

# VX-410/420 Series

## VHF/UHF Portable Radios

### SPECIFICATION SHEET

### Dependable and Discreet Communications

The Vertex Standard VX-410 / VX-420 Series radios provide a host of built-in features in compact convenience for the quality communications you need.

### Large Channel Capacity for Group Communications

Get 32-channel capacity, divided into two 16-channel groups, for quick and convenient channel access that allows for future organizational growth.

### Discreet Communications and Security

Includes Voice Encryption for private communications and programmable key lock control to prevent inadvertent channel change or unwanted function changes, which may be important when the radio is concealed and subject to accidental pressure on the keys.

These radios also support over-the-air Stun, Kill and Revive to disable a lost or stolen radio – mitigating any breach of security from unwanted listeners.

Add the optional DVS-5 Voice Storage unit to record and store up to 120 seconds for keeping an audible record of important messages.

### When Safety Counts

Includes built-in Emergency notification that will switch to a designated channel and send an emergency alert. For enhanced worker safety, the Lone Worker mode is a built-in timer that requires the user to reset at a predetermined interval. If not reset, the radio automatically switches to Emergency mode to alert help.

### Intrinsically Safe

Both the VX-410 and VX-420 Series come in intrinsically safe options that meet the SGS requirements of ANSI/UL913 6th Edition for use in Classes I, II, III, DIV I Groups A – G hazardous locations.

### Exclusive Auto-Range Transpond System – ARTS™

Only Vertex Standard radios are designed to inform you when you and another ARTS™-equipped station are within communication range. If out of range for more than 2 minutes, your radio senses no signal has been received and beeps to alert you. The base station can then alert the field unit to move back in range. A great solution to keep your workers coordinated.



### 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

- Six programmable keys (VX-420)
- Two programmable keys (VX-410)
- 8-Character alphanumeric display (VX-420)
- RX/TX Battery power save
- DTMF ANI
- 2-Tone Encode + Dual 2-Tone Decode
- CTCSS / DCS Encode and Decode
- 5-Tone signaling
- Compander
- BCLO, BTLO and TOT Functions
- Programmable alert tone
- Priority scan
- Dual Watch scan
- Follow-me scan
- Talk Around scan
- Radio-to-radio cloning

## Accessories

- MH-360S: Compact speaker microphone
- MH-37A4B: Earpiece microphone
- MH-450S: Speaker microphone
- MH-45B4B: Noise cancelling speaker microphone
- VH-115S: Behind-the-head headset w/boom mic
- VH-215S: Over-the-head single-muff headset
- VC-25: Over-the-head VOX headset
- VH-120S: 3-Wire earpiece mic w/palm PTT switch
- VH-130S: 2-Wire earpiece w/palm mic and PTT switch
- FNB-V67LI: 2000 mAh Li-Ion battery
- FNB-83: 1400 mAh NiMH battery
- FNB-V57IS: 1100 mAh Intrinsically Safe NiCd battery
- FBA-25A: Alkaline battery case (6 AA size)
- Desktop chargers available
- 6-Unit rapid chargers available
- VCM-1: Vehicle mounting bracket for battery charger
- LCC-410S: Leather case w/swivel belt clip (VX-410)
- LCC-420S: Leather case w/swivel belt clip (VX-420)

## Option Boards

- FVP-25: Voice Inversion Encryption & DTMF Paging
- FVP-35: Rolling Code Encryption
- DVS-5: Digital voice storage
- VME-100: MDC-1200® / GE-STAR® ANI Encode
- VMDE-200: MDC-1200® / GE-STAR® ANI Enc./Dec.

## VX-410/420 Series Specifications

	VHF	UHF
<b>General Specification</b>		
Frequency Range	146 – 174 MHz	450 – 490 MHz
Number of Channels	32 (16 channels x 2 groups)	
Power Supply Voltage	7.5V DC ± 20%	
Channel Spacing	12.5/20/25 kHz	
PLL Steps	2.5 / 6.25 kHz	5 / 6.25 kHz
Battery Life (5-5-90 duty)		
2000 mAh FNB-V67LI	16 hrs (12.5 hrs w/o saver)	15 hours (11 hrs w/o saver)
1100 mAh FNB-V57IS	8.8 hrs (7 hrs w/o saver)	8 hrs (6.5 hrs w/o saver)
IP Rating	IP 54	
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)	4.3 x 2.3 x 1.2 inches (108.5 x 58 x 30 mm) (w/FNB-67LI)	
Weight (Approx.)	10.6 oz (300 g) (w/FNB-V67LI, ANT, Belt Clip)	
<b>Receiver Specification: measured by TIA/EIA-603</b>		
Sensitivity 12dB SINAD	0.25 µV	
Adjacent Channel Selectivity	70 / 65 dB	
Intermodulation	70 dB	
Spurious and Image Rejection	70 dB	
Audio Output	500 mW @ 4 Ohms 5% THD	
<b>Transmitter Specification: measured by TIA/EIA-603</b>		
Output Power	5 / 1 W	
Modulation	16K0F3E, 11K0F3E	
Conducted Spurious Emissions	70 dB below carrier	
FM Hum & Noise	45 dB	
Audio Distortion	< 3 % @1kHz	

## Applicable MIL-STD

Standard	MIL 810D Methods/ Procedures	MIL 810E Methods/ Procedures	MIL 810F Methods/ Procedures
Low Pressure	500.2/Procedure I, II	500.2/Procedure I, II	500.3/Procedure I, II
High Temperature	501.2/Procedure I, II	501.3/Procedure I, II	501.4/Procedure I, II
Low Temperature	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, II
Rain	506.2/Procedure II	506.3/Procedure II	506.4/Procedure I, II
Humidity	507.2/Procedure II, III	507.3/Procedure II, III	507.4
Salt Fog	509.2	509.3	509.4
Dust	510.2/Procedure I	510.3/Procedure I	510.4/Procedure III
Vibration	514.3/Procedure Cat. 10	514.4/Procedure Cat. 10	514.5/Procedure Cat. 24
Shock	516.3/Procedure I	516.4/Procedure I	516.5/Procedure I

Specifications are subject to change without notice or obligation.

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NSS410-420\_03/2009