSK31</i>
		Up-FM	145.825		Up-USB	29.4815	



Satellite ^(Notes) Mode ⁽¹⁾ Frequencies

PO-101 ⁽²⁾ (Diwata-2)	U/v FM Voice Digital [a] [#]	Dwn-FM	145.900	<i>Schedule: twitter.com/diwata2ph</i> <i>141.3 Hz CTCSS tone for access.</i>						
		Up-FM	437.500							
RS-44 (DOSAFF-85)	V/u-Inverting Analog SSB/CW	Dwn-USB	435.610	620	630	640	650	660	435.670	
		Up-LSB	145.995	985	975	965	955	945	145.935	
		Bcn	435.605							
SO-50 ⁽⁵⁾ (SaudiSat-1C)	V/u FM Voice	Dwn-FM	436.795	<i>67.0 Hz CTCSS tone for access.</i>						
		Up-FM	145.850							
TO-108 (CAS-6)	U/v-Inverting Analog SSB/CW	Dwn-USB	145.915	920	925	930	<i>Transponder is intermittent.</i>			
		Up-LSB	435.290	285	280	275				435.270
		Bcn	145.910							
XW-2A (CAS-3A)	U/v-Inverting Analog SSB/CW	Dwn-USB	145.665	670	675	680				
		Up-LSB	435.050	045	040	035				435.030
		Bcn	145.660							
XW-2B (CAS-3B)	U/v-Inverting Analog SSB/CW	Dwn-USB	145.730	735	740	745				
		Up-LSB	435.110	105	100	095				435.090
		Bcn	145.725							
XW-2C (CAS-3C)	U/v-Inverting Analog SSB/CW	Dwn-USB	145.795	800	805	810				
		Up-LSB	435.170	165	160	155				435.150
		Bcn	145.790							
XW-2D (CAS-3D)	U/v-Inverting Analog SSB/CW	Dwn-USB	145.860	865	870	875				
		Up-LSB	435.230	225	220	215				435.210
		Bcn	145.855							
XW-2F (CAS-3F)	U/v-Inverting Analog SSB/CW	Dwn-USB	145.980	985	990	995				
		Up-LSB	435.350	345	340	335				435.330
		Bcn	145.975							
ISS ⁽⁴⁾ (International Space Station)	V/v - U/u - V/u FM Voice Digital [a] [#]	Dwn-FM	145.800 (voice, SSTV)							
		Dwn-FM	145.825/437.550 (simplex packet)							
		Up-FM	144.490	Region 2/3 Voice			145.200 Region 1 Voice			
		Up-FM	145.825 Simplex Digipeater							
		Rptr-FM	145.990 Up			437.800 Dwn				

67.0 Hz CTCSS tone.

Current Status:
<https://www.ariss.org/current-status-of-iss-stations.html>

CURRENT SATELLITE STATUS IS AVAILABLE AT WWW.AMSAT.ORG/STATUS

NOTES:

1. The Mode designations are:

A = 10m	H = 15m	V = 2m
U = 70cm	L = 23cm	S = 13cm
C = 6cm	X = 3cm	K = 1.5cm

The uplink is upper case and listed first while the downlink is lower case and listed last. Uplink/Downlink. Thus, old Mode B is U/v and old Mode J is V/u.

2. Letters in [] represent the following digital formats:

[a] = 1200 bps AFSK-FM AX.25
[b] = 9600 bps FSK
[c] = Subaudible slow speed data when in transponder mode
[d] = 1200 bps BPSK
[e] = 9600 bps downlink includes images and science data

[f] = 4800 bps GMSK

[g] = 9600 bps GMSK

[*] denotes Store and Forward (flying mailbox) capability

[#] denotes digipeater that also allows APRS

[\$] denotes provisions for capturing pictures in orbit

- AO-7 is available only when it's in sunlight. It may not be functional on each pass. Excessive uplink power, especially CW, will reset the transponder to Mode A. Please use QRP only.
- The Region 2/3 voice uplink frequency listed for ISS is to be used over North & South America. The Digital frequency is usable worldwide.
- To activate SO-50, transmit briefly with a 74.4 Hz CTCSS tone.

AMSAT gratefully acknowledges the assistance of N8HM & N1JEZ in compiling this information.

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