



# MOTOTRBO™

## XPR™ 6500/6550/6300 Portable Radios



Portable radios available in Display and Non-Display, **GPS and Non-GPS models**

Uses Time-Division Multiple-Access (TDMA) digital technology which **doubles the number of users** on a single licensed 12.5 kHz channel

Supports **integrated applications** including MOTOTRBO Text Messaging Services and MOTOTRBO Location Services

Provides **clearer voice communications** throughout the coverage area

Up to **40 percent longer** battery life between recharges

**Enables additional functionality** including dispatch data, and enhanced call signaling

**Enhanced call management** features include call alert, emergency, remote monitor, push-to-

talk ID, radio check, private call, all call, radio disable

**Emergency button** alerts supervisor or dispatcher in an emergency situation

XPR 6550 can **transmit location coordinates** with an emergency call

**Integrates voice and data** to increase operational efficiency

Send short free-form and quick **text messaging** via programmable buttons

XPR 6500/6550 contacts list allows up to **256 contacts**

Allows an **easy migration** from analog to digital with the ability to operate in both modes

Meets **IP57 submersibility** standard along with U.S. Military Standards 810 C, D, E, and F and Motorola standards for durability and reliability

Is **intrinsically safe** and can be used in locations where flammable gas, vapors or combustible dust may be present

Portable radios **meet FM approvals**. Approved FM battery option is a 1500 mAh slim Lilon FM battery

Accessory connector meets IP57 submersibility specifications, incorporates RF, and USB and utilizes the IMPRES™ Audio System for **enhanced audio functionality**

Utilizes Motorola's state-of-the-art **IMPRES** technology—providing **longer talk times and clearer audio delivery**

Backed by a two-year Standard Warranty plus **one-year Repair Service Advantage (US)** / Extended Warranty (Canada) and at least a one-year warranty for accessories



### Accelerate performance.

The next-generation professional two-way radio communications solution is here, with more performance, productivity and value—thanks to digital technology that delivers increased capacity and spectrum efficiency, integrated data communications and enhanced voice communications.

MOTOTRBO offers you a private, standards-based, cost-effective solution that can be tailored to meet your unique coverage and feature needs. This versatile portfolio provides a complete system of portable radios, mobile radios, repeaters, accessories and data applications.

## General Specifications

	Display UHF XPR 6500 / XPR 6550	Non-Display UHF XPR 6300/6350*
Channel Capacity	160	32
Frequency	403-470 MHz	403-470 MHz
Dimensions (HxWxT) w/ Lilon non-FM Battery	131.5 x 63.5 x 35.2 mm	131.5 x 63.5 x 35.2 mm
Weight (with Lilon non-FM Battery) (with Lilon FM Battery) (with NiMH Battery)	12.7 oz (360 g) 13 oz (370 g) 15.2 oz (430 g)	11.63 oz (330 g) 11.98 oz (340 g) 14.09 oz (400 g)
Power Supply	7.2V nominal	7.2V nominal
FCC Description	AZ489FT4876	AZ489FT4876
IC Description	109U-89FT4876	109U-89FT4876
Average battery life at 5/5/90 duty cycle with battery saver enabled in carrier squelch and transmitter in high power.		
IMPRES 1500 mAh Lilon Battery	Analog: 9 hrs Digital: 13 hrs	Analog: 9 hrs Digital: 13 hrs
IMPRES FM 1400 mAh Battery	Analog: 8.5 hrs Digital: 12 hrs	Analog: 8.5 hrs Digital: 12 hrs
NiMH 1300 mAh Battery	Analog: 8 hrs Digital: 11 hrs	Analog: 8 hrs Digital: 11 hrs

## Receiver

Frequencies	403-470 MHz	403-470 MHz
Channel Spacing	12.5 kHz/ 25 kHz	12.5 kHz/ 25 kHz
Frequency Stability (-30° C, +60° C, +25° C)	+/- 1.5 ppm (XPR 6500) +/- 0.5 ppm (XPR 6550)	+/- 1.5 ppm (XPR 6300) +/- 0.5 ppm (XPR 6350)*
Analog Sensitivity (12 dB SINAD)	0.35 uV 0.22 uV (typical)	0.35 uV 0.22 uV (typical)
Digital Sensitivity	5% BER: 0.3 uV	5% BER: 0.3 uV
Intermodulation (TIA603C)	70 dB	70 dB
Adjacent Channel Selectivity TIA603 TIA603C	60 dB @ 12.5 kHz, 70 dB @ 25 kHz 45 dB @ 12.5 kHz, 70 dB @ 25 kHz	60 dB @ 12.5 kHz, 70 dB @ 25 kHz 45 dB @ 12.5 kHz, 70 dB @ 25 kHz
Spurious Rejection (TIA603C)	70 dB	70 dB
Rated Audio	500 mW	500 mW
Audio Distortion @ Rated Audio	3% (typical)	3% (typical)
Hum and Noise	-40 dB @ 12.5 kHz -45 dB @ 25 kHz	-40 dB @ 12.5 kHz -45 dB @ 25 kHz
Audio Response	TIA603C	TIA603C
Conducted Spurious Emission (TIA603C)	-57 dBm	-57 dBm

## Transmitter

Frequencies	403-470 MHz	403-470 MHz
Channel Spacing	12.5 kHz/ 25 kHz	12.5 kHz/ 25 kHz
Frequency Stability (-30° C, +60° C, +25° C)	+/- 1.5 ppm (XPR 6500) +/- 0.5 ppm (XPR 6550)	+/- 1.5 ppm (XPR 6300) +/- 0.5 ppm (XPR 6350)*
Power Output Low Power High Power	1 W 4 W	1 W 4 W
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 / Radiated Emission	-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	60 dB @ 12.5 kHz 70 dB @ 25 kHz
Audio Response	TIA603C	TIA603C
Audio Distortion	3%	3%
FM Modulation	12.5 kHz: 11K0F3E 25 kHz: 16K0F3E	12.5 kHz: 11K0F3E 25 kHz: 16K0F3E
4FSK Digital Modulation	12.5 kHz Data Only: 7K60FXD 12.5 kHz Data & Voice: 7K60FXE	12.5 kHz Data Only: 7K60FXD 12.5 kHz Data & Voice: 7K60FXE
Digital Vocoder Type	AMBE++	AMBE++
Digital Protocol	ETSI-TS102 361-1	ETSI-TS102 361-1

## GPS

Accuracy specs are for long-term tracking (95th percentile values > 5 satellites visible at a nominal -130 dBm signal strength)	
TTF (Time To First Fix) Cold Start	< 1 minute
TTF (Time To First Fix) Hot Start	< 10 seconds
Horizontal Accuracy	< 10 meters

## 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,FG, 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.

Specifications subject to change without notice. All specifications shown are typical.  
Radio meets applicable regulatory requirements.  
Version 3 03/07

## Environmental Specifications

Operating Temperature	-30° C / +60° C
Storage Temperature	-40° C / +85° C
Thermal Shock	Per MIL-STD
Humidity	Per MIL-STD
ESD	IEC-801-2KV
Water Intrusion	IEC 60529 - IP57
Packaging Test	MIL-STD 810D and E

\*Coming Soon.



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MD-EU/SP/PORTABLE