



**MOTOROLA**



# MOTOTRBO™

XPR™ 6580 / 6380 SMARTNET® / Privacy Plus™ Trunked Portable Radios  
XPR™ 4580 / 4380 SMARTNET® / Privacy Plus™ Trunked Mobile Radios





# ACCELERATE PERFORMANCE

## MOTOTRBO™ SMARTNET® / PRIVACY PLUS™ ANALOG TRUNKED RADIOS

Motorola is a company of firsts with a rich heritage of innovation. We continue to invent what's next. We connect people, we deliver mobility, and we continually work to ensure that technology functions easily at a personal level. Versatile and powerful, MOTOTRBO is the next generation of professional two-way radio communications. It delivers enhanced performance, greater productivity and more value.

You can take advantage of many of the benefits of MOTOTRBO radios now while they help you to prepare for your migration from analog to digital trunking. MOTOTRBO's scalable digital trunking solutions meet the unique communication needs of your business — ranging from Capacity Plus single-site digital trunking to multi-site, wide area digital trunking in the near future. And when you are ready to migrate to digital technology, these radios will be ready to make the move with only a software upgrade.



## MOTOTRBO™ SMARTNET® / PRIVACY PLUS™ TRUNKED RADIO CAPABILITIES

With MOTOTRBO radios, you can continue to use your analog trunking system today while also taking advantage of many benefits that MOTOTRBO two-way radios bring to your business. Key analog trunking features include:

- Dual Band**—MOTOTRBO analog trunked radios provide operation in both 800 and 900 MHz operation – all in a single radio.
- Increased Capacity**—The MOTOTRBO XPR™ 6580 display portable radio supports up to 20 trunked systems and a maximum of 240 channels or trunked personalities radio wide (16 maximum per zone). The MOTOTRBO XPR 4580 display mobile supports up to 20 trunked systems and a maximum of 240 channels or trunked personalities radio wide (240 maximum per zone).
- Flexible System Operation**—MOTOTRBO analog trunked radios provide functionality in Analog Conventional and Type II 800/900 MHz Privacy Plus™ Enhanced, SMARTNET®, StartSite™, SmartWorks™ and SmartZone™ trunked systems.\*
- Reliable and Flexible Call Features**—MOTOTRBO analog trunked radios provide you with remarkable ease of use and exceptional functionality at the touch of a button.

### SMARTNET FEATURES\*

Call Alert	Push-To-Talk ID
Private Call	Priority Monitor Scan
Telephone Interconnect	Message/Transmission Trunking
Emergency Call/Alarm	Dynamic Regrouping
Busy Queue and Call Back	Selective Radio Inhibit
Recent User Priority	

### SmartZone FEATURES

All SMARTNET features, plus  
 Wide Area Seamless Roaming  
 RSSI Operation  
 Preferred Site  
 Forced Site Search

\* Some features need to be supported and enabled in the trunked system.



## MOTOTRBO BENEFITS FOR ENHANCED PRODUCTIVITY

MOTOTRBO is the next generation professional two-way radio communications solution with more performance, productivity and value for your business. Whether you use MOTOTRBO radios on your existing analog trunking system or migrate to digital trunking, MOTOTRBO radios offer several key features for enhanced communication, including:

- **Demanding Specifications**—MOTOTRBO radios feature an IP57 rating for submersibility in water (portable radios), U.S. Military 810 C, D, E and F specifications and Motorola standards for durability and reliability.
- **IMPRES™ Energy and Audio Technology**—Batteries, chargers and audio accessories feature Motorola's state-of-the-art IMPRES technology, providing longer talk time and clearer audio delivery.
- **High Battery Capacity**—Standard with MOTOTRBO analog trunked portable radios, the IMPRES Li-Ion 2150 mAh battery provides up to 12 hours of battery life for long work shifts.
- **Intrinsically Safe**—When purchased with the FM approved IMPRES Li-Ion 1400 mAh battery, MOTOTRBO radios can be used in locations where flammable gas, vapors or combustible dust may be present.
- **Digital Trunking Ready**—When you are ready, MOTOTRBO analog trunked radios are ready to migrate to digital trunking with a software upgrade\* - no additional hardware required.
- **Integrated Voice and Data Ready**—MOTOTRBO radios feature an integrated GPS module. So when you are ready to migrate to digital, you can increase operational efficiency with data applications such as GPS location tracking, text messaging, and much more - all in one device.



\* MOTOTRBO digital trunking and SMARTNET/SmartZone operation is not supported simultaneously.





## PREPARING FOR THE FUTURE OF DIGITAL TRUNKING

### THE DIGITAL DIFFERENCE

Two-way radio has been a successful analog communication solution for generations, and it proves itself every day in countless deployments around the world. But digital technology breaks through to a new level of performance and productivity for your business.

### PREPARE FOR THE ADVANTAGES OF DIGITAL TRUNKING

Digital two-way radios offer several advantages over analog solutions. To name a few:

- Clearer audio to help assure messages are understood without background noise and static
- Integrated data applications such as text messaging, GPS-based location tracking, work order ticket management and much more
- Longer battery life for extended work shifts
- Increased capacity – twice the number of users for the price of one frequency license

### TDMA – THE BEST CHOICE

There are two primary digital radio technologies: Time-Division Multiple-Access (TDMA) and Frequency-Division Multiple-Access (FDMA). While both digital technologies provide significant benefits over analog, TDMA is the best choice.

#### TDMA technology delivers advantages over FDMA

- *Double your capacity per channel with less than half the infrastructure*  
TDMA divides your existing channels into two time slots enabling you to double the number of users on your system or utilize data applications without the expense of additional infrastructure. A second call does not require a second repeater, resulting in lower costs for you, as you do not need to purchase, install and maintain additional infrastructure equipment.
- *Double your capacity per channel without the hassle*  
Specifically, TDMA divides your existing channels into two time slots so your existing licensed channel capacity is doubled. There is no increased risk of interference, and there is no need for new licenses—simply amend your existing licenses to specify digital. Compatibility with all legacy radios working in 12.5 kHz analog channels is also maintained by TDMA.
- *Longer battery life*  
TDMA uses only half of the transmitter's capacity resulting in longer battery life. During long work shifts or where productivity enhancing data applications place an increased power demand on the radio, this extended battery life is invaluable.
- *Advanced features*  
TDMA enables smart control features like "transmit interrupt" that makes it possible to interrupt lower priority communication so critical instructions can be delivered exactly when they're needed. And to help you maximize your infrastructure investment, TDMA can transmit voice and data on the same channel.

# MOTOTRBO™ PORTABLE RADIO FEATURES

## XPR™ 6580 SMARTNET® / Privacy Plus™ ANALOG TRUNKED DISPLAY PORTABLE RADIO

- 1 Flexible, menu-driven interface with user-friendly icons or two lines of text for ease of reading text messages\* and navigating through the menus.
- 2 Tri-color LED indicator for clear, visible feedback of calling, scanning, roaming and monitoring features.
- 3 Emergency button alerts supervisor or dispatcher in an emergency situation.
- 4 Accessory connector meets IP57 submersibility specifications and incorporates RF, USB and IMPRES™ audio capability.
- 5 Integrated GPS module enables the use of location-tracking data applications.\*
- 6 Large, easy-to-use navigation buttons allow easy access to intuitive menu-driven interfaces.
- 7 Radio housing meets IP57 specifications; submersible in 1 meter of fresh water up to 30 minutes. Offers intrinsically safe options for use in locations where flammable gas, vapors or combustible dust may be present.
- 8 Powerful, front projecting speaker.
- 9 Three side and two front programmable buttons for easy access to favorite features.
- 10 Large, textured push-to-talk button provides good tactile response and easy access, even when wearing gloves.

## ADDITIONAL FEATURES

- 20 trunked systems
- 240 conventional channels or trunked personalities
- 130 zones
- 16 trunked talkgroups per zone
- Companding and HearClear audio enhancement options for 12.5 KHz channels
- Available for Type II 800/900 MHz Privacy Plus™ Enhanced SMARTNET®, StartSite™, SmartWorks™ and SmartZone™ trunked systems
- Upgradeable to MOTOTRBO digital trunking via a software upgrade - with no additional hardware required

\*Digital feature



## STANDARD PACKAGE

- Display Portable Radio
- 800 / 900 MHz GPS Antenna
- IMPRES Li-Ion 2150 mAh Battery
- IMPRES Single Unit Charger
- 2.5" Belt Clip
- Dust Cover for Accessory Connector
- Built-In Expansion Card\*
- Two-year Standard Warranty plus one-year Repair Service Advantage (US only)/ Extended Warranty (Canada only)

## XPR 6380 SMARTNET® / Privacy Plus™ ANALOG TRUNKED NON-DISPLAY PORTABLE RADIO

- 1 Tri-color LED indicator for clear, visible feedback of calling, scanning, roaming and monitoring features.
- 2 Emergency button to alert supervisor or dispatcher in an emergency situation.
- 3 Accessory connector meets IP57 submersibility specifications and incorporates RF, USB and IMPRES audio capability.
- 4 Integrated GPS module enables the use of location-tracking data applications.\*
- 5 Radio housing meets IP57 specifications; submersible in 1 meter of fresh water up to 30 minutes. Offers intrinsically safe options for use in locations where flammable gas, vapors or combustible dust may be present.
- 6 Powerful, front projecting speaker.
- 7 Three side programmable buttons for easy access to favorite features.
- 8 Large, textured push-to-talk button provides good tactile response and easy access, even when wearing gloves.

### ADDITIONAL FEATURES

- 20 trunked systems
- 32 conventional channels or trunked personalities
- 2 zones
- 16 trunked talkgroups per zone
- Companding and HearClear audio enhancement options for 12.5 kHz channels
- Available for Type II 800/900 MHz Privacy Plus Enhanced, SMARTNET, StartSite, SmartWorks and SmartZone trunked systems
- Upgradeable to MOTOTRBO digital trunking via a software upgrade with no additional hardware required

### STANDARD PACKAGE

- Non-Display Portable Radio
- 800 / 900 MHz GPS Antenna
- IMPRES Li-Ion 2150 mAh battery
- IMPRES Single Unit Charger
- 2.5" Belt Clip
- Dust Cover for Accessory Connector
- Built-In Expansion Card\*
- Two-year Standard Warranty plus one-year Repair Service Advantage (US only)/ Extended Warranty (Canada only)

\*Digital feature

# MOTOTRBO™ MOBILE RADIO FEATURES



## XPR™ 4580 SMARTNET® / Privacy Plus™ ANALOG TRUNKED DISPLAY MOBILE RADIO

- 1 Accessory connector supports USB and IMPRES™ audio capability.
- 2 Multi-colored LED indicators for clear, visible feedback of calling, scanning, roaming and monitoring features.
- 3 Large, easy-to-use volume knob.
- 4 Integrated GPS module enables the use of location-tracking data applications.\*
- 5 Powerful, front-projecting speaker.
- 6 Large, easy-to-use navigation buttons allow easy access to intuitive, menu-driven interfaces.
- 7 Flexible, menu-driven interface with user-friendly icons or two lines of text for ease of reading text messages and navigating through the menus.
- 8 Four programmable/replaceable buttons for easy access to favorite features.
- 9 Compact and ergonomically friendly microphone.

### STANDARD PACKAGE

- Mobile Radio with Display Control Head
- Compact Microphone
- Mounting Trunion
- 10-Foot Power Cable
- Replacement Button Kit: monitor, scan, backlight, emergency, talkaround, text message, contacts
- Built-In Expansion Card\*
- Two-year Standard Warranty plus one-year Repair Service Advantage (US only)/Extended Warranty (Canada only)

### ADDITIONAL FEATURES

- 20 trunked systems
- 240 conventional channels or trunked personalities
- 130 zones
- 240 trunked talkgroups per zone
- Companding and HearClear audio enhancement for 12.5 kHz channels
- Available for Type II 800/900 MHz Privacy Plus™ Enhanced, SMARTNET®, StartSite™, SmartWorks™ and SmartZone™ trunked systems
- Upgradeable to MOTOTRBO digital trunking via a software upgrade with no additional hardware required

\*Digital feature





## XPR 4380 SMARTNET® / Privacy Plus™ ANALOG TRUNKED NUMERIC DISPLAY MOBILE RADIO

- 1 Accessory connector supports USB and IMPRES audio capability.
- 2 Multi-colored LED indicators for clear, visible feedback of calling, scanning, roaming and monitoring features.
- 3 Large, easy-to-use volume knob.
- 4 Integrated GPS module enables the use of location-tracking data applications.\*
- 5 Large, easy-to-use channel navigation buttons.
- 6 Powerful, front-projecting speaker.
- 7 Two programmable/replaceable buttons for easy access to favorite features.
- 8 Compact and ergonomically friendly microphone.

### STANDARD PACKAGE

- Mobile Radio with Numeric Display Control Head
- Compact Microphone
- Mounting Trunion
- 10-Foot Power Cable
- Replacement Button Kit: monitor, scan, backlight, emergency, talkaround, text message, contacts
- Built-In Expansion Card\*
- Two-year Standard Warranty plus one-year Repair Service Advantage (US only)/Extended Warranty (Canada only)

### ADDITIONAL FEATURES

- 20 trunked systems
- 32 conventional channels or trunked personalities
- 2 zones
- 32 trunked talkgroups per zone
- Customized replacement button kit
- Companding and HearClear audio enhancement options for 12.5 kHz channels
- Available for Type II 900/900 MHz Privacy Plus Enhanced SMARTNET, StartSite, SmartWorks and SmartZone trunked systems
- Upgradeable to MOTOTRBO digital trunking via a software upgrade with no additional hardware required

\*Digital feature

# IMPRES™ SMART AUDIO SYSTEM— EXCLUSIVE AUDIOTECHNOLOGY THAT ENABLES HIGH QUALITY COMMUNICATIONS

Motorola digital technology enables breakthrough radio performance and features. Our state-of-the-art IMPRES audio technology allows communication between the radio and audio accessories, enabling enhanced performance and capabilities, both in analog and digital modes—now and into the future.



- **IMPRES Smart Audio System**—Provides businesses and agencies with a solution that optimizes key aspects of two-way audio quality—loudness, clarity and intelligibility.

**Optimal Audio Performance:** When an IMPRES accessory is attached, the accessory parameters are sent to the MOTOTRBO radio enabling the radio to optimize its output for each type of audio accessory. This results in more consistent output across all audio accessory types. For example, the IMPRES remote speaker microphone capitalizes on the MOTOTRBO radio's intelligent signal processing for outstanding noise suppression, speech clarity, and loudness – even in difficult weather conditions.

**Customization:** Accessory programmable buttons can be programmed to any feature available in the radio CPS, rather than being linked to radio programmable button programming. This allows accessories with programmable buttons to have independently programmed features. This flexibility allows the radio to be customized to fit your specific applications and needs.

**Enhanced Audio Gain Capability (AGC):** IMPRES audio accessories have significantly enhanced audio gain capability. When you are speaking either quietly or speaking in a normal

volume but not directly into the microphone, IMPRES audio technology can detect that condition and will automatically increase the microphone gain. AGC eliminates the need to adjust volume levels repeatedly.

- **Submersibility**—This connector design meets IP57 submersibility requirements. This allows for use with submersible accessories, such as the submersible remote speaker microphone, which provides reliable communications even in wet conditions.
- **Future Applications**—The portable connector design also incorporates built-in USB capability to allow for the use of USB-capable accessories. The audio accessory interface is now the Motorola standard audio accessory interface for mid- to high-tier two-way radios. Future accessory development is based on this interface so you will be able to take advantage of future releases of new audio accessories.



## IMPRES SMART ENERGY SYSTEM—A UNIQUE BATTERY CHARGING AND RECONDITIONING SOLUTION

Motorola's state-of-the-art IMPRES technology allows communication between the battery and the charger to automate battery maintenance. The result—prolonged life of your batteries and maximized talk time.



- **Automated battery maintenance**—Manual tracking and recording of battery use are a thing of the past. IMPRES uses a unique communications protocol to facilitate adaptive reconditioning—the charger evaluates the details of the battery's usage pattern to determine the optimal reconditioning interval. This automated process works to diminish memory effect and optimize the cycle life of the battery and maximize talk time.
- **Long-term safe charging**—IMPRES batteries may be left in IMPRES chargers for extended periods without heat damage from the charger. Charge levels are also monitored by the charger, so that radios are charged to the appropriate level and ready to go whenever needed.
- **Chargers that communicate**—IMPRES chargers are available with a two-line display module. You now have access to valuable information such as:
  - ~ Battery capacity (in mAh and percent of minimum rated capacity) and voltage while charging and at completion of charge
  - ~ Time remaining to complete rapid charging (NiCd and NiMH only)
  - ~ Current battery charge status
  - ~ The battery's unique serial number, part number and chemistry
  - ~ Knowledge is power. You can make informed decisions on battery replacement and asset management.
- **Extended warranty**—When used exclusively with IMPRES chargers, MOTOTRBO IMPRES batteries have an 18 month capacity warranty coverage—six months longer than Motorola Premium Li-Ion batteries.
- **Proven Tough**—IMPRES batteries are subjected to the same rigorous testing and held to the same high standards as all Motorola Premium batteries. Actual results of Drop, Vibration and ESD (Electrostatic Discharge) tests prove Motorola batteries outperform the competition.
- **Environmentally Friendly**—IMPRES chargers have technology that avoids overcharging and our single-unit IMPRES chargers with external power supplies consume 40 percent less energy in standby mode than required by the U.S. Energy Independence and Security Act of 2007.

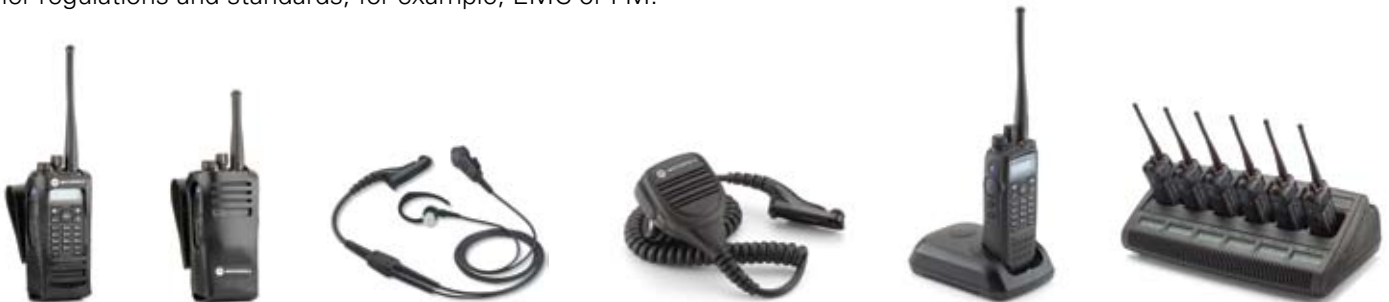
# MOTOTRBO™ ACCESSORIES



## PORTABLE RADIO

To complement the MOTOTRBO portables, Motorola Original® accessories are specifically designed for your critical communication needs. Whether it is harsh working conditions, noisy environments, long shifts or the focus is on discreet communication, a MOTOTRBO accessory is available to meet the challenge.

It is recommended that your MOTOTRBO radio always be paired with Motorola approved batteries or accessories. Use of non-Motorola approved batteries or accessories may result in RF energy exposure standards being exceeded. Use of non-Motorola approved batteries or accessories may cause your Motorola radios to become non-compliant to other regulations and standards, for example, EMC or FM.



### AUDIO SOLUTIONS

Remote Speaker Microphones are versatile and reliable accessories that allow users to remain in full contact without removing the radio from the belt or carry case. Motorola offers a range of these speaker microphones that provide features such as IMPRES™, Windporting, IP57 submersibility and noise-canceling acoustics.

Motorola also offers a wide range of earpieces, surveillance kits, headsets and temple transducers to ensure you have the right audio accessory for your specific business need.

### BATTERY AND CHARGING SOLUTIONS

IMPRES batteries are designed to maximize talk time and optimize battery life. Four batteries are available to meet your specific power needs. Complementing the battery portfolio are a range of IMPRES charging solutions from single-unit chargers, multi-unit chargers and vehicular chargers.

### CARRYING SOLUTIONS

The ability to perform the job while staying in contact requires good carrying solutions. MOTOTRBO offers a wide range of solutions including belt clips, nylon- and leather carry cases, shoulder straps and chest packs. All designed to increase comfort and enhance functionality such as ruggedness as well as water and dust resistance.





## MOBILE RADIO

A range of Motorola accessories are available to support the MOTOTRBO mobile radios. Accessories are an important piece of the mobile solution to meet even the most challenging installation and operational requirements. These MOTOTRBO mobile accessories can enable hands free communication in the vehicle, dispatch-enabled communication and convenient installation options.



### AUDIO SOLUTIONS

Various mobile microphones are available for different needs. The IMPRES keypad microphone allows the user to navigate the mobile menu, dial phone numbers and send text messages, the heavy duty microphone provides enhanced durability and easier handling while wearing gloves. The IMPRES visor microphone enables hands-free and discreet communications.

The desktop microphone, tray and external speaker allow users to convert MOTOTRBO mobiles into simple base stations offering an optimal solution for transportation and dispatch users.

Other accessories are available for MOTOTRBO with specific needs in mind. An emergency footswitch is available allowing users to discretely notify about an emergency situation. External speaker and push-button PTT are available when operating in noisy environments or if hands free operation is required.

### REMOTE MOUNTING SOLUTIONS

Remote Mount cables enable you to mount the mobile in a trunk, a critical accessory when space is limited in the vehicle or in covert operations.

### ANTENNA SOLUTIONS

A wide variety of antenna options are available to support your specific mobile configuration. Standalone radio frequency (RF) antennas, standalone GPS antennas or combination GPS/RF antennas are all available in the frequency band you require.



# MOTOTRBO™ SERVICE OFFERINGS

## SUBSCRIBER REPAIR

Managing the in-house repair and maintenance of your subscriber radios takes a dedicated staff of technicians, as well as an ongoing investment in diagnostic equipment, repair tools, and the technical training to keep up to speed on the latest technology. Motorola has made that investment and can help you easily and cost effectively keep your radios in top operating condition to ensure optimal efficiency and productivity.

Our subscriber repair service offerings allow you to budget for your repairs, preventing unexpected service and maintenance costs. Repair Service Advantage (RSA) and Repair Service Advantage Comprehensive (RSA Comprehensive) repairs receive priority service and meet committed cycle times.

## REPAIR SERVICE ADVANTAGE (RSA):

Repair Service Advantage is a post-warranty service offering that extends the service coverage of Motorola subscriber mobile or portable radios. RSA can be purchased as an option to new radio purchases and is available in 1, 2 or 3-year increments. (US only)

## REPAIR SERVICE ADVANTAGE COMPREHENSIVE:

Motorola mobile and portable subscriber radios are designed to take a lot of abuse. They are built to withstand the chaos and conditions inherent in harsh working conditions. But even the best radios are subject to occasional 'above and beyond' wear and tear. That's why Motorola Subscriber Repair Services has introduced RSA Comprehensive.

RSA Comprehensive offers all the protection of a standard RSA support plan with even more coverage that includes chemical, liquid and other physical damage to your Motorola portable and mobile subscriber radios. RSA Comprehensive is available as an option to the radio purchase for 3 years of coverage. (US only)

## EXTENDED WARRANTY:

In addition to the 2-year standard warranty, Extended Warranty is available for a total of 3 or 5 year coverage. (Canada only)

## MOTOTRBO™ SMARTNET® / PRIVACY PLUS™ TRUNKED RADIO SPECIFICATIONS

General Specifications				
	XPR™ 6580 Display Portable	XPR™ 6380 Non-Display Portable	XPR™ 4580 Display Mobile	XPR™ 4380 Numeric Display Mobile
Frequency Band	800 and 900 MHz	800 and 900 MHz	800 and 900 MHz	800 and 900 MHz
No. of Systems	20	20	20	20
Zone Capacity	130	2	130	2
Max. No. of Conv. Channels or Personality Capacity	240	32	240	32
Talkgroup Capacity per Zone	16	16	240	32
Dimensions (H x W x L) with Li-Ion non-FM battery	5.18 x 2.40 x 1.38 in 131.5 x 61 x 35 mm	5.18 x 2.40 x 1.38 in 131.5 x 61 x 35 mm	2.01 x 6.89 x 8.11 in 51 x 175 x 206 mm	2.01 x 6.89 x 8.11 in 51 x 175 x 206 mm
Weight with Li-Ion non-FM battery	12.7 oz (360 gr)	10.75 oz (305 gr)	4.0 lbs. (1.8 Kg)	4.0 lbs (1.8 Kg)
Power Supply	7.5 V Nominal	7.5 V Nominal	12 V dc Negative Ground	12 V dc Negative Ground
FCC Description	ABZ99FT5011	ABZ99FT5011	ABZ99FT5010	ABZ99FT5010
IC Description	109AB-99FT5011	109AB-99FT5011	109AB-99FT5010	109AB-99FT5010
Average battery life with IMPRES Li-Ion 2150 mAh battery (5/5/90 duty cycle)	12 hrs	12 hrs	N/A	N/A
Average battery life with IMPRES Li-Ion 1400 mAh battery (5/5/90 duty cycle)	8 hrs	8 hrs	N/A	N/A
Trunking System Support	Type II 800/900 MHz Privacy Plus™ Enhanced, SMARTNET®, StartSite™, SmartWorks™ and SmartZone™ analog trunked systems			

Specifications subject to change without notice. All specifications shown are typical. Radio meets applicable regulatory requirements. Version 1 11/09

# MOTOTRBO™ SMARTNET® / PRIVACY PLUS™ TRUNKED RADIO SPECIFICATIONS

## Receiver

	XPR 6580 Display Portable	XPR 6380 Non-Display Portable	XPR 4580 Display Mobile	XPR 4380 Numeric Display Mobile
Frequencies	800 MHz: 854-866 and 869-870 MHz 900 MHz: 935-941 MHz		800 MHz: 854-866 and 869-870 MHz 900 MHz: 935-941 MHz	
Channel Spacing	800 MHz: 12.5 and 25 kHz 900 MHz: 12.5 kHz		800 MHz: 12.5 and 25 kHz 900 MHz: 12.5 kHz	
Frequency Stability (-30° C, +60° C, +25° C)	±/ 0.5 ppm		±/ 0.5 ppm	
Analog Sensitivity (12 dB SINAD) Typical	0.25 UV		0.22 UV	
Intermodulation (TIA603C)	70 dB		78 dB	
Adjacent Channel Selectivity (TIA603) - 1T	60 dB @ 12.5 kHz 70 dB @ 25 kHz		65 dB @ 12.5 kHz 75 dB @ 25 kHz	
Adjacent Channel Selectivity (TIA603) - 2T	45 dB @ 12.5 kHz 70 dB @ 25 kHz		50 dB @ 12.5 kHz 75 dB @ 25 kHz	
Spurious Rejection (TIA603C)	70 dB		75 dB	
Rated Audio	.5 W		3 W (internal)	
Audio Distortion @ Rated Audio	3% (typical)		3% (typical)	
Hum and Noise	-40 dB @ 12.5 kHz -45 dB @ 25 kHz		-45 dB @ 12.5 kHz -45 dB @ 25 kHz	
Audio Response	TIA603C		TIA603C	
Conducted Spurious Emission (ETSI)	-57 dBm		-57 dBm	

## Transmitter

	XPR 6580 Display Portable	XPR 6380 Non-Display Portable	XPR 4580 Display Mobile	XPR 4380 Numeric Display Mobile
Frequencies <sup>1</sup>	800 MHz: 809-821 and 824-825 MHz 900 MHz: 896-902 MHz		800 MHz: 809-821 and 824-825 MHz 900 MHz: 896-902 MHz	
Talkaround	800 MHz: 854-866 and 869-870 MHz 900 MHz: 935-941 MHz		800 MHz: 854-866 and 869-870 MHz 900 MHz: 935-941 MHz	
Channel Spacing	800 MHz: 12.5 and 25 kHz 900 MHz: 12.5 kHz		800 MHz: 12.5 and 25 kHz 900 MHz: 12.5 kHz	
Frequency Stability (-30° C, +60° C)	±/ 0.5 ppm		±/ 0.5 ppm	
Low Power Output	1 W		10 W	
High Power Output	2.5 W		800 MHz: 35W 900 MHz: 30W	
Modulation Limiting	±/ 2.5 kHz @ 12.5 kHz ±/ 5.0 kHz @ 25 kHz		±/ 2.5 kHz @ 12.5 kHz ±/ 5.0 kHz @ 25 kHz	
FM Hum and Noise	-40 dB @ 12.5 kHz -45 dB @ 25 kHz		-40 dB @ 12.5 kHz -45 dB @ 25 kHz	
Conducted / Rated Emission (ETSI)	-36 dBm < 1 GHz -30 dBm > 1 GHz		-36 dBm < 1 GHz -30 dBm > 1 GHz	
Adjacent Channel Power	-60 dB @ 12.5 kHz -70 dB @ 25 kHz		-50 dB @ 12.5 kHz -60 dB @ 25 kHz	
Audio Response	TIA603C		TIA603C	
Audio Distortion (per EIA)	3%		3%	
FM Modulation	12.5 kHz: 11K0F3E 25 kHz: 16K0F3E		12.5 kHz: 11K0F3E 25 kHz: 16K0F3E	

## Environmental Specifications

	XPR 6580 Display Portable	XPR 6380 Non-Display Portable	XPR 4580 Display Mobile	XPR 4380 Numeric Display Mobile
Operating Temperature (Radio Only)	-30deg. C to + 60 deg. C		-30deg. C to + 60 deg. C	
Operating Temperature (with IMPRES Li-Ion battery)	-10deg. C to + 60 deg. C		N/A	
Storage Temperature	-40deg. C to + 85 deg. C		-40deg. C to + 85 deg. C	
Thermal Shock	per MIL-STD		per MIL-STD	
Humidity	per MIL-STD		per MIL-STD	
ESD	IEC-801-2KV		IEC-801-2KV	
Water Intrusion	IEC 60529 - IP57		IEC 60529 - IP54	
Packaging Test	MIL STD 810D and E		MIL STD 810D and E	

## Factory Mutual Approvals

MOTOTRBO XPR Portable series radios have been certified by FM Approvals in accordance with Canada and U.S. Codes as intrinsically safe for use in Class I, II, III, Division 1, Groups C,D,E,F,G, when properly equipped with a Motorola FM approved battery option. They are also approved for use in Class I, Division 2, Groups A, B, C, D.



1 No 806-809 MHz or 821-824 MHz(NPSPAC) channels trunked capability. NPSPAC Mutual Aid Conventional Channels supported:

TX TX  
806.0125 821.0125  
806.5125 821.5125  
807.0125 822.0125  
807.5125 822.5125  
808.0125 823.0125

For digital mode and GPS receiver specifications, please refer to MOTOTRBO XPR digital model specifications in 800/900 MHz.

For frequencies 901-902, 940-941 MHz, FCC Rule 24 limits power to 7W ERP. Antennas HAF4025\_ and HAF4029\_ can be used with reduced power setting for these frequencies.

Specifications subject to change without notice. All specifications shown are typical. Radio meets applicable regulatory requirements. Version 1 11/09



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To learn more about MOTOTRBO, visit:  
[www.motorola.com/mototrbo](http://www.motorola.com/mototrbo)

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