



ASTRO XTS 2250™ Digital Portable Radio



FEATURES

• Trunking Standards Supported

- APCO Project 16 (3600 control channel)
- APCO Project 25 (9600 control channel)

• System Configurations

- SmartZone Analog and Digital Trunking
- ASTRO 25 Digital Trunking
- ASTRO 25 Conventional

• Enhanced Audio Features

- Noise Reduction Software
- Audio gain Control

• Uses Windows-based Customer Programming Software (CPS)

• Available with Software Encryption and Hardware Encryption.

• Built-in FLASHport Support

Be prepared for the unexpected, respond immediately, and execute effectively with the high quality communication that the XTS 2250 Digital Portable Radio provides. Specially designed for the demands of the mining trade, public utilities industry and mission critical operations, the advanced technology on the XTS 2250 portable delivers high-powered features in a light, compact and rugged design.

Digital Migration

The gradual replacement of existing analog radios with the XTS 2250 portable radio can provide a foundation for a later move to a complete digital system. Since the radio can operate in analog mode, you can maintain current system services while laying the groundwork for a future shift to digital.

Advanced Interoperability

The XTS 2250 portable radio is easy to operate and integrate into existing SmartZone™ and ASTRO™ conventional systems and works well with your current XTS or MTS accessories. This allows you to use a mixed set of subscribers without the need for multiple accessory platforms.

Hardware and Software Encryption

The XTS 2250 portable radio supports hardware and software based encryption on ASTRO 25 systems. Motorola's algorithm allows you to communicate in secure mode preventing the loss of sensitive communication to criminals, the media or curiosity seekers.

Easily Adaptable and Expandable

Built-in FLASHport™ support lets you customize your XTS 2250 portable radio with new software. Future enhancements can be made as you embrace more sophisticated features and new technologies and innovations.

ASTRO XTS 2250 Digital Portable Radio

GENERAL					TRANSMITTER					RECEIVER				
Dimensions without Battery (HxWxD)					Rated RF					Audio Output				
152 x 58 x 38mm (6.0" x 2.30" x 1.5")					VHF					Power at Rated*				
Weight without Battery (grams/ounces)					Output Power*					500 mW 500 mW 500 mW 500 mW				
312g (11oz)					Modulation Limiting*					Analog Sensitivity*				
Power Supply					12.5 kHz channel					12 dB SINAD				
Rechargeable 7.5 V NiCd, NiMH, or Li-Ion Battery					±2.5 kHz ±2.5 kHz ±2.5 kHz ±2.5 kHz					.25 µV .25 µV .25 µV .25 µV				
Frequency Range					25 kHz channel					Digital Sensitivity**				
VHF 136-174 MHz UHF R1 380-470 MHz UHF R2 450-520 MHz 800MHz 764-806 MHz, 806-870 MHz					±5.0 kHz ±5.0 kHz ±5.0 kHz ±5.0 kHz					1% BER				
Channel Spacing					NPSAP channel					5% BER				
12.5 / 25 kHz 12.5 / 25 kHz 12.5 / 25 kHz 12.5 / 25 kHz					N/A N/A N/A ±4.0 kHz					.25 µV .25 µV .25 µV .25 µV				
Maximum Frequency Separation					Emissions* (conducted & radiated)					Selectivity*				
Full Bandsplit Full Bandsplit Full Bandsplit Full Bandsplit					-73 dBc -70 dBc -70 dBc -75 dBc (<1GHz)					12.5 kHz				
Frequency Stability* (-30°C to +60°C)					Audio Response* (6 dB/Octave Pre-emphasis from 300 to 3000 Hz)					25 kHz				
+25°C Ref.) 2.5 ppm 2.0 ppm 2.0 ppm 1.5 ppm					+1, -3 dB +1, -3 dB +1, -3 dB +1, -3 dB					-63 dB -63 dB -63 dB -63 dB				
FM Hum & Noise*					FM Hum & Noise*					Intermodulation				
12.5 kHz					12.5 kHz					-78 dB -73 dB -75 dB -75 dB				
-42 dB -40 dB -40 dB -40 dB					Audio Distortion*					Spurious Rejection				
-46 dB -45 dB -45 dB -43 dB					1% 2% 2% 2%					-80 dB -75 dB -75 dB -75 dB				
25 kHz										FM Hum and Noise*				
-42 dB -40 dB -40 dB -40 dB										12.5 kHz				
-46 dB -45 dB -45 dB -43 dB										-40 dB -40 dB -47 dB -40 dB				
										25 kHz				
										-52 dB -47 dB -50 dB -47 dB				
										Audio Distortion*				
										1% 2.0% 2.0% 2.5%				

RADIO MODELS				
	VHF	UHF R1	UHF R2	800MHz
Model 1.5 (96 Channels)	H46KDD9PW5_NI	H46QDD9PW5_NI	H46SDD9PW5_NI	H46UCD9PW5_NI
Advanced (keypad, display 870 channels)	H46KDH9PW7_NI	H46QDH9PW7_NI	H46SDH9PW7_NI	H46UCH9PW7_NI
FCC ID:	AZ489FT3807	AZ489FT4865	AZ489FT4866	AZ489FT5804

ENCRYPTION	
Supported Encryption Algorithms (only 1)	ADP, DES, DES-XL, DES-OFB, DVP-XL, AES and DVI-XL.
Encryption Keys per Radio	48 Encryption Keys
Encryption Keying	Key Loader
Encryption Type	Digital and 12 k-bit Analog Conventional

BATTERIES FOR ASTRO DIGITAL XTS 2250					
Battery Capacity / Type	Dimensions (HxWxD)	Weight	Part No.	Battery Capacity	Duty Cycle
High Capacity NiCd	119 x 60 x 25 mm (4.86" x 2.37" x .968")	251g (8.85oz)	NTN9815	1525mAh	5-5-90/ 8hr.
High Capacity NiCd FM	119 x 60 x 25 mm (4.86" x 2.37" x .968")	251g (8.85oz)	NTN9816	1525mAh	5-5-90/ 8hr.
Ultra High Capacity NiMH	119 x 60 x 25 mm (4.86" x 2.37" x .968")	273g (9.63oz)	NTN9858	2100mAh	5-5-90/10hr.
Ultra High Capacity NiMH FM	119 x 60 x 25 mm (4.86" x 2.37" x .968")	273g (9.63oz)	NTN9858	2000mAh	5-5-90/10hr.
IMPRES Ultra High Capacity Immersible NiMH FM	119 x 60 x 25 mm (4.86" x 2.37" x .968")	288g (10.16oz)	NNTN6263	2000mAh	5-5-90/10hr.
IMPRES Ultra High Capacity Immersible Li-Ion	119 x 60 x 25 mm (4.86" x 2.37" x .968")	190g (6.7oz)	NNTN7335	2700mAh	5-5-90/13hr.

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature	-30°C / +60°C
Storage Temperature	-40°C / +85°C
Humidity	Per MIL-STD
ESD	IEC 801-2KV
Water & Dust Intrusion	IP67, MIL-STD

PORTABLE MILITARY STANDARDS 810 C, D, E & F								
	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F	
	Method	Procedures	Method	Procedures	Method	Procedures	Method	Procedures
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	510.1	I	510.2	I	510.3	I	510.4	I
Vibration	514.2	VIII/F, Curve-W	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

*Measured in the analog mode per TIA / EIA 603.
 **Measured in digital mode per TIA / EIA IS 102.CAAA. Specifications subject to change without notice.
 ***Military Standards specify a single procedure for this test.



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