

Specification Sheet

ASTRO XTS 2500™ Digital Portable Radio



MODEL I:

- ▶ PTT button
- ▶ On/Off volume knob
- ▶ Programmable orange emergency button
- ▶ 16-position top mounted rotary knob
- ▶ 3 position concentric switch
- ▶ Programmable monitor button
- ▶ 2 programmable side buttons
- ▶ Transmit LED indicator
- ▶ No keypad
- ▶ No display
- ▶ Up to 48 channels

MODEL I.5:

- ▶ Same as XTS Model I features plus the following:
- ▶ Large Bitmap Display
 - 2 lines icons
 - 2 lines with 12 characters per line
 - Status icons including battery and received signal strength indicator

MODEL II:

Same as XTS Model I features plus the following:

- ▶ 256 channels
- ▶ Dial from pre-stored lists
- ▶ Programmable soft keys for easy access to radio menu
- ▶ Backlit Keypad
 - 3 soft keys
 - 3 navigation keys
- ▶ Large Bitmap Display
 - 2 lines icons
 - 4 lines with 12 characters per line
 - Status icons including battery and received signal strength indicator

MODEL III:

Same as XTS Model I features plus the following:

- ▶ 256 channels
- ▶ Dial from pre-stored lists
- ▶ Programmable soft keys for easy access to radio menu
- ▶ Backlit Keypad
 - 3 soft keys
 - 3 navigation keys
 - 4 x 3 alphanumeric keypad
- ▶ Large Bitmap Display
 - 2 lines icons
 - 4 lines with 12 characters per line
 - Status icons including battery and received signal strength indicator

- ▶ Available in 700/800 MHz, VHF, UHF R1 and UHF R2 bands
- ▶ Trunking standards supported
 - APCO Project 16 (3600 control channel) *and*
 - APCO Project 25 (9600 control channel)
- ▶ System configurations
 - ASTRO® Analog and Digital Trunking with Mutual Aid *and*
 - ASTRO®25 Digital Trunking with Mutual Aid
- ▶ Narrow and wide bandwidth digital receiver (12.5 kHz, 20 kHz, 25 kHz)
- ▶ High speed and embedded digital signalling (ASTRO & ASTRO 25)
- ▶ Enhanced Audio Features
 - High quality, error corrected digital voice
 - Noise Reduction Software
 - Audio Gain Control
- ▶ Convenience Features
 - Time / Date
 - Caller ID
- ▶ Utilizes Windows-Based Customer Programming Software (CPS)
 - Supports USB and RS-232 communications
 - Built in FLASHport support
- ▶ Meets Mil Specs 810 C, D, E and F
- ▶ Compatible with most MTS and XTS accessories

TRANSMITTER

Typical Performance Specifications			
700/800 MHz	UHF R1	VHF	UHF R2
Frequency Range	700 MHz: 764-776, 773-797, 800 MHz: 803-806, 806-824, 851-870	380-470 MHz	136-174 MHz 450-520 MHz
Channel Spacing	12.5 / 20 / 25 KHz	12.5/25 KHz	12.5/25 KHz
Maximum Frequency Separation	Full Bandsplit	Full Bandsplit	Full Bandsplit
Rated RF Output Power Adj*	764-806 MHz: 1 to 2.5 W 806-870 MHz: 1 to 3 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%
Modulation Limiting** 25 kHz channel NPS/PAC channel 12.5 kHz channel	±5.0 KHz ±4.0 KHz ±2.5 KHz	±5.0 KHz N/A ±2.5 KHz	±5.0 KHz N/A ±2.5 KHz
Emissions* (Conducted & Radiated)	-75 dBc	-70 dBc	-65 dBc
Audio Response* (6 dB/Octave Pre-emphasis from 300 to 3000 Hz)	+1, -3 dB	+1, -3 dB	+1, -3 dB
FM Hum & Noise Radio* 25 kHz 12.5 kHz	-43 dB -40 dB	-45 dB -40 dB	-46 dB -42 dB
Audio Distortion*	2.0%	2.0%	1

* Measured in the analog mode per TIA / EIA 603
 ** Measured in digital mode per TIA/EIA IS 102 CA444
 Specifications subject to change without notice.

RECEIVER

Typical Performance Specifications			
700/800 MHz	UHF R1	VHF	UHF R2
Frequency Range	700 MHz: 764-767, 773-776	380-470 MHz	136-174 MHz 450-520 MHz
Channel Spacing	12.5 / 20 / 25 KHz	12.5/25 KHz	12.5 / 25 KHz
Maximum Frequency Separation	Full Bandsplit	Full Bandsplit	Full Bandsplit
Audio Output Power at Rated*	500 mW	500 mW	500 mW
Frequency Stability** (-30°C to +60°C; 25°C Ref.)	±0.00015%	±0.0002%	±0.00025%
Analog Sensitivity* 12 dB SINAD Digital Sensitivity** 1% BER 5% BER	.25 µV .40 µV .25 µV	.25 µV .35 µV .25 µV	.25 µV .35 µV .25 µV
Selectivity* 25 kHz chnl 12.5 kHz chnl	-72 dB -63 dB	-73 dB -63 dB	-80 dB -63 dB
Intermodulation*	-74 dB	-73 dB	-78 dB
Spurious Rejection*	-75 dB	-75 dB	-80 dB
FM Hum and Noise* 25 kHz 12.5 kHz	-47 dB -40 dB	-47 dB -40 dB	-52 dB -40 dB
Audio Distortion*	2.5%	2.0%	1%

RADIO MODELS

Model I	Model I.5	Model II	Model III
Display	N/A	N/A	N/A
Channel Capacity	16/48	16/48	256
FLASHport Memory	4MB	4MB	4MB
700/800 MHz Band (764-870 MHz)	H46UC9PW5_N	H46UCD9PW5_N	H46UCF9PW6_N
UHF R1 (380-470 MHz)	H46QDC9PW5_N	H46QDD9PW5_N	H46QDF9PW6_N
VHF (136-174 MHz)	H46KDC9PW5_N	H46KDD9PW5_N	H46KDF9PW6_N
UHF R2 (450-520 MHz)	H46SDC9PW5_N	H46SDD9PW5_N	H46SDF9PW6_N
2 lines of icons	4 lines	4 lines	4 lines
12 characters per line LCD	N/A	3x2	3x6
2 lines of icons	4 lines	4 lines	4 lines
12 characters per line LCD	N/A	3x6	3x6
2 lines of icons	4 lines	4 lines	4 lines
12 characters per line LCD	N/A	3x6	3x6

FCC Designation: 11K0F3E, 16K0F3E, 8K10F1E, 8K10F1D
 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

AZ489FT5804 UHF: AZ489FT4865 VHF: AZ489FT3807 AZ489FT4866

BATTERIES FOR ASTRO DIGITAL XTS 2500

Battery Capacity / Type	Dimensions (HxWxD)	Weight	Battery Part Numbers	mAH	Duty Cycle
High Capacity NiCD	4.86" x 2.37" x .968"	8.85 oz	NTN9815	1525	5-5-90 / 8 hr.
High Capacity NiCD FM	4.86" x 2.37" x .968"	8.85 oz	NTN9816	1525	5-5-90 / 8 hr.
High Capacity NiMH	4.86" x 2.37" x .968"	9.63 oz	NTN9858	1800	5-5-90 / 10 hr.
High Capacity NiMH FM	4.86" x 2.37" x .968"	9.63 oz	NTN9857	1750	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	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

*Military Standards specify a single procedure for this test.

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	IP54, MIL-STD



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