

***NOTE: THE DATA IN THE FOLLOWING ATTACHMENTS IS FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE ENGINEER TO REVIEW ALL DATA FROM RELEVANT REFERENCES BEFORE CARRYING OUT THIS TASK.**

NO. 1 ATCRBS TRANSPONDER TEST RECORD

MAKE **MODEL** **TYPE** **S/N**

ITEM	TEST PROCEDURES USING IFR-6000 TEST SET	PASS	FAIL																									
1.	Original TSO _____ TSO Class _____ TSO Mod. Info _____ (Note: If TSO is not C74b or C74c, do not proceed).																											
2.	Set up IFR 6000 test for generic ATCRBS auto test. Set up antenna cable for correct loss and antenna for correct gain. Set up RF port for direct connect or Antenna. Set up test distance. Set up power limit to Far 43 transponder ant.																											
3.	XPDR – A/C decoder and side lobe suppression test. Decoder Inner Low A = _____ C = _____ Decoder Inner High A = _____ C = _____ Decoder Outer Low A = _____ C = _____ Decoder Outer High A = _____ C = _____ SLS 0 dB Mode A A = _____ C = _____ SLS 9 dB Mode A A = _____ C = _____ A code = _____ C Alt = _____ ft																											
4.	A/C F1 / F2 Space/Width F1 Width A = _____ μsec C = _____ μsec F2 Width A = _____ μsec C = _____ μsec F1 – F2 A = _____ μsec C = _____ μsec Reply Delay A = _____ μsec C = _____ μsec Reply Jitter A = _____ μsec C = _____ μsec Reply Ratio A = _____ % C = _____ % -81 dBm Reply Ratio A = _____ % C = _____ % ATCRBS ALL–CALL A = _____ C = _____ Pulse Amp Var. A = _____ dB C = _____ dB																											
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1.	Set up IFR 6000 test for generic Mode S auto test. Set up antenna cable for correct loss and antenna for correct gain. Set up RF port for direct connect or Antenna. Set up test distance. Set up power limit to Far 43transponder ant. Blank None transmitting Antenna individually during Diversity Power / Freq test.																																					
2.	A/C DECDR / SLS Decoder Inner Low A = _____ C = _____ Decoder Inner High A = _____ C = _____ Decoder Outer Low A = _____ C = _____ Decoder Outer High A = _____ C = _____ SLS 0 dB Mode A A = _____ C = _____ SLS 9 dB Mode A A = _____ C = _____ A code = _____ C Alt = _____ ft																																					
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ITEM	TEST PROCEDURES USING IFR 6000 TEST SET	PASS	FAIL
5.	<p>S ALL-CALL ITM Reply</p> <p>Delay A = _____ μsec C = _____ μsec Jitter A = _____ μsec C = _____ μsec Address A = _____ C = _____ Ratio A = _____ % C = _____ % -81 dBm A = _____ % C = _____ % Mode S All - Call = _____ C = - Address = _____ C = - Tail = _____ C = - Country = _____ C = -</p>		
6.	<p>S REPLY TIMING</p> <p>Reply Delay = _____ μsec Reply Jitter = _____ μsec Pulse Width = _____ Pulse Spacing = _____</p>		
7.	<p>S REPLY</p> <p>Pulse Amp VAR Shrt = _____ dB LNG = _____ dB SLS ON = _____ OFF = _____ SQTR DF 11 period = _____ S SQTR DF 17 detected = _____</p> <p>Reply Ratio = _____ % Reply Ratio - 81 dBm = _____ % Invalid AA = _____ Diversity Isolation = _____</p>		
8.	<p>UF 0 NO REPLY</p> <p>DF = _____ VS = _____ CC = _____ SL = _____ RI = _____ AC = _____ ft Mode C Alt Compare = _____ AA = _____ DF 11 Address compare = _____</p>		
9.	<p>UF 4 NO REPLY</p> <p>DF = _____ FS = _____ DR = _____ UM = _____ IDS = _____ IIS = _____ RI = _____ AC = _____ ft Mode C Alt Compare = _____ AA = _____ DF 11 Address compare = _____</p>		

ITEM	TEST PROCEDURES USING IFR 6000 TEST SET	PASS	FAIL
10.	UF 5 DF = _____ FS = _____ DR = _____ UM = _____ IDS = _____ IIS = ID = _____ Mode A ID Compare = _____ AA = _____ DF 11 Address compare = _____		
11.	UF 11 DF = _____ CA = _____ PI = _____ AA = _____ II Lock out timer = _____ Match = _____ SI Lock out timer = _____ Match = _____		
12.	UF 16 DF = _____ VS = _____ SL = _____ RI = _____ MV = _____ AC = _____ ft Mode C Alt Compare = _____ AA = _____ DF 11 Address compare = _____		
13.13.	UF 20 NO REPLY DF = _____ FS = _____ DR = _____ UM = _____ IDS = _____ IIS = _____ MB = _____ AC = _____ ft Mode C Alt Compare = _____ AA = _____ DF 11 Address compare = _____		
14.14.	UF 21 NO REPLY DF = _____ FS = _____ DR = _____ UM = _____ IDS = _____ IIS = _____ MB = _____ ID = _____ Mode A ID Compare = _____ AA = _____ DF 11 Address compare = _____		

ITEM	TEST PROCEDURES USING IFR 6000 TEST SET	PASS	FAIL
15.	<p>UF 24 NOT COMPATIBLE</p> <p>Reservation UF 4 DF = _____ IIS = _____ IDS = _____ AA = _____</p> <p>Segments UF 24 DF = _____ KE = _____ ND = _____ TAS = _____</p> <p>Close Out UF 4 DF = _____ IIS = _____ IDS = _____ AA = _____</p>		
16.1 6	<p>ELEMENTRY SURV 1</p> <p>BDS = _____ <u>1,0</u> Subnet work Version = - ENH Prot IND = - Spec Service Cap = - UELM Capability = - DELM Capability = - Aircraft ID capability = - Surv Ident Cap = - Comm Use GiCB Rep = - DTE = - Cont Flag = - Squitter = -</p>		
17.	<p>ELEMENTRY SURV 2 REFER TO ATTACHED PAGE FOR READOUTS</p> <p>BDS = _____</p> <p>BDS _____ = _____</p> <p>BDS _____ = _____</p> <p>BDS _____ = _____</p> <p>BDS _____ = _____</p> <p>BDS _____ = _____</p> <p>BDS = _____ Flight ID = _____</p> <p>BDS = _____ ARA = _____ RAC = _____</p> <p>_____ RAT = _____</p>		
18.	<p>ENHANCE SURV NOT COMPATIBLE</p> <p>BDS4, 0 MCP / FCU Sel Alt = - Baro press Sel = -</p> <p>Bds 5, 0 Roll Angle = - True Track Angle = - Ground Speed = - Track Angle Rate = - True Air Speed = -</p> <p>BDS 6, 0 Magnectic Heading = - Ind Airspeed = - Mach No. = - Inert Vert Vel = - Baro Alt Rate = -</p>		

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NO. 2 ATCRBS TRANSPONDER TEST RECORD

MAKE **MODEL** **TYPE** **S/N**

ITEM	TEST PROCEDURES USING IFR 6000 TEST SET	PASS	FAIL																																			
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2.	A/C DECDR / SLS Decoder Inner Low A = _____ C = _____ Decoder Inner High A = _____ C = _____ Decoder Outer Low A = _____ C = _____ Decoder Outer High A = _____ C = _____ SLS 0 dB Mode A A = _____ C = _____ SLS -9 dB Mode A A = _____ C = _____ A code = _____ C Alt = _____ ft																																					
3.	A/C F1 /F2 SPACE / WIDTH F1 Width A = _____ μsec C = _____ μsec F2 Width A = _____ μsec C = _____ μsec F1 – F2 A = _____ μsec C = _____ μsec Reply Delay A = _____ μsec C = _____ μsec Reply Jitter A = _____ μsec C = _____ μsec Reply Ratio A = _____ % C = _____ % -81 dBm Reply Ratio A = _____ % C = _____ % ATCRBS ALL-CALL A = _____ C = _____ Pulse Amp Var A = _____ dB C = _____ dB																																					
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5.	<p>S ALL-CALL ITM Reply Delay A = _____ μsec C = _____ μsec Jitter A = _____ μsec C = _____ μsec Address A = _____ C = _____ Ratio A = _____ % C = _____ % -81 dBm A = _____ % C = _____ % Mode S All - Call = _____ C = _____ Address = _____ C = _____ Tail = _____ C = _____ Country = _____ C = _____</p>		
6.	<p>S REPLY TIMING Reply Delay = _____ μsec Reply Jitter = _____ μsec Pulse Width = _____ Pulse Spacing = _____</p>		
7.	<p>S REPLY Pulse Amp VAR Shrt = _____ dB LNG = _____ dB SLS ON = _____ OFF = _____ SQTR DF 11 period = _____ S SQTR DF 17 detected = _____ Reply Ratio = _____ % Reply Ratio – 81 dBm = _____ % Invalid AA = _____ Diversity Isolation = _____</p>		
8.	<p>UF 0 DF = _____ VS = _____ CC = _____ SL = _____ RI = _____ AC = _____ ft Mode C Alt Compare = _____ AA = _____ DF 11 Address compare = _____</p>		
9.	<p>UF 4 DF = _____ FS = _____ DR = _____ UM = _____ IDS = _____ IIS = _____ RI = _____ AC = _____ ft Mode C Alt Compare = _____ AA = _____ DF 11 Address compare = _____</p>		

ITEM	TEST PROCEDURES USING IFR 6000 TEST SET	PASS	FAIL
10.	UF 5 DF = _____ FS = _____ DR = _____ UM = _____ IDS = _____ IIS = ID = _____ Mode A ID Compare = _____ AA = _____ DF 11 Address compare = _____		
11.	UF 11 DF = _____ CA = _____ PI = _____ AA = _____ II Lock out timer = _____ Match = _____ SI Lock out timer = _____ Match = _____		
12.	UF 16 DF = _____ VS = _____ SL = _____ RI = _____ MV = _____ AC = _____ ft Mode C Alt Compare = _____ AA = _____ DF 11 Address compare = _____		
13.13.	UF 20 DF = _____ FS = _____ DR = _____ UM = _____ IDS = _____ IIS = _____ MB = _____ AC = _____ ft Mode C Alt Compare = _____ AA = _____ DF 11 Address compare = _____		
14.14.	UF 21 DF = _____ FS = _____ DR = _____ UM = _____ IDS = _____ IIS = _____ MB = _____ ID = _____ Mode A ID Compare = _____ AA = _____ DF 11 Address compare = _____		

NOTE

1. AN ALTITUDE REPORTING SYSTEM TEST MUST BE PERFORMED AFTER ANY ADJUSTMENTS OR INSTALLATION IS MADE WHICH MAY AFFECT THE ALTITUDE REPORTING SYSTEM. PERFORM ALTITUDE REPORTING SYSTEM TEST IF IT IS DUE AND REQUESTED BY THE CUSTOMER.
2. FOR AIRCRAFT HAVING MODE S ADDRESSES WITHIN THE BLOCK OF ADDRESSED ASSIGNED TO CIVILIAN US AIRCRAFT, THE REGISTRATION NUMBER OF THE AIRCRAFT WILL BE DISPLAYED.
3. FOR NON US REGISTERED AND MILITARY AIRCRAFT THE MODE S ADDRESS WILL APPEAR AS AT HEXADECIMAL CODE. REFER TO AIRCRAFT LOG BOOK FOR MODE S TRANSPONDER ADDRESS STRAPPING (OR AIRCRAFT SPECIFIC WIRING DIAGRAM). ALL REGISTRATION IS PROCEEDED BY THE LETTER N.
4. IF A HEXADECIMAL CODE IS DISPLAYED BY A US CIVIL REGISTERED AIRCRAFT, THIS IS AN INDICATION OF INCORRECTLY STRAPPED MODE S TRANSPONDER.
5. TXPDR ELEMENTARY SURV 2 - COMMON USAGE GROUND INITIATED COMM B SERVICES.(GICB).

BDS	Description
0.5	Ext Squitter Airborne Position
0.6	Ext Squitter Surface Position
0.7	Ext Squitter Status
0.8	Ext Squitter Type and Identification
0.9	Ext Squitter Airborne velocity information
0.A	Ext Squitter event driven information
1.0	Data link capability report
1.7	Common usage GICB capability report
2.0	Aircraft Identification (flight ID)
2.1	Aircraft Registration number
3.0	ACAS resolution Advisory
4.0	Aircraft Vertical Intention
4.1	Next waypoint identifier
4.2	Next waypoint position
4.3	Next waypoint Information
4.4	Meteorological Routine report
4.5	Meteorological Hazard report
4.8	VHF channel report
5.0	Track and Turn report
5.1	Position Course
5.2	Position Fine
5.3	Air Reference state Vector
5.4	Waypoint 1
5.5	Waypoint 2
5.6	Waypoint 3
5.F	Quasi-static Parameter Monitoring
6.0	Heading and speed report