



VX-500Series

PROFESSIONAL-GRADE
FM HAND-HELD TRANSCEIVER



The VX-500 is Yaesu's latest addition to its line of land-mobile transceivers, designed for dependability in professional applications. The VX-500 is a compact frequency-synthesized, microprocessor-controlled FM portable transceiver providing five watts of power output on up to 32 channels on either the VHF or UHF land-mobile bands. Designed specifically for

commercial and professional applications, the VX-500 utilizes a newly designed, high-strength die-cast aluminum case, with high-impact polycarbonate top panel, sealed to MIL-810C, D & E intrinsically safe (I/S) and weather-tight specifications*. The antenna uses a long-life threaded screw-in type connector which seals against moisture.

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The top panel displays the selected channel number, or 4-character alphanumeric channel name, which can be displayed inverted if desired, for easy viewing when the transceiver is worn on the belt. The backlit LCD also indicates a variety of other important operational information, such as scanning, priority channel selection, receipt of a selective call and power output. A large, detented rotary knob allows easy and positive channel selection, even with gloved hands. The internally preset squelch needs no operator adjustment, and has an override button to allow checking for channel activity.

Channels can be individually selected or skipped over during scanning, and scan delay can be configured to stop on a busy channel for five seconds only, or until the station stops transmitting. Any channel can be selected as a Priority Channel, and be sampled for activity every five seconds. The new Dual-Watch feature allows monitoring two selected channels without the need for scanning the entire channel group.

The operator selects the power output by a top-panel button. New FET transistor technology now makes it possible to have full 5-watt power output available from a standard 7.2 Volt Ni-Cd battery pack. With the built-in power saving circuit, operating time is extended to over 8 hours using the full five watts (5-5-90 duty cycle). An audible beeper alerts you when the battery needs to be recharged.

A variety of options enable the VX-500 to easily integrate into your communication network, and adapt to meet your requirements. CTCSS and Digital-Coded Squelch are no longer costly options, but built-in. Selective paging call can be received with the F2D-5A/B Two-Tone Decoder unit installed, and the FTT-7/7D 16-key DTMF keypad is available for telephone autopatch and remote control applications. For user and system security, the optional FVP-22 Voice Encryption unit can be installed for privacy during communications.

The VX-500 offers highly flexible channel programming and operating features that can be custom configured for your communications network, and easily changed according to your requirements. Programming is accomplished using an IBM-PC or compatible computer (CE-6 software and VPL-1 cable required), with all data stored in EEPROM in the transceiver. Without opening the case, the VX-500 can be re-programmed in seconds by a Yaesu dealer and, once stored, channel data is permanently stored without the need for battery backup.

**approval pending*

OPTIONS

- FNB-29** 7.2V 1.2Ah Ni-Cd Battery Pack
- F2D-5A/B** 2-Tone Sequential Decoder (Tone Group A/B)
- FTT-7** DTMF Keypad Tone Generator (16 keys)
- FTT-7D** DTMF Keypad Tone Generator w/Decoder
- FTE-17** Tone Burst Generator
- CD-1/PA-14B** DC-DC Rapid Charger with 117 VAC Mains Adapter
- CD-1/PA-14C** DC-DC Rapid Charger with 220-234 VAC Mains Adapter
- FVP-22** Encryption Unit (Band Inversion Type)
- VPL-1** Programming Cable
- CE-6** Programming Software
- MH-30A2B** Speaker Microphone



FTE-17



F2D-5A/B



FTT-7/7D

Rubber Duckie Antenna

Standard Type	Slim Type	Frequency Range
ATV-3A	ATV-4A	136-144 MHz
ATV-3B	ATV-4B	148-155 MHz
ATV-3C	ATV-4C	150-162 MHz
ATV-3D	ATV-4D	155-164 MHz
ATV-3E	ATV-4E	164-174 MHz

● Some accessories may be supplied as standard per local regulations or operating requirements.

SPECIFICATIONS

GENERAL

Frequency Range (version)
 Number of Channels
 Channel Spacing
 Frequency Stability
 Emission Type
 Antenna
 Voltage Requirement
 Current Consumption
 Dimensions (WHD, approx.)
 Weight (approx.)

RECEIVER

Circuit Type
 Intermediate Frequencies
 Sensitivity
 Adjacent Channel Selectivity
 Intermodulation Response
 Image Rejection
 Audio Output Power

TRANSMITTER

Power Output (selectable)
 FM Noise
 Modulations System
 Maximum Deviation
 Audio Response Characteristic
 Audio Distortion
 Spurious Emission
 Microphone Impedance

VHF

134-150 MHz (A)
 146-174 MHz (C)

32 (2-groups, 16 channels each)

25 kHz

better than ± 5 ppm

F3E

Helical threaded screw-in type

7.2 VDC $\pm 10\%$ (negative ground)

Saver Off: 50 mA Saver On: 19 mA

Receive: 200 mA Transmit (5W): 2.0/2.3A (VHF/UHF)

59 x 149 x 39 mm

540 g (w/FNB-29 Ni-Cd Battery)

UHF

400-420 MHz (A) 450-470 MHz (D)

470-490 MHz (E) 490-512 MHz (F)

Double-conversion superheterodyne

21.6 MHz, 455 kHz

47.9 MHz, 455 kHz

better than 0.35 μ V for 12 SINAD

better than 70 dB

better than 65 dB

better than 65 dB

better than 70 dB

0.5 Watts into 16 Ω @10% distortion

5W/1W

better than -40 dB @1kHz

Variable reactance modulation

± 5.0 kHz

+1, -3 dB/octave pre-emphasis from 300 Hz-3 kHz

Less than 5% @1 kHz, with 3 kHz deviation

better than 60 dB (below carrier)

2 k Ω condenser

Specifications subject to change without notice.



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