

## P5500 Portable 800 MHz

The P5500 portable is a digital two-way radio that provides

- Multi-Mode functionality
- Digital voice and IP data
- P25 Phase 2 upgrade capability
- Versatile configuration for many customer environments



**P5550      P5570**

The P5500 portable enhances the productivity and increases the efficiency of its users.

### Multiple Applications with One Radio

The P5500 uses a new high-speed digital signal processor and the latest RF components to support multiple applications in one package:

- OpenSky® Digital TDMA Trunking
- Project 25 Digital Trunking – Phase 1 FDMA now. Phase 2 TDMA trunking via software upgrade in the future.
- P25 Digital Conventional
- ProVoice™ Digital Trunking
- Enhanced Digital Access Communication System (EDACS®) Trunking
- Complete Analog Conventional features
- AES and DES encryption

### Maximum RF Performance

The radio operates in the 800 MHz band and combines digital and analog operation in one radio. Such versatility maximizes interoperability. The portable complies with TIA-603 to provide the highest RF performance.

### Advanced OpenSky Trunking Features

The P5500 supports the full range of OpenSky digital trunking features, including voice group calls, priority scanning, pre-emptive emergency calls, late call entry, and dynamic reconfiguration. It performs autonomous roaming for wide area applications. High-quality voice coding and robust audio

components assure speech clarity even in noisy environments.

### OpenSky Data Capability

The optional data feature allows the P5500 portable to be used in high-performance wireless data systems. For mobile data applications, the P5500 serves as an IP network node, providing end-to-end IP connectivity for an external portable computer connected to the radio's data port. The 19.2-kbps data airlink rate is a standard operating feature. Users can talk and send or receive data on the same channel at the same time with just one radio.

### Encrypted Communications

The optional Advanced Encryption Standard (AES) is available for maximum security. OpenSky operates the most advanced vocoder on a private wireless Intranet that provides maximum digital voice clarity. As an additional measure of security, P5570 radios may be password-protected, preventing unauthorized use.

### High Performance in a Durable Package

The sturdy mechanical package of the P5500 provides high performance and reliable service.

- MIL-STD-810F durable – including 1-meter drop per TIA-603-B (no antenna installed; drop directly to knobs)
- Programmable dual-position switch for flexible operation
- Tx/Rx LED and enhanced clarity LCD for more visible signaling

(including features such as a battery-level gauge)

- At 13.7 ounces with Lithium-Ion battery, the lightest weight portable offered by Harris
- Illuminated channel indicator for easy channel identification
- Intrinsically safe models (optional)

### Software-Based Design for Customization

With the software-based design, the P5500 portable is readily configurable and easily expandable with software upgrades to meet customized needs.

- Stores up to 1,024 trunked system/group combinations and up to 512 conventional channels
- Stores 255 individual call numbers and 255 telephone numbers in memory
- ProFile™ offers easy over-the-air programming for efficient updates
- ProScan™ provides smooth, automatic roaming between sites
- Personality Lock prevents unauthorized users from programming radios or accessing the system.

### Radio TextLink Text Messages

With this option, users may receive, display, and respond to text messages sent from authorized users on the network. This feature improves real-time communications among first responders while also providing the capability to leave messages with users that are actively engaged in other critical activities.

## General Specifications

**P5500 Portables are available in 2 models:**

**P5570:** System Model with LCD and DTMF keypad

**P5550:** Scan Model with LCD and limited keypad

### Dimensions (H x W x D):

(Without Knobs and Antenna)

With battery:

5.37 x 2.44 x 1.67 in.  
(136.5 x 62.0 x 42.5 mm)

### Weight (with Battery):

Li-Ion: 13.70 oz (388g)

Li-Polymer: 14.10 oz (400g)

NiMH: 18.10 oz (513g)

### Input Voltage:

7.5 VDC (nominal)

### Vibration:

5 G (per U.S. Forest Service)

### Shock:

1 meter drop (per TIA-603B)

### Battery Life (at 5% Tx, 5% Rx, and 90% standby):

Li-Ion: 9 hours (2000 mAh)

Li-Polymer: 16 hours (3500 mAh)

NiMH: 11 hours (2400 mAh)

### Operating Temperature Range:

Li-Ion: +14 to +140°F

(-10 to +60°C)

Li-Polymer: -4 to +140°F

(-20 to +60°C)

NiMH: -4 to +140°F

(-20 to +60°C)

### Relative Humidity:

90% @ 122°F (+50°C)

### Altitude:

Operational: 15,000 ft  
(4,572 m)

In Transit: 50,000 ft  
(15,240 m)

**Color (case):** Black

## Options and Accessories

Headset, heavy-duty headset, earpiece, speaker microphones, PC programming software and cables, subminiature surveillance accessories, antennas, cases, straps, belt loops and swivel mounts, desk chargers, wall chargers, and vehicular chargers.

## Intrinsically Safe Options

Factory Mutual Intrinsically Safe (FM3610:1988) for Class I, II, and III, Division 1, Groups C, D, E, F, and G, Temp T3C, TA=+60°C; Nonincendive for Class I, Division 2, Groups A, B, C, and D, Temp T4, TA=+60°C.



## Transmitter

	800 Typical Performance Specifications
Frequency Range (MHz):	806-825, 851-870
Rated RF Power Trunked (W):	0.5-3.0
Rated RF Power Talkaround (W):	0.5-3.0
Frequency Stability (-30 to +60°C; +25°C Ref) (ppm):	±1.5
Frequency Separation (MHz):	Full bandwidth
Modulation Deviation (kHz):	±5.0 (±4.0 NPSPAC)
FM Hum and Noise (Companion Receiver) (dB):	-48 (non-NPSPAC), -46 (NPSPAC)
Spurious and Harmonics (dBm/dBc):	-40/75
Audio Response (dB):	+1/-3
Audio Distortion:	1% (1 kHz tone @ 3 kHz deviation (non-NPSPAC)) 1% (1 kHz tone @ 2.4 kHz deviation (NPSPAC))
Project 25 Modulation Fidelity (%):	2
Project 25 ACP (dBc):	68

## Receiver

	800 Typical Performance Specifications
Frequency Range (MHz):	851-870
Frequency Separation (MHz):	Full bandwidth
Channel Spacing (kHz):	25/NPSPAC
Frequency Stability (-30 to +60°C; +25 Ref) (ppm):	±1.5
Sensitivity (12 dB SINAD) (µV/dBm):	0.21/-120.5
Adjacent Channel Rejection @ 25 kHz (dB):	76
Intermodulation (dB):	76
Spurious and Image Rejection (dB):	81
Rated Audio Output (mW):	500
Audio Distortion:	1% @ rated power
Offset Channel Selectivity @ NPSPAC (dB):	26
Project 25 Reference Sensitivity @ 5% BER (µV/dBm):	0.22/-120.0
Project 25 Adjacent Channel Rejection (dB):	61

## Environmental Specifications

Standard	Parameter	Methods & Procedures
MIL-STD-810F*	Low Pressure	500.4/1,2
	High Temperature	501.4/1,2
	Low Temperature	502.4/1,2
	Temperature Shock	503.4/1
	Solar Radiation	505.4/2
	Blowing Rain	506.4/1
	Humidity	507.4
	Salt Fog	509.4
	Blowing Dust	510.4/1
	Vibration (Minimum Integrity)	514.5/1, Category 24
	Vibration (Basic Transportation)	514.5/1, Category 4
	Shock (Functional/Basic)	516.5/1
	Shock (Transit Drop)	516.5/4
	IEC 60529	Dust-tight, Water Jets
U.S. Forest Service	Vibration (10-60 Hz)	USDA LMR Standard, Section 2.15
TIA-603B	Shock (1 meter drop)	Paragraph 3.3.5.3

\*Also meets equivalent superseded MIL-STD-810C, -D, and -E.

## Digital Operation

Protocol	OpenSky	ProVoice	Project 25
Vocoding Method:	AMBE+2™ Half Rate & Enhanced Half Rate	AMBE+2 Enhanced Full Rate	AMBE+2 Enhanced Full Rate & Enhanced Half Rate
Signaling Rate (kbps):	19.2 & 9.6	9.6	9.6
Modulation:	4-Level GFSK & M4FM	GFSK	WCQPSK & C4FM

## Regulatory Data

Frequency Range (MHz)	RF Output (W)	FCC Type Acceptance Number	Applicable FCC Rules	Industry Canada Certification Number	Applicable Industry Canada Rules
806-824 851-869	3.0	OWDTR-0066-E	Part 2, 90	3636B-0066	RSS-119

