

# XTS<sup>®</sup> 1500

## Digital Portable Radio



Model 1

Model 1.5

### XTS 1500 Portable Radios Feature:

Available Frequency:

- 136-174 MHz (5W)
- 380-470 MHz (5W)
- 450-520 MHz (5W)
- 764-870 MHz (3W)

Supports APCO Project 16 (3600 control channel) and APCO Project 25 (9600 control channel)

Works with ASTRO<sup>®</sup> Analog and Digital Trunking with Mutual Aid or ASTRO 25 Digital Trunking with Mutual Aid

Meets Military Standards 810, C, D, E and F

Utilizes Customer Programming Software and supports USB and RS-232

Compatible with most XTS 3000, XTS 3500, XTS 2500, HT 1000, JT 1000 and MTS 2000 portable radio accessories

Supports enhanced audio features: noise reduction software, Hear Clear and audio gain control

### Affordability in action. Durability to depend on. Simplicity that succeeds.

Motorola's XTS 1500 portable radio is the cost-effective, convenient, compact solution for public works and public utilities. This high-quality APCO Project 25 radio features two-way functionality in a durable, dependable unit that is very easy to use.

Both Model 1 and Model 1.5 (display version) are available in 700/800 MHz, VHF, UHF R1 and UHF R2 bands, and supports APCO Project 16 or Project 25 operation. Use the analog functionality on the XTS 1500 or migrate to wide-area Project 25 operation.

For true simplicity, affordability and reliability make the right call with the XTS 1500 digital radio from Motorola.

## SPECIFICATION SHEET

XTS® 1500  
Digital Portable Radio

### TRANSMITTER TYPICAL PERFORMANCE SPECIFICATIONS

	700/800 MHz	UHF R1	VHF	UHF R2
Frequency Range	700 MHz: 764-776, 794-806 800 MHz: 806-870	380-470 MHz	136-174 MHz	450-520 MHz
Channel Spacing	12.5 / 20 / 25 kHz	12.5 / 25 kHz	12.5 / 25 kHz	12.5 / 25 kHz
Maximum Frequency Separation	Full Bandsplit	Full Bandsplit	Full Bandsplit	Full Bandsplit
Rated RF Output Power Adj*	764-806 MHz: 1 to 3 W 806-870 MHz: 1 to 3 W	1 to 5 W	1 to 5 W	1 to 5 W
Frequency Stability* (-30°C to +60°C; +25°C Ref.)	0.00015%	0.0002%	0.00025%	0.0002%
Modulation Limiting*				
25 kHz channel	5.0 kHz	5.0 kHz	5.0 kHz	5.0 kHz
NPSAC channel	4.0 kHz	N/A	N/A	N/A
12.5 kHz channel	2.5 kHz	2.5 kHz	2.5 kHz	2.5 kHz
Emissions* (Conducted & Radiated)	-75 dBc	-70 dBc	-73 dBc (<1 GHz)	-70 dBc
Audio Response* (6 dB/Octave Pre-emphasis from 300 to 3000 Hz)	+1, -3 dB	+1, -3 dB	+1, -3 dB	+1, -3 dB
FM Hum & Noise Ratio*				
25 kHz	-43 dB	-45 dB	-46 dB	-45 dB
12.5 kHz	-40 dB	-40 dB	-42 dB	-40 dB
Audio Distortion*	2.0%	2.0%	1.0%	2.0%

### RECEIVER TYPICAL PERFORMANCE SPECIFICATIONS

	700/800 MHz	UHF R1	VHF	UHF R2
Frequency Range	700 MHz: 764-776, 800MHz: 851-870 <i>Note: Radio covers entire 700 MHz and 800 MHz frequency ranges</i>	380-470 MHz	136-174 MHz	450-520 MHz
Channel Spacing	12.5 / 20 / 25 kHz	12.5 / 25 kHz	12.5 / 25 kHz	12.5 / 25 kHz
Maximum Frequency Separation	Full Bandsplit	Full Bandsplit	Full Bandsplit	Full Bandsplit
Audio Output Power at Rated*	500 mW	500 mW	500 mW	500 mW
Frequency Stability* (-30°C to +60°C; +25°C Ref.)	0.00015%	0.0002%	0.00025%	0.0002%
Analog Sensitivity*				
12 dB SINAD	.25 µV	.25 µV	.25 µV	.25 µV
Digital Sensitivity**				
1% BER	.40 µV	.35 µV	.25 µV	.35 µV
5% BER	.25 µV	.25 µV	.20 µV	.25 µV
Selectivity*				
25 kHz channel	-72 dB	-73 dB	-80 dB	-73 dB
12.5 kHz channel	-63 dB	-63 dB	-63 dB	-63 dB
Intermodulation*	-75 dB	-73 dB	-78 dB	-75 dB
Spurious Rejection*	-75 dB	-75 dB	-80 dB	-75 dB
FM Hum & Noise Ratio*				
25 kHz	-47 dB	-47 dB	-52 dB	-50 dB
12.5 kHz	-40 dB	-40 dB	-40 dB	-47 dB
Audio Distortion*	2.5%	2.0%	1.0%	2.0%

\* Measured in the analog mode per TIA / EIA 603

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

## SPECIFICATION SHEET

XTS® 1500  
Digital Portable Radio

### RADIO MODELS

	Display	Keypad	Channel Capacity	700/800MHz Band (764-870 MHz)	UHF R1 (380-470 MHz)	VHF (136-174 MHz)	UHF R2 (450-520 MHz)
Model 1	None	None	48	H66UCC9PW5_N	H66QDC9PW5_N	H66KDC9PW5_N	H66SDC9PW5_N
Model 1.5	Yes	None	96	H66UCD9PW5_N	H66QDD9PW5_N	H66KDD9PW5_N	H66SDD9PW5_N
FCC Designation				AZ489FT5804	AZ489FT4865	AZ489FT3807	AZ489FT4866

### FCC Emissions

Designators 11K0F3E, 16K0F3E, 8K10F1E, 8K10F1D

Power Supply One rechargeable nickel-cadmium, or nickel-metal hydride

### Dimensions without

battery (HxWxL) 6.00" x 2.30" x 1.50"

### Weight

without battery 11.0 oz

### BATTERIES FOR ASTRO DIGITAL XTS 1500

Battery Type	Dimension (HxWxD)	Weight	Battery Part Numbers	mAH	Duty Cycle
NiCD	4.86" x 2.37" x .968"	8.85 oz	NTN9815	1525	5-5-90 / 8 hr
NiCD FM	4.86" x 2.37" x .968"	8.85 oz	NTN9816	1525	5-5-90 / 8 hr
IMPRES™ NiMH	4.86" x 2.37" x .968"	9.63 oz	NTN9858	2100	5-5-90 / 10 hr
IMPRES NiMH FM	4.86" x 2.37" x .968"	9.63 oz	NTN9857	2000	5-5-90 / 10 hr

### 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	-	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	-
Salt Fog	509.1	-	509.2	-	509.3	-	509.4	-
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

### ENVIRONMENTAL SPECIFICATIONS

Operating Temperature -30°C / +60°C

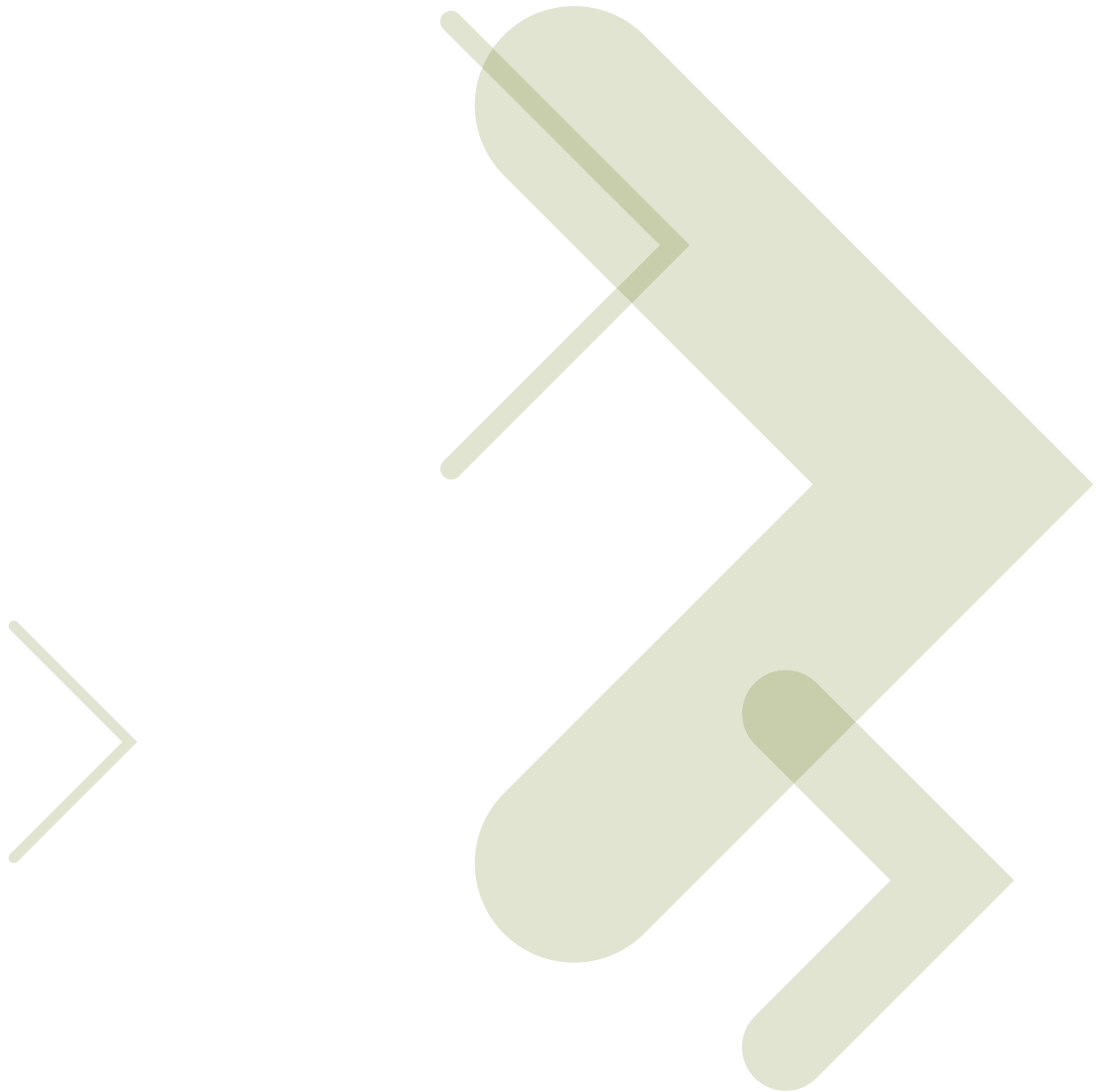
Storage Temperature -40°C / +85°C

Humidity Per MIL-STD

ESD IEC 801-2 KV

Water & Dust Intrusion IP54, MIL-STD

Specifications subject to change without notice.



Motorola, Inc. 1301 E. Algonquin Road, Schaumburg, Illinois 60196 U.S.A. [www.motorola.com/governmentandenterprise](http://www.motorola.com/governmentandenterprise) 1-800-367-2346

MOTOROLA and the Stylized M Logo are registered in the U.S. Patent and Trademark Office.  
All other product or service names are the property of their registered owners. © Motorola, Inc. 2008 (0809)  
R3-4-20071