



ATS2500

Trunked System Radio Series

The Power Tool for Contact and Control





ATS2500

MOTOROLA SMARTZONE TRUNKED PROFESSIONAL RADIO SERIES

From daily operations of security, facility management, events to fighting spills, you can rely on Motorola Professional Radio Services - ATS2500 to meet your communication needs.

Both the non-keypad and advanced keypad model ATS2500 radios are designed for use in the Smartnet/Smartzone trunking systems and each comes with Smartzone software packages that offer users a wide range of features and capabilities.

COMMON KEY FEATURES FOR ATS2500 NON-KEYPAD AND ATS2500 KEYPAD MODEL

Audio Technology

As with any radio, sound quality is critical for effective communications. Motorola's ATS2500 Trunked system radio series can be heard in almost any environment because of improved audio features and noise cancelling microphone.

Intrinsically Safe Standards

The radio complies with Factory Mutual (FM) Intrinsically Safe Standards in order to meet the needs of petrol chemical, oil refinery, hazardous material users and those who operate in dangerous environment such as emergency services and public safety.

Wideband and Programmable Channel Spacing (12.5/20/25 kHz)

The wideband technology and programmable channel spacing of 12.5/20/25 kHz offer flexibility & easy migration of channel spacing requirements.

Failsoft Operation

In the event of a trunked system or central controller failure, radio conversation is still possible in failsoft mode. Upon indication of the central controller failure, the radio will automatically revert to a preassigned voice channel and operate in a non-trunked repeater mode.

Selective Radio Inhibit

In situations when the radios have been stolen or are missing, selective radio inhibit allows the dispatcher to remotely disable the radios.

Talkgroup / Priority Scan

The ATS2500 radio provides effortless scanning ability to monitor conversations on other talkgroups without having to change systems or talkgroups. It supports dual mode scanning, priority level and nuisance channel delete scanning.

Dual Modes

The ATS2500 radio operates on both trunking and conventional modes providing maximum systems flexibility.

Lithium Ion Battery Option

Motorola ATS2500 trunked radio series offers a Lithium Ion battery option which provides higher capacity at a lighter weight; allowing users to communicate for a longer period of time.

ATS2500 also supports various multiple call types such as:

- Private Call
- Call Alert
- Telephone Interconnect
- Group call
- Announcement call



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ATS2500 SMARTZONE ENHANCED FEATURES

Committed to satisfying the trunking communication needs, the ATS2500 SmartZone package offers the public safety features below:

a. Emergency Alarm/Call

During emergency operation, the ATS2500 SmartZone radio is assigned the highest priority for access on trunking system. In life-threatening situations, when access to communication is critical, an emergency alarm will be sent to the dispatcher identifying the unit in trouble. Emergency calls can be directed to specific talkgroups, dispatcher, or announcement groups, according to users' need.

b. Dynamic Regrouping

Enables different talkgroups to be brought together to communicate during an emergency. It permits the dispatcher to change the radio talkgroup assignments of individual radios without having to return the radio to the workshop for reprogramming.

c. Omnilink

This feature allows the user wide-area roaming capabilities across multi-zone SmartZone networks.

d. Advanced Conventional

The ATS2500 SmartZone Radio supports a range of enhanced signaling capabilities such as MDC1200 signalling and conventional voting scan.

e. Remote Monitor

Dispatcher has control to monitor the radio user activity especially when it suspected that the radio user may be in danger.



ATS2500 Non-Keypad

ATS2500 Keypad



ATS2500 COMMON ACCESSORIES

Enhance Your Radio's Capabilities

A comprehensive range of accessories is also available so that Motorola professional ATS2500 Trunked Radio Series can be customised to suit your unique applications. Adding the proper headsets, microphones, batteries, chargers or carry case can enhance the productivity of the two-way radio users.

Motorola accessories are built with the highest quality standards and are specially engineered to ensure maximum performance for your radio, no matter what profession you're in.



PLMN4607
Surveillance Kit with Clear
Acoustic Earpiece



RMN4048
Temple Transducer



RLN4883
Travel Charger



Multi-unit Charger



ENMN4018A
Helmet-com



impres™ Smart
Energy System

GENERAL SPECIFICATION (VHF/UHF)	ATS2500 Model I	ATS2500 Model II
Frequency*	136 - 174 / 330 - 400 / 403 - 470 / 450-527 / 800 MHz	
Power Supply	Provided through rechargeable battery - 7.5V	
DIMENSIONS H x W x D (Radio footprint height excluding knobs)		
With Standard High Capacity NiMH Battery	137mm x 57.5mm x 37.5mm	
With Ultra High Capacity NiMH Battery	137mm x 57.5mm x 40.0mm	
With NiCD Battery	137mm x 57.5mm x 40.0mm	
With Lilon Battery	137mm x 57.5mm x 33.0mm	
WEIGHT		
With Standard High Capacity NiMH Battery	420gm	428gm
With Ultra High Capacity NiMH Battery	508gm	508gm
With NiCD Battery	450gm	458gm
With Lilon Battery	350gm	358gm
AVERAGE BATTERY LIFE @ 5/5/90 CYCLE		
	LOW POWER	HIGH POWER
With Standard High Capacity NiMH Battery	11 hours	8 hours
With Ultra High Capacity NiMH Battery	14 hours	11 hours
With NiCD Battery	12 hours	9 hours
With Lilon Battery	11 hours	8 hours
Sealing	Withstands rain testing per MIL STD 810 C/D/E and IP54	
Shock and Vibration	Protection provided via impact resistant housing exceeding MIL STD 810 C/D/E and TIA/EIA 603	
Dust and Humidity	Protection provided via environment resistant housing exceeding MIL STD 810 C/D/E and TIA/EIA603	

TRANSMITTER SPECIFICATION	All Specs Measured to TIA/EIA-603			
	VHF	330-400 MHz	UHF	800 MHz
*Frequency (MHz)	136-174	330-400 MHz	403-470 MHz 450-527 MHz	806 - 825 MHz
Power	1 - 5W	1 - 4W	1 - 4W	1 - 2.5W
Frequency Separation	Full bandsplit			
Channel Spacing	12.5/20/25 kHz			25 kHz
Frequency Stability (-30°C to 60°C, +25°C Ref.)	±2.5 ppm			±2.5 ppm
Modulation Limiting	±2.5 kHz @ 12.5 kHz ±4 kHz @ 20 kHz ±5 kHz @ 25 kHz			±5 kHz @ 25 kHz
FM Hum & Noise	-34 dB @ 12.5 kHz -38 dB @ 20 kHz -40 dB @ 25 kHz			-40 dB
Conducted/Radiated Emission	-66 dBw < 1 GHz -60 dBw < 1 GHz			-66 dBw < 1 GHz -60 dBw < 1 GHz
Adjacent Channel Power	-60 dBc @ 12.5 kHz -70 dBc @ 20/25 kHz			-70 dBc
Audio Response (from 6 dB/oct. pre-emphasis 300-3000 Hz)	+1 to -3 dB			+1 to -3 dB
Audio Distortion	3%			3%

RECEIVER SPECIFICATION	All Specs Measured to TIA/EIA-603			
	VHF	330-400 MHz	UHF	800 MHz
*Frequency	136-174 MHz	330-400 MHz	403-470 MHz 450-527 MHz	851-870 MHz
Power	1 - 5W	1 - 4W	1 - 4W	1 - 2.5W
Frequency Separation	Full bandsplit			
Sensitivity (12dB SINAD)	0.25 µV			0.25 µV
Intermodulation	-70 dB			-70 dB
Adjacent Channel Selectivity	-60 dB @ 12.5 kHz -70 dB @ 20/25 kHz			-70 dB
Spurious Rejection	-70 dB			-70 dB
Rated Audio	0.5 W			0.5 W
Audio Distortion @ Rated Audio	3% typical			3% typical
Hum and Noise	-34 dB @ 12.5 kHz -38 dB @ 20 kHz -40 dB @ 25 kHz			-37 dB
Conducted Spurious Emission	-57dBw < 1 GHz -47dBw > 1 GHz			-57dBw < 1 GHz -47dBw < 1 GHz

All Rx Hum & Noise numbers assume low level expander is used. Data for +25°C unless otherwise specified.

*Availability subject to country law and regulations. Specifications subject to change without notice.

All specifications shown are typical. Radios meet applicable regulatory requirements.

FIRMWARE OFFERING		ATS2500 SMARTZONE	
Model	Non-Keypad	Keypad	
Maximum Number of Modes Systems	16	250	
Maximum Number of Systems	16	20	
Max Number of Talkgroups / Personality	15	15	
Max Number of Personality	16	50	
Channel/Zone Selection via Menu	X	✓	
Caller ID- Text Alias	N/A	✓	
Low Battery Indication	✓	✓	
Out of Range Indicator	✓	✓	
Microphone Automatic Gain Control (TX)	✓	✓	
Time-Out-Timer Programmable via RSS	✓	✓	
Variable RF Power Level	✓	✓	
TRUNK MODE			
Group Call/Announcement Call	✓	✓	
Private Call/Call Alert/Telephone Encode	X	✓	
Private Call/Call Alert/Telephone Decode	✓	✓	
One-Touch Button	X	✓	
Trunking Scan	✓	✓	
Selective Radio Inhibit	✓	✓	
Emergency	✓	✓	
Remote Monitor	✓	✓	
Dynamic Regroup	✓	✓	
Reprogram Request	✓	✓	
Status/Message (encode only)	✓	✓	
SMARTZONE (RSSI Site selection)	✓	✓	
Voice on Control	✓	✓	
OMNILINK Capable	✓	✓	
CONVENTIONAL			
PL/DPL/CSQ	✓	✓	
Monitor	✓	✓	
Conventional Scan	✓	✓	
MDC -1200	✓	✓	
Voting Scan	✓	✓	

PORTABLE MILITARY STANDARDS 810 C, D, & E

Applicable MIL-STD	810C		810D		810E	
	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	1	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
Vibration	514.2	8, 10	514.3	1	514.4	1
Shock	516.2	1, 2, 5	516.3	1, 4	516.4	1, 4

Motorola: Reliability & Quality



Accelerated Life Testing
Stringent Motorola Accelerated Life Testing simulating five years of hard use in real life.



MIL-STD 810C, D and E
Stamp of approval from the U.S. Military for use in rough environments.



ISO 9001 Standard
Compliance with ISO 9001 Standard – an international quality system assurance on design, development, production, installation and servicing of a product.

Factory Mutual Approval

ATS2500 radio units are certified by Factory Mutual Approvals as intrinsically safe for use in Division 1, Class I, II, III, Groups C,D,E,F,G and Division 2, Class I, Groups A,B,C,D, when ordered with the Factory Mutual approved battery option.



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