

RTCA Special Committee 209
ATCRBS / Mode S Transponder
Meeting #1

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**Sample Report from the Requirements Data Base that Shows Cross
References Between DO-181C and ED-73B**

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SUMMARY

This Working Paper shows a short sample of the output of a report from the data base application that has been created for the purpose of mapping the requirements statements in the two documents: DO-181C and ED-73B.

<p>13 Identical Almost identical text DO SHALL0006 Page: 17 2.1.5 Operation of Controls The operation of controls intended for use during flight, in all possible combinations and sequences, shall not result in a condition detrimental to the continued performance of the equipment (see paragraph 2.1.2).</p>	<p>6</p>	<p>ED SHALL0016 Page: 24 2.4 OPERATION OF CONTROLS The operation of controls intended for use during flight, in all possible positions, combinations and sequences, shall not result in a condition detrimental to the continued performance of the equipment.</p>	<p>16</p>
<p>14 Identical Almost identical text DO SHALL0007 Page: 17 2.1.6 Accessibility of Controls Controls that are not normally adjusted in flight shall not be readily accessible to flight personnel.</p>	<p>7</p>	<p>ED SHALL0017 Page: 24 2.4 OPERATION OF CONTROLS Controls which are not intended to be operated in flight shall not be readily accessible to flight personnel.</p>	<p>17</p>
<p>15 Similar precedes a list DO SHALL0008 Page: 17 2.1.7 Flight Crew Control Functions The following functions shall be provided.</p>	<p>8</p>	<p>ED SHALL0018 Page: 24 2.5 CONTROL AND INDICATION FUNCTIONS The following Control and Indication functions shall be provided:</p>	<p>18</p>
<p>17 Identical same intent No statement in ED about how hijack is activated DO SHALL0009 Page: 17 2.1.7 Flight Crew Control Functions If the Hijack Mode (2.2.21) is activated by means that do not involve the Control Function, then the "7500" Hijack Code shall NOT be displayed by the Control Function.</p>	<p>9</p>	<p>ED SHALL0020 Page: 24 2.5 CONTROL AND INDICATION FUNCTIONS The 7500 Hijack Code shall NOT be displayed by the Control Function.</p>	<p>20</p>
<p>16 Identical same text DO SHALL0010 Page: 17 2.1.7 Flight Crew Control Functions Return to normal operation from this condition shall be possible within five seconds.</p>	<p>10</p>	<p>ED SHALL0025 Page: 25 2.5 CONTROL AND INDICATION FUNCTIONS Return to normal operation from this condition shall be possible within five seconds.</p>	<p>25</p>

18	Identical	same intent - almost identical text. Did not check references		
DO	SHALL0011	Page: 17	11	ED SHALL0022 Page: 25 22
2.1.7	Flight Crew Control Functions			2.5 CONTROL AND INDICATION FUNCTIONS

If performed manually, this condition shall have no effect on the transmission of extended squitters (2.2.16.2.6.2.2) or on the reporting of on-the-ground state (2.2.13.1.2.c, 2.2.16.2.6.3.7, 2.2.16.2.7.b, and 2.2.16.2.7.c).

If performed manually, this condition shall have no effect on the transmission of extended squitters (If the extended squitter function is implemented in the transponder) (3.21.2.6.2) or on the reporting of on-the-ground state (3.17.1 b (3), 3.21.2.6.5, 3.20.2.7 b, and 3.20.2.7 c).

338	Identical			
DO	SHALL0012	Page: 17	12	ED SHALL0023 Page: 25 23
2.1.7	Flight Crew Control Functions			2.5 CONTROL AND INDICATION FUNCTIONS

Hijack Mode (2.2.21): No method shall be capable of rendering the transponder incapable of generating replies to ATCRBS and Mode-S Only All-Call interrogations whenever the transponder is in the Hijack Mode(2.2.21) whether in the airborne or in the on ground state (2.2.13.1.2.c,2.2.16.2.6.3.7, 2.2.16.2.7.b and 2.2.16.2.7.c).

No method shall be capable of rendering the transponder incapable of generating replies to Mode A/C, Mode A/C/S All Call, and Mode-S Only All-Call interrogations whenever the transponder is in the Hijack Mode(2.6) whether in the airborne or in the on-ground state (3.17.1 b (3),3.21.2.6.5, 3.20.2.7 b and 3.20.2.7 c).

33	Identical			
DO	SHALL0013	Page: 17	13	ED SHALL0024 Page: 25 24
2.1.7	Flight Crew Control Functions			2.5 CONTROL AND INDICATION FUNCTIONS

The transponder shall also continue to generate Mode S squitter transmissions and reply to discretely addressed Mode-S interrogations when the aircraft is in the Hijack Mode (2.2.21).

The transponder shall also continue to generate Mode S squitter transmissions and reply to discretely addressed Mode-S interrogations when the aircraft is in the Hijack Mode (2.7).

23	Identical			
DO	SHALL0014	Page: 17	14	ED SHALL0021 Page: 25 21
2.1.7	Flight Crew Control Functions			2.5 CONTROL AND INDICATION FUNCTIONS

Return to normal operation from this condition shall be possible within five seconds.

Return to normal operation from this condition shall be possible within five seconds.

<p>24 Identical DO SHALL0015 Page: 17 2.1.7 Flight Crew Control Functions</p> <p>Hijack Mode (2.2.21): No method shall be capable of placing the transponder into the Standby Mode once the transponder has entered the Hijack Mode (2.2.21) except as specified in 2.2.21.5.2.</p>	<p>15 ED SHALL0026 Page: 25 26 2.5 CONTROL AND INDICATION FUNCTIONS</p> <p>No method shall be capable of placing the transponder into the Standby Mode once the transponder has entered the Hijack Mode (2.7)except as specified in 2.7.6.2.</p>
<p>25 Identical DO SHALL0016 Page: 18 2.1.7 Flight Crew Control Functions</p> <p>Hijack Mode (2.2.21): No method shall be capable of placing the transponder in a mode that inhibits the transmission of altitude information when in the Hijack Mode (2.2.21) and in the airborne state(2.2.13.1.2.c, 2.2.16.2.6.3.7, 2.2.16.2.7.b and 2.2.16.2.7.c) except as specified in</p>	<p>16 ED SHALL0027 Page: 26 27 2.5 CONTROL AND INDICATION FUNCTIONS</p> <p>No method shall be capable of placing the transponder in a mode that inhibits the transmission of altitude information when in the Hijack Mode (2.7) and in the airborne state (3.17.1 b (3), 3.21.2.6.5,3.20.2.7 b and 3.20.2.7 c) except as specified in 2.7.3.1.1 b.</p>
<p>26 Identical DO SHALL0017 Page: 18 2.1.7 Flight Crew Control Functions</p> <p>If the aircraft uses a flight number for aircraft identification, a means shall be provided for the variable aircraft identification to be inserted by the pilot.</p>	<p>17 ED SHALL0028 Page: 26 28 2.5 CONTROL AND INDICATION FUNCTIONS</p> <p>If the aircraft uses a flight number for aircraft identification, a means shall be provided for the variable aircraft identification to be inserted by the pilot.</p>
<p>32 Similar ED mentions design DO SHALL0018 Page: 18 2.1.9 Effects of Tests</p> <p>Unless otherwise provided, the application of the specified tests shall produce no subsequently discernible condition detrimental to the continued performance of the equipment.</p>	<p>18 ED SHALL0091 Page: 35 91 2.8 EFFECTS OFTESTS</p> <p>Unless otherwise stated, the design of the equipment shall be such that, during and after the application of the specified tests, no condition exists which would be detrimental to the subsequent performance of the equipment.</p>