XG-75P PORTABLE
VHF/UHF–L

The Harris XG-75P Portable delivers the high reliability and rugged performance essential for missions operating in extreme conditions. Ideal for organizations wanting just one radio to manage all their migration needs, this flexible solution supports legacy Harris platforms, P25 EDACS®, ProVoice™ and OpenSky®.

RUGGED, FLEXIBLE P25 MIGRATION SOLUTION

KEY FEATURES

Multimode solution supporting legacy Harris platforms, P25 EDACS®, ProVoice™, and OpenSky®

Software-defined architecture for in-field updates to new capabilities

Clear, distortion-free audio despite loud, harsh environments

Optional features include IP68 immersion and UL certification for C1D1 HAZLOC use

The XG-75P features an enlarged speaker, dual microphone, active voice cancellation and AMBE+2™ vocoder to deliver crisp, clear audio despite noisy environments.

The portable supports wideband and narrowband channels and has a software-defined architecture, allowing field upgrades to operating modes, including P25 Phase 2 trunking.

Designed for ease of use, the XG-75 features a two-position A-B switch on the top of the radio for direct access to 32 talkgroups/channels. Knobs and buttons are ruggedized to protect from impact and are shaped for error-free, gloved-hand operation.

Secure communications through a choice of encryption methods, including standard single-key AES, single key DES and Encryption Lite.

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HARRIS® TECHNOLOGY TO CONNECT, INFORM AND PROTECT™

GENERAL

Radio Models		
Full Keypad	Dot matrix LCD and DTMF keypad	
Partial Keypad	Dot matrix LCD and limited keypad	
Dimensions (without antenna, battery and knobs)		
Height	5.89 (in)	149.6 (mm)
Width	2.44 (in)	62.0 (mm)
Depth	1.86 (in)	47.2 (mm)
Weight (without antenna and battery)		
Portable	10.4 (oz)	294.5 (g)
Housing Colors		
Midnight Black, Black-Gray, Black-Yellow, and Tactical Green		
Environmental Specifications		
Relative Humidity	95% @ 140° F (+60° C)	
Vibration	9.2G (per U.S. Forest Service)	
Drop Shock	1.5 meter drop to concrete (exceeds TIA-603-C)	
Immersion[1]	2 meters for 4 hours in accordance with MIL-STD-810G / IP68 (per IEC60529)	
Operating Temperature[2]	-22° F to +140° F	-30° C to +60° C
Storage Temperature*	-40° F to +176° F	-40° C to +80° C
***Store batteries at the following temperatures**		
Li-Ion	-40° F to + 176° F	-40° C to +80° C
Li-Polymer	-22° F to +176° F	-30° C to +80° C
NiMH	-40° F to + 176° F	-40° C to +80° C
Altitude		
Operational	15,000 (ft)	4,572 (m)
In Transit	50,000 (ft)	15,240 (m)
Electrical		
Input Voltage	7.5 VDC (nominal)	
Safety		
HAZLOC Options	UL certified to ANSI / TIA-4950, ANSI / ISA 12.12.01, CAN / CSA-C22.2 No. 157-92, CAN / CSA-C22.2 No. 213-15 standards as suitable for use in Class I, Division 1, Groups C and D; Class II, Division 1, Groups E, F, and G; Class III, Division 1 hazardous locations; Class I, Division 2, Groups A, B, C, and D or non-hazardous (unclassified) locations only	
RoHS compliant		

[1]Optional feature
[2]Extremely low temperatures adversely affect battery life

TRANSMITTER

Typical Performance Specifications	VHF	UHF-L
Frequency Range (MHz)	136-174	378-470
Rated RF Power (W)	6	5
Frequency Stability (-30° C to +60° C, +25° C Ref) (ppm)	±1.5	±1.5
Frequency Separation (MHz)	Full Bandwidth	Full Bandwidth
Modulation Deviation (kHz)	5.0 (wideband*) 2.5 (narrowband)	5.0 (wideband*) 2.5 (narrowband)
FM Hum and Noise Companion Receiver (dB)	-52 (wideband*) -50 (wideband*)	-50 (narrowband) -45 (narrowband)
Spurious and Harmonics (dBm / dBc)	-36 / -75	-36 / -75
Audio Response (dB)	+1 / -3	+1 / -3
Audio Distortion (1 kHz tone)		
@ 3 kHz deviation	1% (wideband)	1% (wideband)
@ 2.4 kHz deviation	NA	NA
@ 1.5 kHz deviation	1% (narrowband)	1% (narrowband)
Project 25 Modulation Fidelity (%)	<5	<5
Project 25 Adjacent Channel Power (dBc)	>67	>67

*VHF and UHF product is compliant with applicable FCC narrowbanding mandate below 512 MHz.

REGULATORY DATA

Frequency Range (MHz)	RF Output (W)	Frequency Stability (ppm)	FCC Type Acceptance Number	Applicable FCC Rules	Industry Canada Certification Number	Applicable Industry Canada Rules	NTIA Certification Number
136-174	6	±1.5	OWDTR-0059-E	22, 80, 90	3636B-0059	RSS-119	J / F 12 / 9974
378-470	5	±1.5	OWDTR-0070-E	90	3636B-0070	RSS-119	J / F 12 / 9974

SPECIFICATIONS FOR: XG-75P PORTABLE−VHF/UHF-L

RECEIVER

Typical Performance Specifications	VHF	UHF
Frequency Range (MHz)	136-174*	378-470
Frequency Separation (MHz)	Full Bandwidth	Full Bandwidth
Channel Spacing (kHz)	25 / 30 (wideband**) 12.5 / 15 (narrowband)	25 / 30 (wideband**) 12.5 / 15 (narrowband)
Frequency Stability (-30 to +60°C, +25°C Ref) (ppm)	±1.5	±1.5
Sensitivity (12 dB SINAD) (µV / dBm)	0.20 / -121	0.25 / -119.0

Adjacent Channel Selectivity
  @ 25 kHz (dB)
  @12.5 kHz (dB)
	79 (wideband**)
	66 (narrowband)
		>73
		>60

Intermodulation (dB)	77	75
Spurious and Image Rejection (dB)	80	80
FM Hum and Noise (dB)	>50 (wideband**) >45 (narrowband)	>50 (wideband**) >45 (narrowband)
Audio Output (mW)	500 rated (3800 max)	500 rated (3800 max)
Audio Distortion @ Rated Power (%)	1.5	1.5
Project 25 Reference Sensitivity @ 5% BER (µV / dBm)	0.22 / -121	0.25 / -119
Project 25 Adjacent Channel Rejection (dB)	>60	>60

*The following self-quieting frequencies cannot be programmed as receive frequencies: 144.000, 153.600, 163.200, and 172.800 MHz.
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ENVIRONMENTAL STANDARD

Standard	Parameter	Methods	Procedure / Categories
MIL-STD-810G*	Low Pressure	500.5	1,2
	High Temperature	501.5	1,2
	Low Temperature	502.5	1,2
	Temperature Shock	503.5	1-B
	Solar Radiation	505.5	2
	Blowing Rain	506.5	1
	Humidity	507.5	2
	Salt Fog	509.5	1
	Blowing Dust	510.5	1
	Immersion**	512.5	1
	Vibration (Minimum Integrity)	514.6	1, Category 24
	Vibration (Basic Transportation)	514.6	1, Category 4
	Shock (Functional / Basic)	516.6	1
	Shock (Transit Drop)	516.6	4
IEC 60529	Dust-tight, Continuous Immersion	IP68	
U.S. Forest Service	Vibration (10-60 Hz)	USDA LMR Standard Section 2.15	
TIA-603-C***	Shock (1-meter drop)	Paragraph 3.3.5.3	

*Also meets equivalent superseded MIL-STD-810D, -E, and -F.
**XG-75 immersion model only. Available option that must be ordered. Additional certification for water intrusion with water depth of 2 meters for 4 hours.
***Environmental test certification of 1.5-meter drop shock to concrete using parameters of TIA-603-C 1.0-meter drop shock with additional height.

DIGITAL OPERATION

Protocol	ProVoice™	P25
Vocoding Method	AMBE + 2 Enhanced Full Rate	AMBE + 2 Enhanced Full Rate & Enhanced Half Rate
Signaling Rate (kbps)	9.6	9.6
Modulation	GFSK	Phase1 TX: C4FM, RX: C4FM & WCQPSK Phase 2 TX: HCPM, RX: WCQPSK

ENCRYPTION

Encryption Algorithms	Voice Encryption: Single-key AES/DES, Multiple-key AES/DES, DES-OFB, Encryption Lite (ARC4)*, 256-bit AES P25, 64-bit DES Control Channel Encryption: 128-bit AES (LLA)
Encryption Keys per Radio	Capable of storing 128 keys (64 AES, 64 DES)

*Interoperates with commonly available ARC4 encryption algorithms.

BATTERIES

Type	Dimensions (H x W x D)	Weight	Life (@5% Tx, 5% Rx, and 90% standby)	Capacity (mAh)
Li-Ion	4.42 x 2.44 x 0.83 in	5.1 oz. (145 g)	10 hours	2400
Li-Polymer	4.42 x 2.44 x 0.83 in	6.6 oz (187 g)	16 hours	3600
NiMH	4.42 x 2.44 x 0.83 in	9.5 oz (270 g)	10 hours	2400

Technical specifications are subject to change without notice. Product sales are subject to applicable U.S. export control laws.

ACCESSORIES

The XG-75P offers a full complement of accessories for use in the industrial, public safety, utility and transportation markets.

Audio Accessories

Heavy-duty and lightweight headsets are available with in-ear or over-the-ear hearing protection, flexible boom microphones with noise-reduction technology and standard or remote PTTs. The XG-75P can also be used with Bone Conducting Skull Headsets and Throat Microphone / Headset Kits. Covert Audio Kits are available in black or beige, and in 2-wire or 3-wire configurations with earpiece, microphone, and PTT.

Speaker Microphone   *Fire Speaker Microphone*   *Tactical Headset*   *3-Wire Mini-Lapel Microphone*

Carrying Cases

Low-profile, integrated carrying options include a standard belt clip and premium belt loop. A premium leather holster can be attached to a belt or worn with the premium leather shoulder strap.

Nylon Carrying Case   *Belt Clip*   *Leather Carrying Case*

Chargers

Harris offers a variety of chargers for the XG-75P radio: Single-Bay, Multi-Bay and a Vehicular Charger. All are designed to quickly and safely charge battery packs in approximately 1 to 4 hours.

Single-Bay Charger   *Multi-Bay Charger*   *Vehicular Charger*

Additional Accessories Available

Antennas, Bluetooth® speaker microphones and covert earpieces, public safety speaker microphones, Lithium batteries, PC programming software and cables are available.

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