

in column 1, select the Call Sign Characters listed in column 2, and verify that Bytes 18 and 19 of the received ADS-B Long Message match the corresponding Binary Encoding value in the table.

Table 2-91: “EMITTER CATEGORY” And Bytes 18 & 19 Encoding Test Data

”EMITTER CATEGORY” AND BYTES 18 & 19 ENCODING			
Emitter Category	Call Sign Characters	Binary Encoding	
		Byte 18 MSB	Byte 19 LSB
No aircraft type information	00000000	0000	0000 0000 0000
No aircraft type information	01000000	0000	0000 0000 0000 0001
No aircraft type information	02000000	0000	0000 0000 0000 0010
No aircraft type information	04000000	0000	0000 0000 0000 0100
No aircraft type information	08000000	0000	0000 0000 0000 1000
No aircraft type information	0H000000	0000	0000 0000 0001 0001
No aircraft type information	0Y000000	0000	0000 0000 0010 0010
No aircraft type information	1S000000	0000	0000 0000 0100 0100
No aircraft type information	3G000000	0000	0000 0000 1000 1000
No aircraft type information	6W000000	0000	0001 0001 0001 0000
No aircraft type information	DO000000	0000	0010 0010 0010 0000
No aircraft type information	R8000000	0000	0100 0100 0100 0000
Light (ICAO) < 15 500 lbs	EG000000	0000	1000 1000 0000 0000
Small - 15 500 to 75 000 lbs	SW000000	0001	0001 0000 0000 0000
Heavy (ICAO) - > 300 000 lbs	HO000000	0010	0010 0000 0000 0000
Lighter than air	Z8000000	0100	0100 0000 0000 0000
Cluster-Line Obstacle	UG000000	1000	1000 0000 0000 0000
Small - 15 500 to 75 000 lbs	KG000000 MG000000	0001	0000 0000 0000 0000
Heavy (ICAO) - > 300 000 lbs	4W000000	0010	0000 0000 0000 0000
Lighter than air	9O000000	0100	0000 0000 0000 0000
Cluster Obstacle	J8000000	1000	0000 0000 0000 0000

2.4.4.5.4.3.2 Verification of Bytes #20 and #21 (§2.2.4.5.4.3.2)

Purpose/Introduction:

Bytes #20 and #21 **shall** be encoded such that:

- B₂ - Represents Character #3 of the “CALL SIGN” field (§2.2.4.5.4.2)
- B₁ - Represents Character #4 of the “CALL SIGN” field (§2.2.4.5.4.2)
- B₀ - Represents Character #5 of the “CALL SIGN” field (§2.2.4.5.4.2)

Measurement Procedure:

Step 1: Bytes 20 and 21 Field (§2.2.4.5.4.3.2)

Configure the ADS-B Transmitting Equipment to transmit valid ADS-B Long Messages with Payload Type Code 1 (or Code 3 for A1H equipment class). For each case in [Table 2-92](#) below, select the Call Sign Characters listed, and verify that Bytes 20 and 21 of the received ADS-B Long Message match the corresponding Binary Encoding value in the table.

Table 2-92: Bytes 20 & 21 Encoding Test Data

BYTES 20 & 21 ENCODING					
Call Sign Characters	Binary Encoding		Call Sign Characters	Binary Encoding	
	Byte 20 MSB LSB	Byte 21 MSB LSB		Byte 20 MSB LSB	Byte 21 MSB LSB
00001000	0000	0000	0000	0001	0100
00003000	0000	0000	0000	0001	0111
00007000	0000	0000	0000	0111	0101
0000F000	0000	0000	0000	1111	0110
0001S0000000V000	0000	0000	0001K0000009JN000	0001	1011
0001Q000	0000	0000	0100	0010	0101
0003P000	0000	0000	1001	0001	1110
0007O000	0000	0001	0011	0000	0101
000FK000000FL000	0000	0010	0110	1101	0000
000VG000	0000	0100	1110	1000	0101
001Q5000	0000	1010	0101	0101	0000
003PK000003PL000	0001	0110	1011	1101	0011
007O6000	0010	1111	1000	0110	1100
00FKK00000FLM000	0110	0001	0001	1110	0011
00VG7000	1100	0100	0100	0111	1001
00Q5P000	1010	0011	0110	0001	0011
00PKE00000PLE000	1001	1111	1001	0110	0011
00O61000	1001	0110	1111	0001	1100
00KKD00000LMD000	1000	0110	1011	1101	0000
00G7R000	0110	0101	0011	0011	0011
005PI000	0010	0011	0011	1010	1001
00KE900000LE9000	1000	0101	0111	1001	0010
0061T000	0010	0101	1100	0101	0100
00KDK00000MDM000	1000	1011	1001	1110	1000
007RH000	0011	0000	0000	1001	0000
00PI8000	1001	1111	0001	1000	0000
00E9Q000	0101	1001	0000	0010	0001
001TF000	0000	1010	1101	0111	0011
00DK400000DM4000	0101	0100	1011	0100	0111
00RH1000	1010	1011	0111	1010	0111
00I8SP000	0111	0001	1110	0100	1111
009Q9000	0011	1100	0101	1001	0010
00TFJ000	1011	0111	1010	1011	0001
00K4200000M42000	1000	1010	0010	0010	0000
00HIE000	0110	1101	0001	1110	0110
008SPS000	0011	0111	1011	1100	1000
00Q9J000	1010	0011	1111	1011	0101

2.4.4.5.4.3.3 Verification of Bytes #22 and #23 (§2.2.4.5.4.3.3)

Purpose/Introduction:

Bytes #22 and #23 **shall** be encoded such that:

- B₂ - Represents Character #6 of the “CALL SIGN” field (§2.2.4.5.4.2)
- B₁ - Represents Character #7 of the “CALL SIGN” field (§2.2.4.5.4.2)
- B₀ - Represents Character #8 of the “CALL SIGN” field (§2.2.4.5.4.2)

Measurement Procedure:Step 1: Bytes 22 and 23 Field (§2.2.4.5.4.3.3)

Configure the ADS-B Transmitting Equipment to transmit valid ADS-B Long Messages with Payload Type Code 1 (or Code 3 for A1H equipment class). For each case in [Table 2-93](#) below, select the Call Sign Characters listed, and verify that Bytes 22 and 23 of the received ADS-B Long Message match the corresponding Binary Encoding value in the table.

Table 2-93: Bytes 22 & 23 Encoding Test Data

BYTES 22 & 23 ENCODING					
Call Sign Characters	Binary Encoding		Call Sign Characters	Binary Encoding	
	Byte 22 MSB	Byte 23 LSB		Byte 22 MSB	Byte 23 LSB
00000001	0000	0000	0000000001	0110	0000
00000003	0000	0000	0000000011	0001	1001
00000007	0000	0000	0000000111	0111	0010
0000000F	0000	0000	0000001111	1110	0101
0000001S0000000V	0000	0000	000009JK000009JN	0011	1011
0000001Q	0000	0000	000001000010	0111	1000
0000003P	0000	0000	000001000011	0001	0001
0000007O	0000	0001	000000110000	0101	1000
000000FK000000FL	0000	0010	000000110101	1011	0000
000000VG	0000	0100	000000110100	0111	1010
000001Q5	0000	1010	000000101010	0100	1100
000003PK000003PL	0001	0110	000000101011	1101	1001
000007O6	0010	1111	000000100011	0010	0010
00000FKK00000FLM	0110	0001	000000100011	0100	0111
00000VG7	1100	0100	000000100011	1001	0001
00000Q5P	1010	0011	000000100001	0011	1110
00000PKE00000PLE	1001	1111	000000100011	1011	1101
00000O61	1001	0110	00000011110001	1001	0010
00000KKD00000LMD	1000	0110	00000011011101	0111	1101
00000G7R	0110	0101	00000011010011	0101	0011
000005PI	0010	0011	00000010101010	0000	0101
00000KE900000LE9	1000	0101	00000010110001	0011	1111
0000061T	0010	0101	00000011000101	0111	1110
00000KDK00000MDM	1000	1011	00000010011110	0001	0110
000007RH	0011	0000	00000000001001	0110	1100
00000PI8	1001	1111	00000000010000	1110	0000
00000E9Q	0101	1001	00000000001010	0010	0101
000001TF	0000	1010	00000011010111	0100	1011
00000DK400000DM4	0101	0100	0000001011010100	1001	0111
00000RHI	1010	1011	0000001111010101	0100	0111
00000I8SP	0111	0001	0000001110010100	1101	0011
000009Q9	0011	1100	0000001010010001	0000	1100
00000TFJ	1011	0111	0000001010101011	0001	1001
00000K4200000M42	1000	1010	0000001001000100	0011	0011
00000HIE	0110	1101	00000000011110	0110	0110
000008SPS	0011	0111	00000010111100	1100	1100
00000Q9J	1010	0011	00000011110101	0000	1010