

PTX Series Portable Radios

The Power Tool for Contact & Control

PTX700 / PTX760 / PTX780





Introducing Motorola's MPT-Trunked Professional Radio Series

Different professions have different communication needs. That's the simple reason why Motorola offers 3 different models in its MPT-Trunked Professional Radio Series – PTX700, PTX760 & PTX780.

Each of the models in the series has its own distinctive, easy-to-use features; offering users a wide range of capabilities to accomplish their unique tasks, while at the same time, tapping the extensive benefits offered by the widely accepted MPT1327 trunking system.

The MPT1327 trunking system is a signalling standard that defines an open air interface of speech and data services between radio terminals and the system. An MPT1327 system manages the network and radio users, synchronises and schedules call requests, calls individuals and groups of radio users and conducts call maintenance.

Motorola's MPT-Trunked Professional Radio Series conforms to the MPT1327 signalling standard and supports major dialling plans such as MPT1343, RegioNet 43 and ANN.

Audio Technology

As with any radio, sound quality is critical for effective communications. Motorola's MPT-Trunked Professional Radio series can be heard in almost any environment because of Motorola's unique voice compression and expansion technology called X-PAND™. X-PAND enables crisper, clearer and stronger audio quality, allowing users to continue communicating even in noisy conditions. In addition, Low Level Expansion allows further improvements in audio quality by reducing noise usually heard during pauses in conversation.

Data Messaging and MAP27

The PTX700/760/780 can provide data messaging capabilities via MAP27 data interface and user can benefit from the remote control of radio capabilities from the data interface. With PTX760/780, the commonly-used statements can also be programmed into the 32 status messages for quick communication. It also enable the radio to store up to 10 data messages. Moreover, the PTX780 data messages of any length can be sent via the traffic channel between radios with appropriate modem equipment.

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

The series deploys wideband technology and allows programmable channel spacing of 12.5/20/25 kHz; offering flexibility in deployment and stocking.

Option Board

Through option boards such as Voice Storage and Mandown, the series' capabilities can be expanded.

Lithium ION Battery Option

Accompanied with the latest technology in battery chemistry, Motorola's MPT-Trunked series offers a Lithium Ion battery option which provides high power at a lighter weight.

| Feature | PTX700 | PTX760 | PTX780 |
|--|--------|--------|--------|
| Multiple Personalities | 2 | 4 | 60 |
| Dynamic re-group | Yes | Yes | Yes |
| Contact list | 16 | 40 | 40 |
| Speed-dial | – | Yes | Yes |
| Programmable Dedicated Call Button | 3 | 3 | 6 |
| Individual call | Yes | Yes | Yes |
| Group call | Yes | Yes | Yes |
| Fleet call | Yes | Yes | Yes |
| Interfleet call | Yes | Yes | Yes |
| Broadcast call | Yes | Yes | Yes |
| Emergency button & calls | Yes | Yes | Yes |
| PABX/PSTN calls | Yes | Yes | Yes |
| Non-prescribed data | No | No | Yes |
| MAP27 interface | Yes | Yes | Yes |
| Menus | – | Yes | Yes |
| Alpha-numeric decode of incoming calls | – | Yes | Yes |
| Missed calls stack | 1 | 5 | 10 |
| Voice storage | Option | Option | Yes |
| Mandown Board | Option | Option | Option |
| Call barring | – | Yes | Yes |
| Alpha-numeric short data status | – | Yes | Yes |



Instant Communication with People on the Move

PTX700 – The Popular Radio

The PTX700 is the affordable communication solution for professionals who require a rugged and reliable radio to stay in contact. This popular radio increases productivity, keeping users communicating, whilst allowing them to concentrate on their jobs.

Multiple Personalities

Able to configure up to 2 personalities - Trunked (inclusive of Talkgroup Select mode) and/or Conventional to suit different communication needs.

Dynamic Regrouping

Enables the field radio to be reassigned to flexible groupings over the air, without the necessity to return the radio to the workshop for reprogramming.

Missed Call Alerts

Ability to store incoming caller identities; prompting the user to return the calls received, therefore eliminating the risk of losing important calls.

Emergency Call

Addressing the need for urgent communications in emergency crises, the PTX700 provides an immediate call set-up capability, even when the system is busy or during overloaded periods.

Low Battery Warning

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

2 Dedicated Buttons

Easy-to-use, the PTX700 can be programmed for common calls to be accessed at the convenience of a single touch.

PTX760 – The Versatile Radio

The PTX760 is essential for growing organisations because it offers an expandable list of features which can be easily programmed in the field. Easily adaptable no matter which industry it is used in, this versatile radio is the communication tool that grows with your organisation.

Building upon the wide-ranging features of the PTX700, the PTX760 has the following additional offerings:

4 Personalities

Able to configure up to 4 multiple personalities - Trunked (inclusive of Talkgroup Select mode) and/or Conventional; offering users the flexibility in meeting their diverse communication needs.

User Indication

The 14 character alpha-numeric display contains useful icons and information; such as a radio signal strength indicator which informs users of the signal strength in the vicinity and a battery gauge icon which alerts users on battery strength – key information that assists users in ensuring optimum communication efficiency. The PTX760 also provides distinctive ringing tones and alpha-tagging of incoming calls, enabling audio and visual caller-identification.

Fast Access Dialling and Intuitive Menus

One-touch dialling (dedicated and speed-dial buttons), easy to use menus and an alpha-numeric phonebook/contact list make the full power of the radio simple and intuitive to use.



PTX700

PTX760

PTX780

PTX780 – The Sophisticated Radio

In many organisations, there is a need for professionals to communicate using the highest level of MPT radio sophistication. The PTX780 helps improve your efficiency and productivity, with a high level of communication control. It is the epitome of two-way professionalism in the palm of your hand.

The PTX780, takes communication sophistication to the next level, by offering advanced features beyond the PTX700 and PTX760. Ideally suited for users with complex communication needs.

60 Personalities

Able to configure up to 60 multiple personalities - Trunked (inclusive of Talkgroup Select mode) and/or Conventional; for users that need to adapt quickly to their ever-changing communication requirements.

User Indication

This large 4-line alpha-numeric display enables users to read messages quickly without the need for time-consuming scrolling. The display also features a battery gauge icon which alerts users on battery strength and a radio signal strength indicator which informs users of the signal strength in the vicinity. In addition, it provides distinctive ringing tones and alpha-tagging of incoming calls, enabling audio and visual caller-identification.

Built-in voice storage

Instead of relying on pen and paper for lengthy instructions, users can benefit from a feature in the PTX780 which provides the storage and retrieval of voice messages. With built-in voice storage, the radio also offers a voice prompt for callers to leave voice messages which are stored in the radio.

Enhance Your Radio's Capabilities

A comprehensive range of accessories is available so that Motorola's MPT-Trunked Professional Radio Series can be customised to suit your unique applications. Adding the proper headsets, microphones, batteries, chargers or carry cases 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.



Light Weight Head Set
AZRMN4018



NiMH Battery & Belt Clip
PMINN4008



Carry Case
HLN9701



Multi-unit Charger



impres™ Smart
Energy System



Remote Speaker Microphone
PMINN4002

The Advantages of Trunking

With the onset of trunking systems, a new dimension has been added to the capabilities of business communications; enabling both organisations and companies to achieve higher levels of efficiency and productivity at lower costs.

When you invest in trunked radio communications, a radio channel will be automatically assigned to you for two-way conversations. With today's limited availability for frequency use, trunked networks allow users to share resources effectively without incurring additional costs.

Additional Benefits for Trunked Networks are:

- Wider coverage than private mobile radio networks
- Ability to send and receive voice and information
- Highly efficient and cost effective

Key Trunking Markets

- Public safety organisations such as the military, police and emergency services
- Public utilities
- Transportation agencies handling rail, port and airports
- Businesses such as those in construction, courier, security, convention and service industries.

PTX700, PTX760 & PTX780 Specifications

| GENERAL -VHF, UHF | PTX700 | PTX760 | PTX780 |
|--|---|-------------------------|-------------------------|
| *Frequency (MHz): | 136 - 174 / 330 - 400 / 403 - 470 / 450 - 527 | | |
| Channel Capacity: | 16 Channels per Conventional Mode | | |
| 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 | 137mm x 57.5mm x 37.5mm | 152mm x 57.5mm x 37.5mm |
| With Ultra High Capacity NiMH Battery: | 137mm x 57.5mm x 40.0mm | 137mm x 57.5mm x 40.0mm | 152mm x 57.5mm x 40.0mm |
| With NiCD Battery: | 137mm x 57.5mm x 40.0mm | 137mm x 57.5mm x 40.0mm | 152mm x 57.5mm x 40.0mm |
| With Lilon Battery: | 137mm x 57.5mm x 33.0mm | 137mm x 57.5mm x 33.0mm | 152mm x 57.5mm x 33.0mm |
| WEIGHT: | | | |
| With Standard High Capacity NiMH Battery: | 420gm | 428gm | 460gm |
| With Ultra High Capacity NiMH Battery: | 500gm | 508gm | 535gm |
| With NiCD Battery: | 450gm | 458gm | 485gm |
| With Lilon Battery: | 350gm | 358gm | 390gm |
| 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/EIA 603 | | |

TRANSMITTER SPECIFICATION

| | VHF | UHF I / UHF II | 330-400 MHz |
|---|----------|---|-------------|
| *Frequency (MHz) | 136 -174 | 403 - 470 450 - 527 | 330 - 400 |
| Channel spacing | | 12.5/20/25kHz | |
| Freq Stability:(-25°C to 55°C,+25°CRef.) | | +/- 2.5ppm | |
| Power | 5W | 4W | 4W |
| Modulation limiting | | ±2.5 @12.5kHz / ±4.0 @20kHz/ ±5.0 @ 25kHz | |
| Hum & Noise | | -40 dB | |
| Conducted/Radiated Emission | | -36dBm <1GHz -30dBm >1GHz | |
| Adjacent Channel Power | | -60dB @ 12.5kHz -70dB @ 20/25kHz | |
| Audio Response (from 6dB/octave pre-emphasis 300-3000Hz) | | +1 to -3dB | |
| Audio Distortion | | 3% | |

RECEIVER SPECIFICATION

| | VHF | UHF I / UHF II | 330-400 MHz |
|---|---------------|------------------------------------|-------------|
| *Frequency (MHz) | 136 -174 | 403 - 470 450 - 527 | 330 - 400 |
| Channel spacing | 12.5/20/25kHz | | |
| Freq Stability:(-25°C to 55°C,+25°C Ref.) | | +/- 2.5 ppm | |
| Sensitivity (12dB SINAD)EIA | | .25µV | |
| Sensitivity (20dB SINAD)ETS | | .50µV | |
| Intermodulation(EIA) | | 70dB | |
| Adjacent Channel Selectivity | | 60 dB @ 12.5kHz/70dB @ 20/25kHz | |
| Spurious Rejection | | 70dB | |
| Rated Audio | | .5 W | |
| Hum and Noise | | -40 dB @ 12.5kHz, -50dB @ 20/25kHz | |
| Audio Response(300-3000Hz) | | +1 to -3dB | |
| Conducted Spurious Emission | | -57dBm < 1 GHz | |
| ETS 300 086 | | -47dBm > 1 Ghz | |
| Audio Distortion @ Rated Audio | | 3% | |

Data for +25°C unless otherwise specified

* Availability subject to country law and regulations.

Radios meet applicable regulatory requirements.

All specifications shown are subject to change without notice. Specifications are not representative of all radios and may vary in different radios.

Factory Mutual Approval

PTX700/760/780 portable 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.

Motorola: Reliability & Quality



ACCELERATED LIFE TESTING

Stringent Motorola Accelerated Life Testing simulating five years of hard use in real life, EIA RS-3168 in Shock, Vibration, Dust, Humidity, IP54 for Sealing.



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 - on international quality system assurance on design, development, production, installation and servicing of a product.



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