



# ***MTX900 / MTX960***

The Power Tool for Contact and Control





# THE MTX900 AND MTX960

## PROFESSIONAL RADIO: TRUNKED SYSTEM RADIO SERIES

In today's dynamic environment, effective and instant communications are critical to the success of your business. Whether you are targeting to improve your operating efficiency, reducing the risks to employee safety or maximising your ability to respond to emergency situations, Motorola MTX900 series of professional radios are your ideal communication tools.

This series comes in 2 models. The MTX900 is a non-keypad model and the MTX960 is a keypad model.

Both models have its own distinctive, easy to use features; offering a wide range of capabilities for the Single Site Shared Mobile Radio to private security users. The distinctive features of the MTX960 keypad model is its 1x14 character LCD screen display & intuitive menu navigation that gives the user instant talk group identification.

### ***Common Key Features for the MTX900 Non-keypad and MTX960 Keypad model***

#### **Audio Technology**

As with any radios, sound quality is critical for effective communications. Motorola's MTX900 and MTX960 Trunked system radio series can be heard in almost any environment because of LLE and noise cancelling microphone.

#### **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 should channel spacing requirement expand.

#### **Automatic Multiple Site Selection (AMSS)**

The AMSS feature extends communications beyond the reach of a single trunked site. In a system where multiple trunking sites are used to extend coverage; the AMSS will automatically switch the radio to a different site when the current site signal becomes too weak. Thus ensuring users continuous radio communications.

#### **Emergency Alarm\***

An emergency function is provided to alert the dispatcher. This function is activated by pushing an easily accessible orange button on the top of the radio. These calls are processed by the trunking system with the highest priority to ensure that they get through as quickly as possible.

#### **Selective Radio Inhibit**

In situations when the radios have been stolen or are missing, the selective radio inhibit feature will enable the dispatcher to remotely disable the radios for greater security.

#### **Talkgroup Scan**

Provides effortless scanning combination of talkgroups and conventional channels for messages, and monitoring of channels in a multiple system environment.

#### **Dual Mode Capability**

Enables user the convenience of selecting either both trunked or conventional operation providing maximum systems flexibility.

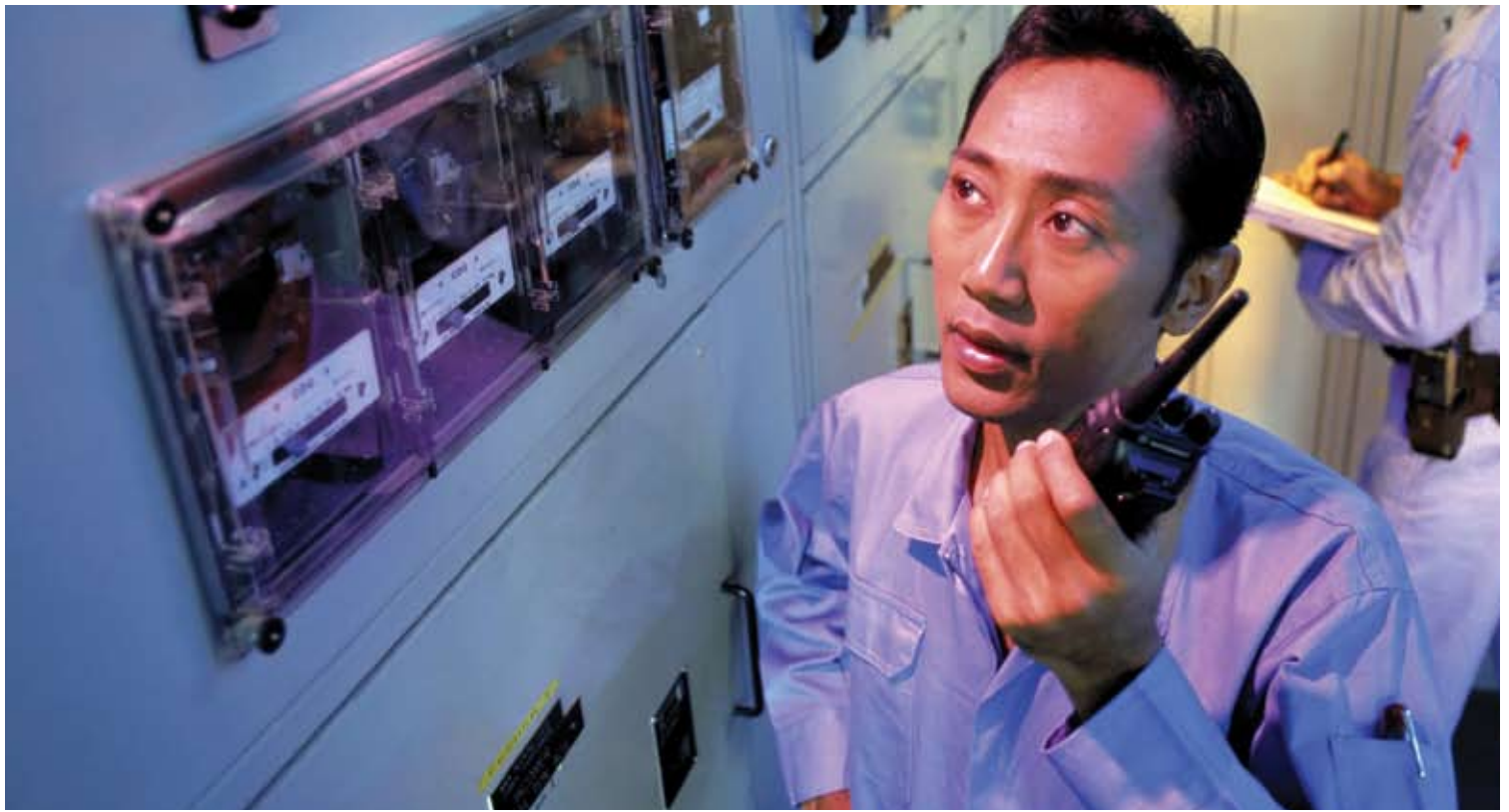
#### **Failsoft Operation**

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.

#### **Lithium Ion Battery Option**

The Lithium Ion battery option provides high capacity battery at a lighter weight; allowing users to communicate for a longer period of time.

\*Feature not available in some countries.



### ***MTX900 Non-keypad Radio - Affordable and Easy to Use***

The MTX900 is the affordable communication solution for professionals who required a rugged and reliable radio to stay in touch. This radio helps to enhance productivity, keeping users connected, whilst allowing them to concentrate on their jobs.

#### **16 Modes**

Allows for up to 16 modes to organise different user talkgroups to meet different communication needs.

#### **Multiple System/Talk Group Capability**

Provides operation & flexible access of up to 10 systems/15 talkgroups.

#### **4 Programmable Buttons**

The MTX900 can be programmed for common calls to be accessed as easy as a touch of a button.

#### **Low Battery Warning**

Pre-alert users when the battery is running low through the LED indicator and alert tone.

#### **Multiple Call - Types Flexibility**

- **Private Call Decode**  
Enables you to receive a one-to-one call from another radio user, assuring privacy when discussing sensitive issue.
- **Call Alert Decode**  
Notification of 1 missed call via a series of audible signals, ensuring that a page can be received in the user's absence.
- **Telephone Interconnect**  
Allows users the capability to receive an incoming telephone call through the trunked system, thus enhancing their communication coverage.

### ***MTX960 Keypad Radio - Smart and Versatile***

The MTX960 is a smart choice for an organisation because it offers extra features to expand your communication needs and enhance your operational efficiency. Building on the basic features of the MTX900, the MTX960 has the following additional features.

#### **LCD Display**

The 14 character alpha-numeric display contains useful icons and information; such as instant talkgroup ID, radio signal strength indicator and a battery gauge icon are value-added features to optimise communication efficiency.

#### **90 Modes**

Allows for up to 90 modes to keep large diverse user talkgroups constantly in touch with each other.

#### **Intuitive Menus**

Easy to use menus and an alpha-numeric phonebook/contact list make the radiosimple and easy to use.

#### **Unlimited Private Call**

In addition to receiving a one-to-one call, the MTX960 is also able to send one-to-one radio call through the pre-programmed list or via direct entry from the keypad.

#### **Unlimited Call Alert**

MTX960 will display the caller ID of the latest missed calls from the menu screen via a series of audible signals, ensuring that a page will be received. Users can also send their Call Alert page via pre-programmed list or direct keypad entry.

#### **Telephone Interconnect**

Allows user to receive and make telephone call through the trunked system, thus expanding their communication coverage. In addition, dialing can also be via the user editable phone book or direct keypad entry.



## ***MTX900 & MTX960 Common Accessories***

### **Enhance Your Radio's Capabilities**

A comprehensive range of accessories is also available so that Motorola MTX900 Privacy Plus radio Series can be customised to suite your unique applications. Adding the proper headsets, microphones, batteries, charger or carry case can further 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)	MTX900	MTX960
*Frequency (MHz)	136-174 / 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	11hours
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	VHF/UHF	800MHz
*Frequency (MHz)	136-174, 403-470, 450-527 MHz	806-825 MHz
Frequency Separation	Full bandsplit	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
Power	1-5 W / 1-4 W	1-2.5 W
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	VHF/UHF	800MHz
*Frequency (MHz)	136-174, 403-470, 450-527 MHz	851-870 MHz
Frequency Separation	Full bandsplit	Full bandsplit
Sensitivity (12dB SINAD)	0.25 µV	0.25 µV
Intermodulation	-70 dB	-65 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	-39 dB
Conducted Spurious Emission	-57dBm < 1 GHz -47dBm > 1 GHz	-57 dBm < 1 GHz -47 dBm > 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.

PRIVACY PLUS	MTX900	MTX960
Display	None	1 Line By 14
RADIO WIDE FEATURES	MTX900	MTX960
Caller ID/Alias Text	N/A	Yes
Systems Compatibility		
Starsite	Yes	Yes
Smartnet	Yes	Yes
Maximum Number of Systems	10	10
Max Number of Talkgroups/Personality	15	15
Max Number of Personality	10	10
Alert Tones	Yes	Yes
Battery Gauge	N/A	Yes
Out of Range	Yes	Yes
Time-Out-Timer	Yes	Yes
Modes	16	90
Variable RF Power Level	Yes	Yes
Transmit Inhibit on Busy	Yes	Yes
TRUNKING FEATURES	MTX900	MTX960
Trunked Signaling Type	II / III	II / III
Group Call	Yes	Yes
Talkgroup	Yes	Yes
Announcement Group	Yes	Yes
System Wide (Receive Only)	Yes	Yes
Affiliation/Defiliation	Yes	Yes
Failsoft	Yes	Yes
AMSS	Yes	Yes
Private Call	Decode	Unlimited
Call Alert	Decode	Unlimited
Telephone Interconnect	Decode	Unlimited
DTMF	N/A	Yes
Selective Radio Inhibit	Yes	Yes
Emergency	Yes	Yes
CONVENTIONAL FEATURES	MTX900	MTX960
PL/DPL Signaling	Yes	Yes
Coded Squelch Operation (CSQ)	Yes	Yes
Monitor	Yes	Yes
SCAN FEATURES	MTX900	MTX960
Talkgroup Scan (Dual Mode)	Yes	Yes
Trunking Scan	Yes	Yes
Conventional Scan	Yes	Yes

## 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

MTX900/MTX960 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.

## 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**

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