Allow the system to stabilize for at least 2 seconds after the data change prior to continuing with the following steps.

Table 2-89: Airborne Position Encoding Values

Angular Weighted Binary Values (degrees)				Even Airborne Encoding		Odd Airborne Encoding	
Latitude Decimal	Latitude HEX	Longitude Decimal	Longitude HEX	Latitude HEX	Longitude HEX	Latitude HEX	Longitude HEX
-90.000000	C0000000	-180.000000	80000000	00000	10000	08000	10000
-89.950000	C0091A2B	179.500000	7FA4FA50	00444	0FF4A	08432	0FF4A
-89.500000	C05B05B0	178.500000	7EEEEEEF	02AAB	0FDDE	0A9F5	0FDDE
-89.000000	C0B60B61	175.500000	7CCCCCCD	05555	0F99A	0D3E9	0F99A
-87.500000	C1C71C72	-165.000000	8AAAAAAB	0D555	11555	151C7	11555
-86.750000	C24FA4FA	-171.500000	860B60B6	11555	0182E	190B6	10C17
-86.500000	C27D27D2	-172.500000	85555555	12AAB	12000	1A5B0	01555
-85.850000	C2F37C05	65.750000	2EC16C17	16222	11889	1DC3B	0BB06
-85.000000	C38E38E4	-142.750000	9A7D27D2	1AAAB	0D3E9	0238E	19EEF
-84.250000	C416C16C	60.000000	2AAAAAAB	1EAAB	1AAAB	0627D	15555
-83.550000	C4962FC9	-60.000000	D5555555	02666	00000	09D3A	05555
-82.680000	C53490BA	120.000000	55555555	070A4	0AAAB	0E63B	00000
-81.750000	C5DDDDDE	-120.000000	AAAAAAAB	0C000	0AAAB	13444	15555
-80.250000	C6EEEEEF	144.000000	66666666	14000	13333	1B222	06666
-79.750000	C749F49F	-144.000000	9999999A	16AAB	00000	1DC17	0CCCD
-78.400000	C83FB72F	-121.000000	A9F49F4A	1DDDE	09B06	04D5E	1471C
-77.400000	C8F5C28F	121.000000	560B60B6	03333	01111	0A148	164FA
-76.550000	C9907F6E	-154.280000	924A2EE0	07BBC	0DB89	0E89B	1B6F4
-75.600000	CA3D70A4	154.280000	6DB5D120	0CCCD	1FFE3	13852	12477
-74.750000	CAD82D83	157.500000	70000000	11555	12000	17FA5	04000
-73.650000	CBA06D3A	-157.500000	90000000	17333	00000	1DBF2	0E000
-72.750000	CC444444	-120.000000	AAAAAAAB	1C000	0AAAB	02777	15555
-71.550000	CD1EB852	120.000000	55555555	02666	00000	08C29	15555
-70.650000	CDC28F5C	-144.000000	9999999A	07333	0CCCD	0D7AE	1999A
-69.550000	CE8ACF13	144.000000	66666666	0D111	00000	133FB	13333
-68.750000	CF1C71C7	-114.550000	AE8ACF13	11555	0A2C6	1771C	145B0
-67.750000	CFD27D28	114.550000	517530ED	16AAB	00024	1CB06	15D3A
-66.550000	D0ACF135	-67.500000	D0000000	1D111	16000	02FB7	1C000
-65.550000	D162FC96	67.500000	30000000	02666	10000	083A0	0A000
-64.450000	D22B3C4D	-83.080000	C4EBBF60	08444	0760B	0DFEE	0EC34
-63.250000	D305B05B	83.080000	3B1440A0	0EAAB	0001D	1449F	189F5
-62.250000	D3BBBBBC	-64.290000	D2485CD8	14000	05B44	19889	0B6B3
-61.250000	D471C71C	64.290000	2DB7A328	19555	0002C	1EC72	1A4BC
-60.250000	D527D27D	-72.000000	CCCCCCCD	1EAAB	06666	0405B	0CCCD
-59.960000	D55C9D78	-120.500000	AA4FA4FA	0036A	0960B	058B1	1416C
-59.955000	D55D867C	120.000000	55555555	003D7	15555	0591C	0AAAB
-59.930000	D5621392	-119.500000	AB05B05B	005F9	01555	05B35	0BF4A
-58.000000	D6C16C17	-78.750000	C8000000	0AAAB	07000	0FD28	0E000
-58.500000	D6666666	78.750000	38000000	08000	19000	0D333	12000
-57.950000	D6CA8642	-22.500000	F0000000	0AEEF	02000	1015A	04000

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Table 2-89: Airborne Position Encoding Values (con't)

Angular Weighted Binary Values (degrees)				Even Airborne Encoding		Odd Airborne Encoding	
Latitude Decimal	Latitude HEX	Longitude Decimal	Longitude HEX	Latitude HEX	Longitude HEX	Latitude HEX	Longitude HEX
-56.850000	D792C5F9	22.500000	10000000	10CCD	00000	15DA7	1E000
-55.500000	D8888889	-52.940000	DA5A912E	18000	04B59	1CEEF	096A4
-54.620000	D928BB81	52.940000	25A56ED2	1CB18	1FFF1	018C6	1B4A7
-53.250000	DA222222	-30.000000	EAAAAAAB	04000	02AAB	08BBC	05555
-51.950000	DB0ECA86	30.000000	15555555	0AEEF	00000	0F8D1	1D555
-50.750000	DBE93E94	-75.790000	CA1ADA00	11555	06BC3	15D83	0D78D
-49.650000	DCB17E4B	75.790000	35E52600	17333	00007	1B9D0	1943D
-48.250000	DDB05B06	-27.000000	ECCCCCCD	1EAAB	02666	02F4A	04CCD
-47.000000	DE93E93F	27.000000	13333333	05555	00000	0982E	1D99A
-45.600000	DF92C5F9	-68.570000	CF3D3663	0CCCD	0619B	10DA7	0C321
-44.250000	E0888889	-180.000000	80000000	14000	00000	17EEF	10000
-42.850000	E1876543	179.500000	7FA4FA50	1B777	0E16C	1F469	1E222
-41.400000	E28F5C29	178.500000	7EEEEEEF	03333	1A222	06E14	0A444
-40.000000	E38E38E4	175.500000	7CCCCCCD	0AAAB	1E000	0E38E	0E666
-38.500000	E49F49F5	-160.900000	8D950C84	12AAB	0E190	1616C	1C666
-36.900000	E5C28F5C	-171.500000	860B60B6	1B333	1382E	1E7AE	02C17
-35.250000	E6EEEEEF	-172.500000	85555555	04000	00000	07222	0F555
-33.600000	E81B4E82	65.750000	2EC16C17	0CCCD	1E60B	0FC96	18889
-31.800000	E962FC96	-142.750000	9A7D27D2	16666	058E4	193A0	123E9
-30.000000	EAAAAAAB	59.500000	2A4FA4FA	00000	0DBBC	02AAB	0871C
-28.000000	EC16C16C	-60.000000	D5555555	0AAAB	0AAAB	0D27D	10000
-25.900000	ED950C84	-66.700000	D091A2B4	15DDE	05C4D	182B4	0BB2A
-23.600000	EF37C049	-120.000000	AAAAAAAB	02222	00000	043B3	0AAAB
-21.100000	F0FEDCBB	41.500000	1D82D82E	0F777	0AE39	1157A	07333
-18.200000	F30ECA86	-144.000000	9999999A	1EEEF	13333	008D1	00000
-14.900000	F56789AC	-121.000000	A9F49F4A	10889	1AEEF	11DB9	05B06
-10.500000	F8888889	121.000000	560B60B6	08000	0FD28	08EEF	05111
-5.100000	FC5F92C6	6.250000	0471C71C	04CCD	00C72	0540E	0038E
-2.500000	FE38E38E	154.280000	6DB5D120	12AAB	091CE	12E39	1B663
0.000000	00000000	60.000000	2AAAAAAB	00000	1AAAB	00000	15555
0.000000	00000000	-157.500000	90000000	00000	06000	00000	14000
90.000000	40000000	-180.000000	80000000	00000	10000	18000	10000
89.950000	3FF6E5D5	179.500000	7FA4FA50	1FBBC	0FF4A	17BCE	0FF4A
89.500000	3FA4FA50	178.500000	7EEEEEEF	1D555	0FDDE	1560B	0FDDE
89.000000	3F49F49F	175.500000	7CCCCCCD	1AAAB	0F99A	12C17	0F99A
87.500000	3E38E38E	-165.000000	8AAAAAAB	12AAB	11555	0AE39	11555
86.750000	3DB05B06	-171.500000	860B60B6	0EAAB	0182E	06F4A	10C17
86.500000	3D82D82E	-172.500000	85555555	0D555	12000	05A50	01555
85.850000	3D0C83FB	65.750000	2EC16C17	09DDE	11889	023C5	0BB06
85.000000	3C71C71C	-142.750000	9A7D27D2	05555	0D3E9	1DC72	19EEF
84.250000	3BE93E94	60.000000	2AAAAAAB	01555	1AAAB	19D83	15555
83.550000	3B69D037	-60.000000	D5555555	1D99A	00000	162C6	05555

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Table 2-89: Airborne Position Encoding Values (con't)

Angular Weighted Binary Values (degrees)				Even Airborne Encoding		Odd Airborne Encoding	
Latitude Decimal	Latitude HEX	Longitude Decimal	Longitude HEX	Latitude HEX	Longitude HEX	Latitude HEX	Longitude HEX
82.680000	3ACB6F46	120.000000	55555555	18F5C	0AAAB	119C5	00000
81.750000	3A222222	-120.000000	AAAAAAAB	14000	0AAAB	0CBBC	15555
80.250000	39111111	144.000000	66666666	0C000	13333	04DDE	06666
79.750000	38B60B61	-144.000000	9999999A	09555	00000	023E9	0CCCD
78.400000	37C048D1	-121.000000	A9F49F4A	02222	09B06	1B2A2	1471C
77.400000	370A3D71	121.000000	560B60B6	1CCCD	01111	15EB8	164FA
76.550000	366F8092	-154.280000	924A2EE0	18444	0DB89	11765	1B6F4
75.600000	35C28F5C	154.280000	6DB5D120	13333	1FFE3	0C7AE	12477
74.750000	3527D27D	157.500000	70000000	0EAAB	12000	0805B	04000
73.650000	345F92C6	-157.500000	90000000	08CCD	00000	0240E	0E000
72.750000	33BBBBBC	-120.000000	AAAAAAAB	04000	0AAAB	1D889	15555
71.550000	32E147AE	120.000000	55555555	1D99A	00000	173D7	15555
70.650000	323D70A4	-144.000000	9999999A	18CCD	0CCCD	12852	1999A
69.550000	317530ED	144.000000	66666666	12EEF	00000	0CC05	13333
68.750000	30E38E39	-114.550000	AE8ACF13	0EAAB	0A2C6	088E4	145B0
67.750000	302D82D8	114.550000	517530ED	09555	00024	034FA	15D3A
66.550000	2F530ECB	-67.500000	D0000000	02EEF	16000	1D049	1C000
65.550000	2E9D036A	67.500000	30000000	1D99A	10000	17C60	0A000
64.450000	2DD4C3B3	-83.080000	C4EBBF60	17BBC	0760B	12012	0EC34
63.250000	2CFA4FA5	83.080000	3B1440A0	11555	0001D	0BB61	189F5
62.250000	2C444444	-64.290000	D2485CD8	0C000	05B44	06777	0B6B3
61.250000	2B8E38E4	64.290000	2DB7A328	06AAB	0002C	0138E	1A4BC
60.250000	2AD82D83	-72.000000	CCCCCCCD	01555	06666	1BFA5	0CCCD
59.960000	2AA36288	-120.500000	AA4FA4FA	1FC96	0960B	1A74F	1416C
59.955000	2AA27984	120.000000	55555555	1FC29	15555	1A6E4	0AAAB
59.930000	2A9DEC6E	-119.500000	AB05B05B	1FA07	01555	1A4CB	0BF4A
58.000000	293E93E9	-78.750000	C8000000	15555	07000	102D8	0E000
58.500000	2999999A	78.750000	38000000	18000	19000	12CCD	12000
57.950000	293579BE	-22.500000	F0000000	15111	02000	0FEA6	04000
56.850000	286D3A07	22.500000	10000000	0F333	00000	0A259	1E000
55.500000	27777777	-52.940000	DA5A912E	08000	04B59	03111	096A4
54.620000	26D7447F	52.940000	25A56ED2	034E8	1FFF1	1E73A	1B4A7
53.250000	25DDDDDE	-30.000000	EAAAAAAB	1C000	02AAB	17444	05555
51.950000	24F1357A	30.000000	15555555	15111	00000	1072F	1D555
50.750000	2416C16C	-75.790000	CA1ADA00	0EAAB	06BC3	0A27D	0D78D
49.650000	234E81B5	75.790000	35E52600	08CCD	00007	04630	1943D
48.250000	224FA4FA	-27.000000	ECCCCCCD	01555	02666	1D0B6	04CCD
47.000000	216C16C1	27.000000	13333333	1AAAB	00000	167D2	1D99A
45.600000	206D3A07	-68.570000	CF3D3663	13333	0619B	0F259	0C321
44.250000	1F777777	-180.000000	80000000	0C000	00000	08111	10000
42.850000	1E789ABD	179.500000	7FA4FA50	04889	0E16C	00B97	1E222
41.400000	1D70A3D7	178.500000	7EEEEEEF	1CCCD	1A222	191EC	0A444

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Table 2-89: Airborne Position Encoding Values (con't)

Angular Weighted Binary Values (degrees)				Even Airborne Encoding		Odd Airborne Encoding	
Latitude Decimal	**Latitude HEX**	**Longitude Decimal**	**Longitude HEX**	**Latitude HEX**	**Longitude HEX**	**Latitude HEX**	**Longitude HEX**
40.000000	1C71C71C	175.500000	7CCCCCCD	15555	1E000	11C72	0E666
38.500000	1B60B60B	-160.900000	8D950C84	0D555	0E190	09E94	1C666
36.900000	1A3D70A4	-171.500000	860B60B6	04CCD	1382E	01852	02C17
35.250000	19111111	-172.500000	85555555	1C000	00000	18DDE	0F555
33.600000	17E4B17E	65.750000	2EC16C17	13333	1E60B	1036A	18889
31.800000	169D036A	-142.750000	9A7D27D2	0999A	058E4	06C60	123E9
30.000000	15555555	59.500000	2A4FA4FA	00000	0DBBC	1D555	0871C
28.000000	13E93E94	-60.000000	D5555555	15555	0AAAB	12D83	10000
25.900000	126AF37C	-66.700000	D091A2B4	0A222	05C4D	07D4C	0BB2A
23.600000	10C83FB7	-120.000000	AAAAAAAB	1DDDE	00000	1BC4D	0AAAB
21.100000	0F012345	41.500000	1D82D82E	10889	0AE39	0EA86	07333
18.200000	0CF1357A	-144.000000	9999999A	01111	13333	1F72F	00000
14.900000	0A987654	-121.000000	A9F49F4A	0F777	1AEEF	0E247	05B06
10.500000	07777777	121.000000	560B60B6	18000	0FD28	17111	05111
5.100000	03A06D3A	6.250000	0471C71C	1B333	00C72	1ABF2	0038E
2.500000	01C71C72	154.280000	6DB5D120	0D555	091CE	0D1C7	1B663
0.000000	00000000	60.000000	2AAAAAAB	00000	1AAAB	00000	15555
0.000000	00000000	-157.500000	90000000	00000	06000	00000	14000

b. For each Even interval Airborne Position Message that is broadcast by the ADS-B Transmitting System:

(1). Verify that the "CPR Format" (F) subfield is set to "0," and

(2). Verify that the Encoded Even Interval Latitude subfield is encoded exactly as shown in the Even Airborne Encoding Latitude column of Table 2-89.

If the encoding is not exact, verify that the encoding does not differ from the table value by more that "1" Least Significant Bit (LSB).

If the encoded value differs from the table value by more than "1" LSB, then the test shall be considered to have Failed. Otherwise, the test shall be considered to have passed.

(3). Verify that the Encoded Even Interval Longitude subfield is encoded exactly as shown in the Even Airborne Encoding Longitude column of Table 2-89.

If the encoding is not exact, verify that the encoding does not differ from the table value by more that "1" Least Significant Bit (LSB).

If the encoded value differs from the table value by more than "1" LSB, then the test shall be considered to have Failed. Otherwise, the test shall be considered to have passed.

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columns of the table, then this portion of the test shall be considered as PASSED.

Table 2-90: Verification of Transition Table

Latitude in degrees (rounded to nearest AWB value)				Even Surface Position Encodings			
lat_{low}	lat_{low}	lat_{up}	lat_{up}	lower		upper	
Decimal	HEX	Decimal	HEX	latitude	longitude	latitude	longitude
10.470463	077216EF	10.470474	07721777	1F5EB	10000	1F5EC	00000
14.828167	0A8B62AB	14.828178	0A8B6333	1C559	00000	1C55A	10000
18.186253	0CEEB4CD	18.186264	0CEEB555	03F93	10000	03F94	00000
21.029388	0EF44889	21.029400	0EF44911	00A08	00000	00A09	10000
23.545040	10BE3E66	23.545052	10BE3EEF	164B5	10000	164B6	00000
25.829247	125E1222	25.829258	125E12AB	07062	00000	07063	10000
27.938976	13DE22AB	27.938988	13DE2333	14081	10000	14082	00000
29.911354	15453222	29.911366	154532AB	1E1BE	00000	1E1BF	10000
31.772095	1697EEEF	31.772106	1697EF77	05CE0	10000	05CE1	00000
33.539932	17D9C222	33.539944	17D9C2AB	0B84C	00000	0B84D	10000
35.228989	190D3DDE	35.229000	190D3E66	0F8D4	10000	0F8D5	00000
36.850250	1A346222	36.850262	1A3462AB	12238	00000	12239	10000
38.412415	1B50C444	38.412426	1B50C4CD	13770	10000	13771	00000
39.922565	1C63AE66	39.922577	1C63AEEF	13AE7	00000	13AE8	10000
41.386517	1D6E2F77	41.386528	1D6E3000	12E99	10000	12E9A	00000
42.809132	1E712A22	42.809143	1E712AAB	1142F	00000	11430	10000
44.194542	1F6D5EEF	44.194553	1F6D5F77	0ED12	10000	0ED13	00000
45.546261	2063719A	45.546272	20637222	0BA75	00000	0BA76	10000
46.867332	2153F000	46.867344	2153F089	07D62	10000	07D63	00000
48.160389	223F54CD	48.160400	223F5555	036BF	00000	036C0	10000
49.427753	23260C44	49.427765	23260CCD	1E757	10000	1E758	00000
50.671497	240876EF	50.671509	24087777	18FDF	00000	18FE0	10000
51.893417	24E6E889	51.893429	24E6E911	130F4	10000	130F5	00000
53.095161	25C1ADDE	53.095173	25C1AE66	0CB26	00000	0CB27	10000
54.278172	26990A22	54.278183	26990AAB	05EF3	10000	05EF4	00000
55.443775	276D3B33	55.443787	276D3BBC	1ECCF	00000	1ECD0	10000
56.593185	283E799A	56.593197	283E7A22	17524	10000	17525	00000
57.727467	290CF6EF	57.727478	290CF777	0F84F	00000	0F850	10000
58.847637	29D8E2AB	58.847649	29D8E333	076A9	10000	076AA	00000
59.954590	2AA26666	59.954601	2AA266EF	1F080	00000	1F081	10000
61.049171	2B69A99A	61.049183	2B69AA22	1661E	10000	1661F	00000
62.132160	2C2ED089	62.132172	2C2ED111	0D7C7	00000	0D7C8	10000
63.204266	2CF1FC44	63.204277	2CF1FCCD	045B9	10000	045BA	00000
64.266163	2DB34C44	64.266174	2DB34CCD	1B02F	00000	1B030	10000
65.318447	2E72DC44	65.318459	2E72DCCD	1175D	10000	1175E	00000
66.361702	2F30C777	66.361713	2F30C800	07B76	00000	07B77	10000
67.396465	2FED26EF	67.396477	2FED2777	1DCA9	10000	1DCAA	00000
68.423218	30A81111	68.423229	30A8119A	13B20	00000	13B21	10000
69.442417	31619B33	69.442429	31619BBC	09703	10000	09704	00000
70.454510	3219DA22	70.454521	3219DAAB	1F079	00000	1F07A	10000
71.459862	32D0DEEF	71.459873	32D0DF77	147A2	10000	147A3	00000
72.458839	3386BAAB	72.458851	3386BB33	09C9E	00000	09C9F	10000
73.451763	343B7C44	73.451775	343B7CCD	1EF89	10000	1EF8A	00000
74.438931	34EF319A	74.438942	34EF3222	1407D	00000	1407E	10000
75.420559	35A1E4CD	75.420570	35A1E555	08F8D	10000	08F8E	00000
76.396843	36539EEF	76.396854	36539F77	1DCCA	00000	1DCCB	10000
77.367886	370464CD	77.367897	37046555	1283D	10000	1283E	00000
78.333733	37B43889	78.333744	37B43911	071EA	00000	071EB	10000
79.294281	38631555	79.294292	386315DE	1B9C8	10000	1B9C9	00000
80.249222	3910ECCD	80.249233	3910ED55	0FFBC	00000	0FFBD	10000
81.198006	39BDA555	81.198017	39BDA5DE	04396	10000	04397	00000
82.139568	3A690D55	82.139580	3A690DDE	184F9	00000	184FA	10000
83.071987	3B12CB33	83.071999	3B12CBBC	0C33D	10000	0C33E	00000
83.991726	3BBA3A22	83.991737	3BBA3AAB	1FD2D	00000	1FD2E	10000
84.891655	3C5E0DDE	84.891666	3C5E0E66	1305A	10000	1305B	00000
85.755409	3CFB4BBC	85.755421	3CFB4C44	0572E	00000	0572F	10000
86.535370	3D894889	86.535381	3D894911	16168	10000	16169	00000
86.999999	3DDDDDDD	87.000011	3DDDDE66	00000	00000	00001	10000

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Note: *An entry from Table 2-90 consists of a pair of latitudes which, in the process of encoding with maximum precision, will produce values which straddle the transition latitudes as closely as possible. In addition, each entry contains 2 pairs of even surface encodings for the positions at each latitude in the entry and 45 degrees longitude. Both the latitudes and the encodings are distinguished by "upper" and "lower" where the upper position is the one closer to the North Pole.*

2.4.3.2.4.7.1.2 Verification of Surface Latitude and Longitude Data Encoding (subparagraph 2.2.3.2.4.6, 2.2.3.2.4.7, 2.2.3.2.4.7.1, 2.2.3.2.4.8, 2.2.3.2.4.8.1, 2.2.5.1.7, 2.2.5.1.8, 2.2.5.1.12, 2.2.5.1.13, Appendix A.7)

Purpose/Introduction:

The "ENCODED LATITUDE" subfield is a 17-bit field (ME Bits 23 through 39, Message Bits 55 through 71) containing the encoded latitude of the surface position. The following test procedure verifies that the ADS-B Transmitting System correctly receives Latitude position data from the Navigation source and outputs encoded Latitude data in the Surface Position Message. The Latitude data is encoded according to the Compact Position Reporting (CPR) Format described in Appendix A. The Latitude data is dependent upon the positional accuracy supported by the ADS-B Transmitting System.

The following procedure verifies the ***static*** latitude encoding where the velocity input is 0.0 knots and is intended to verify the actual CPR Latitude encoding precision.

Measurement Procedure:

Step 1: Establish Initial Conditions

a. Configure the ADS-B Transmitting System to create a Surface Position Message, i.e., Type Codes 5 through 8.

b. Ensure that the Velocity input provided to the ADS-B Transmitting System is set to **ZERO**.

Step 2: Verify Encoded Latitude Data

a. Via the appropriate Navigation Data Source interface, provide the ADS-B Transmitting system with the exact latitude and longitude data pair provided in the Angular Weighted Binary Values Latitude and Longitude Columns for each line item given in Table 2-91.

   Provide the latitude and longitude data via the interface at the nominal rate of the navigation data source.

   Allow the system to stabilize for at least 2 seconds after the data change prior to continuing with the following steps.

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Table 2-91: Surface Position Encoding Values

Angular Weighted Binary Values (degrees)				Even Surface Encoding		Odd Surface Encoding	
Latitude	Latitude	Longitude	Longitude	Latitude	Longitude	Latitude	Longitude
Decimal	HEX	Decimal	HEX	HEX	HEX	HEX	HEX
-90.000000	C0000000	-180.000000	80000000	00000	00000	00000	00000
-89.950000	C0091A2B	179.500000	7FA4FA50	01111	1FD28	010C8	1FD28
-89.500000	C05B05B0	178.500000	7EEEEEEF	0AAAB	1F777	0A7D2	1F777
-89.000000	C0B60B61	175.500000	7CCCCCCD	15555	1E666	14FA5	1E666
-87.500000	C1C71C72	-165.000000	8AAAAAAB	15555	05555	1471C	05555
-86.750000	C24FA4FA	-171.500000	860B60B6	05555	060B6	042D8	0305B
-86.500000	C27D27D2	-172.500000	85555555	0AAAB	08000	096C1	05555
-85.850000	C2F37C05	65.750000	2EC16C17	18889	06222	170ED	0EC17
-85.000000	C38E38E4	-142.750000	9A7D27D2	0AAAB	14FA5	08E39	07BBC
-84.250000	C416C16C	60.000000	2AAAAAAB	1AAAB	0AAAB	189F5	15555
-83.550000	C4962FC9	-60.000000	D5555555	0999A	00000	074E8	15555
-82.680000	C53490BA	120.000000	55555555	1C28F	0AAAB	198EB	00000
-81.750000	C5DDDDDE	-120.000000	AAAAAAAB	10000	0AAAB	0D111	15555
-80.250000	C6EEEEEF	144.000000	66666666	10000	0CCCD	0C889	1999A
-79.750000	C749F49F	-144.000000	9999999A	1AAAB	00000	1705B	13333
-78.400000	C83FB72F	-121.000000	A9F49F4A	17777	06C17	1357A	11C72
-77.400000	C8F5C28F	121.000000	560B60B6	0CCCD	04444	0851F	193E9
-76.550000	C9907F6E	-154.280000	924A2EE0	1EEEF	16E23	1A26B	0DBD2
-75.600000	CA3D70A4	154.280000	6DB5D120	13333	1FF8B	0E148	091DD
-74.750000	CAD82D83	157.500000	70000000	05555	08000	1FE94	10000
-73.650000	CBA06D3A	-157.500000	90000000	1CCCD	00000	16FC9	18000
-72.750000	CC444444	-120.000000	AAAAAAAB	10000	0AAAB	09DDE	15555
-71.550000	CD1EB852	120.000000	55555555	0999A	00000	030A4	15555
-70.650000	CDC28F5C	-144.000000	9999999A	1CCCD	13333	15EB8	06666
-69.550000	CE8ACF13	144.000000	66666666	14444	00000	0CFEE	0CCCD
-68.750000	CF1C71C7	-114.550000	AE8ACF13	05555	08B18	1DC72	116C1
-67.750000	CFD27D28	114.550000	517530ED	1AAAB	00092	12C17	174E8
-66.550000	D0ACF135	-67.500000	D0000000	14444	18000	0BEDD	10000
-65.550000	D162FC96	67.500000	30000000	0999A	00000	00E82	08000
-64.450000	D22B3C4D	-83.080000	C4EBBF60	01111	1D82E	17FB7	1B0D0
-63.250000	D305B05B	83.080000	3B1440A0	1AAAB	00075	1127D	027D2
-62.250000	D3BBBBBC	-64.290000	D2485CD8	10000	16D0E	06222	0DACB
-61.250000	D471C71C	64.290000	2DB7A328	05555	000AF	1B1C7	092F2
-60.250000	D527D27D	-72.000000	CCCCCCCD	1AAAB	1999A	1016C	13333
-59.960000	D55C9D78	-120.500000	AA4FA4FA	00DA7	0582E	162C2	105B0
-59.955000	D55D867C	120.000000	55555555	00F5C	15555	16470	0AAAB
-59.930000	D5621392	-119.500000	AB05B05B	017E5	05555	16CD4	0FD28
-58.000000	D6C16C17	-78.750000	C8000000	0AAAB	1C000	1F49F	18000
-58.500000	D6666666	78.750000	38000000	00000	04000	14CCD	08000
-57.950000	D6CA8642	-22.500000	F0000000	0BBBC	08000	00568	10000
-56.850000	D792C5F9	22.500000	10000000	03333	00000	1769D	18000

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Table 2-91: Surface Position Encoding Values (con't)

Angular Weighted Binary Values (degrees)				Even Surface Encoding		Odd Surface Encoding	
Latitude	Latitude	Longitude	Longitude	Latitude	Longitude	Latitude	Longitude
Decimal	HEX	Decimal	HEX	HEX	HEX	HEX	HEX
-55.500000	D8888889	-52.940000	DA5A912E	00000	12D66	13BBC	05A91
-54.620000	D928BB81	52.940000	25A56ED2	12C60	1FFC6	0631A	0D29A
-53.250000	DA222222	-30.000000	EAAAAAAB	10000	0AAAB	02EEF	15555
-51.950000	DB0ECA86	30.000000	15555555	0BBBC	00000	1E345	15555
-50.750000	DBE93E94	-75.790000	CA1ADA00	05555	1AF0C	1760B	15E35
-49.650000	DCB17E4B	75.790000	35E52600	1CCCD	0001D	0E741	050F4
-48.250000	DDB05B06	-27.000000	ECCCCCCD	1AAAB	0999A	0BD28	13333
-47.000000	DE93E93F	27.000000	13333333	15555	00000	060B6	16666
-45.600000	DF92C5F9	-68.570000	CF3D3663	13333	1866E	0369D	10C84
-44.250000	E0888889	-180.000000	80000000	10000	00000	1FBBC	00000
-42.850000	E1876543	179.500000	7FA4FA50	0DDDE	185B0	1D1A3	18889
-41.400000	E28F5C29	178.500000	7EEEEEEF	0CCCD	08889	1B852	09111
-40.000000	E38E38E4	175.500000	7CCCCCCD	0AAAB	18000	18E39	1999A
-38.500000	E49F49F5	-160.900000	8D950C84	0AAAB	18642	185B0	1199A
-36.900000	E5C28F5C	-171.500000	860B60B6	0CCCD	0E0B6	19EB8	0B05B
-35.250000	E6EEEEEF	-172.500000	85555555	10000	00000	1C889	1D555
-33.600000	E81B4E82	65.750000	2EC16C17	13333	1982E	1F259	02222
-31.800000	E962FC96	-142.750000	9A7D27D2	1999A	1638E	04E82	08FA5
-30.000000	EAAAAAAB	59.500000	2A4FA4FA	00000	16EEF	0AAAB	01C72
-28.000000	EC16C16C	-60.000000	D5555555	0AAAB	0AAAB	149F5	00000
-25.900000	ED950C84	-66.700000	D091A2B4	17777	17135	00ACF	0ECA8
-23.600000	EF37C049	-120.000000	AAAAAAAB	08889	00000	10ECB	0AAAB
-21.100000	F0FEDCBB	41.500000	1D82D82E	1DDDE	0B8E4	055E7	1CCCD
-18.200000	F30ECA86	-144.000000	9999999A	1BBBC	0CCCD	02345	00000
-14.900000	F56789AC	-121.000000	A9F49F4A	02222	0BBBC	076E6	16C17
-10.500000	F8888889	121.000000	560B60B6	00000	1F49F	03BBC	14444
-5.100000	FC5F92C6	6.250000	0471C71C	13333	031C7	15037	00E39
-2.500000	FE38E38E	154.280000	6DB5D120	0AAAB	0473A	0B8E4	0D98B
0.000000	00000000	60.000000	2AAAAAAB	00000	0AAAB	00000	15555
0.000000	00000000	-157.500000	90000000	00000	18000	00000	10000
90.000000	40000000	-180.000000	80000000	00000	00000	00000	00000
89.950000	3FF6E5D5	179.500000	7FA4FA50	1EEEF	1FD28	1EF38	1FD28
89.500000	3FA4FA50	178.500000	7EEEEEEF	15555	1F777	1582E	1F777
89.000000	3F49F49F	175.500000	7CCCCCCD	0AAAB	1E666	0B05B	1E666
87.500000	3E38E38E	-165.000000	8AAAAAAB	0AAAB	05555	0B8E4	05555
86.750000	3DB05B06	-171.500000	860B60B6	1AAAB	060B6	1BD28	0305B
86.500000	3D82D82E	-172.500000	85555555	15555	08000	1693F	05555
85.850000	3D0C83FB	65.750000	2EC16C17	07777	06222	08F13	0EC17
85.000000	3C71C71C	-142.750000	9A7D27D2	15555	14FA5	171C7	07BBC
84.250000	3BE93E94	60.000000	2AAAAAAB	05555	0AAAB	0760B	15555
83.550000	3B69D037	-60.000000	D5555555	16666	00000	18B18	15555
82.680000	3ACB6F46	120.000000	55555555	03D71	0AAAB	06715	00000

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Table 2-91: Surface Position Encoding Values (con't)

Angular Weighted Binary Values (degrees)				Even Surface Encoding		Odd Surface Encoding	
Latitude	Latitude	Longitude	Longitude	Latitude	Longitude	Latitude	Longitude
Decimal	HEX	Decimal	HEX	HEX	HEX	HEX	HEX
81.750000	3A222222	-120.000000	AAAAAAAB	10000	0AAAB	12EEF	15555
80.250000	39111111	144.000000	66666666	10000	0CCCD	13777	1999A
79.750000	38B60B61	-144.000000	9999999A	05555	00000	08FA5	13333
78.400000	37C048D1	-121.000000	A9F49F4A	08889	06C17	0CA86	11C72
77.400000	370A3D71	121.000000	560B60B6	13333	04444	17AE1	193E9
76.550000	366F8092	-154.280000	924A2EE0	01111	16E23	05D95	0DBD2
75.600000	35C28F5C	154.280000	6DB5D120	0CCCD	1FF8B	11EB8	091DD
74.750000	3527D27D	157.500000	70000000	1AAAB	08000	0016C	10000
73.650000	345F92C6	-157.500000	90000000	03333	00000	09037	18000
72.750000	33BBBBBC	-120.000000	AAAAAAAB	10000	0AAAB	16222	15555
71.550000	32E147AE	120.000000	55555555	16666	00000	1CF5C	15555
70.650000	323D70A4	-144.000000	9999999A	03333	13333	0A148	06666
69.550000	317530ED	144.000000	66666666	0BBBC	00000	13012	0CCCD
68.750000	30E38E39	-114.550000	AE8ACF13	1AAAB	08B18	0238E	116C1
67.750000	302D82D8	114.550000	517530ED	05555	00092	0D3E9	174E8
66.550000	2F530ECB	-67.500000	D0000000	0BBBC	18000	14123	10000
65.550000	2E9D036A	67.500000	30000000	16666	00000	1F17E	08000
64.450000	2DD4C3B3	-83.080000	C4EBBF60	1EEEF	1D82E	08049	1B0D0
63.250000	2CFA4FA5	83.080000	3B1440A0	05555	00075	0ED83	027D2
62.250000	2C444444	-64.290000	D2485CD8	10000	16D0E	19DDE	0DACB
61.250000	2B8E38E4	64.290000	2DB7A328	1AAAB	000AF	04E39	092F2
60.250000	2AD82D83	-72.000000	CCCCCCCD	05555	1999A	0FE94	13333
59.960000	2AA36288	-120.500000	AA4FA4FA	1F259	0582E	09D3E	105B0
59.955000	2AA27984	120.000000	55555555	1F0A4	15555	09B90	0AAAB
59.930000	2A9DEC6E	-119.500000	AB05B05B	1E81B	05555	0932C	0FD28
58.000000	293E93E9	-78.750000	C8000000	15555	1C000	00B61	18000
58.500000	2999999A	78.750000	38000000	00000	04000	0B333	08000
57.950000	293579BE	-22.500000	F0000000	14444	08000	1FA98	10000
56.850000	286D3A07	22.500000	10000000	1CCCD	00000	08963	18000
55.500000	27777777	-52.940000	DA5A912E	00000	12D66	0C444	05A91
54.620000	26D7447F	52.940000	25A56ED2	0D3A0	1FFC6	19CE6	0D29A
53.250000	25DDDDDE	-30.000000	EAAAAAAB	10000	0AAAB	1D111	15555
51.950000	24F1357A	30.000000	15555555	14444	00000	01CBB	15555
50.750000	2416C16C	-75.790000	CA1ADA00	1AAAB	1AF0C	089F5	15E35
49.650000	234E81B5	75.790000	35E52600	03333	0001D	118BF	050F4
48.250000	224FA4FA	-27.000000	ECCCCCCD	05555	0999A	142D8	13333
47.000000	216C16C1	27.000000	13333333	0AAAB	00000	19F4A	16666
45.600000	206D3A07	-68.570000	CF3D3663	0CCCD	1866E	1C963	10C84
44.250000	1F777777	-180.000000	80000000	10000	00000	00444	00000
42.850000	1E789ABD	179.500000	7FA4FA50	12222	185B0	02E5D	18889
41.400000	1D70A3D7	178.500000	7EEEEEEF	13333	08889	047AE	09111
40.000000	1C71C71C	175.500000	7CCCCCCD	15555	18000	071C7	1999A

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Table 2-91: Surface Position Encoding Values (con't)

Angular Weighted Binary Values (degrees)				Even Surface Encoding		Odd Surface Encoding	
Latitude	Latitude	Longitude	Longitude	Latitude	Longitude	Latitude	Longitude
Decimal	HEX	Decimal	HEX	HEX	HEX	HEX	HEX
38.500000	1B60B60B	-160.900000	8D950C84	15555	18642	07A50	1199A
36.900000	1A3D70A4	-171.500000	860B60B6	13333	0E0B6	06148	0B05B
35.250000	19111111	-172.500000	85555555	10000	00000	03777	1D555
33.600000	17E4B17E	65.750000	2EC16C17	0CCCD	1982E	00DA7	02222
31.800000	169D036A	-142.750000	9A7D27D2	06666	1638E	1B17E	08FA5
30.000000	15555555	59.500000	2A4FA4FA	00000	16EEF	15555	01C72
28.000000	13E93E94	-60.000000	D5555555	15555	0AAAB	0B60B	00000
25.900000	126AF37C	-66.700000	D091A2B4	08889	17135	1F531	0ECA8
23.600000	10C83FB7	-120.000000	AAAAAAAB	17777	00000	0F135	0AAAB
21.100000	0F012345	41.500000	1D82D82E	02222	0B8E4	1AA19	1CCCD
18.200000	0CF1357A	-144.000000	9999999A	04444	0CCCD	1DCBB	00000
14.900000	0A987654	-121.000000	A9F49F4A	1DDDE	0BBBC	1891A	16C17
10.500000	07777777	121.000000	560B60B6	00000	1F49F	1C444	14444
5.100000	03A06D3A	6.250000	0471C71C	0CCCD	031C7	0AFC9	00E39
2.500000	01C71C72	154.280000	6DB5D120	15555	0473A	1471C	0D98B
0.000000	00000000	60.000000	2AAAAAAB	00000	0AAAB	00000	15555
0.000000	00000000	-157.500000	90000000	00000	18000	00000	10000

b. For each Even interval Surface Position Message that is broadcast by the ADS-B Transmitting System:

(1). Verify that the "CPR Format" (F) subfield is set to "0", and

(2). Verify that the Encoded Even Interval Latitude subfield is encoded exactly as shown in the Even Surface Encoding Latitude column of Table 2-91.

If the encoding is not exact, verify that the encoding does not differ from the table value by more that "1" Least Significant Bit (LSB).

If the encoded value differs from the table value by more than "1" LSB, then the test shall be considered to have Failed. Otherwise, the test shall be considered to have passed.

(3). Verify that the Encoded Even Interval Longitude subfield is encoded exactly as shown in the Even Surface Encoding Longitude column of Table 2-91.

If the encoding is not exact, verify that the encoding does not differ from the table value by more that "1" Least Significant Bit (LSB).

If the encoded value differs from the table value by more than "1" LSB, then the test shall be considered to have Failed. Otherwise, the test shall be considered to have passed.

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