



XTS[®] 4000

VHF and UHF R1 Models



The XTS[®] 4000 is the ideal solution to help maintain order and ensure secure communications in surveillance covert type operations. Designed to resemble the appearance of today's consumer communication devices, the XTS 4000 allows agents to blend right into the crowd. Our digital, Project 25 portable radio delivers high quality communication in a light and discrete package for those critical undercover applications.

Features and Benefits:

- Consumer look and feel
- Color Display
- APCO P25 Digital
- Supports 9600cc Trunking, 3600cc Trunking, Astro Conventional
- 850 Channel Capability
- UCM Type 3 FIPS Encryption
- Includes multikey and OTAR (Over the Air ReKey)
- VHF frequency (136-174 MHz)
- UHF R1 frequency (380-470 MHz)
- Supports vibrate mode and silent mode
- Conventional Call Features (ASTRO)
 - Channel & Zone Selection
 - Talk & Listen Talk group calls
 - Emergency
 - Secure (ADP, AES and DES)
 - Text Messaging
- Audio Accessories
- AC/DC charging accessories
- Meets Mil Specs 810 C, D, E and F
- Utilizes Windows-Based Customer Programming Software (CPS)
 - Supports USB and RS-232 communications
 - Built in FLASHport support

SPECIFICATION SHEET

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TRANSMITTER – TYPICAL PERFORMANCE SPECIFICATIONS

	VHF	UHF R1
Operating Frequency Range	136-174 MHz	380-470 MHz
Channel Spacing	12.5 kHz	12.5 kHz
Maximum Frequency	Subject to antenna	N/A
Separation*	Operating band	Operating band
Rated RF Output Power**	1 to 2 W	0.25 to 2 W
Operating Frequency Accuracy** (-30°C to +60°C; +25°C Ref.)	±0.00020%	±0.00020%
Modulation Fidelity**		
Deviation	1750 Hz	1700 Hz
Carrier Frequency Offset	±0.00020%	±0.00020%
Error Vector Magnitude	1.5%	2.0%
Emissions** (Conducted & Radiated)	-75 dBc	-75 dBc
Symbol Rate Accuracy**	0%	0%
Adjacent Channel Power Ratio**	-69 dB	-67 dB

RECEIVER – TYPICAL PERFORMANCE SPECIFICATIONS

	VHF	UHF R1
Operating Frequency Range	136-174 MHz	380-470 MHz
Channel Spacing	12.5 kHz	12.5 kHz
Maximum Frequency	Subject to antenna	N/A
Separation*	Operating band	Operating band
Rated Audio Output Power**	500 mW	500 mW
Frequency Stability** (-30°C to +60°C; 25°C Ref.)	±0.00020%	±0.00020%
Reference Sensitivity**		
1% BER	0.25 µV	0.25 µV
5% BER	0.22 µV	0.22 µV
Selectivity**		
12.5 kHz channel	-63 dB	-63 dB
Intermodulation**	-73 dB	-70 dB
Spurious Rejection**	-75 dB	-75 dB
Residual Audio Noise Ratio (silence)**	-65 dB	-65 dB
Residual Audio Noise Power (mute)**	-53 dBm	-53 dBm
Audio Distortion**	1%	1%

ANTENNAS FOR ASTRO DIGITAL XTS4000

Frequency Range	Length	Part Number
VHF		
136-151 MHz	1.89"	NAD6582
145-166 MHz	1.69"	NAD6581
162-174 MHz	1.49"	NAD6583
UHF R1		
380-470 MHz	1.89"	NAE6552

* Refer to XTS4000 ANTENNA List

** Measured in DIGITAL mode per TIA/EIA IS 102.CAAA

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RADIO MODELS

XTS 4000	Displays	Keypad	Channel Capacity	VHF (136-174 MHz)	UHF 1 (380-470 MHz)
	Caller ID Display: <ul style="list-style-type: none">• 1 line of icons• 1 line of text• 14 characters per line Main Display: <ul style="list-style-type: none">• RGB Color• 2 lines of icons• 4 lines of text (including menu line)• 14 characters per line with dynamic resizing• Dim & Auto-Light Timer<ul style="list-style-type: none">– Controls brightness for Caller ID & Main Displays– Available settings: High, Low, and Off	3x7	850	H18KCN9PW9_N	H18QCN9PW9_N
FCC Designation				AZ489FT3814	AZ489FT4881
FCC Emissions Designators				8K10F1D 8K10F1E 11K0F3E 16K0F3E 20K0F1E	8K10F1D 8K10F1E 11K0F3E 16K0F3E 20K0F1E
Power Supply	One rechargeable Lithium-Ion (Li-Ion)				
Dimensions without battery*** (HxWxD)	4.06" x 2.18" x 1.17"				
Weight without battery	5.6 oz				

ENCRYPTION

Supported Encryption Algorithms	ADP, AES, DES, DES-XL and DES-OFB, DVP-XL
Encryption Keys per Radio	48 common Key Reference (CKR) Encryption Keys 16 Physical Identifier (PID) Encryption Keys
Encryption Frame Re-sync Interval	P25 CAI 360 msec
Encryption Keying	Key Loader
Synchronization	CFB – Cipher Feedback XL – Counter Addressing OFB – Output Feedback
Vector Generator	National Institute of Standards and Technology (NIST) approved random number generator
Encryption Type	Digital
Key Storage	Tamper protected volatile or non volatile memory
Key Erasure	Keyboard command and tamper detection
Standards	FIPS 46-2; FIPS 140-2; FIPS 197

*** Does not include Antenna height.

Note that the depth with a battery assembled is 1.36" (not 1.17" + 0.43" = 1.60"; although this difference may be considered insignificant and certainly errors on the conservative side).

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BATTERIES FOR ASTRO DIGITAL XTS4000

Battery Capacity / Type	Dimensions (HxWxD)	Weight	Battery Part Number	Minimum Rated	Duty Cycle Capacity
Standard Li-Ion	4.06" x 2.18" x 0.43"	2.2 oz	NNTN6944	630 mAh	5-5-90/4hr.
High Capacity Li-Ion	4.06" x 2.18" x 0.64"	4.3 oz	PMNN4083	1260 mAh	5-5-90/8Hr

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-10°C to +60°C
Battery Storage Temperature	-20°C to +60°C**
Humidity	Per MIL-STD
ESD	IEC 801-2KV
Water & Dust Intrusion	IP54, MIL-STD

PORTABLE MILITARY STANDARDS 810 C, D, E & F

	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F	
	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II
High Temperature	501.1	I, II	501.2	I/A1, II/A1	501.3	I/A1, II/A1	501.4	I/Hot, II/Hot
Low Temperature	502.1	I	502.2	I/C3, II/C1	502.3	I/C3, II/C1	502.4	I/C3, II/C1
Temperature Shock	503.1	I*	503.2	I/A1C3	503.3	I/A1C3	503.4	I
Solar Radiation	505.1	II	505.2	I	505.3	I	505.4	I
Rain	506.1	I, II	506.2	I, II	506.3	I, II	506.4	I, III
Humidity	507.1	II	507.2	II	507.3	II	507.4	I*
Salt Fog	509.1	I*	509.2	I*	509.3	I*	509.4	I*
Blowing Dust/Sand	510.1	I	510.2	I, II	510.3	I, II	510.4	I, II
Vibration	514.2	VIII/F Curve-W, XI	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24
Shock	516.2	I, II	516.3	I, IV	516.4	I, IV	516.5	I, IV

* Military Standards specify a single procedure for this test.
 ** Storage temperature range of radio without battery is -40°C to +85°C
 Specifications subject to change without notice.

