

ED-73 re-organisation of Chapter 3								
Current chapter 3 organisation		New chapter 3 organisation		Changes	Changed	Relocated	Ref check	
Ref.	Title	Ref.	Title	Ref.	Title			
3.19	Mode S Transponders	3.21	Mode S Transponders	Y	y	y	y	
3.2	The Level 1 Transponder	3.22	The Level 1 Transponder	Y	y	y	y	
3.20.1	Mode S Formats	3.22.1	Mode S Formats	Y	y	y	y	
3.20.2	Mode S Protocols	3.22.2	Mode S Protocols	Y	y	y	y	
3.20.2.1	Error Protection (Figures 3-8 and 3-9)	3.22.2.1	Error Protection (Figures 3-8 and 3-9)	Y	y	y	y	
3.20.2.2	Interrogation Acceptance Protocol (Figure 3-10)	3.22.2.2	Interrogation Acceptance Protocol (Figure 3-10)	Y	y	y	y	
3.20.2.3	Interrogation Reply Coordination	3.22.2.3	Interrogation Reply Coordination	Y	y	y	y	
3.20.2.4	Lockout Protocol (Figure 3-11)	3.22.2.4	Lockout Protocol (Figure 3-11)	Y	y	y	y	
3.20.2.5	Multisite Lockout Protocol (Figure 3-11)	3.22.2.5	Multisite Lockout Protocol (Figure 3-11)	Y	y	y	y	
3.20.2.6	Acquisition Squitter Protocol	3.22.2.6	Acquisition Squitter Protocol	Y	y	y	y	
3.20.2.7	Flight Status and Vertical Status Protocols (Figures 3-12 and 3-13)	3.22.2.7	Flight Status and Vertical Status Protocols (Figure 3-12)	Y	y	y	y	
3.20.2.8	Capability Reporting	3.22.2.8	Capability Reporting	Y	y	y	y	
3.20.2.9	All-Call Reply Protocol	3.22.2.9	All-Call Reply Protocol	Y	y	y	y	
3.20.2.10	Reply Content (Figure 3-13)	3.22.2.10	Reply Content (Figure 3-13)	Y	y	y	y	
3.20.2.11	Data Handling and Interfaces	3.22.2.11	Data Handling and Interfaces	Y	y	y	y	
3.21	Data Link Transponder Description (Level 2 architecture)	3.23	Level 2 Transponder	Y	Y	y	y	
3.21.1	The Data Link (Level 2) Transponder	3.23.1	The Data Link (Level 2) Transponder	Y	y	y	y	
3.21.1.1	Interrogation Acceptance Protocol	3.23.1.1	Interrogation Acceptance Protocol	Y	y	y	y	
3.21.1.2	Error Protection	3.23.1.2	Error Protection	Y	y	y	y	
3.21.1.3	Information Transfer	3.23.1.3	Information Transfer	Y	y	y	y	
3.21.1.4	Interrogation-Reply Coordination (Figure 3-16)	3.23.1.4	Interrogation-Reply Coordination (Figure 3-16)	Y	y	y	y	
3.21.1.5	Lockout Protocols (Figure 3-11)	3.23.1.5	Lockout Protocols (Figure 3-11)	Y	y	y	y	
3.21.1.6	Flight and Vertical Status Protocols	3.23.1.6	Flight and Vertical Status Protocols	Y	y	y	y	
3.21.1.7	Capability Report	3.23.1.7	Capability Report	Y	y	y	y	
3.21.1.8	Reply Content	3.23.1.8	Reply Content	Y	y	y	y	
3.21.1.9	UM Protocol (Figure 3-17)	3.23.1.9	UM Protocol (Figure 3-17)	Y	y	y	y	
3.21.1.10	Comm-A Protocol	3.23.1.10	Comm-A Protocol	Y	y	y	y	
3.21.1.11	Broadcast Protocol	3.23.1.11	Broadcast Protocol	Y	y	y	y	
3.21.1.12	Comm-B Protocol (Figure 3-18)	3.23.1.12	Comm-B Protocol (Figure 3-18)	Y	y	y	y	
3.21.1.13	Aircraft Identification Reporting and AIS Aircraft	3.23.1.13	Aircraft Identification Reporting and AIS Aircraft	Y	y	y	y	
3.21.1.14	Linked Comm-A Coding	3.23.1.14	Linked Comm-A Coding	Y	y	y	y	
3.21.1.15	Comm-B Multisite Message Protocol	3.23.1.15	Comm-B Multisite Message Protocol	Y	y	y	y	
3.21.1.16	Comm-U/V Protocol	3.23.1.16	Comm-U/V Protocol	Y	y	y	y	
3.21.1.17	Data Handling and Interfaces	3.23.1.17	Data Handling and Interfaces	Y	y	y	y	
3.21.1.18	ACAS Crosslink Protocol	3.23.1.18	ACAS Crosslink Protocol	Y	y	y	y	
3.21.1.19	Invalid AA Condition	3.23.1.19	Invalid AA Condition	Y	y	y	y	
3.21.2	Multisite Message Protocol	3.23.2	Multisite Message Protocol	Y	y	y	y	
3.21.2.1	Multi Site Data Format	3.23.2.1	Multi Site Data Format	Y	y	y	y	
3.21.2.2	Multisite Common Protocol	3.23.2.2	Multisite Common Protocol	Y	y	y	y	

3.21.2.3	Multisite Comm-B Protocol	3.23.2.3	Multisite Comm-B Protocol	Y	y	y	y
3.21.2.4	Multisite Uplink ELM Protocol	3.24.2	Multisite Uplink ELM Protocol	Y	y	y	y
3.21.2.5	Multisite Downlink ELM Protocol	3.25.2	Multisite Downlink ELM Protocol	Y	y	y	y
3.21.2.6	Extended Squitters	3.28	Extended Squitters	Y	y	y	y
3.21.2.6.1	Extended Squitter Format	3.28.1	Extended Squitter Format	Y	y	y	y
3.21.2.6.2	Extended Squitter Types	3.28.2	Extended Squitter Types	Y	y	y	y
3.21.2.6.3	Extended squitter rate	3.28.3	Extended squitter rate	Y	y	y	y
3.21.2.6.3.1	ADS-B Message Transmission Rate Exceptions	3.28.3.1	ADS-B Message Transmission Rate Exceptions	Y	y	y	y
3.21.2.6.3.2	Maximum ADS-B Message Transmission Rates	3.28.3.2	Maximum ADS-B Message Transmission Rates	Y	y	y	y
3.21.2.6.3.3	ADS-B Message Timeout	3.28.3.3	ADS-B Message Timeout	Y	y	y	y
3.21.2.6.3.4	ADS-B Message Termination	3.28.3.4	ADS-B Message Termination	Y	y	y	y
3.21.2.6.3.5	ADS-B Transmitted Message Error Protection	3.28.3.5	ADS-B Transmitted Message Error Protection	Y	y	y	y
3.21.2.6.4	Register Timeout	3.28.4	Register Timeout	Y	y	y	y
3.21.2.6.5	Airborne/Surface State Determination	3.28.5	Airborne/Surface State Determination	Y	y	y	y
3.21.2.6.6	Surface Squitter Rate Control	3.28.6	Surface Squitter Rate Control	Y	y	y	y
3.21.2.6.7	Subfields in SD for Extended Squitter	3.28.7	Subfields in SD for Extended Squitter	Y	y	y	y
3.21.2.6.8	Subfields in ME for Extended Squitter	3.28.8	Subfields in ME for Extended Squitter	Y	y	y	y
3.21.2.6.9	Subfields in MB for Extended Squitter	3.28.9	Subfields in MB for Extended Squitter	Y	y	y	y
3.21.3	Uplink ELM Capability (Level 3) Transponder	3.24	Level 3 Transponder - Uplink ELM Capability	Y	Y	y	y
3.21.3.1	Comm-C/ELM Protocol	3.24.1	Comm-C/ELM Protocol	Y		y	y
3.21.4	Downlink ELM Capability (Level 4) Transponder	3.25	Level 4 Transponder - Downlink ELM Capability	Y	Y	y	y
3.21.4.1	Comm-D/ELM Protocol	3.25.1	Comm-D/ELM Protocol	Y		y	y
3.21.5	Enhanced Data Link Capability (Level 5) Transponder	3.26	Level 5 Transponder - Enhanced Data Link Cap	Y	Y	y	y
3.21.5.1	Enhanced Air-Initiated Comm-B Protocol	3.26.1	Enhanced Air-Initiated Comm-B Protocol	Y		y	y
3.21.5.1.1	General	3.26.1.1	General	Y		y	y
3.21.5.1.2	Enhanced Multisite Air-Initiated Comm-B Protocol	3.26.1.2	Enhanced Multisite Air-Initiated Comm-B Protocol	Y		y	y
3.21.5.1.3	Enhanced Multisite Directed Comm-B Protocol	3.26.1.3	Enhanced Multisite Directed Comm-B Protocol	Y		y	y
3.21.5.1.4	Enhanced non-multisite Comm-B protocol	3.26.1.4	Enhanced non-multisite Comm-B protocol	Y		y	y
3.21.5.1.5	Enhanced Broadcast Comm-B Protocol	3.26.1.5	Enhanced Broadcast Comm-B Protocol	Y		y	y
3.21.5.2	Enhanced Comm-C ELM Protocol	3.26.2	Enhanced Comm-C ELM Protocol	Y		y	y
3.21.5.2.1	General	3.26.2.1	General	Y		y	y
3.21.5.3	Enhanced Comm-D ELM Protocol	3.26.3	Enhanced Comm-D ELM Protocol	Y		y	y
3.21.5.3.1	General	3.26.3.1	General	Y		y	y
3.21.5.3.2	Enhanced Multisite Comm-D ELM Protocol	3.26.3.2	Enhanced Multisite Comm-D ELM Protocol	Y		y	y
3.21.5.3.3	Enhanced Multisite Directed Comm-D ELM Protocol	3.26.3.3	Enhanced Multisite Directed Comm-D ELM Protocol	Y		y	y
3.21.5.3.4	Enhanced Non-Multisite Comm-D ELM Protocol	3.26.3.4	Enhanced Non-Multisite Comm-D ELM Protocol	Y		y	y
3.22	Antenna	3.19	Antenna	Y		y	y
3.22.1	Frequency of Operation	3.19.1	Frequency of Operation	Y		y	y
3.22.2	Impedance and VSWR	3.19.2	Impedance and VSWR	Y		y	y
3.22.3	Polarisation	3.19.3	Polarisation	Y		y	y
3.22.4	Radiation Pattern	3.19.4	Radiation Pattern	Y		y	y
3.23	ACAS Compatible Mode S Transponder	3.27	ACAS Compatible Mode S Transponder	Y		y	y
3.23.1	Message Fields and Protocols	3.27.1	Message Fields and Protocols	Y		y	y
3.23.1.1	MA Message, Comm-A used by ACAS	3.27.1.1	MA Message, Comm-A used by ACAS	Y		y	y

3.23.1.2	MB Message, Comm-B used by ACAS		3.27.1.2	MB Message, Comm-B used by ACAS	Y	y	y	y
3.23.1.3	MU Message, Comm-U used by ACAS		3.27.1.3	MU Message, Comm-U used by ACAS	Y	y	y	y
3.23.1.4	MV Message, Comm-V used by ACAS.		3.27.1.4	MV Message, Comm-V used by ACAS.	Y	y	y	y
3.23.1.5	RI Air-toAir Reply Information		3.27.1.5	RI Air-toAir Reply Information	Y	y	y	y
3.23.2	General Requirements of the Mode S Interface to the ACAS		3.27.2	General Requirements of the Mode S Interface	Y	y	y	y
3.23.2.1	Delivery of Messages		3.27.2.1	Delivery of Messages	Y	y	y	y
3.23.2.2	Data Integrity		3.27.2.2	Data Integrity	Y	y	y	y
3.23.2.3	ACAS Failure Data Handling		3.27.2.3	ACAS Failure Data Handling	Y	y	y	y
3.23.2.4	Communication Timing		3.27.2.4	Communication Timing	Y	y	y	y
3.23.3	Data provided by ACAS Equipment to the Mode S Transponder		3.27.3	Data provided by ACAS Equipment to the Mode S Transponder	Y	y	y	y
3.23.3.1	Data contained in the Special Surveillance Replies (SRR)		3.27.3.1	Data contained in the Special Surveillance Replies (SRR)	Y	y	y	y
3.23.3.2	Data contained in the Long Air-Air Surveillance Replies (LASR)		3.27.3.2	Data contained in the Long Air-Air Surveillance Replies (LASR)	Y	y	y	y
3.23.3.3	Data contained in Altitude and Identity Surveillance Replies (AIRS)		3.27.3.3	Data contained in Altitude and Identity Surveillance Replies (AIRS)	Y	y	y	y
3.23.3.4	Data contained in the Altitude and Identity Comm-B		3.27.3.4	Data contained in the Altitude and Identity Comm-B	Y	y	y	y
3.23.4	ACAS-Compatible Transponder Automatic Performance		3.27.4	ACAS-Compatible Transponder Automatic Performance	Y	y	y	y
		3.29	ELS		Y	Y	y	y
		3.30.	EHS		Y	Y	y	y
3.24	Power Interruption.		3.20.	Power Interruption.	Y	y	y	y