Transmitter

Frequency

Range	952 MHz to 1223 MHz
Resolution	10 KHz
Accuracy	2.5 ppm
Phase Noise	>80 dBc/Hz @ 100 KHz

Power

Range (Transponder)	+5 to -110 dBm
Resolution	0.1 dB
Accuracy	±1 dB [+5 to -100 dBm]
	±3 dB [< -100 dBm]
	@ 1030 MHz
Range (UAT)	+5 to -110 dBm
Resolution	0.1 dB
Accuracy	±1 dB @ 978 MHz
Range (DME)	+5 to -110 dBm
Resolution	0.1 dB
Accuracy	±1 dB [+1 to -100 dBm]
	±3 dB [< -100 dBm]
	952 to 1223 MHz

Spectral Purity

Harmonics	>50 dBc
Spurious	>55 dBc, 350 to 1800 MHz
Residual FM	250 Hz Peak

Channels

No. of Channels	4 (XPDR/UAT)
	6 (ADS-B Option)

Diversity

Power	± 20 dB
Resolution	1 dB
Accuracy	± 1 dB
Timing	± 1 uS
Resolution	25 nS
Accuracy	± 10 nS

Modulation

Pulse On/Off Ratio	>80 dB

Pulse Position (high speed rise/fall time mode)

Mode A Interrogation P1-P3 default	8.0 uS
Accuracy	±10 nS
Mode C Interrogation P1-P3 default	21.0 uS
Accuracy	±10 nS
ATCRBS Interrogation P1-P2 default	2.0 uS
Accuracy	±10 nS
ATCRBS Interrogation P3-P4 default	2.0 uS
Accuracy	±10 nS
ATCRBS Interrogation Variation	±1.95 uS
Resolution	25 nS
Accuracy	±10 nS
Mode S Interrogation P1-P2 Default	2.0 uS
Accuracy	±10 nS
Mode S Interrogation P1-P2 Variation	±1.0 uS
Resolution	25 nS
Accuracy	±10 nS
Mode S Interrogation P1 to P6 Default	3.5 uS
Accuracy	±10 nS
Mode S Interrogation P6 Variation	±1.95 uS
Resolution	25 nS
Accuracy	±10 nS
Mode S Interrogation P2 to SPR Default	2.75 uS
Accuracy	±10 nS
Mode S Interrogation SPR Variation	±1.0 uS
Resolution	25 nS
Accuracy	±10 nS
Mode S Interrogation P5 prior SPR Default	400 nS
Accuracy	±10 nS
Mode S Interrogation P5 Variation	±1.95 uS
Resolution	25 nS
Accuracy	±10 nS
Interference Interrogation Signal #1	-44 to 400 us
Resolution	25 nS
Accuracy	±10 nS
Interference Interrogation Signal #2	0 to 400 us
Resolution	25 nS
Accuracy	±10 nS
Double Interrogation	0 to 400 uS
Resolution	25 nS
Accuracy	±10 nS

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Pulse Width (high speed rise/fall time mode)

ATCRBS Interrogation P1/P2/P3 Default	0.8 uS
Accuracy	±10 nS
ATCRBS Interrogation P4 Short	0.8 uS
Accuracy	±10 nS
ATCRBS Interrogation P4 Long	1.6 uS
Accuracy	±10 nS
ATCRBS Interrogation P1/P2/P3/P4 Variation	0 to 1.95 uS
Resolution	25 nS
Accuracy	±10 nS
Mode S Interrogation P1/P2 Default	0.8 uS
Accuracy	±10 nS
Mode S Interrogation P1/P2 Variation	0 to 1.95 uS
Resolution	25 nS
Accuracy	±10 nS
Mode S Interrogation P6 Short Default	16.25 uS
Accuracy	±10 nS
Mode S Interrogation P6 Long Default	30.25 uS
Accuracy	±10 nS
Mode S Interrogation P6 Variation	
P6 Overall	-0.5 to +1.45 uS (offset range)
P6 End	0 to 1.95 uS
Resolution	25 nS
Accuracy	±10 nS
Mode S Interrogation P5 Default	0.8 uS
Accuracy	±10 nS
Mode S Interrogation P5 Variation	0.2 to 1.95 uS
Resolution	25 nS
Accuracy	±10 nS
Interference Pulse Width	0.2 to 32.0 uS
Resolution	25 nS
Accuracy	±10 nS

Pulse Rise/Fall Time

Transponder	<50 / <50 nS
Accuracy	<50 nS

Pulse Amplitude

Video Data Block Variation	+3 to -4 dB
Resolution	1 dB
Accuracy	±1 dB

ATCRBS Interrogation Variation	+9 to -19 dB
Resolution	1 dB
Accuracy	±1 dB
Interference	+9 to -19 dB
Resolution	1 dB
Accuracy	±1 dB

Block Transmissions

XPDR	2000 messages
No. of Blocks	1 to 50,000 or indefinite
Interrogation Rate within Block	User defines spacing between interrogations
Period	10 ms to 90 seconds
Resolution	1 ms
Accuracy	±1 ms

PRF

ATCRBS Interrogations	1 to 10,000 Hz
Resolution	1 Hz
Accuracy	0.1% of setting
Mode S Interrogations	1 to 2500 Hz
Resolution	1 Hz
Accuracy	0.1% of setting
Double Interrogation	
Each message:	1 to 2500 Hz
PRF	in sync or non-sync
Resolution	1 Hz
Accuracy	0.1% of setting
Interlace	1 to 400 Hz
Resolution	1 Hz
Accuracy	0.1% of setting

Interlace Ratio

Ratio	1:1 to 1:1000

DME Simulation

Ident Frequency	1350 Hz
Accuracy	±0.02%
Dot Default	120 ms
Accuracy	±1 ms

Dot Variation	50 to 250 ms	**Receiver**	
Resolution	10 ms	**VSWR**	<1.4
Accuracy	± 1 ms	**Max Input Power**	+60 dBm
Dash Default	360 ms	**Receiver Decoding**	
Accuracy	± 1 ms	Messages	ATCRBS Interrogation and Replies
Dash Variation	150 to 750 ms		
Resolution	10 ms		Mode S Interrogations and Replies
Accuracy	± 1 ms		
Space Default	150 ms		UAT Ground and Airborne Messages [UAT Option]
Accuracy	± 1 ms		
Space Variation	50 to 250 ms		
Resolution	10 ms	**Dynamic Range**	
Accuracy	± 1 ms	1090 MHz	>40 dB
Code Rate Default	37 s	UAT	>30 dB
Accuracy	± 100 ms		
Code Rate Variation	10 to 65 s	**Channels**	
Resolution	0.1 s	No. of Channels	2, Top/Bottom
Accuracy	± 100 ms		
Echo Power Variation	-15 to +6 dB	**Measurement**	
Resolution	0.1 dB	Power	+17 to +60 dBm
Accuracy	± 0.25 dB	Resolution	0.1 dB
Echo Range	30 nmi	Accuracy	± 0.5 dB
Accuracy	± 0.02 nmi	Frequency	
Range	0 to 400 nmi	Pulse Measurement Type	1090 MHz ±3 MHz
Resolution	0.01 nmi	Resolution	1 KHz
Accuracy	± 0.02 nmi	Accuracy	± 50 KHz
Velocity	0 to 10000 knots	Pulse Spacing	
Resolution	1 knot	Resolution	1 nS
Accuracy	± 0.001%	Accuracy	± 10 nS
Acceleration	0 to 400 ft/s2	Pulse Width	
Resolution	1 ft/s2	Resolution	1 nS
Accuracy	± 0.05% of setting	Accuracy	± 10 nS
Squitter	0 to 8000 Hz	Pulse Rise/Fall Time	
Resolution	1 Hz	Resolution	1 nS
Accuracy	10 Hz or 2%, whichever is greater	Accuracy	± 20 nS
		ATCRBS Reply Delay	
Spectrum at +/- 800 KHz Offset	> 55dB below center frequency level	Resolution	25 nS
		Accuracy	± 20 nS
		Mode S Reply Delay	
Reply Efficiency	0 to 100 %	Resolution	25 nS
Resolution	1%	Accuracy	± 20 nS
Accuracy	± 0.5%	Reply Jitter	
		Resolution	25 nS
		Accuracy	± 20 nS

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Environmental

Temperature

Full specified performance	23 +5 degrees C
Operating	0 to 45 degrees C
Storage	-30 to 85 degrees C
Relative Humidity	0 to 95% non-condensing

Physical Characteristics

Height	10.5 inches (26.67 cm)
Width	19 inches (48.26 cm)
Depth	16.5 inches (41.91 cm)
Weight	44 lbs. (19.95 kg)

Functional Characteristics

Remote Interface

Optional Command set emulation of the SDX-2000, ATC-1400A
and S-1403DL
Ethernet
GPIB

Inputs/Outputs

Suppression bus (front/back)
2 scope BNC outputs (front/back)
LAN (front/back)
USB Type B control (front)
2 USB Type A (front) for HID/flash drives

Certifications

CE (pending)
UL (pending)

Versions, Options and Accessories

Order Number	Description
138156	ATC-5000NG Transponder Test Set
139311	ATCNGOPT01 DME Option
138157	ATCNGOPT02 UAT 978MHZ Option
138159	ATCNGOPT03 Multi-receiver Option
138158	ATCNGOPT04 SDX Command Set Comp
138223	ATCNGOPT05 1400/1403 Command Set Comp
139310	ATCNGOPT06 DO-260B MOPS Test Option

Standard Accessories

114114	Keyboard w/ touchpad
62302	Power cord, 110V
64020	Power cord set, 220V
139188	Operations Manual (CD)
139189	Getting Started Manual

Extended Standard Warranties with Calibration

139170	Extended Warranty 36 Months with scheduled calibration
139171	Extended Warranty 60 Months with scheduled calibration

For further information please contact:

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