

# **APPENDIX E:**

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## **Product Operational Description**

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The ATS System 1200 was designed to support two primary operating scenarios. The first scenario is direct transceiver-to-transceiver communications. In this scenario, communications occur between individual transceivers, using either Channel A or Channel B.

The Model 1225 Hand Held Transceiver is a push-to-talk, spread spectrum transceiver. It uses digitized audio. The digital data stream is scrambled before modulation for security. The combination of spread spectrum modulation and scrambled, digitized audio give the Model 1225 its low probability of detection and interception characteristics.

<b>RF CHARACTERISTICS</b>	
RF Channels	2, Crystal Controlled
Normal Mode	Transmit/Receive Channel A or B
Repeater Mode	Transmit Channel A, Receive on Channel B

<b>TRANSMIT</b>	
Power Output	900 mW
Emissions	
Spurious	-55 dBc
Out Of Band	-20 dBc
Freq. Stability	+100 ppm -25° C to +68° C

<b>RECEIVE</b>	
Sensitivity	-95 dBm
Selectivity	
Adjacent Channel	-65 dB
Spurious & Image	-85 dB

<b>ANTENNA SYSTEM</b>	
Antenna	½ Wavelength, flexible
RF Output	
Compatibility	50 Ω

<b>AUDIO CHARACTERISTICS</b>	
Frequency Response	± 6 dB, 300 - 5800 Hz
Microphone	Internal or external
Mic Audio Processing	Dual Time Constant AGC
Dynamic Range	55 dB, Minimum
Speaker	Internal or Remote
Rated Audio Output	400mW into 16 Ω (less than 5% distortion)
Remote Speaker/Mic	Model 1230-04

<b>VOICE DATA SCRAMBLING</b>	
Type	Synchronous Key Stream
Key Generation	External, Hand Held, Model 1260 Key Loader
Key Storage	Internal, non-volatile memory

<b>NUMBER OF KEYS</b>	
Number of Keys	Two sets, Private and Common

<b>USER CONTROL</b>	
On-Off/Volume	
Channel (Mode) Select	
Code Select	
PTT	

<b>INDICATORS</b>	
Power/Battery Low	
Transmit	

<b>POWER REQUIREMENTS</b>	
Battery Pack	1200 mAh, Nickel Cadmium, rechargeable (1800 mAh available)

<b>TEMPERATURE</b>	
Operating	-25°C to +68°C
Storage	-40°C to +85°C

<b>PHYSICAL DIMENSIONS</b>	
Less Battery	6.25" x 2.75" x 1.50" (HxWxD), 11bs.
With 1200 mAh Battery	8.625" x 2.75" x 1.5" (HxWxD), 11bs.