

50/144/ (222)*1/430 MHz FM 5 W/AM 1 W (50 MHz) Triple Band Handheld

VX-8R/E^{*2}

*1 222 MHz 1.5 W : US version
*2 E for European Version



Actual size

A TECHNOLOGY BREAKTHROUGH

The New Prestigious Compact – VX-8R/E^{*2}

Bluetooth® Hands-free Operation with GPS/APRS and Real RF-Dual Wideband Receive
The next generation Amateur Handheld Transceiver from Yaesu,
who has been introducing Leading-Edge Transceiver Technology for decades.

Sheer beauty of technology and elegance in a compact body

The Ultra Compact VX-8R/E (2.4"W x 3.7"H x 0.9"D/60 W x 95 H x 24.2 Dmm) is 0.2"(5 mm) thinner than the current advanced model^{*1} – It is filled with advanced technologies designed for outdoor operation – submersible and shockproof!

^{*1} Compared with the VX-7R/E (2.4"W x 3.5"H x 1.1"D/60 W x 95 H x 24.2 Dmm)

Submersible to 3 feet (1m) for 30 minutes : Equivalent to the IPX7 Rating

Designed for real outdoor operation! Take your VX-8R/E out with you wherever you go. It is waterproof 3 ft (1m) for 30 minutes. The radio is designed to meet commercial grade standards in every aspect, including its battery terminals, external microphone jack, etc.

Ultra-Rugged Polycarbonate Resin Front Panel with Aluminum die-cast chassis - Absolutely Tougher than Tough!

compact case combines a rugged die-cast chassis with the clean, tough polycarbonate resin front panel. Its high shockproof versatility will allow you to operate the radio in the toughest environments.

Heavy Duty Yet Easy to Operate

The large main dial and the four durable independent key buttons on the side permit easy operation ...even when wearing gloves

The key buttons on the side of the radio have been allocated to the four most often used functions, the PTT, MONI (Squelch OFF), VOL and F (Function). Each button of the full 10-key keypad has additional operating functions, by either pushing the F key on the side, or pressing and holding the key button. The large main dial (0.75"/19 mm diameter) is protected from inadvertent changes, yet it is easy to operate even when you are outdoors wearing gloves.



• Convenient side located operational keys



• Main dial

50/144/(222)^{*1}/430 MHz
 FM 5 W/AM 1 W (50 MHz)
 Triple Band Handheld

VX-8R/E^{*2}

^{*1} 222 MHz 1.5 W : US version
^{*2} E for European Version

VX-8R/E	
SCALE	1/1
WEIGHT	8.5 oz (240 g)



Large Frequency and Information LCD Display, TX/RX Busy Indication, Easy Band Selection, and a Bright White LED!

"A" and "B" band key LED buttons on the left side of the large LCD display will show TX/PTT (Red) and RX/BUSY (Green) to let you know your operating condition at once. Just push the desired band key button to change your operating band!



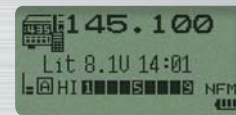
• TX/RX band key LED buttons

A Large High-resolution Dot Matrix LCD Display – (about 1.3" x 0.8"/35 x 18 mm)

The large LCD display provides clear, easy-to-read indication of both Main and Sub band frequencies, operating mode, and S-meters for both bands. You may also display customized pictorial icons or the input DC voltage. When you engage the Spectrum Scope function, the high-resolution display will indicate relative signal strengths on adjacent channels up to ± 50 channels!



• Menu Mode



• Pictorial Icons



• Audio Scope



• Spectrum Analyzer

Memory Stations may be displayed with up to 16 digit Alpha-numeric Tags

CW Training Feature, Emergency Automatic ID system, Emergency Strobe/Beep Feature, and Busy Strobe LED Function when Receiving messages.

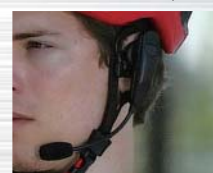
You may also use the bright LED light for your convenience in the dark or as an emergency signal!



• High Bright LED

Bluetooth® Capabilities (Optional Bluetooth unit required)

The Bluetooth capabilities, widely known and utilized among users and enthusiasts of the FTM-10R/SR, are also available with the VX-8R/E. The optional Bluetooth Unit BU-1 makes it possible to operate Hands-free with the optional waterproof Bluetooth headsets BH-1 (Stereo) or BH-2 (monaural). Take your VX-8R/E outdoors with you wherever you go in your backpack, pocket or pouch, and enjoy total Hands-free operation with the built-in VOX function! You may also enjoy your favorite FM broadcasts in stereo with the optional Bluetooth® Stereo Headset (BH-1) and Earphone (FEP-4)!



• Optional Bluetooth® Unit BU-1



■ Integrated High-Performance APRS® Operation

Access the worldwide standard APRS system to exchange your positions and messages.

(The optional FGPS-2 unit is required to display your station information)

* APRS® is a registered trademark of Bob Bruninga WB4APR.

■ Optional GPS Operation

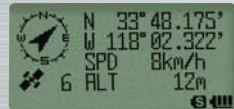
The optional GPS Antenna Unit FGPS-2, which is based on a 12ch receiver, provides GPS data. You may display your exact current position (latitude and longitude), heading direction, moving speed, altitude, etc. The Optional FGPS-2 can be attached to the radio using the microphone input jack, so that you may simultaneously enjoy total Hands-free Operation using the optional Bluetooth® headset, even though your radio is attached to your backpack, belt pouch, or holder, etc.



The optional GPS Antenna Unit FGPS-2

• Attached to the radio (microphone input) using the optional GPS Antenna Adapter CT-136

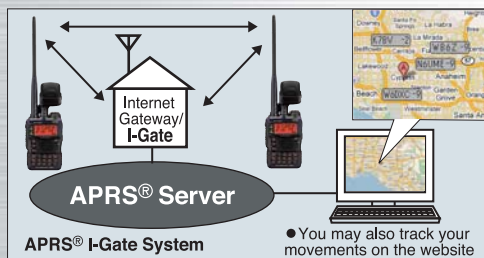
• The optional GPS Antenna Unit FGPS-2 attached to the optional Speaker/Microphone MH-74A7A



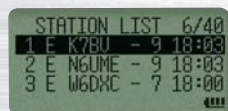
• GPS Display
Your exact current position (latitude and longitude), altitude, moving speed and heading direction.

■ APRS® 1200/9600 bps Data Communication (B band only)

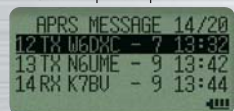
The built-in worldwide standard AX.25 Data TNC Modem permits uncomplicated APRS® (Automatic Packet/Position Reporting System) operation. The VX-8R/E supports APRS® 1200/9600 bps data communication (B band only). You may communicate your location to other APRS® stations with the position, speed and heading displayed on your radio! You will be able to see your APRS® movement on the web! When you receive signals and information from other APRS® stations, the VX-8R/E displays their positions, heading directions, messages, distances, icons (43 kinds), weather information, object, etc. The List function stores up to 40 stations and up to 20 messages automatically with the individual APRS® data, and you may recall them later. The optional GPS Antenna Unit FGPS-2 provides you with real time APRS® data. You may also send the information without it if you manually input your data in advance.



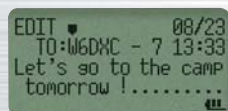
• Position/Distance/Direction of the APRS station picked up from the list



• APRS® Station List



• List of Incoming/Outgoing messages from/to other APRS stations



• Display your message with up to 67 characters

A Powerful 7.4 V 1100 mAh Lithium Ion Battery is Included. (The optional Cell Holder FBA-39 permits operation with 3 AA batteries.)

You will enjoy up to 5 hours operation on 144/440 MHz, or up to 5.5 hours on 50 MHz with the supplied FNB-101LI Lithium-ion battery. The optional FNB-102LI, high capacity Lithium-ion Battery, will provide up to 8.5 hours operation on 144MHz, 9 hours on 50MHz, and 8 hours on 440 MHz. The FNB-101LI battery will provide up to 13 hours of AM/FM broadcast listening. The optional FNB-102LI or FBA-39 will enable you to enjoy up to 20 hours of broadcast reception!

Battery operation time

Operating Band	Battery Life (Approx.)		
	FNB-101LI	FNB-102LI	FBA-39
50 MHz ⁽¹⁾	5.5 hours	9.0 hours	20 hours
144 MHz ⁽¹⁾	5.0 hours	8.5 hours	17 hours
222 MHz ⁽¹⁾ (USA version)	6.0 hours	11 hours	20 hours
430 MHz ⁽¹⁾	5.0 hours	8.0 hours	16 hours
Broadcast Band ⁽²⁾	13 hours	20 hours	20 hours

• Reference only. May vary depending on environmental temperature, humidity, etc.
(1) TX 6 sec., Rx 6 sec. and Squelched 48 sec.
(2) Continuous signal reception

Battery



FNB-101LI
7.4 V/1,100 mAh Rechargeable Lithium Ion Battery Pack



FNB-102LI
7.4 V/1,800 mAh High Capacity Rechargeable Lithium Ion Battery Pack



• When charging



• When charging completed

Charging condition will be displayed when charged by Ext. DC Input.



• Optional 2.5 Hr Rapid Charger CD-41

The battery can be charged either by itself or with the radio.

Output power

Operating Band	Transmit Power	
	FNB-101LI/FNB-102LI or EXT DC (7.4 V)	FBA-39 (w/Fresh Batteries)
50/144/430 MHz FM	HI: 5.0 W L3: 2.5 W L2: 1.0 W L1: 0.05 W	L2: 1.0 W L1: 0.05 W
222 MHz FM (US Version)	HI: 1.5 W L3: 1.0 W L2: 0.5 W L1: 0.05 W	L2: 0.5 W L1: 0.05 W
50 MHz AM	1.0 W (Fixed)	1.0 W (Fixed)

Wideband Receive + Completely independent AM/FM Receiver

■ Real Dual Ham Band Operation (V+V/U+U/V+U)

With two independent Amateur Band Receivers, you may listen to either the same or a different band simultaneously.



V+V

U+U

V+U

■ Wideband Receive for 500 kHz-999.990 MHz

Covers from 500 kHz to 999.990 MHz, continuous reception for short-wave, FM/AM broadcasts, analog TV station audio, aircraft, public service channels, etc. (cellular blocked)

Frequency ranges: A Band B Band

Operating Band [Band Number]	Frequency Range	
	"VFO-A"	"VFO-B" (w/o wide FM)
SW Band [1]	1.8-30 MHz	—
50 MHz Band [2]	30-76 MHz	30-76 MHz
AIR Band [3]	108-137 MHz	108-137 MHz
VHF HAM Band [4]	137-174 MHz	137-174 MHz
VHF TV Band [5]	174-222 MHz	174-222 MHz
INFO 1 Band [6]	222-420 MHz	222-420 MHz
UHF HAM Band [7]	420-470 MHz	420-470 MHz
UHF TV Band [8]	470-770 MHz	470-774 MHz
INFO 2 Band [9]	770-999.99 MHz	—

■ Internal Bar Antenna for better AM Broadcast Band Reception

The VX-8R/E has a completely independent FM/AM broadcast receiver and an internal bar antenna for better AM broadcast reception. Listen to FM broadcasts in stereo with your stereo headset/earphone!

(You may also enjoy "wireless stereo reception" with the optional Bluetooth Headset (BH-1) and/or FEP-4 earphone.) FM radio Stereo earphone jack Internal Bar Antenna



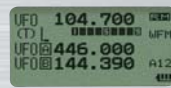
• Earphone jack FM Stereo Audio Available

• Internal Bar Antenna

(The photo is for illustrative purpose only)

■ Dual Band AF Dual Monitor Function

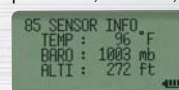
Listen to AM or FM radio stations while monitoring two HAM frequency channels! Two independent Amateur Band Receivers will allow you to listen to your favorite AM or FM stereo broadcast station, and monitor two different amateur bands ("Band A" and "Band B") at the same time. When the radio receives a signal, either on the A Amateur Band or The B Amateur Band, it will mute the FM/AM broadcast and let you go to the Amateur Band that the VX-8R/E is receiving on.



New Handy Features to support your outdoor operation!

■ Built-in Barometric Pressure and Temperature Sensors

The radio can monitor and display the temperature, pressure, altitude, or any combination of these.



• Sensor Display



• Internal Sensor Unit

■ 1267 Memory Channels. Assign 24 Memory Banks up to 100 channels each

Memory Name	channels
Standard Memories	900 ch ch1-ch900
Skip Memories	99 ch ch901-ch999
PMS	50 sets (L01-L50, U01-U50 = 100 ch)
EAI	1ch
Home	11ch
WX Broadcast	10 ch
VHF Marine	57 ch
SW Broadcast Station	89 ch

■ CW Training feature that can send Morse Code randomly to help you improve your code proficiency

■ The Message Feature (20 different messages with up to 16 characters each)

The VX-8R/E message feature is compatible with the FTM-10R/SR Series and/or the VX-3R/E which sends a message of up to 16 characters instead of sending voice. 20 different messages can be programmed.

■ Versatile Scanning for the Monitoring Enthusiasts!

■ Yaesu's original Emergency Feature EAI (Emergency Automatic ID system) that will allow the radio to transmit your call sign (CW ID) in case of emergency.

■ Fully illuminated keypad that will permit easy operation in dark environments

■ Built-in CTCSS/DCS encode/decode enables selective call features for the A and the B Band individually. Enhanced Paging and Code Squelch functions are also available to place a call to an individual member of your group.

■ Easy access to WiRES-II Internet Linking System with the WiRES-II Access DTMF memory function

■ Useful Battery saving features

■ Yaesu's original "Auto-Range Transponding System" (ARTS) which provides audio and/or visual confirmation that another ARTS-equipped station is within communication range

■ Spectrum Scope function for determining the frequency of nearby stations.

■ VOX function

■ A built-in 24-hour Clock with On/Off Timer functions,

■ Automatic Power-Off (APO) that turns the radio off after a programmed period with no key stroke activity

■ Time-Out Timer (TOT) that will disengage transmission after a programmed time interval

■ Busy Channel Lockout (BCLO) feature prevents transmitting when the current frequency is in use.

■ Microphone Gain Adjustment

■ 10 dB Attenuator for use in strong-signal environments

■ "My Band Display" function to display only the part of the band needed.

■ "My Key" function to memorize your most frequently used key functions

■ External DC input

Specifications

<p>General Frequency Ranges: A (Main) Band RX: 0.5-1.8 MHz (AM Radio) (Cellular Blocked) 1.8-30 MHz (SW Band) 30-76 MHz (50 MHz HAM) 76-108 MHz (FM Radio) 108-137 MHz (Air Band) 137-174 MHz (144 MHz HAM) 174-222 MHz (VHF-TV) 222-470 MHz (General 1) 470-800 MHz (UHF-TV) 800-999.90 MHz (General 2) B (Sub) Band RX: 30-76 MHz (50 MHz HAM) 108-137 MHz (Air Band) 137-174 MHz (144 MHz HAM) 174-222 MHz (VHF-TV) 222-470 MHz (General 1) 470-800 MHz (430 MHz HAM)</p> <p>TX: 50-54 MHz or 50-52 MHz 144-146 MHz or 144-148 MHz 222-225 MHz (USA version only) 430-440 MHz or 430-450 MHz 5/6.25/8.33/9/10/12.5/15/20/25/50/100 kHz Emission Type: F2D, F3E, A3E, F2A, F1D Frequency Stability: ± 5 ppm (-10° C to $+60^{\circ}$ C [$+14^{\circ}$ F to $+140^{\circ}$ F]) Repeater Shift: ± 600 kHz (144 MHz), ± 1.6 MHz (222 MHz), $\pm 1.6/5.0/7.6$ MHz (430 MHz) Antenna Impedance: 50 Ohms Supply Voltage: Nominal: 7.4 V DC (Negative Ground) Operating: 4-16 V DC (Negative Ground, EXT DC jack) Operating while Charging: 11-16 V DC (Negative Ground, EXT DC jack)</p>	<p>Current Consumption: 200 mA (Mono Band Receive) (@7.4 V DC, approx.) 240 mA (Dual Band Receive) 85 mA (Mono Band Receive, Standby, Saver Off) 120 mA (Dual Band Receive, Standby, Saver Off) 35 mA (Mono Band Receive, Standby, Saver On Save Ratio 1:5) 42 mA (Dual Band Receive, Standby, Saver On Save Ratio 1:5) 300 μA (Auto Power Off) 1.6 A (50 MHz, 5 W TX) 1.7 A (144 MHz, 5 W TX) 1.2 A (222 MHz, 1.5 W TX: USA Only) 1.9 A (430 MHz, 5 W TX) Operating Temperature: -20° C to $+60^{\circ}$ C (-4° F to $+140^{\circ}$ F) Case Size (W x H x D): 60 x 95 x 24.2 mm (2.4" x 3.7" x 0.9") w/o knob & antenna Weight (Approx.): 240 g (8.5 oz) with FNB-101LI & antenna</p> <p>Transmitter RF Power Output: 50/144/430 MHz 5.0 W (@7.4 V or EXT DC) 1.5 W (@4.5 V: AA x 3) L3: 2.5 W, L2: 1 W, L1: 0.05 W 222 MHz (USA only) 1.5 W (@7.4 V or EXT DC) 0.5 W (@4.5 V: AA x 3) 50 MHz AM: 1 W Fixed</p> <p>Modulation Type: F2E, F3E: Variable Reactance A3E: Low Level Amplitude Modulation (50 MHz only) Maximum Deviation: ± 5 kHz (F2E/F3E) Spurious Emission: At least 60 dB below (@ TX power HI/L3/L2) At least 50 dB below (@ TX power L1) Microphone Impedance: 2 K Ohms</p> <p>Receiver Circuit Type: NFM, AM: Double-Conversion Superheterodyne WFM: Triple-Conversion Superheterodyne AM/FM Radio: Single-Conversion Superheterodyne</p>	<p>IF: NFM, AM 1st: 47.25 MHz (A (Main) Band), 46.35 MHz (B (Sub) Band), 2nd: 450 kHz WFM 1st: 45.8 MHz/2nd: 10.7 MHz/3rd: 1 MHz AM/FM Radio: 130 kHz</p> <p>Sensitivity: 3.0 μV for 10 dB S/N (0.5-30 MHz @AM) 0.35 μV (TYP) for 12 dB SINAD (30-54 MHz @NFM) 1.0 μV (TYP) for 12 dB SINAD (54-76 MHz @NFM) 1.0 μV (TYP) for 12 dB SINAD (54-59 MHz @NFM, USA Ver.) 1.5 μV (TYP) for 12 dB SINAD (76-108 MHz @WFM) 1.5 μV (TYP) for 12 dB SINAD (59-108 MHz @WFM) 1.5 μV (TYP) for 10 dB SN (108-137 MHz @AM) 0.2 μV for 12 dB SINAD (137-140 MHz @NFM) 0.16 μV for 12 dB SINAD (140-150 MHz @NFM) 0.2 μV for 12 dB SINAD (150-174 MHz @NFM) 1.0 μV for 12 dB SINAD (174-222 MHz @WFM) 0.5 μV for 12 dB SINAD (300-350 MHz @NFM) 0.2 μV for 12 dB SINAD (350-400 MHz @NFM) 0.18 μV for 12 dB SINAD (400-470 MHz @NFM) 1.5 μV for 12 dB SINAD (470-540 MHz @WFM) 3.0 μV (TYP) for 12 dB SINAD (540-800 MHz @WFM) 1.5 μV (TYP) for 12 dB SINAD (800-999.90 MHz @NFM)</p> <p>A Band 0.18 μV (TYP) for 12 dB SINAD (50-54 MHz) 0.18 μV for 12 dB SINAD (144-148 MHz) 0.2 μV (TYP) for 12 dB SINAD (430-450 MHz)</p> <p>Selectivity: 12 kHz/35 kHz (-6 dB/-60 dB: NFM, AM) 200 kHz/300 kHz (-6 dB/-20 dB: WFM)</p> <p>AF Output: 200 mW @ 8 Ohms for 10 % THD (@ 7.4 V DC) 400 mW @ 8 Ohms for 10 % THD (@ 13.8 V DC)</p> <p>B Band 0.18 μV (TYP) for 12 dB SINAD (50-54 MHz) 0.18 μV for 12 dB SINAD (144-148 MHz) 0.2 μV (TYP) for 12 dB SINAD (430-450 MHz)</p> <p>Selectivity: 12 kHz/35 kHz (-6 dB/-60 dB: NFM, AM) 200 kHz/300 kHz (-6 dB/-20 dB: WFM)</p> <p>Specifications are subject to change without notice, and are guaranteed within the 50/144/222/430 MHz amateur bands only.</p>
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Supplied Accessories FNB-101LI 7.4V/1,100 mAh Rechargeable Lithium ion Battery Pack NC-86B/C/U* Battery Charger Belt Clip

* (B for 120 VAC) (C for 220-240 VAC)
(U for 230 VAC-UK plugs)

Options

FGPS-2 Specification

Receiving Channels : 12 ch parallel
Sensitivity: Acquisition: -140 dBm
Tracking : -150 dBm
Datum: WGS84
Output Format: NMEA-0183
Size: 1.4" W x 1.3" H x 0.6" D/36 W x 33 H x 15 D mm
Weight: 0.7 oz/20 g

CN-3
BNC-SMA Adapter

CT-136
GPS Antenna Adapter
for FGPS-2

FGPS-2
GPS Antenna Unit

IPX7
Submersible
(2 ft for 20 min)

MH-74A7A
Waterproof Speaker Microphone
(FGPS-2 optional GPS Antenna
can be attached)

IPX7
Submersible
(2 ft for 20 min)

CT-131
Microphone Adapter

CT-134
Cloning Cable

CSC-93
Soft Case

FNB-101LI*2
7.4 V/1,100 mAh
Rechargeable Lithium ion
Battery Pack

FBA-39
3 x AA Cell Battery Case
(Batteries are not supplied)

FNB-102LI
7.4 V/1,800 mAh
High Capacity Rechargeable
Lithium ion Battery Pack

CD-41 Rapid Charger
Battery Charger Cradle for rapid (2.5 Hr)
charging (Battery Charger not included)

NC-86B/C/U*1
Battery Charger*2
(5 hrs/FNB-101LI)
(8 hrs/FNB-102LI)

E-DC-5B
DC Cable with
Cigarette Adapter

E-DC-6
DC Cable
(plug and wire only)

For your Bluetooth® operation

BH-1
Bluetooth® Headset with
stereo earphone jack
(requires BU-1)

IP55
Dust protected
Water Jet

FEP-4
Earphone (Stereo)
Headset

BH-2
Bluetooth® Headset
(requires BU-1)

IP55
Dust protected
Water Jet

BU-1
Bluetooth®
Adapter Unit

CD-40
3 hrs Charger Cradle
for BH-1/BH-2
Bluetooth® headset

NC-85B/C/U*
Battery Charger for
CD-40 Headset Cradle

*1 B for 120 VAC/C for 220-240 VAC/U for 230 VAC-UK plug
*2 As same as Supplied Accessory

About this brochure: we have made this brochure as comprehensive and factual as possible. We reserve the right, however, to make changes at any time to equipment, optional accessories, specifications, model numbers, and availability. Precise frequency range may be different in some countries. Some accessories shown herein may not be available in some countries. Some information may have been updated since the time of printing; please check with your Authorized Yaesu Dealer for complete details.

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