

# VX-160 SERIES

VHF/UHF Portable Radios



## Rugged, Durable Portables Ideal for Factory or Fleet

- LIGHT WEIGHT AND COMPACT SIZE
- 16 CHANNEL CAPACITY
- 5 WATTS POWER OUTPUT  
(Selectable to 1 Watt)
- MIL-STD 810 C/D/E
- RUGGED CONSTRUCTION
- LOUD, CLEAR AUDIO OUTPUT
- 12.5/25 kHz BANDWIDTH  
PROGRAMMABLE BY CHANNEL
- CTCSS/DCS ENCODE + DECODE
- DTMF ANI
- DUAL 2-TONE DECODE
- MULTI-MODE SCAN  
(incl. Dual Watch, Priority, Follow-Me)
- ARTS™ (Auto-Range Transpond System)
- BCLO, BTLO AND TOT FUNCTIONS
- TX/RX BATTERY SAVER CIRCUIT
- PC PROGRAMMING
- RADIO-TO-RADIO CLONING



Actual Size

## VX-160 SERIES VHF/UHF Portable Radios

### SUPER RUGGED CONSTRUCTION

Housed inside a high-impact case, the diecast chassis of the VX-160 provides a solid, rugged foundation for the VX-160's circuitry. Built to survive in the real world of factory, construction site, or fleet use, the VX-160 will provide many years of reliable communications.

### 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. DCS is ideal for crowded RF environments, providing superior immunity from false opening of squelch.

### DTMF ANI

The VX-160 includes a DTMF Automatic Number Identifier (ANI) circuit, which will be able to generate DTMF Identification with press/release the PTT.

### VERSATILE SCANNING FEATURES

The high-speed scanning capability of the VX-160 includes "All-Channel" scanning, plus Dual Watch and Priority Channel capability. And with "Follow-Me" scanning, a designated channel may be watched during scanning of other channels.

### DUAL 2-TONE DECODE

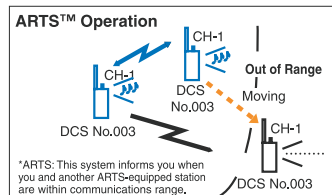
This built in feature allows you to decode up to two, 2-tone pairs per channel. These can be used for two individual pager calls, or one for Individual and one for Group call.

### BCLO, BTLO AND TOT

To facilitate efficient channel management, the VX-160 provides Busy Channel Lock-Out (BCLO) and Busy Tone Lock-Out (BTLO) features. What's more, the transmitter's Time-Out Timer (TOT) function prevents a "stuck microphone" condition from jamming a channel for an extended period of time.

### ARTS™ (Auto-Range Transpond System)

Included in the VX-160 is Surya exclusive ARTS™ feature, which can be critically important in search-and-rescue applications. ARTS™ provides a "handshake" with other ARTS™-equipped transceivers, and the display indicates if an "Out of Range" condition exists. The base station can then alert the field unit to move to a better location.



### TX/RX BATTERY SAVER CIRCUIT

To maximize battery life, the VX-160 includes both transmit- and receive-mode battery savers. On transmit, the portable will reduce power when the incoming signal is very strong. On receive, the radio will put itself into a pulsing "sleep" mode, periodically checking for channel activity.

### PC PROGRAMMING

The channel and feature configurations are easily programmed in minutes by the dealer, using the optional CT-42 Programming Cable and CE44 Programming Software.

### RADIO TO RADIO CLONE FEATURE

For quick programming of VX-160 radios for fleet use, the "Clone" feature allows copying of all channel and other configuration data from one VX-160 to another, using the optional CT-27 Cloning Cable.

### 500 mW AUDIO OUTPUT

Ideal for reception in noisy environments, the VX-160's high-powered audio is coupled to a large internal speaker, assuring solid copy throughout difficult construction site or field operations.

### MIL-STD 810 C/D/E

Built to meet or exceed the requirements of the U.S. MIL-STD 810 C/D/E standards, the VX-160 is designed to survive under difficult operating conditions of shock, vibration, and driving rain. Cost-performance begins with durability, and the Mil-Spec toughness of the VX-160 is your guarantee of its design quality.



### APPLICABLE MIL-STD

Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures
Low Pressure		500.2/Procedure I	500.3/Procedure I, II
High Temperature		501.2/Procedure I, II	501.3/Procedure I, II
Low Temperature		502.2/Procedure I, II	502.3/Procedure I, II
Temperature Shock		503.2/Procedure I	503.3/Procedure I
Solar Radiation		505.2/Procedure I	505.3/Procedure I
Rain		506.2/Procedure II	506.3/Procedure II
Humidity		507.2/Procedure II	507.3/Procedure II
Salt Fog		509.2/Procedure I	509.3/Procedure I
Dust		510.2/Procedure I	510.3/Procedure I
Vibration	514.2/Procedure VIII	514.3/Procedure I Cat. 10	514.4/Procedure I Cat. 10
Shock	516.2/Procedure I	516.3/Procedure I, IV	516.4/Procedure I, IV

## Specifications

	VX-160V	VX-160U
<b>General Specifications</b>		
Frequency Range	134-160 MHz (A) 142-176 MHz (CS1)	400-430 MHz (AS1) 440-470 MHz (CS) 450-490 MHz (D)
Number of Channels	16 Channels	
Channel Spacing	12.5/25 kHz	
PLL Steps	2.5/6.25 kHz	5/6.25 kHz
Power Supply Voltage	7.5 VDC ± 20 %	
Battery Life (5-5-90 duty)		
w/FNB-V67LI (1600 mAh)	11.9 hrs. (14.4 hrs. w/saver) @ 5 W	10.3 hrs. (12.3 hrs. w/saver) @ 5 W
w/FNB-V57 (1100 mAh)	8.2 hrs. (9.9 hrs. w/saver) @ 5 W	7.1 hrs. (8.5 hrs. w/saver) @ 5 W
Operating Temperature Range	-30° C to +60° C	
Frequency Stability	±2.5 ppm	
Dimensions (W x H x D)	58 x 120 x 31 mm	
Weight (Approx)	365 g w/FNB-V57	

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

	VX-160V	VX-160U
<b>Receiver Specifications</b>		
Measurements made per EIA standard TIA/EIA-603		
Sensitivity		
EIA 12 dB SINAD	0.20 µV	0.25 µV
20 dB Quieting	0.30 µV	0.35 µV
Adjacent Channel Selectivity	70 dB (25 kHz) / 60 dB (12.5 kHz)	
Intermodulation	70 dB	
Spurious and Image Rejection	65 dB	
Hum & Noise	40 dB	
Audio Output	500 mW @ 4 Ohms, 5 % THD	
<b>Transmitter Specifications</b>		
Measurements made per EIA standard TIA/EIA-603		
Power Output	5.0/1.0 W	
Modulation	16K0F3E, 11K0F3E	
Conducted Spurious Emissions	70 dB Below Carrier @ 5 W	
FM Hum & Noise	40 dB	
Audio Distortion (@ 1 kHz)	< 5 %	

## Accessories & Options


**SURYA TELECOM PVT. LTD.**

**WIRELESS & TELECOM ENGINEERS**

SCO 36, Sector 3,

Panchkula - 134 109 Haryana, INDIA

E-mail : office@suryatel.com