



# ***2-In-1 Radio. For One-Of-A-Kind Interoperability***

Motorola APX™ 7000 Multi-Band Portable Radios



# Motorola's most advanced portable radio delivers exceptional performance

APX P25 Multi-Band radios transform input from users into real world advantages for mission critical communications.

Motorola's APX 7000 P25 Multi-Band portable radios deliver exceptional performance by combining advanced voice and data technology driven by the challenges of mission critical users. APX portable radios provide interoperability on demand, as well as enhanced voice and data capabilities, in a revolutionary form factor optimized for use in high stress situations.

Designed with input from federal agencies, this rugged device is easy to use allowing personnel to focus on their mission, not the technology. In addition, the APX 7000 equips users with the loudest, clearest audio of any Motorola portable on the market – 50% louder than the Motorola XTS® 5000\*. APX 7000 radios meet current P25 standards and are future-ready to support new technology and data applications.

The APX 7000 exemplifies Motorola's commitment to meet the voice and data demands of today's federal personnel in mission critical environments – to enable anywhere, anyplace, anytime connectivity.

Motorola is the leader in providing mission critical solutions that enable agencies to achieve interoperability goals, whether customers are upgrading an existing system or designing a new system from the ground up.

*\* Based on results of controlled engineering tests.*

## Top Mission Critical Communication Challenges – and How APX Answers the Call

### Interoperability On Demand

In mission critical situations responders from different agencies often operate on different frequency bands – requiring personnel to carry two radios in order to communicate with one another.

*The APX solution:* The APX 7000 multi-band radio can operate in any of 2 bands (VHF/UHF R1, or 700/800 MHz frequencies)\*\* – to enable instant, interoperable communications for improved coordination, response, and personnel safety.

### Mission Critical Form Factor

Users want an ergonomic and rugged device that delivers superior audio performance with real-time information in a smaller package.

*The APX solution:* The APX 7000 offers voice and data capabilities with a large color display, top display, keypad, and loud and clear audio in a compact rugged design. Its unique T-Grip form factor provides secure and easy handling.

*\*\* UHF and other additional bands available in the future.*





## APX is Fully Compatible with the Motorola ASTRO® 25 Network

APX 7000 radios are designed to work with Motorola's ASTRO 25, Project 25 standards-based communications network. With integrated voice and data capabilities, the ASTRO 25 network offers improved communications between multiple agencies, from everyday operations to disaster response.

### Advanced Technology Provides an Answer

FDMA (Frequency Division Multiple Access) is a proven technology that is widely used today in radio systems and is part of Project 25 Phase 1. FDMA carries one call per channel. TDMA (Time Division Multiple Access) will be part of P25 Phase 2 requirements and provide double the voice capacity. Customers can add more users to their system without the need for additional frequencies or infrastructure.

The APX radios support both P25 Phase 1 and Phase 2 technologies seamlessly. Using Motorola's unique Dynamic Dual Mode (DDM) capability, the radios dynamically switch between FDMA and TDMA without the user having to change channels. This provides interoperability on demand with existing and future networks.

### Future Ready Investment

Agencies want to protect current investments in mission critical radios and ensure that new radio purchases can be updated to utilize the latest advances in technology.

*The APX solution:* The APX 7000 is backwards and forwards compatible – it works on all Motorola ASTRO 25 systems and will also work as customers migrate to advanced technology. The radios have an expansion slot that makes adding future data applications, such as Bluetooth®, possible without additional hardware updates.

***“Providing cross-discipline interoperability and increased functionality, APX is a cutting-edge tool for communications.”***

– Eugene Vardaman, Executive Director,  
North Carolina Criminal Justice Information Network

# Innovation at Every Turn

Mission Critical two-sided design.  
Highly functional and easy to operate.

## Choice of two APX 7000 models

- + Top Display model offers an 8-character visible top display.
- + Dual Display model features a large color display, top display and keypad.

## ERGONOMIC FORM FACTOR

- 1 Universal Push-to-Talk**  
Enlarged Push-to-Talk button with enhanced grooves is easy to access and simple to operate. Provides optimal tactility for right or left hand use.
- 2 T-Grip**  
The T-Grip design provides an enhanced slip-free grip and a wider control top area for increased knob spacing and differentiation in a seamless eyes-off, hands-on operation.
- 3 Dual-Battery Latch**  
The dual-battery latch system is designed for increased stability and is easy to secure with its Commercial 'Power Tool' style loading.
- 4 Accessory Connector**  
New portable accessory connector utilizes the IMPRES™ audio technology. It is extremely durable and offers increased intelligence for enhanced accessories.

## USER INTERFACE

- 5 Two-Sided Design**  
Enhanced ergonomic design features a large color display, loud audio speaker and an enlarged keypad. Ideal for both voice and data communications.
- 6 Top Display**  
An 8-character visible display, presenting 32-character zone/channel data, provides information at a quick glance.
- 7 Large Color Display**  
High contrast color display with impact and scratch resistance is enhanced for legibility in all lighting conditions and durable in mission critical environments.
- 8 Enlarged Keypad**  
Keypad with increased spacing enables easy navigation, improved numeric input and better visibility.

## SUPERIOR AUDIO

- 9 Dual Speakers**  
Dual sided speakers for optimized communication in both voice and data environments. The custom loud speakers reproduce speech dynamics for superior intelligibility in most environments\*.
- 10 Dual Microphones**  
Dual-microphones with directional-sensing technology locates the talker and engages sophisticated algorithms in noisy or windy environments for clear communications.

\* Recent studies have shown communication systems can be affected by certain high noise sources such as alarm systems in self-contained breathing apparatus or chainsaws in fireground environments.





## ADVANCED HARDWARE FEATURES

### Multi-Band Operation

Multiple frequency bands supported while maintaining APCO and TIA transceiver specifications.

### Seamless Scan

Seamless scanning of multiple protocols including FDMA and TDMA systems and multiple RF bands.

### Integrated GPS

Integrated GPS receiver can transmit the outdoor location of an individual or vehicle to map based location software.

### Encryption

Standard equipped with FIPS certified encryption. Provides secure communications with greater security in a tamper-proof solution.

## ADVANCED SOFTWARE FEATURES

### Intelligent Lighting

Intelligent lighting uses color to notify the user of the radio mode, potential emergencies, or specific events. Color alerts provide information at a glance.

### Radio Profiles

Radios can be configured to adjust audio level, lighting and tones through user selected or automated options. Whether on surveillance or working in bright sunlight, the user can customize settings as needed.

### Text Messaging

Text messaging offers a free-form or canned messaging solution to efficiently and discreetly send and receive messages to and from subscribers or dispatch operators.

### Unified Call List

Consolidates all call lists underneath one unified list. Users can easily access all information associated to a particular contact.

## FUTURE READY

### Expansion Slot

Expansion slot for future option cards, such as Bluetooth® and other future data applications. Easily update radios to achieve the latest functionality.

### Memory

Equipped with 64 MB of industrial grade internal memory and a removable memory MicroSD card slot. The removable memory card allows future expandability for growing technology needs.

### Programming Over Project 25

Motorola's POP25 solution allows subscriber radios to be programmed over the air via the ASTRO 25 systems while remaining in the field.





# Emergency Response Situations Demand Radios Designed with the User and Their Mission in Mind.

## Why APX 7000?

Motorola's APX portable radios deliver exceptional performance by combining advanced voice and data technology with legendary Motorola quality.

### **INTEROPERABILITY ON DEMAND**

APX 7000 operates in multiple bands and meets P25 public safety specifications for seamless multi-agency collaboration.

#### **2-In-1 Radio**

APX 7000 operates in VHF and 700/800 MHz and acts as two radios in one thus reducing the amount of equipment responders must carry and maintain.

### **RUGGED AND DURABLE DESIGN**

The new two-sided ergonomic design was developed based on extensive user input. It is rugged and easy to use in extreme environments.

#### **Superior Audio Quality**

The APX 7000 is the loudest Motorola portable available on the market. Dual speakers enable extremely loud, bidirectional audio when needed. It is equipped with Motorola's Noise Reduction Software (NRS) and dual microphones that virtually eliminate ambient background noise from radio transmissions, and improves user safety by making sure transmissions are not only heard, but are clearly intelligible.

#### **Optimized Mechanical Design**

Operating in the field, extreme heat, cold, or sweat can make holding a radio difficult. Built with a rugged endoskeleton chassis, the APX employs an immersion-sealed metal housing encased in high-grade polymer. This fusion of materials delivers superior electrical shielding and mechanical rigidity, while providing shock absorption and abrasion resistance to the bumps and scrapes that APX radios may encounter in everyday use.

### **FUTURE READY INVESTMENT**

APX is backwards and forwards compatible with

multiple analog and digital communication protocols and offers future expandability for developing technologies.

#### **Standards**

APX 7000 supports P25 Phase 1 and is upgradable to support P25 Phase 2 to offer better spectrum utilization and double voice capacity using existing frequencies.

#### **Data Capability**

The APX 7000 is Integrated Voice & Data ready. With the ability to send and receive data through your trunking or conventional system infrastructure, APX is ideal for text messaging, and can be used as an RF modem. Programming over Project 25 (POP25) allows the radio configuration to be accessed and updated over the air. APX also comes equipped with an integrated GPS Receiver for outdoor location tracking.

#### **Advanced Encryption**

APX 7000 offers advanced FIPS certified Type 3 and 4 encryption options. It includes the simplicity of both Infrastructure and Tactical Over the Air Rekeying (OTAR).

#### **Customer Programming Software**

The APX radios utilize new and enhanced CPS software that is user friendly and provides increased speed and efficiency. The Built-in Codeplug Comparator allows easy diagnostics of codeplug differences. The Customizable Views feature allows users to see only the codeplug fields they are interested in.

### **SERVICES**

Motorola stands beside customers at every stage in the system life cycle, including repair and maintenance from over 500 service facilities worldwide in 28 countries, including depot facilities dedicated solely for federal agencies.

## Add-On. Optimize. Enhance.

### Extensive line of Motorola Original® accessories for APX portable radios

To complement the APX 7000 portables, Motorola Original accessories are specifically designed for mission critical communications.

Plus, Motorola offers the new IMPRES™ Smart Audio System which enables enhanced communication between the radio and the accessory optimizing audio performance and assuring the highest quality communication.

#### AUDIO ACCESSORIES

##### IMPRES Remote Speaker Microphone

Utilizes state-of-the-art IMPRES technology, in which the microphone sends accessory identification information to the radio enabling the radio to optimize its audio level for this specific microphone. Includes a 3.5mm audio jack and emergency button for discreteness and communication flexibility.

##### IMPRES 3-Wire Surveillance Kits

Flexible and most discreet communication option for surveillance activity. Includes one wire for receiving, one wire for the microphone, and one wire for push-to-talk functionality. Offers Motorola's state-of-the-art IMPRES technology which provides enhanced audio gain capability – a critical feature when whispering is required to remain discreet capability when officers need to whisper to remain discreet.

#### BATTERIES

##### IMPRES Batteries

IMPRES energy technology maximizes talk time and optimizes battery life. All IMPRES batteries are designed and manufactured to Motorola Proven Tough standards. Four batteries are available to meet your specific needs.

#### CARRY DEVICES

##### Leather Carry Cases

Constructed of top-grain leather designed to withstand the harsh conditions of mission critical use. Two models: fixed-belt loop or a quick release swivel latch for a secure fit in high activity environments.

##### Universal Carry Holder

Sturdy hard-plastic case with a belt clip designed to support the APX 7000 Dual Display portable. The large display remains protected by facing in on the belt. One size fits all available batteries.

#### CHARGERS

##### IMPRES Dual Unit Charger

The unique, dual-pocket design allows simultaneous charging of primary and secondary batteries. Providing the convenience of a spare battery that is charged and ready to be used at all times. Utilizing IMPRES technology, the dual unit charger provides advanced features, including the ability to turn on/off reconditioning, reduced reconditioning time and improved energy efficiency.

IMPRES Remote Speaker Microphone



IMPRES 3-Wire Surveillance Kits



IMPRES Batteries



Leather Carry Cases



Universal Carry Holder



## Over 65 Years of Understanding the Needs of Federal Agencies

Motorola seamlessly and securely connects people, assets and information to help the federal government achieve true enterprise mobility.

Our comprehensive portfolio expands the mobile edge by providing the devices, networks, applications and services; ensuring always available, always secure information to make critical decisions when and where they are needed.

For over 65 years, Motorola has provided the federal government with the most reliable and innovative wireless solutions that help save lives and protect the security of the country.

To learn more about Motorola's full range of products and services, please visit our website: [www.motorola.com/federal](http://www.motorola.com/federal)

### **APX P25 Multi-Band Radios**

Additional information and resources such as product information, brochures, and white papers are available on the APX product website found at [motorola.com/apx](http://motorola.com/apx).

 ***[motorola.com/apx](http://motorola.com/apx)***



**MOTOROLA**

Motorola, Inc.  
1301 East Algonquin Road  
Schaumburg, IL 60196 U.S.A.  
800-367-2346  
[www.motorola.com/apx](http://www.motorola.com/apx)

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