

VX-P920/P970 Series

P25 VHF/UHF Portable Radios

SPECIFICATION SHEET

Ready-To-Respond With P25 Interoperability

The conventional VX-P920/P970 Series is ready to respond when you are with APCO P25 interoperability, state-of-the-art engineering and a wide array of features, providing great value in its class.

P25 Digital Mode Capabilities

Expanded Signaling: Supports selective calling, Talk Group IDs (TGID), Network Access Codes, Individual ID lists and Paging Group lists for flexible communications.

Secure Communication (optional): Options available to support both Advanced Encryption Standard (AES) and Data Encryption Standard (DES) as required by APCO Project 25. Additionally, multiple encryption keys can be stored in the radio as required.

Mixed Mode: Seamlessly switch between analog to P25 digital mode on each channel based on call type received and on programming for transmit.

Enhanced Voice Quality: Featuring the AMBE+2™ Vocoder, get exceptional voice quality in both digital P25 and narrow-band modes of operation.

Connectivity Assurance: The RSSI warning emits an audible alert when the receive signal strength drops to a level not suitable for reliable communications.

Loud Audio For Noisy Environments

With 700 mW audio output, be assured of hearing critical information you need in most situations.

Intrinsically Safe

The VX-P920/P970 Series comes in intrinsically safe options that meet the SGS requirements of ANSI/UL913 6th Edition for Class I, Division I, Groups A-D, Class II, Groups E-G; and Class III for use in hazardous locations.

Never Miss An Important Call

Includes flexible scanning features designed to optimize operation. Along with basic scan, get Priority, Dual Watch, Follow-me, Follow-me Dual Watch and Talk Around scanning with a programmable home channel function built-in.

When Safety Counts – Never Be Alone

When help is needed, the VX-P920/P970 Series has Emergency notification that will switch to a designated channel and send an emergency alert. The radios also include Remote Listen which turns the radio transmit on remotely if needed to check out what is happening near the radio.

Dual-Band Receive For Enhanced Communications

With the Sub-Receiver option, get single VHF or UHF transmit with dual-band receive for greater flexibility and multi-agency interoperability.



The Vertex Standard Difference

Our number one goal is achieving superior customer satisfaction by delivering products and services that exceed your expectations. Vertex Standard radios are built to last and are backed by an industry-leading 3 year warranty – another great reason to choose Vertex Standard. Ask your Dealer for more details.



Additional Features

- 512 Channel capacity (VX-P929/P924/P979/P974)
- 48 Channel capacity (VX-P921/P971)
- Wide band coverage
- Field programmable (VX-P929/P979)
- Ten programmable keys (VX-P929/P979)
- Eight programmable keys (VX-P924/P974)
- Four programmable keys (VX-P921/P971)
- Programmable 3-position toggle key
- Direct channel recall
- 12-Character LCD (VX-P929/P924/P979/P974)
- Minimum volume control
- User set mode (VX-P929/P924/P979/P974)

P25 Digital Mode Only

- Caller ID display (VX-P929/P924/P979/P974)
- BCLO and TOT

Analog Mode Only

- RX/TX Battery power save
- DTMFANI / DTMF Paging
- Lone Worker
- 2-Tone encode and multiple 2-tone decode
- CTCSS/DCS Encode and Decode
- BCLO/BTLO and TOT
- MDC1200® Encode (PTT ID, Emergency ID)
- Auto-Range Transpond System (ARTS™)
- Comander
- Clear voice and audio pitch control
- 7-Color LED call alert indicator
- User selectable tone (VX-P929/P924/P979/P974)
- Radio-to-radio cloning

Accessories

- MH-50D7A: Public Safety speaker mic w/toggle
- MH-66A7A: Submersible noise cancelling speaker mic
- MH-66B7A: Submersible speaker mic w/PF key & toggle
- VH-121: 3-Wire mini lapel microphone surveillance kit
- VH-131: 2-Wire earpiece, palm mic. with PTT
- VH-111: Over-the-head dual-muff headset
- VH-115L: Behind-the-head headset w/boom mic.
- VH-215L: Over-the-head single-muff headset
- FNB-V92LI: 3000 mAh Li-Ion battery
- FNB-V92LIIS: 3000 mAh Intrinsically safe Li-Ion battery
- FNB-V87LI: 2000 mAh Li-Ion battery
- FNB-V86LI: 1150 mAh Li-Ion battery
- FBA-34: Alkaline battery case (holds 6 AA batteries)
- VAC-920: Desktop rapid charger
- VAC-6920: 6-Unit rapid charger
- VCM-2: Vehicular charger kit
- LCC-920S: Leather case w/swivel belt clip

Option Boards

- SRX-3D/H: Dual-band Rx module (adds UHF Rx)
- SRX-4: Dual-band Rx module (adds VHF Rx)

Specifications are subject to change without notice or obligation.

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VX-P920/P970 Series Specifications

| | VHF | UHF |
|---|--|---|
| General Specification | | |
| Frequency Range | 134 – 174 MHz | 380 – 450 MHz 400 – 470 MHz 450 – 512 MHz |
| Number of Channels and Groups | 512 and 32 Groups (VX-P929/P979/P924/P974) 48 and 3 Groups (VX-P921/P971) | |
| Power Supply Voltage | 7.4V DC ± 20% | |
| Channel Spacing | 12.5 / 20 / 25 kHz | |
| PLL Steps | 1.25 / 2.5 / 5 / 6.25 kHz | 5 / 6.25 kHz |
| Battery Life (5-5-90 duty) | 19.6 hours (15.1 hrs w/o saver) | |
| 3000 mAh FNB-V92LI | 21 hrs (16 hrs w/o saver) | 13.1 hrs (10.1) hrs w/o saver |
| 2000 mAh FNB-V87LI | 14 hrs (10.6 hrs w/o saver) | |
| IP Rating | IP 57 (VX-P920 series) / IP 68 (VX-P970 series) | |
| Operating Temperature Range | -22° F to +140° F (-30° C to +60° C) | |
| Frequency Stability | ±2.5 ppm | |
| RF Input-Output Impedance | 50 Ohms | |
| Dimension (H x W x D) | 5.3 x 2.3 x 1.5 inches (133 x 57.5 x 37.5 mm) (w/FNB-V86LI) | |
| Weight (Approx.) | 13.4 oz (380 g) (w/FNB-V86LI, ANT and Belt Clip) | |
| Receiver Specification: measured by TIA/EIA-603, TIA-102 CAAA (Digital) | | |
| Sensitivity 12dB SINAD | 0.25 µV | 0.32 µV |
| Digital 5% BER | 0.25 µV | 0.32 µV |
| Digital 1% BER | 0.35 µV | 0.40 µV |
| Adjacent Channel Selectivity (W/N) | 75 / 70 dB | |
| Intermodulation | 75 / 70 dB | |
| Spurious and Image Rejection | 80 dB | 75 dB |
| Audio Output | 700 mW @ 16 Ohms 5% THD | |
| Transmitter Specification: measured by TIA/EIA-603, TIA-102 CAAA (Digital) | | |
| Output Power | 5 / 2.5 / 1 / 0.25 W | |
| Modulation | Analog 16K0F3E, 11K0F3E Digital 8K10F1D / 8K10F1E | |
| Spurious Emissions | 70 dB | |
| FM Hum and Noise (W/N) | 46 / 40 dB | |
| Audio Distortion | < 3% @ 1 kHz | |

Applicable MIL-STD

| Standard | MIL 810C Methods/ Procedures | MIL 810D Methods/ Procedures | MIL 810E Methods/ Procedures | MIL 810F Methods/ Procedures |
|----------------------------|------------------------------|------------------------------|------------------------------|-------------------------------|
| Low Pressure | 500.1 | 500.2 | 500.3 | 500.4 |
| High Temperature | 501.1/Procedure I, II | 501.2/Procedure I, II | 501.3/Procedure I, II | 501.4/Procedure I, II |
| Low Temperature | 502.1/Procedure I, II | 502.2/Procedure I, II | 502.3/Procedure I, II | 502.4/Procedure I, II |
| Temperature Shock | - | 503.2 / Procedure I | 503.3 / Procedure I | 503.4/Procedure I |
| Solar Radiation | 505.1/Procedure I | 505.2/Procedure II Cat. A1 | 505.3/Procedure II Cat. A1 | 505.4/Procedure I, II Cat. A1 |
| Rain | 506.1/Procedure I | 506.2/Procedure I | 506.3/Procedure I, II | 506.4/Procedure I |
| Humidity | 507.1/Procedure I, II | 507.2/Procedure II, III | 507.3/Procedure II, III | - |
| Salt Fog | 509.1 | 509.2 | 509.3 | 509.4 |
| Dust | 510.1/Procedure I | 510.2/Procedure I | 510.3/Procedure I | 510.4/Procedure I, III |
| Immersion (VX-P970 series) | 512.1/Procedure I | 512.2/Procedure I | 512.3/Procedure I | 512.4/Procedure I |
| Vibration | 514.2/ Procedure VIII, X | 514.3/Procedure I Cat. 10 | 514.4/Procedure I Cat. 10 | 514.5/Procedure I Cat. 20, 24 |
| Shock | 516.2/Procedure I | 516.3/Procedure I | 516.4/Procedure I | 516.5/Procedure I |