

# VX-1400

## HF Compact Mobile Radio

### SPECIFICATION SHEET

### Compact HF Communications

The 100 Watt VX-1400 supports both mobile and base station operations for integrated, affordable long-haul communications. Operating modes include: CW (A1A), LSB/USB (J3E), FSK/AFSK (J2B) and AM (A3E).

### Space-Saving Compact Size

The VX-1400 is designed to occupy less space while providing all the features you need for optimal mobile HF communications. Use the optional remote control mounting kit for more flexible installation.

### Reliable Performance

Includes two large-diameter cooling fans to ensure stable temperature for long-life performance with proper ventilation.

### Clear Communications

The VX-1400 uses Digital Signal Processing (DSP) for voice enhancement and digital noise reduction that eliminates background noise for clear message transmission and reception. Additional DSP capabilities include auto-notch and microphone equalizer for quality performance.

### Large Channel Capacity

The VX-1400 stores 512 channels arranged in five groups with the flexibility to have any number of channels per group. Each channel can be programmed with a 14-character alphanumeric description for quick and easy call management.

Includes three channel display options: memory channel with frequency; alpha-numeric tag or a combination of both.

### Automatic Link Establishment (ALE) Option

For convenient, cross-organization message passing and monitoring without additional equipment and operators, install the ALE-2 option to enable the VX-1400 to use ALE to select the channel with the best LQA (Link Quality Analysis) score from the programmed channels. ALE automatically removes potential sources of transmit failure for more robust and reliable communications. A key solution for response agencies and organizations seeking an alternative back-channel to use during the loss of conventional communications.

### Voice Encryption Option

For secure communication requirements, the Transcript™ SC20-455 rolling code frequency inversion unit is compatible with the VX-1400.



VX-1400

178 (W) x 60 (H) x 268 (D) mm



### The Vertex Standard Difference

Our number one goal is achieving superior customer satisfaction by delivering products and services that exceed your expectations. Count on Vertex Standard for radios that are built to last and designed to provide more features for a better return on your investment. Ask your Dealer for more details.

### Additional Features

- Seven programmable keys
- Programmable key lock function
- VFO (Variable Frequency Oscillator)
- Memory Channel (ITU Marine Channels preset)
- One-touch alert and 2182 kHz channel programmable option for S1/S2 keys
- Call Modes: SELCALL, TELCALL, Message, Position Request, Position Send, Beacon Request
- Message recall (SELCALL or ALE)
- Voice guide announcing memory channel number
- Voice storage
- Clarifier
- Noise blanker
- VOX
- Priority scan
- GPS input port (with CT-139 cable)
- Data modem port (with CT-139 cable)
- D-sub 25 pin accessory connector (with CT-139 cable)
- External automatic antenna tuner (optional)
- Remote control head operation (optional)

### Accessories

- MD-12A8J: Desktop microphone
- MH-31A8J: Dynamic hand microphone
- MH-67A8J: Standard hand microphone
- MH-77A8J: Water-resistant keypad microphone (16 keys)
- MH-77B8J: Water-resistant microphone
- FP-1030A: External power supply
- MLS-100: External speaker 12 W
- MLS-200: External speaker 12 W (indoor/outdoor)
- ALE-2: Automatic link establishment unit
- FC-30: Antenna tuner (coaxial lines, 1.8 MHz- 30 MHz)
- FC-40: Antenna tuner (wire/whip antennas)
- YA-30: Broadband HF antenna 23.4 m (dipole)
- YA-31: Broadband HF antenna 15 m (dipole or wire)
- YA-007FG: HF Multi-band mobile antenna (7 MHz to 30 MHz requires FC-40)
- MMB-92: Mobile bracket
- RMK-1400: Remote mounting kit
- CT-139: Accessory cable
- CT-83: Remote control cable (0.6 m)
- CT-82: Remote control cable (2.5 m)
- CT-81: Remote control cable (6 m)
- CT-93: Remote control cable (10 m)

### VX-1400 Specifications

#### General Specification

Frequency Range	RX: 30 kHz – 30 MHz; TX: 1.6 – 30 MHz
Number of Channels	512
Emission Type	A1A (CW); J3E (LSB/USB); A3E (AM); H3E (2182 kHz only); J2B (FSK/AFSK)
Power Requirements	DC 13.8V ±15%
Frequency Synthesizer Steps	10 Hz
Frequency Stability	± 0.5 ppm
Current Consumption	RX, no signal: 1 A TX, max: 23 A
Operating Temperature Range	-20° C to +60° C
Antenna Impedance	50 Ohms, Unbalanced
IP Rating	IP 54 Front panel only with MH-77 connected
Dimension (W x H x D)	178 x 60 x 268 mm w/o projection (knobs and fans)
Weight (Approx.)	3.4 kg

#### Receiver Specification

Circuit Type	Double Conversion Superheterodyne
Sensitivity (10 dB S/N)	0.5 – 1.6 MHz: 0.71 µV (A1A/J2B/J3E); 0.5 – 1.6 MHz: 7.93 µV (A3E) 1.6 – 30 MHz: 0.16 µV (A1A/J2B/J3E); 1.6 – 30 MHz: 1.00 µV (A3E)
Adjacent Channel Selectivity (-6 dB / -60 dB)	2.2 kHz/4.5 kHz (J2B/J3E/A3E Narrow) 500 Hz / 1.2 kHz (A1A Narrow) 6 kHz / 20 kHz (A3E)
IF and Image Rejection	80 dB
Audio Output	10 W into 4 Ohms @ 5% THD (J3E/A1A)

#### Transmitter Specification

Output Power (@ 13.8V, 25° C)	100 W (J2B/J3E/A1A) 3 steps selectable: Low/Mid/High, adjustable (100 W - 10 W) by 1 W step 25 W – 2.5 W AM carrier (A3E)
Modulation Type	PSN Type Modulator (SSB) Low-Level (Early Stage) (AM)
Spurious Radiation	- 42 dB (1.8 – 30 MHz) - 36 dB (1.6 – 1.8 MHz, Harmonics)
J3E Carrier Suppression	-45 dB @ 100 W (PEP)
Undesired Sideband Suppression	50 dB @ 1.5 kHz tone, 100 W (PEP)
Audio Response (SSB)	<-6 dB (300 – 2400 Hz)
Occupied Bandwidth	A1A: less than 0.5 kHz J2B/J3E/H3E: less than 3.0 kHz A3E: less than 6.0 kHz
Microphone Impedance	200 – 10 k Ohms, (600 Ohms Nominal)

### Applicable MIL-STD

Standard	MIL 810D Methods/ Procedures	MIL 810E Methods/ Procedures	MIL 810f Methods/ Procedures
Vibration	514.3 / Procedure I Cat. 10	514.4 / Procedure I Cat. 10	514.5 / Procedure I Cat. 20/24
Shock	-	-	516.5/Procedure I

Specifications are subject to change without notice or obligation.

VERTEX STANDARD is registered in the US Patent & Trademark Office. All other product or service names are the property of their respective owners. © Vertex Standard Co. Ltd. 2009

EXPS1400\_11/2009