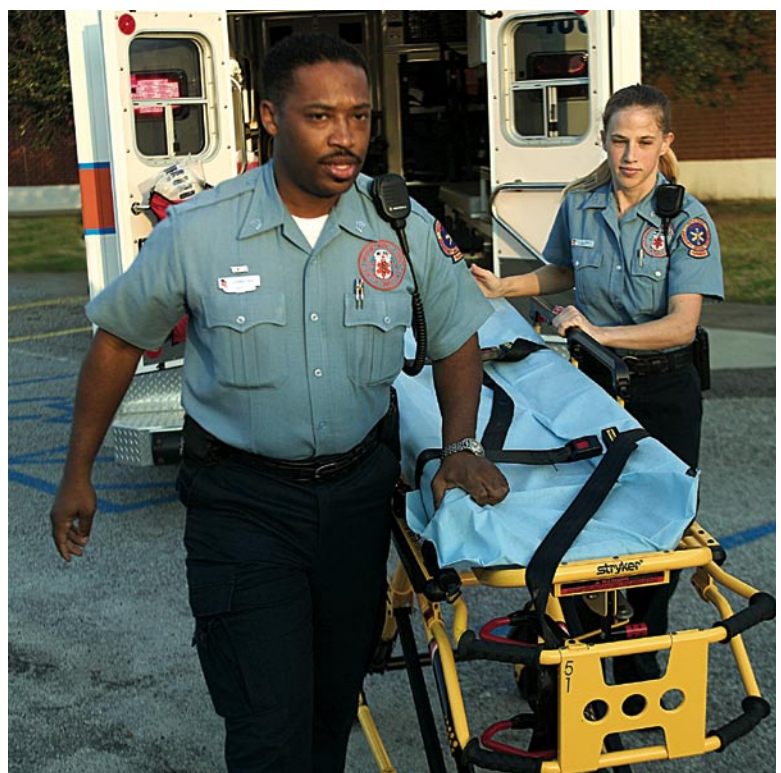
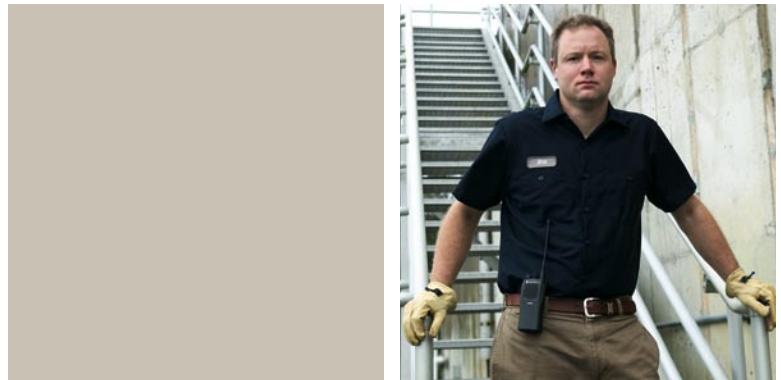


PR860 Professional Series Two-Way Radios and Accessories

Strengthening The Link: Two-Way Radios for a Stronger,
More Secure Community



PR860 Professional Series

Two-Way Radios and Accessories

Welcome to the Community!

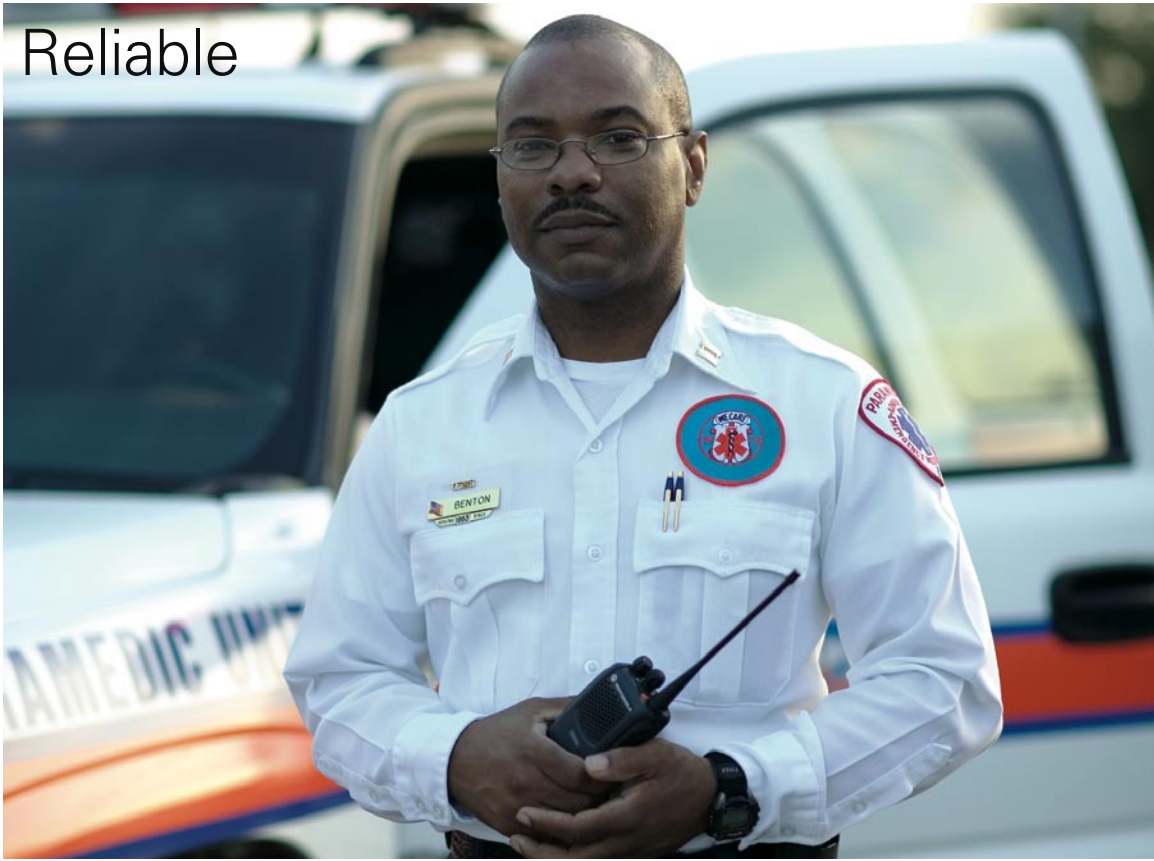
In large and small communities alike, people rely on police and fire departments to keep their families safe and their properties secure. In times of emergency and severe weather, they count on critical first responders and public utility workers.

It's for these safety professionals that Motorola has designed the PR860 Professional Series two-way radio. The combination of durability and performance also make the PR860 a strong option for construction and manufacturing firms as well as any organization concerned with security and quick response.

This brochure will detail all the performance features of the PR860, its many practical accessories, and an important advancement from Motorola – the IMPRES™ Energy System. Your Motorola Authorized Dealer or Representative can give you all the information you need to help you choose the right products and accessories for your organization.



Reliable



What sets the PR860 apart

Compared to other professional two-way radios, the PR860 offers a unique combination of advanced performance options and a rugged design, all in a surprisingly light weight radio (12.8 oz. with the IMPRES Li-ion battery). You should also know the PR860:

- Offers an extremely high level of sound clarity and dynamics for a radio at this price.
- Has been ergonomically designed to handle easily, with bigger knobs and controls that can be operated even when wearing heavy gloves.
- Meets strict U.S. military specifications and Motorola standards for durability and reliability.
- Is backed by Motorola service and a two-year warranty.



Did you know? The PR860 weighs less than a can of soda.

(12.8 oz. with IMPRES Li-ion battery)

PR860

Heavyweight features in a light, durable model



16 Channels

1- Large Raised Channel and On/Off Volume Knobs

Easy to operate when wearing gloves

2- Programmable Emergency Button

Alerts dispatcher in an emergency situation

3- X-Pand™ Voice Compression

Crisper, clearer audio quality

Adjustable Power Levels

Saves battery life

Priority Channel Scan

Frequently scan higher priority channels

4- Sealed Accessory Connector

Customize audio solutions to meet your needs

5- Internal VOX

Hands-free operation with headset

6- 3 Programmable Side Buttons and Large Textured Push-To-Talk Button

Easy access to favorite features. Easy to operate when wearing gloves and provides good tactile response

IMPRES™ Energy System

Battery, charging and reconditioning system that automates battery maintenance, optimizes cycle life, and maximizes talktime

PR860 Additional Features

Quik-Call II™ and MDC1200 Signaling

Send and receive information in a variety of ways including:

- **Selective Call (Decode)** Receive a call from a specific group or individual
- **Call Alert (Decode)** Receive alerts of incoming calls when you're a short distance from your radio

MDC Signaling Only Features:

- **Push-to-Talk ID (Encode)** Identify your outgoing calls
- **Radio Check (Decode)** Lets others check your radio status
- **Emergency (Encode)** Alerts dispatcher in urgent situations
- **Selective Radio Inhibit (Decode)** Allows system owner to disable stolen or missing radios

Engineered



PR860 Programmable Features

Choose up to 12.

Top features include:

High/Low Power

Adjusts transmit power to accommodate user environment

Channel Scan

Monitors the selected channel for any activity

Squelch Levels

Helps minimize interference from undesired weak signals and helps weak signals be heard

Repeater Talkaround

Unit-to-unit communication, bypassing the repeater

Emergency Siren

For use in public safety situations

Battery Status

Displays battery charge level via LED

Volume Set

Preferred volume level for radio speaker

PR860 Standard Package

IMPRES™ Li-ion 2000 mAh Battery

IMPRES Single Unit Rapid Charger

Low Band, VHF or UHF Antenna

2.5" Belt Clip

User Guide CD

2-Year Standard Warranty

Did you know? The PR860 has been approved intrinsically safe by Factory Mutual (FM) and by the Canadian Standard Association when ordered initially with the appropriate FM options.

Classes I, II, and III, Division 1, Groups C,D,E,F and G.

Indispensable

Did you know? Motorola offers more than 100 high-quality accessories for your PR860 radio.



Accessories for the PR860: Getting the most from your radio

Motorola Original and Motorola Certified Accessories expand the capabilities of your radio and create a truly customized communication solution for your organization. Motorola accessories are system-tested with Motorola radios to ensure optimum performance. Your Motorola Authorized Dealer or Representative can assist you in selecting the right accessories to meet your needs. In addition to the accessories below, Motorola offers a variety of antenna options including Whip, Heliflex and Stubby antennas, each available in UHF or VHF. Contact us for complete accessory availability.



Motorola Original – When an accessory is purchased with this seal, it certifies a Motorola Original® Accessory. These high-quality accessories allow your customers to properly charge and safely transport the PR Professional Series radios. Motorola Original Accessories carry a one-year limited warranty.

PR860 Accessories



IMPRES™ Batteries and Chargers

Offer superior, long-lasting performance with automated maintenance
Product featured – WPLN4182A

Carry Accessories

Keep the radio secure and safe from the elements wherever you go
Product featured – HLN9701B

Traditional Batteries and Chargers

Different battery chemistries to best suit your needs as well as single and multi-unit charger options
Product featured – HNN9008AR

Vehicle Options

Adapters to give you on-the-go charging and power options
Product featured – AAEN1006B

Headsets

For hands-free operation in a variety of models to fit your needs and preferences
Product featured – RMN5048A

Remote Speaker Microphones

Talk or listen without removing the radio from belt or case
Product featured – RMN5055A

Ear Microphones

Compact, with tremendous audio clarity for hands-free communication
Product featured – AARMN4045A

CommPort™ Integrated System

Combines ear microphone with receiver so you can speak in a whisper and hear in a noisy crowd
Product featured – NTN1737A

Innovative



The IMPRES™ Smart Energy System. More than a smart battery – it's practically brilliant.

Motorola's IMPRES™ Smart Energy System adjusts the reconditioning frequency to match individual battery usage patterns. No longer will you have to manually track and record battery usage. With automatic and adaptive reconditioning, you eliminate guesswork and the time wasted reconditioning batteries prematurely. The IMPRES energy system automates battery maintenance, optimizes cycle life and maximizes talk time so your radio system will be charged and ready to go...whenever you need it.



Batteries and chargers that work together for optimal battery performance

IMPRES™ Batteries

NiMH or Li-ion chemistries which offer superior life with automated maintenance. Virtually no capacity loss due to memory effect; no need to run the battery down completely before charging.

Product featured – HNN4001A

IMPRES Chargers

Single and multi-unit chargers, customizable to your particular charging habits and needs to optimize battery performance. Available with a two-line display module that communicates important information in real time such as current battery status, battery capacity and more.

IMPRES chargers can also charge compatible non-IMPRES batteries.

Product featured – WPLN4187A

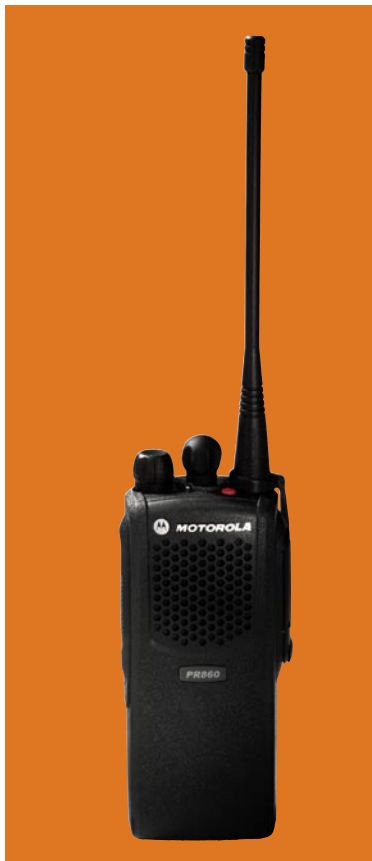


Did you know? The IMPRES batteries also carry an additional 6 month warranty.

(When used exclusively in an IMPRES charger.)

PR860

Specifications



Exceptional Durability

There's a reason why Motorola two-way radios are so rugged and reliable. Each radio undergoes rigorous testing in the design process, so your customers can be assured Motorola radios will hold up under demanding conditions. These tests are designed to simulate very harsh environments, including:

GENERAL SPECIFICATIONS				
Specification	Low Band		VHF	UHF
Model Numbers	AAH45BEC9AA3_N AAH45CEC9AA3_N		AAH45KDC9AA3_N	AAH45RDC9AA3_N AAH45SDC9AA3_N
Frequency Range	29.7-42.0 MHz 35.0-50.0 MHz		136-174 MHz	403-470 MHz 450-512 MHz
Frequency Stability (-30°C to +60°C, 25°C Ref.)	±10 PPM		±5 PPM @ 25 kHz ±2.5 PPM @ 12.5 kHz	
Channel Capacity	16 Channels			
Channel Spacing	12.5/20/25 kHz		12.5/20/25 kHz	
Power Supply	7.5 volts rechargeable battery			
Dimensions: H x W x D				
With IMPRES NiMH Battery	5.40 in. x 2.26 in. x 1.60 in. (137mm x 57.5mm x 40mm)			
With IMPRES NiMH FM Battery	5.40 in. x 2.26 in. x 1.60 in. (137mm x 57.5mm x 40mm)			
With IMPRES LilonBattery	5.40 in. x 2.26 in. x 1.60 in. (137mm x 57.5mm x 40mm)			
Weight				
With IMPRES NiMH Battery	17.5 ounces (488 grams)			
With IMPRES NiMH FM Battery	17.5 ounces (488 grams)			
With Impres Lilon Battery	12.8 ounces (358 grams)			
Average Battery Life @ 5-5-90 Duty Cycle*	Low Power	High Power	Low Power	High Power
With IMPRES NiMH Battery	17 hours	11 hours	17 hours	13 hours
With IMPRES NiMH FM Battery	16 hours	10 hours	16 hours	13 hours
With IMPRES Lilon Battery	18 hours	11 hours	18 hours	14 hours
Sealing	Passes rain testing per IP54 and MIL-STD 810E			
Shock	Meets MIL-STD-810-C,D & E and TIA/EIA 603			
Vibration	Meets MIL-STD-810-C,D & E and TIA/EIA 603			
Dust	Meets MIL-STD-810-C,D & E and IP54			
Humidity	Meets MIL-STD-810-C,D & E and TIA/EIA 603			
FCC Descriptions	29.7-50 MHz: AZ489FT1625 136-174 MHz: AZ489FT3794 403-470 MHz: AZ489FT4826 450-512 MHz: AZ489FT4834			

* 5% receive, 5% transmit, 90% standby

TRANSMITTER				
Specification	Low Band		VHF	UHF
Power Output NiMH @ 7.5V	1-6 W		1-5 W	1-4 W
Spurs/Harmonics			-36 dBm < 1 GHz -30 dBm > 1 GHz	
Audio Response (from 6 dB/oct. Pre-Emphasis, 300 to 3000 Hz)			+1 to -3 dB	
Audio Distortion @ 1000 Hz, 60% Rated Max. Dev.			3% Typical	
Modulation Limiting	±5.0 kHz @ 20 kHz		±2.5 kHz @ 12.5 kHz ±4.0 kHz @ 20 kHz 5.0 kHz @ 25 kHz	
Conducted/Radiated Emissions	66 dBw			
FM Hum and Noise	-40 dB			
FM Modulation	11KOF3E, 16KOF3E			

Rain – steady rainfall and wind for 30 minutes on every surface. Ideal for agriculture, light construction, utility and public administration personnel who work outdoors in any type of weather.

Salt Fog – 48 hours of exposure to an atomized salt solution. Hospitality staff, utility workers and public administration personnel working near oceans or around winter salt applications will appreciate our radios’ resistance to salt corrosion.

Dust – 6 hours of blowing dust on all surfaces. Ideal for agriculture, light construction, utility and public administration workers who are exposed to a variety of dusty environments.

Vibration – up to 9 hours of exposure to vibration that simulates the rigors that a radio could undergo while being transported. Because these portables are carried by the radio user, it’s important they hold up to extensive vibration tests. Light construction and industrial workers, agriculture, utility and public administration staff expect a radio to withstand any vibrations.

Shock – 18 shocks with a minimum G force of 40 Gs each makes these portables ideal for light construction and light industrial, agriculture, public administration, utilities and anyone who has ever dropped a radio.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-30°C / +60°C
Storage Temperature	-55°C / +85°C
Humidity	95% RH @ 8 Hr.
ESD	IEC 801-2KV
Water Intrusion	IP54

FACTORY MUTUAL APPROVALS

The PR860 is Factory Mutual approved and Canadian Standard Association approved as intrinsically safe for use in Classes I, II, and III, Division 1, Groups C, D, E, F and G, as well as non-incendive use in Class I, Division 2, Groups A, B, C and D on models ordered with the Factory Mutual option, and battery.

Accelerated Life Test

Motorola’s Accelerated Life Test (ALT) is a developmental process of rigorous laboratory testing that simulates years of field use. Motorola has a firm commitment to quality and reliability. These radios have been designed, manufactured and tested to achieve high levels of component and workmanship quality. Motorola radios are designed to minimize costly repairs and downtime.

RECEIVER

Specification	Low Band	VHF	UHF
Sensitivity (12 dB SINAD) EIA	0.30 μ V Typical	0.35 μ V Typical	
Sensitivity (20 dB SINAD) ETS	0.5 μ V Typical		
Intermodulation per EIA	-65 dB		
Adjacent Channel Selectivity ETS	60 dB @ 12.5 kHz 70 dB @ 25 kHz		
Spurious Rejection	70 dB		
Rated Audio	0.5 W		
Audio Distortion @ Rated Audio	3% Typical		
Hum and Noise (with LLE enabled)	-45 dB @ 20/25 kHz	-45 dB @ 12.5 kHz/-50 dB @ 25 kHz	
Audio Response (0.3 - 3 kHz)	+1 to -3 dB		
Conducted Spurious Emission per FCC Part 15	-57 dBm < 1 Ghz -47 dBm > 1 Ghz		

Specifications subject to change without notice. All electrical specifications and methods refer to EIA/TIA 603 standards. Professional Series radios meet or exceed requirements of MIL STD 810 C, D, E

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 Temperature	501.1	1,2	501.2	1,2	501.3	1,2
Low Temperature	502.1	2	502.2	1,2	502.3	1,2
Temperature 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

For more information, please contact:



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