

VX-600 SERIES

VHF/UHF Portable Radios



- 48 CHANNEL CAPACITY
(Managed in up to 3 Memory Groups)
- WIDE-BAND COVERAGE
- 5 WATTS POWER OUTPUT
(Selectable to 2.5, 1.0, 0.25, W)
- LONG BATTERY LIFE:
14 (w/FNB-V68LI) or 18 (w/FNB-V69LI)
HOURS (VX-600U w/saver)
- SIXTEEN POSITION ROTARY
CHANNEL SELECTOR
- 12.5 / 25 kHz BANDWIDTH
PROGRAMMABLE PER CHANNEL
- MIL-STD 810 C/D/E
- DIE-CAST CHASSIS
- NON-WIRE MAIN BOARD
CONSTRUCTION
- SINGLE / DUAL PRIORITY SCAN MODES
- NOISE CANCELING MICROPHONE
- WATER SHIELD MICROPHONE
CONNECTION
- MIL-SPEC SPEAKER MIC AVAILABLE
- LOUD 700 mW AUDIO OUTPUT
- 8 PROGRAMMABLE SOFT KEYS AND
3-POSITION TOGGLE SWITCH
- DTMF SIGNALING & DIALING FEATURES
- CTCSS / DCS ENCODE + DECODE
- EMERGENCY FUNCTIONS
- ENCRYPTION
- INTRINSICALLY SAFE VERSION
AVAILABLE
- OPTIONAL ALKALINE BATTERY CASE
- RADIO TO RADIO CLONE FEATURE
- TALK AROUND
- BCLO, BTLO, AND TOT FUNCTIONS
- PROGRAMMABLE MINIMUM VOLUME

VX-600

SERIES

Engineered to make its advanced features easy to use, and providing the ruggedness demanded by public safety users, the VX-600 utilizes a large-capacity Lithium-Ion battery, which typically provides 14 hours of operating time (VX-600U w/FNB-V69LI). With improved scan speeds, Emergency Alert, and User Selectable Tones / Codes, 48 Channel Capacity, and a host of easily-programmable customization features, the VX-600 is ideal for a wide variety of public safety and commercial applications.

The VX-600 gives you the reliability and dependability you require, built to meet the punishing test procedures of MIL-STD 810 C, D, & E, as well as the highest-level Intrinsically Safe rating. With a Weather Sealed mic connector, built-in Noise Canceling Microphone, and a loud 700 mW audio output stage, this very capable and rugged package is ready to serve your communications needs.

DURABLE CONSTRUCTION

MIL-SPEC CONSTRUCTION

Built to meet or exceed the requirements of the U.S. MIL-STD 810 C/D/E standards, the VX-600 is designed to survive under difficult operating conditions of shock, vibration, and driving rain.



DIE-CAST CHASSIS AND WEATHERPROOF CASE DESIGN

The VX-600's ruggedness begins with its one-piece die-cast aluminum chassis, which provides high strength and durability along with light weight. Surrounding the portable's circuitry is a one-piece high-impact case, sealed against water ingress by a robust O-ring.



WATER SHIELD MICROPHONE CONNECTION

The multi-pin accessory connector on the side of the VX-600, sealed for protection against weather, provides a convenient connection point for the MH-50_{ATA} Speaker/Microphone or other accessories. Its gold-plated contacts ensure many years of reliable service.



NON-WIRE MAIN BOARD CONSTRUCTION

Advanced non-wire construction improves reliability over the life of the radio. Non-wire construction eliminates the durability concern of pinched wires and broken wire connection at solder points. The construction is neat and well protected against the rigors of daily, heavy use.



HIGH PERFORMANCE

LOUD 700 mW AUDIO OUTPUT

Ideal for reception in noisy environments, the VX-600's high-powered audio is coupled to a large internal speaker, assuring solid copy throughout difficult crowd control, fire, or sporting-event operations.

NOISE CANCELING MICROPHONE

Providing a significant reduction in transmitted background noise, the built-in Noise Canceling Microphone helps push your critical messages through, even in very noisy environments.

MIL-SPEC SPEAKER/MIC AVAILABLE

Built to survive under difficult field conditions, the optional MH-50_{ATA} Speaker/Mic includes a Noise Canceling microphone design.

12.5/25 kHz BANDWIDTH PROGRAMMABLE PER CHANNEL

The VX-600 may be programmed with Wide or Narrow operating bandwidths, channel by channel, to conform to your local channel environment. Ideal for multi-jurisdiction operations.

LITHIUM-ION BATTERIES PROVIDE EXTENDED OPERATING TIMES

The 1800 mAh Lithium-Ion Battery Pack typically provides 11 hours of operation, while the long life 2400 mAh Battery Pack yields up to 14 hours on the UHF Version.

OPTIONAL ALKALINE BATTERY CASE

For situations where recharging of battery packs is not available, the optional FBA-27 Alkaline Battery Pack allows the use of six AA Alkaline batteries to power the VX-600.

VERSATILITY

48 CHANNEL CAPACITY (Managed in up to 3 Memory Groups)

Huge 48-channel capacity may be partitioned into as many as 3 Memory Groups, with no limit on the number of channels in each Group. A single radio may therefore be programmed with channel sets for a number of different jurisdictions or organizations.

WIDE-BAND COVERAGE

Coverage beyond typical limits allows programming in guard band channel allocations, and ensures compatibility for programming in a wide variety of locations.

SINGLE/DUAL PRIORITY SCAN MODES

Monitor one or two important channels on a Priority basis. Flexible Revert and Talk-Back functions ensure compatibility with existing user operating knowledge, thus minimizing training time in new installations.

HIGH-SPEED SCAN

The lightning-fast scanning capability allows rapid coverage of the VX-600's huge memory bank. Nuisance channels may temporarily be deleted, and single-group and multiple-group scanning are available.

PROGRAMMABLE SOFT KEYS (4- and 8-Key Models Available) AND 3-POSITION TOGGLE SWITCH

Customization of feature access is easily accomplished at the time of programming. Complete flexibility in assignment of features ensures compatibility with existing-system requirements.



DTMF SIGNALING & DIALING FEATURES

The 16-Key versions of the VX-600 provide both manual and Speed Dial DTMF calling. All versions provide programmable PTT ANI for business or fleet applications.

CTCSS/DCS ENCODE + DECODE

High-performance Encoder/Decoder circuits for both CTCSS and Digital Code Squelch are provided, for access to tone/code controlled systems.



EASY USER INTERFACE

SIXTEEN-POSITION ROTARY CHANNEL SELECTOR

The top panel's rugged rotary switch may be used for channel selection, or for selection of the desired Memory Group.

KEY LOCK

A soft key may be assigned as a Key Lock control, to prevent inadvertent frequency change or unwanted activation/de-activation of functions. This is especially valuable in surveillance operations, where the radio may be concealed and subject to accidental pressure on its keys.

ERGONOMIC CONSTRUCTION

The carefully-engineered case construction features a gently rounded shape for a solid grip, whether the radio is wet or dry. Its oversized front panel keys are easy to activate, even for users with large fingers.



SECURITY

EMERGENCY FUNCTIONS

The VX-600 may be programmed to transmit an emergency DTMF ENI burst, with or without a live microphone engaged, to alert the dispatcher to an emergency situation requiring assistance to the officer.



ENCRYPTION

The FVP-25 Encryption Unit provides security for your important public safety and private security communications, and it also includes a DTMF Paging function for selective calling.

INTRINSICALLY SAFE VERSION AVAILABLE

Included in the VX-600 Intrinsically Safe version's certification is approval for use in the hazardous Hydrogen and Acetylene environments.

RADIO-TO-RADIO CLONE FEATURE

For quick programming of VX-600 radios for an emergency task force, the Clone feature allows copying of all channel and other configuration data from one VX-600 to another, using the optional CT-72 Cloning Cable.

OTHER FEATURES:

- 5 Watts Power Output (Selectable to 2.5, 1.0, 0.25 W)
- Talk Around
- BCLO, BTLO, and TOT functions
- Programmable Minimum Volume



ACTUAL SIZE

Specifications

| VX-600V | | VX-600U |
|--|--|---|
| General Specifications | | |
| Frequency Range | 134-160 MHz (A) 148-174 MHz (C) | 400-430 MHz (AS1) 450-490 MHz (D) 485-512 MHz (F) |
| Number of Channels | 48 Channels | |
| Channel Spacing | 12.5/25/30 kHz | 12.5/25 kHz |
| PLL Steps | 1.25/2.5/5/6.25 kHz | 5/6.25 kHz |
| Power Supply Voltage | 7.4 VDC ±20 % | |
| Battery Life (5-5-90 duty) | | |
| w/FNB-V68LI(1800 mAh) | 13 hrs. (17 hrs. w/saver) @5 W | 11 hrs. (14 hrs. w/saver) @5 W |
| w/FNB-V69LI(2400 mAh) | 16 hrs. (21 hrs. w/saver) @5 W | 14 hrs. (18 hrs. w/saver) @5 W |
| Operating Temperature Range | -22° F to +140° F (-30° C to +60° C) | |
| Frequency Stability | Better than ±2.5 ppm | |
| Dimensions | 2.3" (W) x 6.1" (H) x 1.3" (D) (59 x 155 x 34 mm) | |
| Weight | 0.93 lb. (420 g) w/Antenna, FNB-V68LI and Belt clip | |
| Battery | Lithium-Ion 7.4 V 1800 mAh or Lithium-Ion 7.4 V 2400 mAh | |
| Receiver Specifications Measurements made per EIA standard TIA/EIA-603 | | |
| Sensitivity | | |
| EIA 12 dB SINAD | | 0.25 µV |
| 20 dB Quieting | | 0.35 µV |
| Adjacent Channel Selectivity | | |
| 25 kHz / 12.5 kHz channel spacing | 75 dB / 70 dB | 75 dB / 68 dB |
| Intermodulation | | |
| 25 kHz / 12.5 kHz | 75 dB / 68 dB | 75 dB / 65 dB |
| Spurious and Image Rejection | 75 dB | |
| Hum & Noise | 4.5 dB / 4.0 dB | |
| Audio Output | 700 mW @16 Ohms, 5 % THD | |
| Transmitter Specifications Measurements made per EIA standard TIA/EIA-603 | | |
| Power Output | 5.0/2.5/1.0/0.25 W | |
| Modulation | Direct FM 16K0F3 E, 11K0F3 E | |
| Conducted Spurious Emissions | 70 dB Below Carrier | |
| FM Hum & Noise | 4.5 dB (25 kHz) / 4.0 dB (12.5 kHz) | |
| Audio Distortion (@1 kHz) | <3 % | |

Measurements per EIA standards unless noted above. Specifications subject to change without notice or obligation.
























Applicable MIL-STD

| Standard | MIL 810C Methods/Procedures | MIL 810D Methods/Procedures | MIL 810E Methods/Procedures |
|-------------------|-----------------------------|-----------------------------|-----------------------------|
| Low Pressure | | 500.2/Procedure 2 | 500.3/Procedure 2 |
| High Temperature | 501.1/Procedure 1, 2 | 501.2/Procedure 1, 2 | 501.3/Procedure 1, 2 |
| Low Temperature | 502.1/Procedure 1 | 502.2/Procedure 1, 2 | 502.3/Procedure 1, 2 |
| Temperature Shock | 503.1/Procedure 1 | 503.2/Procedure 1 | 503.3/Procedure 1 |
| Solar Radiation | 505.1/Procedure 1 | 505.2/Procedure 1 | 505.3/Procedure 1 |
| Rain | | 506.2/Procedure 1, 2 | 506.3/Procedure 1, 2 |
| Humidity | 507.1/Procedure 2 | 507.2/Procedure 2 | 507.3/Procedure 2 |
| Salt Fog | | 509.2/Procedure 1 | 509.3/Procedure 1 |
| Dust | | 510.2/Procedure 1 | 510.3/Procedure 1 |
| Vibration | 514.2/Procedure 8, 10 | 514.3/Procedure 1 Cat. 10 | 514.4/Procedure 1 Cat. 10 |
| Shock | 516.2/Procedure 1, 5 | 516.3/Procedure 1, 4 | 516.4/Procedure 1, 4 |

Intrinsically Safe Approvals

The VX-600 VHF and UHF models have been given an intrinsically safe rating for use in ANSI/UL-913-88 Class I, II, and III, Division 1, Groups A, B, C, D, E, F, and G hazardous environments on models equipped with the Intrinsically Safe option.

Accessories & Options

| | |
|---|--|
|  MH-50A7A Speaker/Microphone (Noise Canceling) |  VH-110 Over the Head, Heavy Duty Headset |
|  VH-120 3-Wire Earpiece, Mic, Palm PTT Switch |  VH-130 2-Wire Earpiece, Palm Mic/ PTT Combo |
|  VH-140 DSP VOX Earpiece-Mic* |  VH-150 DSP VOX Bone-vibration Headset* |
|  VH-160 Earpiece, Mic, Body PTT System* |  VH-170 Bone-vibration Headset* |
|  FVP-25 Encryption/DTMF Pager Unit |  VTP-50 VX-Trunk Unit |
|  F2D-8 2-Tone Decode Unit |  F5D-14 5-Tone ENC/DEC Unit |
|  FNB-V68LI 7.4 V 1800 mAh Li-Ion Battery |  FBA-27 Alkaline Battery Case (6XAA) |
|  FNB-V69LI 7.4 V 2400 mAh Li-Ion Battery |  VAC-6900 6-unit Multi Charger |
|  VAC-900B/C Desktop Rapid Charger (B for 120 VAC/ C for 240 VAC) |  VCM-1 Mobile Mounting Bracket for VAC-900 |
|  CT-70 Radio Programming Cable (Requires VPL-1) |  LCC-900/S Leather Case (S for swivel belt clip) |
|  CT-71 Radio Programming Cable |  CT-72 Radio to Radio Programming Cable |
|  CE39 Programming Software | * Non-inventory item, special order required. Various accessories listed may not be available in some countries. |



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ISO9001



Sukagawa Division
Trondule Co., Ltd.
ISO9001 certification

ISO14001



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