MOTOROLA

MOTOROLA EX500 EXPERT SERIES

Portable Two-Way Radio

Programmable Emergency Button
Dedicated button that sounds alarm or alerts dispatcher in urgent situations

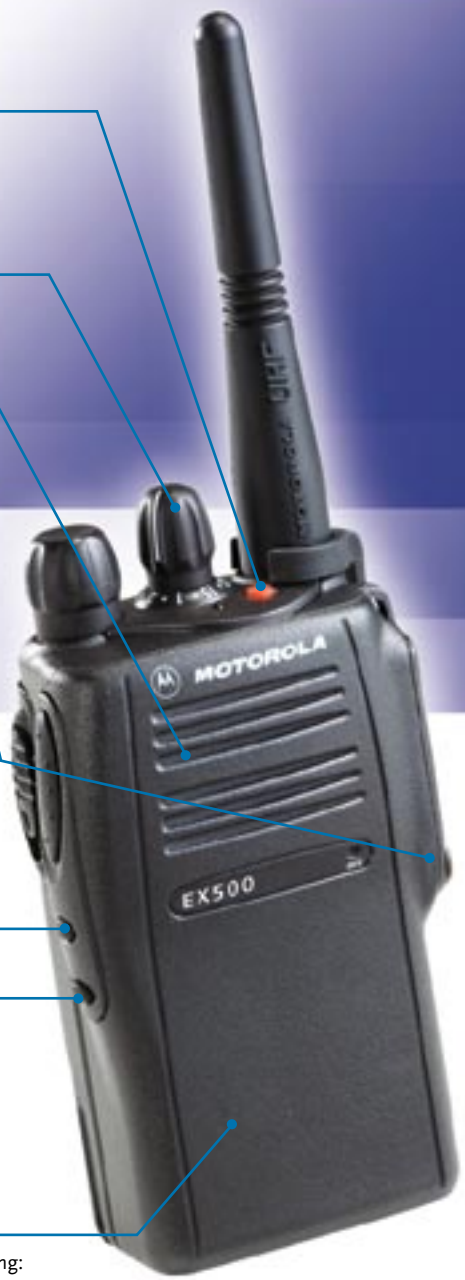
16 Channels

X-Pand™ Audio Enhancement
Clearer, crisper audio quality

Internal VOX
Voice-operated transmission capability with optional headset allows hands-free operation

3 Programmable Buttons
Immediate access to your favorite features

- **Adjustable Power Levels**
  Help optimize coverage and battery life
- **Priority Channel Scan**
  Program radio to more frequently scan transmissions on your most important channel, to help ensure you don't miss critical calls
- **Monitor/Permanent Monitor**
  Quickly and easily monitor a specific channel at the touch of a button
- **Repeater Talkaround**
  Unit-to-unit communication allows radio to bypass the repeater when necessary, to help ensure continuous radio contact



Quik Call II™ and MDC1200 Signaling
Send and receive information in a variety of ways, including:

- **Push-to-Talk ID (Encode)**
  Identifies your outgoing calls on other users' radios
- **Selective Call (Decode)**
  Lets you receive a specific group or individual call
- **Call Alert (Decode)**
  Notifies you of incoming calls when you're a short distance away from your radio
- **Radio Check (Decode)**
  Tells others whether your radio is activated
- **Emergency (Encode)**
  Sounds an alarm or alerts dispatcher in urgent situations
- **Selective Radio Inhibit (Decode)**
  Allows system owner to disable stolen or missing radios

Practicality and Power

Ideal for high-level professionals who want powerful yet streamlined communication tools, the compact Motorola EX500 portable radio has what it takes to make all the right connections. Its sleek, ergonomic design makes this Expert Series radio easy to hold and carry — and it's so lightweight you can take it virtually anywhere. The Motorola EX500 radio's exceptional features deliver solid functionality and remarkable ease-of-use. Flexible scanning and monitoring capabilities allow you to stay on top of critical transmissions. Three programmable buttons and a range of signaling capabilities offer the tools you require to communicate steadily and efficiently. With the Motorola EX500 radio, you'll have everything you need to perform at your best.

intelligence everywhere™

MOTOROLA
EX500
EXPERT SERIES

Specifications

Putting Sophisticated Communication
in the Palm of Your Hand

GENERAL

SPECIFICATION	VHF/UHF
Channel Capacity	16 Channels
Dimensions (with Li-Ion Battery)	3.74″ x 1.04″ x 2.17″ 95mm x 26.5mm x 55.1mm
Weight (with Li-Ion Battery)	8.8 ounces / 250 grams
Power Supply	Rechargeable battery 7.5 V
Average Battery Life @ 5/5/90 Cycle	
Slim Li-Ion Battery	Low Power: 10 hours High Power: 7 hours
High Capacity Li-Ion Battery	Low Power: 10 hours High Power: 14 hours

TRANSMITTER

SPECIFICATION	VHF/UHF
Frequencies	136-174 MHz 403-470 MHz 450-512 MHz
Channel Spacing	12.5 kHz/20/25 kHz
Freq. Stability (-30° C to 60° C, +25° Ref.)	±2.5 ppm @12.5 kHz ±4 ppm @20/25 kHz
Power	1 W, 5 W, 136-174 MHz 1 W, 4 W, 403-470 MHz 1 W, 4 W, 450-512 MHz
Modulation Limiting	±2.5 KHz @12.5 kHz ±4 KHz @20 kHz ±5 KHz @25 kHz
FM Hum & Noise	-34 dB @12.5 kHz -40 dB @20/25 kHz
Conducted/Radiated Emission	-36 dBm < 1 GHz -30 dBm > 1 GHz
Adjacent Channel Power	-60 dBc @12.5 kHz -70 dBc @20/25 kHz
Audio Response (300 - 3000 Hz)	+1 to -3dB of a 6 dB/octave pre-emphasis
Audio Distortion	3%

For more information, please contact:

RECEIVER

SPECIFICATION	VHF/UHF
Frequencies	136-174 MHz 403-470 MHz 450-512 MHz
Channel Spacing	12.5/20/25 kHz
Freq. Stability (-30° C to 60° C, +25° Ref.)	±2.5 ppm @12.5 kHz ±4 ppm @20/25 kHz
Sensitivity (12 dB SINAD)	0.35 µV
Intermodulation	70 dB
Adjacent Channel Selectivity	60 dB @ 12.5 kHz 70 dB @ 20/25 kHz
Spurious Rejection	70 dB
Rated Audio	0.5 W
Audio Distortion @ Rated Audio	3% typical
Hum and Noise	-34 dB @12.5 kHz -40 dB @20/25 kHz
Conducted Spurious Emission	-57 dBm < 1 GHz -47 dBm > 1 GHz

NOTE: All RX Hum and Noise numbers assume a low level expander is used.

PORTABLE MILITARY STANDARDS 810 C, D & E

	810C		810D		810E	
Applicable	Methods	Procedures	Methods	Procedures	Methods	Procedures
Low Pressure	500.1	1	500.2	2	500.3	2
High Temp	501.1	1,2	501.2	1,2	501.3	1,2
Low Temp	502.1	2	502.2	1,2	502.3	1,2
Temp. Shock	503.1	1	503.2	1	503.3	1
Solar Radiation	505.1	1	505.2	1	505.3	1
Rain	506.1	1,2	506.2	1,2	506.3	1,2
Humidity	507.1	2	507.2	2,3	507.3	2,3
Salt Fog	509.1	1	509.2	1	509.3	1
Dust	510.1	1	510.2	1	510.3	1
Shock	516.2	1,2,5	516.3	1,4	516.4	1,4
Vibration	514.2	8,10	514.3	1	514.4	1

ENVIRONMENTAL

PARAMETER	SPECIFICATION
Operating Temperature Radio only	-30 to 60° C
Storage Temperature	-55 to 85° C
Thermal Shock	-40 to 85° C
Humidity	95% RH @ 8 Hr.
Sand Dust	Blowing Dust: 5 Hr. Non-operating IP54
Vibration	SINE 10-60Hz 30 min/axis
Drop Test	42 drops from 48″ height 42 drops from 121.9cm height
Flame Resistance	UL94 HB
ESD	IEC 801-2 KV
Water Intrusion	IP54
Packing Test	5 feet

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www.motorola.com/cgiss

MD-EX500-01

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