

VX-4100/4200 SERIES

VHF/UHF Mobile Radios



- HIGH POWER OUTPUT (50W VHF/45W UHF)
- WIDE FREQUENCY SPAN
134-174 MHz (VX-4104/4204)
450-512 MHz (VX-4107/4207)
- 501 CHANNELS/32 GROUPS (VX-4200 SERIES)
- 8 CHANNELS (VX-4100 SERIES)
- LARGE LCD WITH 12-CHARACTER ALPHA-NUMERIC LABELS AND OPERATING STATUS ICONS (VX-4200)
- WIDE/NARROW DEVIATION (12.5/20/25 kHz), PROGRAMMABLE PER CHANNEL
- CTCSS AND DCS ENCODE/DECODE
- DTMF ANI AND PAGING
- 2-TONE ENCODE AND MULTIPLE 2-TONE DECODE
- 5-TONE SIGNALLING BUILT IN
- USER-SELECTABLE TONES
- CHANNEL SCAN PLUS PRIORITY SCAN, DUAL WATCH, AND FOLLOW-ME SCAN/DW
- BUILT-IN EMERGENCY MICROPHONE
- AUDIO COMPANDER (WIDE/NARROW-BAND)
- LOUD 2/12 W AUDIO OUTPUT FRONT SPEAKER
- BCLO, BTLO, AND TOT
- REMOTE RADIO STUN/KILL/REVIVE
- PUBLIC ADDRESS/HORN ALERT
- PROGRAMMABLE MINIMUM VOLUME
- PROGRAMMABLE FUNCTION KEYS
- USER "SET" (MENU) MODE
- D-CUB 15-PIN ACCESSORY CONNECTOR
- ARTS™ (AUTO-RANGE TRANSPONDER SYSTEM)
- OPTIONAL ENCRYPTION
- OPTIONAL VOICE STORAGE
- MIL-STD 810 C/D/E



VX-4100/VX-4200

SERIES

Public Safety applications require three essential elements: reliability, ruggedness, and performance versatility. These three elements are found in the VX-4100 (8-Channel) and VX-4200 (501-Channel) series of FM Mobiles from Vertex Standard. Wide programmable frequency coverage, high power output (50 Watts VHF/45 Watts UHF), leading-edge signaling capability, and a 12-character alpha-numeric display are just a few of the many reasons why the VX4100 and VX-4200 are the best choice for the most demanding Public Safety environments.



VX-4100 Series



VX-4200 Series

Actual Size

VX-4100 Series 8 Channels VHF/UHF Mobile Radios

3 PROGRAMMABLE FRONT KEYS

The programmable keys allow for customizing the radio to suit your needs. Programmable functions include (but not limited to): Monitor, Home Channel, Direct access (channel #), External accessory control, Scan and many many more. The radio can be configured for your needs, and leave out the features you don't need to worry about.



VX-4200 Series 501 Channels VHF/UHF Mobile Radios

5 PROGRAMMABLE FRONT KEYS

P1 through P4 and an A key allow for customizing the radio to suit your needs. Programmable functions includes (but not limited to): Monitor, Squelch, Dimmer, Home Channel, Direct access (channel #), External accessory control and many many more. The radio can be configured for your needs, and leave out the other features that you don't need to worry about.

HIGH CONTRAST LCD DISPLAY

The high contrast LCD allows for 12 alphanumeric character channel tags. Enough characters to name the channel yet still provide large, readable displays. Besides the channel (and Group) name, the display tells you: scan activation, low power, priority scan, voice msg received, and channel and group numbers in a sub LCD display.

GENEROUS CHANNEL CAPACITY

501 channels maximum managed in up to 32 groups. If you need plenty of channels, we have you covered. The channels can be grouped in any way. This makes it easy for you to go from channel 3 to channel 73. Only need 50 channels? No problem. You will only see channels that you have programmed.

DIRECT CHANNEL ACCESS

With over 500 channel capabilities, you will always have one or two channels that are your primary channels. The VX-4200 has four Direct Channel Access field to immediately take you to where you want to be. Direct Channel Access when assigned to a programmable key, allows you to jump right to the channel you want, even if it is in another group.



HIGH PERFORMANCE

WIDE BANDWIDTH

For communicating with other agencies, companies, or even within your own communications system, the wide bandwidth of this radio will let you operate anywhere within the 40 MHz (VHF) or 62 MHz (UHF) band.

WIDE / NARROW (12.5 / 20 / 25 kHz PER CHANNEL)

The VX-4100/VX-4200 may be programmed with Wide or Narrow operating bandwidths, channel by channel, to conform to your local channel environment. Ideal for multi-jurisdiction operations.

AUDIO COMPANDING

For narrow-band channel applications, the built-in Audio Companding system compresses the voice waveform during transmission, and expands it during reception, allowing full-sounding audio despite the restricted transmission bandwidth.

LOUD 2/12W AUDIO OUTPUT FRONT SPEAKER

The VX-4100/VX-4200's high-powered audio (2 Watts standard, 12 Watts optional) is coupled to a large, front-facing speaker, producing high-quality, crisp audio that will punch through even in the noisy environments experienced by public safety officers.



VERSATILITY

POPULAR 2-TONE ENCODE AND DECODE FUNCTIONS

2-Tone encode and decode gives you the selective calling used nationwide. Encode and decode functions for the 2-tone format include multiple decode pairs as well as multiple encode tones. DTMF paging and identification is also built-in to allow selective paging and to see who is calling you.

BUILT-IN 5-TONE SIGNALLING

The 5-Tone signaling feature gives you many features found on much higher priced competitors. Features such as remote Stun, Kill, Revive. Remote listen (remote TX), 100 unique status messages, ANI Tag display, and many more.

REMOTE STUN/KILL/REVIVE

Need to disable a radio in the field? No problem. The VX-4100 gives you the ability to Stun, Kill, and Revive over the air in the 5-Tone signalling. Another built-in feature you can use to your system's advantage.

OPTIONAL VOICE STORAGE

With the optional DVS-5 Voice Storage unit installed, you can hear page transmissions while away from the vehicle. When activated (programmable softkey), the voice storage unit waits for a page, then begins recording. Upon return, you will see the "Message Icon" alerting you of the page and message.

PROGRAMMABLE MINIMUM VOLUME

Another feature to ensure all calls are heard. The radio can be programmed for a minimum volume level. If the radio is on, the minimum volume level will ensure the audio of a call will be heard.

VERSITILE SCANNING FEATURES

The VX-4100 provide scan of all or some of the eight channels programmed. Also, if a channel is flagged as Priority, that channel is monitored even during non-priority calls. Besides the normal Scan and Priority Scan modes, the VX-4200 adds Group Scan. You can scan all Groups or selected Groups.

ARTS™ (AUTO RANGE TRANSPONDER SYSTEM)

The Auto-Range Transponder System, a Vertex Standard exclusive, alerts the operator when another ARTS™-equipped station (for example, a hand-held unit) moves out of communication range. You can then advise the other user to move to a better location.

SECURITY

EMERGENCY MODE

When the Emergency feature is activated, the radio will switch to an emergency channel and transmit with live mic audio through a front panel mounted microphone. Among the many programmable features of the emergency mode are: Live TX time, RX Live time, RX dead time, and more.



OPTIONAL VOICE ENCRYPTION MODULES

With options for simple inversion or rolling code, we have the right encryption level to fit your requirements and budget.

DURABLE CONSTRUCTION

BUILT TOUGH, BUILT TO LAST

Rugged design to meet Mil-Std 810 C/D&E will allow this radio to last. The Ultra-rugged design enables this mobile to pass a torrent of Mil-Std tests listed in this brochure. The extraordinary design and construction ensures many years of reliable service, even in high vibration, dusty or extreme temperature environments.



Ultra-rugged design

OTHER FEATURES

D-SUB 15 PIN ACCESSORY CONNECTOR

The included D-Sub 15 pin connector on the rear panel allows for access to Audio In, Audio Out, Ext PTT, RSSI, and many more functions making this radio perfect for third party interfaces.



TOT, BCLO, BTLO FEATURES

Among the most useful protection features of the VX-2500 are the transmitter Time-Out Timer (TOT), Busy Channel Lock-Out (BCLO), and Busy Tone Lock-Out (BTLO), to ensure efficient network performance at all times.

RADIO TO RADIO CLONE FEATURE

For quick programming of VX-4100/4200 radios for an emergency task force, the Clone feature allows copying of all channel and other configuration data from one VX-4100/4200 to another, using the optional CT-4 Cloning Cable.

● TALK AROUND ● PUBLIC ADDRESS/HORN ALERT

Accessories & Options

			
MH-25A8J	MH-700D	MD-11A8J	MLS-100
Standard Microphone	DTMF Dial Microphone	Desktop Microphone	Mobile Loud Speaker (12 Watts Peak Power)
			
FP-1023	FVP-25	FVP-35	DVS-5
External Power Supply (13.6 VDC 23 A)	DTMF Paging + Encryption unit	High Level Encryption unit	Voice storage Unit
			
VTP-50	MDC1200	LF-1	VPL-1
VX-Trunk Unit	ANI Signalling Unit	Line Filter	Programming Kit (Computer to Radio)
			
CT-4 (T9101411)	CE59		
Cloning cable	Programming Software		



Specifications

	VX-4104 (VHF)	VX-4204 (VHF)	VX-4107 (UHF)	VX-4207 (UHF)
General Specifications				
Frequency range	134-174 MHz		450-512 MHz	
Number of Groups	1	32	1	32
Number of Channels	8 channels	501 channels	8 channels	501 channels
Power Supply Voltage	13.6 VDC \pm 15 %			
Channel Spacing	12.5 / 20 / 25.0 kHz			
Current Consumption	TX:11.0 A		RX:2.5 A	STBY:0.3 A
Operating Temperature range	-22° F to 140° F (-30° C to +60° C)			
Frequency Stability	Better than \pm 2.5 ppm			
RF Input-Output Impedance	50 Ohms			
Dimensions (WxHxD)	6.5 " x 1.7 " x 6.1 " (165 mm x 43 mm x 155 mm)			
Weight	3.1 lbs. (1.4 kg)			
Receiver Specifications				
Measurements made per TIA/EIA-603				
Circuit type	Double conversion Super-heterodyne			
Sensitivity (12 dB SINAD)	0.25 μ V		0.35 μ V	
Adjacent Channel Selectivity	85/75 dB		78/70 dB	
Intermodulation	80/75 dB			
Spurious and Image Rejection	90 dB		80 dB	
Audio Output	int. 2 W @ 32 Ohms 5% THD / ext. 12 W @ 4 Ohms 5% THD			
Audio Distortion	<3 % @1 kHz			
Transmitter Specifications				
Measurements made per TIA/EIA-603				
Power Output	50/25/10 W		45/25/10 W	
Modulation	16K0F3E, 11K0F3E			
Max Deviation	5.0/2.5 kHz			
Conducted Spurious Emission	75 dB below carrier			
Audio Distortion	<3 % @ 1 kHz			
Microphone type	Dynamic			
Microphone impedance	600 Ohms			

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		500.2/3Procedure I	500.2/3Procedure I
High Temperature	501.1/Procedure I,II	501.2/3Procedure I,II	501.2/3Procedure I,II
Low Temperature	502.1/Procedure I	502.2/3Procedure I,II	502.2/3Procedure I,II
Temperature Shock	503.1/Procedure I	503.2/3Procedure I	503.2/3Procedure I
Solar Radiation		505.2/3Procedure I	505.2/3Procedure I
Rain (Blowing)			506.2/Procedure II
Rain (Drip)		506.2/3Procedure II	506.3/Procedure I,II
Humidity	507.1/Procedure II	507.2/3Procedure II	507.2/3Procedure II
Salt Fog		509.2/3Procedure I	509.2/3Procedure I
Blowing Sand & Dust			510.3/Procedure I
Vibration	514.2/Procedure I,VIII		514.3/Procedure IV,X
Shock (Basic Design)	516.2/Procedure I,V		



Communication Specialists Ltd.
Unit 20,
Murrell Green Business Park,
London Road, Hook,
Hampshire, United Kingdom.
RG27 9GR

Tel +44 (0) 1256 766600
Fax +44 (0) 1256 766500

www.walkie-talkie.co.uk
info@comm-spec.co.uk