XG-25P Portable

VHF, UHF, 700/800 MHz

WHEN COMMUNICATION AND PERFORMANCE MATTER

XG-25P: The Feature-rich and Economical Solution for Narrowband P25 Performance

SCAN **SYSTEM**

The XG-25P meets the challenge. Armed with Bluetooth® functionality and ready for operation in the narrowband frequencies, the XG-25P is the economical solution for those who seek out the best in radio value. The XG-25P accomplishes this without sacrificing the functionality that is expected from a Harris radio in the XG family: exceptional audio in a rugged and lightweight design.

Standard features found on the XG-25P include:

- AMBE+2™ Vocoder – enhances audio quality
- Lightweight Design – does not weigh down a user with its total weight of 15 ounces (including Lithium Ion battery)
- Rugged for Field Use – meets MIL standard for durability

Optional features include:

- Bluetooth Functionality – avoid troubles with corded microphones
- Factory Mutual Intrinsically Safe – for operation in hazardous conditions when paired with an Intrinsically Safe battery and other accessories

Available in both System and Scan models, the XG-25P offers a full complement of accessories to suit a variety of user needs.

HARRIS®
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FUTURE READY

The XG-25P is an economical investment that agencies can rely on as transitions occur to P25 technology. The portable supports P25 conventional and trunked operation, wideband and narrowband channels, and its software-defined architecture allows field upgrading to operating modes such as P25 Phase 2.

SUPERIOR AUDIO EXPERIENCE

The XG-25P delivers the exceptional audio that users have grown to expect from Harris. The large speaker provides extremely powerful audio, and the AMBE+2 vocoder optimizes the quality of communications. The vocoder also controls distortion that may occur from shouting into the microphone. Through the combination of an oversized speaker and the AMBE+2 vocoder, the XG-25P provides one of the best audio experiences available.

BLUETOOTH READY

The XG-25P delivers Bluetooth functionality for a wireless interface to selected accessories. Bluetooth provides freedom of movement with no protruding parts or cumbersome wires or cables, allowing users the flexibility to operate without corded microphones or programming cables if desired.

LIGHTWEIGHT AND ERGONOMIC DESIGN

The XG-25P is one of the lightest radios in the Harris portfolio, weighing 15 ounces with the Lithium Ion battery. From the keypad buttons to the battery, each aspect of the radio has been developed to provide a better user experience. The knobs and buttons of the XG-25P have been designed to be strong enough to avoid incidental changes while still being easily managed by users wearing heavy gloves. The XG-25P is simple to operate so users may focus attention on the task rather than on radio operation.

ACCESSORIES

The XG-25P operates with a wide range of Harris accessories. Several of the newest accessories are shown below.

The 3600 mAH Lithium Polymer battery is the highest capacity Harris battery for single-band radios. Offering the ultimate in performance and ease of use, the battery has an average 16-hour shift life, 400 charge cycles, and maintenance-free Lithium battery technology. With its IP67 rating for immersion and dust/dirt particle intrusion, the battery is ideal for public safety, commercial and industrial, and utility applications.

The Wireless Bluetooth Remote Speaker Microphone (RSM) affords XG-25P users the capability to add an RSM to their system wirelessly. This Class 2 device, with a 10-meter wireless range, employs Secure Simple Pairing and encryption and contains a Lithium rechargeable battery with a 12-hour shift life. The compact design includes volume control buttons, a dedicated Emergency button, PTT button, Pairing and Power buttons, a 2.5-mm audio jack for earpiece accessories, and a ruggedized lapel clip for secure attachment to clothing.

The Standard Speaker Microphone includes a two-position volume control setting, emergency button, rubber PTT, and earphone jack in a compact yet highly functional design. A clothing clip that rotates a full 360 degrees provides complete accessibility. With construction that complies with MIL standard specifications, this speaker microphone meets the needs of a wide range of users.

GENERAL SPECIFICATIONS

XG-25P Portables are available in 2 models:

System: With dot matrix LCD and DTMF keypad

Scan: With dot matrix LCD and limited keypad

Dimensions (H x W x D):
(Without Knobs and Antenna)
With battery:
5.89 x 2.44 x 1.85 in.
(149.6 x 62.0 x 47.0 mm)

Weight (with Battery & Antenna):
Li-Ion: 15.0 oz (425g)
Li-Polymer: 16.4 oz (465g)
NiMH: 18.8 oz (533g)

Input Voltage:
7.5 VDC (nominal)

Vibration:
5 G (per U.S. Forest Service)

Shock:
1 meter drop (per TIA-603-C)

Battery Life (at 5% Tx, 5% Rx, and 90% standby):
Li-Ion: 8 hours (2000 mAH)
Li-Polymer: 16 hours (3600 mAH)
NiMH: 10 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, earpiece, speaker microphones, PC programming software and cables, subminiature surveillance accessories, antennas, cases, straps, belt loops and swivel mounts, desk chargers, and wall chargers.

Intrinsically Safe Options*
Factory Mutual Intrinsically Safe 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.
*For VHF only

RoHS compliant

RUGGED AND FEATURE-RICH PORTABLE RADIO

TRANSMITTER

TYPICAL PERFORMANCE SPECIFICATIONS	VHF	UHF	700/800
Frequency Range (MHz):	136-174	378-470	764-776, 794-805, 806-825, 851-870
Rated RF Power (W):	1.0-5.0	5	3
Frequency Stability (-30 to +60°C; +25°C Ref) (ppm):	±1.5	±1.5	±1.5
Frequency Separation (MHz):	38 (full bandwidth)	92 (full bandwidth)	NA
Modulation Deviation (kHz):	5.0 (wideband*) 2.5 (narrowband)	5.0 (wideband*) 2.5 (narrowband)	2.5, 4, or 5 FM
FM Hum and Noise (Companion Receiver) (dB):	49 (wideband*) 45 (narrowband)	49 (wideband*) 44 (narrowband)	44 (700 MHz) 47 (800 MHz NPSPAC) 48 (800 MHz non-NPSPAC)
Spurious and Harmonics (dBm/dBc):	-42/-80	-36/73	-55/90
Audio Response (dB):	+1/-3	+1/-3	Meets TIA-603-C Section 3.2.6
Audio Distortion (1 kHz tone): @ 3 kHz deviation: @ 2.4 kHz deviation: @1.5 kHz deviation:	 1% (wideband*) NA 1% (narrowband)	 1% (wideband*) NA 1% (narrowband)	 1% (800 MHz non-NPSPAC) 1% (800 MHz NPSPAC) 1% (700 MHz)
Project 25 Modulation Fidelity (%):	5	1.5	1
Project 25 Adjacent Channel Power (dBc):	73	67	73

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

RECEIVER

TYPICAL PERFORMANCE SPECIFICATIONS	VHF	UHF	700/800
Frequency Range (MHz):	136-174	378-470	764-776, 851-870
Frequency Separation (MHz):	38 (full bandwidth)	92 (full bandwidth)	NA
Channel Spacing (kHz):	25 (wideband*) 12.5 (narrowband)	25 (wideband*) 12.5 (narrowband)	12.5, 25, PLL Step
Frequency Stability (-30 to +60°C: +25°C Ref) (ppm):	±1.5	±1.5	±1.5
Sensitivity (12 dB SINAD) (µV/dBm):	0.25/-119.0 (wideband*) 0.30/-117.5 (narrowband)	0.25/-119.0 (wideband*) 0.30/-117.5 (narrowband)	0.21/-120.5 (700 MHz) 0.18/-122.0 (800 MHz NPSPAC) 0.19/-121.5 (800 MHz non-NPSPAC)
Project 25 Adjacent Channel Rejection @12.5 kHz (dB):	63	62	64
Offset Channel Selectivity@ NPSPAC (dB):	NA	NA	33
Selectivity @ 12.5 kHz (dB): @ 15 kHz (dB): @ 25 kHz (dB):	60 60 75	60 NA 72	NA 62 (700 MHz) 72 (800 MHz non-NSPPAC)
Intermodulation (dB):	70	75	72
Spurious and Image Rejection (dB):	75	73	72
FM Hum and Noise (dB):	45 (wideband*) 40 (narrowband)	54 (wideband*) 48 (narrowband)	45 (700 MHz), 50 (800 MHz NPSPAC) 50 (800 MHz non-NPSPAC)
Rated Audio Output (mW):	500	500	500
Audio Distortion:	1% @ rated power	1% @ rated power	1% @ rated audio output power
Project 25 Reference Sensitivity @ 5% BER (µV/dBm):	0.22/-120.0	0.22/-120.0	0.22/-120.0

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ENVIRONMENTAL SPECIFICATIONS

STANDARD	PARAMETER	METHODS & PROCEDURES
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
	Contamination by Fluids	504.1/2
	Solar Radiation	505.5/2
	Blowing Rain	506.6/1
	Humidity	507.4
	Salt Fog	509.5
	Blowing Dust	510.5/1
	Blowing Sand	510.5/2
	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, Powerful Water Jets	IP66
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.

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	WCQPSK & C4FM
Encryption Algorithms:	AES (FIPS-140-2 certified) & DES	AES (FIPS-140-2 certified) & DES

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	5.0	±1.5	OWDTR-0072-E	22, 80, 90	3636B-0072	RSS-119, RSS-210	J/F 12/10038
378-470	5.0	±1.5	OWDTR-0109-E	22, 80, 90	3636B-0109	RSS-119, RSS-210	J/F 12/10038
769-869	3.0	±1.5	OWDTR-0073-E	90	3636B-0073	RSS-119, RSS-210	NA

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

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