



HF TRANSCEIVERS



FT-1000MP Mark V – Choice of DXers

\$CALL – HRO Discount Price

The FT-1000MPMKV HF transceiver works in all modes—SSB, CW, FSK, AM, FM, Packet—but is optimized for digital. Enhanced digital signal processing (EDSP) provides four random-noise reduction settings, selectable bandpass filtering with adjustable low and high cut responses, and transmitted audio enhancement. An automatic seeking EDSP notch filter identifies and eliminates interfering heterodynes and carriers in the passband.

Two VFO knobs allowing individual adjustments to the main and sub VFOs provide in-band dual receive, even on different modes and bandwidths. Shuttle-jog™ tuning enhancement allows quick QSY up or down the band. Direct digital synthesizers (DDS) provide 13 extremely fine tuning steps, selectable down to 0.625 Hz per step. A full-featured contest memory keyer provides CQ message generation along with contest numbers.

Built-ins: a lightweight switch-mode AC power supply and a high-performance high-speed automatic antenna tuner, with 39 frequency information memories.

- General coverage receiver 100 kHz to 30 MHz.
- Power output 200 watts PEP; class-A power amp operation at 75 watts.
- Dual in-band receive; separate S meters.
- CAT system capability with built-in RS-232C level converter.
- Collins mechanical filters: 455 kHz / 2.75 kHz SSB built in. A 455 kHz / 500 Hz CW is optional.
- Interlocked digital bandwidth tracking system (IDBT).
- Wide receiver dynamic range with separate, optimized FET RF preamps for high and low bands.
- Multi-function shuttle jog dial.
- Variable RF front-end filter.
- Transverter jack for VHF/UHF operation (display shows actual frequency).
- Selectable antenna jacks. Separate receive-only antenna jack included.
- Custom configuration via new menu system.
- Quick memory bank (QMB) system for instant recall of important memories.



FT-1000MP Mark V Field

\$CALL – HRO Discount Price

Building on the success of the FT-1000 Elite-Class of HF Transceivers, the Field brings you leading edge technology in 100-watt self-contained transceiver design. The Field features a built-in power supply and automatic antenna tuner.

- AC/DC operation.
- High efficiency cooling.
- High speed automatic antenna system.
- Dual receive with independent AGC systems.
- Enhanced digital signal processing.
- Selectable SSB pattern contour filters.
- Industry-leading RF front end design.
- Full break in CW and electronic keyer.
- Three RF preamp modes plus IPO (direct mixer feed).
- Outstanding IF filter chain.
- Multifunction display with improved contrast.
- Enhanced shuttle jog tuning dial.
- Direct keypad frequency entry.
- Twin stacked VFO registers.
- Easy digital interfacing.



FT-840

\$CALL

HRO Discount Price

The FT-840 is a mobile or main station transceiver with high-tech performance and a wealth of features at an affordable price. The LCD display gives sharp visibility in bright sunlight. Die-cast heat sink and internal thermally switched fan keep it running cool. Modular design circuit boards ensure operating efficiency.

- General coverage receiver 100 kHz to 30 MHz with a low noise front end with FET RF amplifier.
- Transmit on amateur bands 160-10 m.*
- Direct digital synthesis (DDS).
- FM repeater operation with automatic 10 meter repeater offset.
- Twin band-stacking VFOs .
- IF shift.
- 100 memories (independent transmit / receive per memory).
- Selectable CTCSS encode with optional FM-747.
- CW reverse feature.
- Choice of two optional antenna tuners: FC-10 Matching External Tuner or FC-800 External Remote Tuner.

HF Plus



HF + 6m + 2m + 400 MHz

All Mode FT-847

\$CALL

HRO Discount Price



The all-purpose, all-mode FT-847 is ideal for satellite operation and packet (1200 / 9600 bps packet ready). Includes normal/reverse tracking and dedicated satellite memories. CW has sidetone and pitch control.

- Crossband full duplex operation.
- 100 watts output on HF*/ 6m; 50 watts on 2m / 430 MHz.
- DSP filters: notch, noise reduction, band pass.
- Direct frequency keypad entry.
- High resolution 0.1 Hz tuning steps for ultra-smooth tuning.
- Shuttle jog tuning dial.
- Built-in CTCSS/DCS encode/ decode.
- Built-in low noise VHF/ UHF preamps.
- 13.8 VDC. * Not 60m

INTERNET LINKING

FT-DX9000 Contest Shown



FT-DX9000 – \$CALL

The rebirth of the renowned FT DX series

The FT-DX9000 has the electronic DNA from the FT-1000D but it has advanced far more than just one generation. This is the ultimate achievement in RF design in the amateur radio industry. Identical dual receivers feature unmatched real-world dynamic range, selectable roofing filters, 32-bit IF DSP with adjustable filter response contours, and four antenna ports. Its leading edge TFT display gives you unprecedented information and access to dozens of features and settings. The flash memory and keyboard connector ensure that your station will evolve as the FT-DX9000 does. Three configurations are available:

FT-DX9000MP – 400 watts output; separate switching power supply/twin speaker enclosure; LCD display with 2 analog meters and two additional meters for monitoring other functions; memory card (flash) for configuration, logging; full dual receive (identical receivers); VRF (preselector) in both main and sub receivers.

FT-DX9000D – 200 watts output; 6.5" TFT display with status indicators and world map/clock; memory card (flash) for configuration, logging; full dual receive (identical receivers); VRF (preselector) in both main and sub receivers; three "Mu" tuning modules; internal switching supply.

FT-DX9000 Contest – 200 watts output; LCD display with two analog meters and two additional meters for monitoring other functions; internal switching power supply; single receiver with VRF; extra key and headphone jacks; (second RX, VRF and Mu modules are optional and may be added).

- HF + 50 MHz.
- Four TX/RX antenna jacks plus two RX-only jacks.
- PS/2 keyboard connector.
- Data port for PC interconnection.
- Direct frequency entry.
- One-touch band change.
- Huge multi-function TFT display on FT-DX9000D.

- Rotator interface jack for direction indication when rig has the TFT display.
- Direct input/output sound card connections.
- Data port for PC interconnection.

The FT-DX9000 has not been approved by the Federal Communications Commission. This device is not and may not be offered for sale, lease, or sold or leased until the approvals of the FCC have been obtained.

Yaesu HF Specifications

Model	Frequency Range	Power Supply		Current Drain		Power Output				Mike Z ohms	Receive Circuitry	Sensitivity †	RIT/XIT Range	Audio Output	HRO Price
		AC	DC	Xmit	Rec	AM	FM	SSB	CW						
FTDX9000MP						100 W		400 W	400 W						CALL
FTDX9000D						75 W		200 W	200 W						CALL
FTDX9000Contest						75 W		200 W	200 W						CALL
FT-1000MPMKV	50kHz - 30 MHz		13.8 VDC			25 W	200 W	200 W	200 W	500-600	Triple	< .25 µV	±300 Hz	1.5W	CALL
FT-1000MKV Field	100kHz -30MHz	117/234	13.8 VDC			25 W	100 W	100 W	200 W	500-600	Quad	< .25 µV	±9.975 kHz	2 W	CALL
FT-897D	100 kHz - 30 MHz, 50-54 MHz, 144-148 MHz, 430-450 MHz	117/234	13.8 VDC			20 W (batt)* 100 W (batt)* 100 W+ +50W@ 20W%	20 W (batt)* 100 W (batt)* 100 W+ +50W@ 20W%	20 W (batt)* 100 W (batt)* 100 W+ +50W@ 20W%	20 W (batt)* 100 W (batt)* 100 W+ +50W@ 20W%						CALL
FT-840	100 kHz - 30 MHz		13.8 VDC	20 A	1.2 A	25 W	100 W	100 W	100 W	500-600	Double	< .25 µV	±1.25 kHz	4 W	CALL
FT-847	100 kHz - 30 MHz, 50-54 MHz, 144-148 MHz, 430-450 MHz		13.8 VDC	22 A	2.0 A	25 W 12.5 W 2m/70cm	100 W!	100 W!	100 W!	200-10K	Double	< .25 µV	±9.99 kHz	1.5 W	CALL
FT-817ND	100 kHz – 56 MHz; 76 – 154 MHz; 420 – 470 MHz.		13.8 VDC			1.5 W	5 W	5 W	5 W						CALL
FT-857D	See page 24		13.8 VDC	22 A	1 A	25 W 12.5 W 2m 5w 70cm	100W 50W 2m 20 W 70cm	100W 50W 2m 20 W 70cm	100W 50W 2m 20 W 70cm	200-10K	Double	< .2 µV	±9.99 kHz	2.5W	CALL

† Sensitivity measurements for 1.8-30 MHz SSB,CW *Optional module required @2m %70cm *HF-6M battery +HF-6M AC/13.8VDC

Wires-II

HRI-100 Interface Box



Give your repeater worldwide coverage with the Wires-II Internet repeater enhancement system

Wires™-II uses DTMF signaling to establish a bridge via the Internet from your repeater or home station to another WIRESTM-II equipped station anywhere in the world. No proprietary tones to connection formats are used, so any manufacturer's radio (equipped with a DTMF encoding keypad) may be used to bring up the Internet link.

At the repeater site, a PC is connected to the HRI-100 Wires™-II interface box which serves as a command and audio-patching controller. Use either a dial-up or high-speed line for Internet connection.

Wires™-II may be configured to allow on-the-fly selection for linked or non-linked communications. Wires™-II uses voice recording technology as a buffer and will never interrupt a conversation in progress on a distant repeater.

Wires™-II provides two operating network concepts. Up to 10 repeaters and/or home stations may join to form a "Sister Radio Group" for closed network operation. The Wires™-II server also maintains a world-

wide listing of repeaters operating in the "Friends' Radio Group" mode that may be contacted using a 6 digit DTMF string to establish a link.

The Wires™-II kit includes: AP01 CD-ROM, power cable, data cable (RS-232DB-9 plug), data cable (8-pin Mini-DIN plug), two audio cables (3.5 mm plug) and the Wires™-II User/Server Agreement. **HRO Price \$149.95**

Linking system requirements are:

- Wires™-II kit.
- Transceiver or repeater (with standard PKT jack recommended).
- Intel® MMX 200 MHz or faster processor.
- Internet connection (56 kbps modem if dialup connection is used).
- Microsoft® Windows® 98SE or later operating system.
- 30 MB of available hard disk space, 64 MB or more of RAM, CD-ROM drive for installation, 640 x 480 color display with 256-bit color support.
- Sound card with 44.1 kHz sampling rate (some sound cards may not work).



HF PLUS

The Smallest HF + 6m + 2m + 70cm

Optional Remote Head FT-857D
\$CALL

HRO Discount Price

Now with DSP-2 Built-in



The world's smallest HF/ VHF / UHF mobile transceiver provides base station performance from an ultra-compact package. Wide frequency coverage, outstanding receiver performance, and the convenience of remote-head operation (requires the optional YSK-857 separation kit) make the FT-857 ideal for mobile or external battery portable work.

The rig's rugged power amplifier uses bipolar transistor devices to provide low noise, low distortion and high reliability. On HF and 6 meters there is 100 watts output. On 2 meters there is 50 watts and 20 watts on 70 cm. Transmitter reliability is assured due to an extensive cooling system with a thermostatically-controlled fan and aluminium diecast chassis.

The FT-857 receiver front-end has a very low noise floor and wide dynamic range. It has a double conversion superheterodyne system (single on WFM) with the second IF at 455 kHz. It features extensive bandpass filtering and careful device selection and gain distribution to handle the strong signal challenges of today. On VHF and UHF, the very low noise MOSFET preamplifier and active DBM mixer yield a low noise figure for working weak signals and rejecting intermodulation.

- Receive coverage 100 kHz to 56 MHz, 76-108 MHz, 420-470 MHz. Now includes 60m
- Transmits 160-6m, 144-148 MHz, 430-450 MHz and 5167.5 kHz (Alaska emergency frequency on USA version).
- SSB, CW, AM, FM, packet (1200/9600 bps) operation.
- Power out: 100 W (160-6m), 50 W (2m), 20 W (70 cm).
- DSP bandpass filter, DSP auto-notch filter, DSP noise reduction and DSP microphone equalizer.
- VHF / UHF features: versatile tone control selections, automatic repeater shift, Smart Search™, Spectrum Scope and ATSM™.

- Big-radio tuning dial and outstanding ergonomics.
- Easy-to-use "Scrolling Front Panel" keys allow adjustment of several transceiver functions during use.
- DXer features include IF shift, IF noise blanker, intercept point optimization, adjustable AGC, clarifier (RIT). RF gain control and VOX.
- CW features: built-in electronic keyer, CW message memory with beacon mode, CW pitch/sidetone control, and CW trainer.
- Easy data mode set-up for operation on 1200/9600 bps FM packet, RTTY, SSTV or PSK31. Has a rear panel 6-pin mini-DIM connector for each connection of these modes.
- Versatile memory system with up to 200 main memory channels: Each may be named with alphanumeric labels of up to 8 characters. Memories can be separated into 10 groups with 20 memories each. You get a "Quick Memory" and "Home Channel" for each band.
- The large multi-color display provides easy-to-read indications of many operating functions.
- Battery voltage meter, TX meter selection, two antenna connectors, TX / RX status LEDs, versatile scanning features, auto power off, time out timer and CAT system.

- Options include:**
- ATAS-120: Active Tuning Antenna System provides a compact automatically adjusting antenna for mobile, portable or apartment / balcony use. Designed for use on the 7 / 14 / 21 / 18 MHz amateur bands. Can be used fully retracted on the 50 / 144 / 430 MHz bands. **HRO Price \$349.95**
 - Collins® Mechanical Filters: YF-122S 2.3 kHz SSB YF-122C 500Hz CW YF-122CN 300Hz CW **HRO Price each \$169.95**
 - YSK-857 Separation Kit **HRO Price \$169.95**
 - TCXO-9 High Stability Reference Oscillator. **HRO Price \$95.95**

5 Watt Backpack HF Plus

Now with FNB-85 battery 1400 mah NiMh + NC-72B Charger



FT-817ND
\$CALL

HRO Discount Price



- Product concept: fully self-contained battery-powered low-power amateur transceiver for portable, camping, or mountain use. Now includes 60m.
- Transmits on: 160-10 m,* 50 / 144 / 430-450 MHz, plus Alaska Emergency Channel (5167.5 kHz).
- Receives: 100 kHz-56 MHz; 76-154 MHz; 420-470 MHz. (Exact frequency range may be slightly different.)

- Operating modes: USB, LSB, CW, AM, FM, WFM, digital (AFSK), packet (1200 / 9600 FM).
- Power output: 5 watts SSB / CW / FM with 13.8V external DC; 1.5 W AM carrier; 2.5 W SSB / CW / FM with 9.6V Ni-Cd Pack or 8 "AA" batteries (AM: 0.7 W); up to 5 W SSB / CW / FM power (maximum) programmable via menu on Ni-Cd/AA cells.

10m / 6m / 2m / 70cm FM

FT-8900R
\$CALL
HRO Price



The FT-8900 combines "traditional" 2m / 70cm local communications with the exciting capability of Sporadic-E or F2 DX on the 10m and 6m bands, allowing nationwide FM communication.

- Covers 28-29.7 / 50-54 / 108-180/320-480 MHz and 700-985 MHz (cellular blocked and non-restorable).
- Independent 2-channel, dual-receive, full duplex.
- High power output with 50 watts on 10m / 6m / 2m and 35 on 70cm.
- Large, easy-to-read LCD display.
- Built-in duplexer.

- More than 800 memory channels. 799 "regular," 6 "home," 5 sets of band edge, and 6 "Hyper Memories."
- Cross-band repeater capability.
- Versatile scanning.
- CTCSS / DCS built-in.
- User-programmable mike keys.
- Remote head mounting with optional YSK-800.

MOBILES

Portable

All Mode FT-897D

\$1049.95 – HRO Discount Price

HF + 6m + 2m +70cm



Now with TXCO Built-in

The innovative FT-897 rugged multiband portable transceiver covers the 160-10 meter bands (now includes 60m) plus 6m, 2m and 70 cm. All mode operation includes SSB, CW, AM, FM and digital modes. With the internal batteries (optional) it will produce 20 watts out. With an external 13.8 volt DC supply it will produce 100 watts out.

- 200 memory channels with alphanumeric tags.
- ATAS-120/100 compatible.
- Digital signal processing built-in.
- Bolt-on FC-30 automatic antenna tuner optional.
- IF shift control.
- IF noise blanker.
- AGC selector (auto / fast / slow / off).
- VOX operation
- CTCSS / DCS encoders / decoders built-in.
- Collins® 2.3 kHz SSB mechanical filter and 500 Hz CW filter (optional).
- Built-in 3 message memory keyer with adjustable pitch control.
- Automatic repeater shift.
- Smart Search™.
- Spectrum scope.
- Automatic beacon mode.

Accessories:

- FNB-78 internal 4.5 Ah ni-MH battery **\$119.95**
- FC-30 antenna tuner **\$249.95**
- FP-30 internal power supply **\$219.95**
- CD-24 4-hour charge adapter for FNB-78 **\$119.95**
- PA26B charger for CD-24 **\$85.95**
- ATAS-120 active tuning antenna **\$349.95**
- MMB-80 mounting bracket **\$35.95**

**Visit HRO Stores
Nationwide**

2m / 440 MHz Dual Band



FT-8800R

\$CALL – HRO Price

The FT-8800R provides easy operation, outstanding receiver performance and crossband repeat capability.

- Wide receiver frequency coverage covering public safety, commercial, aircraft and government communications.
- Independent two channel operation operates as two radios in one.
- Large LCD display.
- High power output with 50 Watts on 2m and 35 on UHF.
- Over 1000 memory channels with 512 regular memories on each band.
- One-touch Band-Pattern.
- CTCSS and DCS tone systems.
- User-programmable microphone keys.
- Convenient remote-head mounting capability with the optional YSK-8900 separation kit.



FT-7800R

\$CALL – HRO Price

The FT-7800R is designed for simplicity of operation along with high performance in the receiver section. It is the ideal rig for the active Ham who has a need for simplex, repeater, or FM satellite operation on both bands, but without the complication of cross-band repeat capability.

- NOAA Weather Alert (U.S. Version only).
- More than 1000 memory channels, each capable of storing a 6-character alpha-numeric label.
- Wiires™ internet linking capability.
- YSK-7800 remote mounting kit (option).
- One-touch "Hyper Memory" operation.
- High power output - 50 Watts of power output on 144 MHz and 40 Watts on 430 MHz.

2m Mobiles



FT-2800M – 2 meters

\$CALL

The FT-2800M, the most ruggedly built 2m amateur transceiver ever, provides 65 watts of power along with Yaesu's bullet-proof receiver front end. Direct keypad frequency entry, alphanumeric memory system, high power output and unsurpassed ergonomics make the transceiver an operator's dream come true.

- 65 watts output with 4 selectable power output levels (65/25/10/5 watts). Power levels may be stored in memory.
- Extensive memory system provides a total of 221 memory channels including 200 regular memories, 10 pairs of band-limit memories and an instant recall "Home" channel. Memories may store repeater shift, CTCSS/DCS data, power level, scanning status and alphanumeric labels.
- CTCSS and DCS encode/decode built in.
- Versatile scanning capability include a choice of scanning/resume options. Scans memories, VFO or within a limited VFO sub-band.
- Wide/narrow deviation selection.
- Weather channels with "severe weather" alert.
- Smart Search™ may be used to automatically load a special bank of 31 memories based on activity.
- Wires™-II internet linking access feature. (Optional Wires™-II Kit required.)
- Multi-function LCD display shows memory channels, alphanumeric label.
- HM-48A6J DTMF direct access microphone allows direct keypad frequency entry and other controls.
- RF-level squelch.
- Interactive programming menu.
- Supply voltage display.
- Also: time out timer, auto power off, auto repeater shift, 4-level display dimmer and dual watch.



ACCESSORIES

HF Amp & Power Supply



Quadra System

HRO Discount Price
\$3999.95

Here's all the linear amplifier you should need for operation on both HF (160 - 15 meters) and 6 meters. It is designed for automatic band switching with the FT-1000D, FT-1000MP, FT-920, FT-990 and the FT-900 HF radios.

The amp features 8 MRF150 power MOSFET transistors designed into 4 units of 2 transistors in a push-pull circuit at 48 VDC.

The separate power supply, the VP-1000 allows for easy installation. There are two input voltages, 117 VAC or 220 VAC. Output power is a function of the power supply voltages. At 220 VAC there is 1000 watts out on HF and 500 watts on 6 meters. At 117 VAC the output is 500 watts on HF.

The amplifier comes with a built-in high speed antenna tuner. It has four antenna outputs and two inputs. The multifunction omni-glow LCD display shows the status of the amplifier. There is automatic system monitoring with VSWR protection.

Power Supplies



FP-1030A

Yaesu makes two low profile switching power supplies. The FP-1023A has 23 amps continuous and 25 intermittent. The FP-1030A is 25 amps with meters. Both operate on 110 or 220 VAC.

HRO Prices: FP-1023A \$149.95
FP-1030A \$239.95

Antenna Tuner

FC-20 – \$249.95

HRO Price

Controlled from the FT-847, the FC-20 will match your HF or 6m antenna. SWR 3:1 on HF and 2:1 on 6m. 100 memories of tuning data.

DC Noise Filter

LF-1 – \$26.95

HRO Price

Especially designed for mobile use, consists of a heavy choke coil to suppress alternator DC line noise.

Programming Kits

To Program Handhelds:

ADMS-1E

FT-10/ 40/ 11/ 41/ 50/ 51

VX-1R / VX-5R

HRO Price \$38.95

ADMS-1F

VX-110 / VX-150

HRO Price \$38.95

To Program Mobiles:

ADMS-2D

FT-3000 / 8000 / 8100 / 8500

ADMS-2E

FT-90R / 2600M

HRO Price \$39.95

ADMS-2F

FT-1500M

HRO Price \$38.95

To Program a Receiver:

ADMS-3

VR-500

HRO Price \$38.95

Radio Cases

Cases for Yaesu Handhelds

Cases are available for Yaesu handheld radios. Please contact your closest HRO store or call one of the toll free numbers for information on the case that matches your HT. Several options match the various radios and the battery packs that are used.

Microphones



MD-200 A8X

\$379.00

HRO Price

The MD-200A8X is a stylish, high-quality desk microphone designed for base station use with the latest generation of Yaesu transceivers. (It is fully compatible with the FT-1000MPMKV, FT-1000MP, FT-920, FT-900C/ATC, FT-847, and FT-817. CT-69 adapter required for use with the FT-100/100D.)

Features a studio-quality polyethylene terephthalate film dynamic element optimized for SSB operation. The variable side pressure control allows the operator to adjust the frequency response of the mike from totally flat to high-articulation. Provision for incorporating user supplied mike element with a switch to select between the standard and user element.



MD-100 A8X

\$125.95 – HRO Price

This desk microphone features selectable low-cut filtering and high-emphasis active filtering that allow you to tailor the microphone response for optimum voice clarity or DX punch. It has a large push-to-talk switch and latching button, along with a large rotary up/down, slow/fast control for scanning.

The MD-100a8x is especially designed for the FT-1000MP and the FT-900, but can be used with the following Yaesu HF transceivers: FT-747GX, FT-757GXII, FT-890, FT-840, and FT-1000.

For the FT-1000 MP Mark V

Remote Control FH-1

The FH-1 remote control will enhance the operating flexibility of your FT-1000MP Mark V. It permits remote control of the contest memory keyer, VFO/memory and main/sub VFO. It connects by a 3.5 mm miniature mono plug to the REMOTE jack on the rear panel of the FT-1000MP. **HRO Discount Price: \$88.95**

50 MHz Transverter FTV-1000

for FT-1000MP Mark V



The FTV-1000 uses high performance MOSFET transistors to provide 200 watts at 50 MHz. The unit runs cool with extensive heat sinking and cross-flow cooling fan. It features exclusive Class-A bias capability. When selected, output power is reduced to 50 watts. Class-A operation provides the best signal on 6 meters.

The receive section follows the same design as the FT-1000MP Mark V. It has a low noise preamp with two gain selections. For local work, these preamps may be bypassed. **HRO Discount Price: \$CALL SPECIAL**

Meters



YS-60
\$129.95

HRO Price

YS-500
\$104.95

HRO Price

Meters monitor average and peak transmitter power and voltage standing wave ratio (VSWR) of antenna systems in two way radio stations from 1.6 to 60 MHz (YS-60) or 140 to 525 MHz (YS-500). YS-60 requires 12 VDC for PEP operation.

RECEIVERS

Communications Receiver



VR-120D with 12v input \$CALL



For professional-grade monitoring in the field, the VR-120 provides wide band coverage from 0.1 to 1299.996 MHz in AM / FW / Wide-FM modes (cellular and other restricted frequencies blocked). The receiver is constructed with a durable, high-impact polycarbonate case and is water resistant to survive the rigors of outdoor use. The VR-120 low current consumption and can provide up to 20 hours of use on a pair of "AA" batteries.

- Front-end attenuator.
- Special bank of 12 preset mode memories.
- Listen to the shortwave broadcasts from around the world.
- Simple one-touch memories.
- Wide selection of scanning modes.
- Cloning capability to other VR-120's.
- BNC type antenna connector.

Charger Adapters

NC-50 Charger Adapters

The NC-50 quick charger supports most Yaesu hand-held batteries. An appropriate adapter is required. Adapters and batteries supported are shown in the table.

Model	Batteries Supported	HRO Price
CA-7	FNB-12 / 14 / 17	\$22.95
CA-8	FNB-25 / 26 / 27	\$27.95
CA-10	FNB-31 / 33 / 38	\$14.95
CA-14	FNB-40 / 41 / 42	\$25.95

Yaesu Handheld Batteries and Chargers

Battery	Voltage VDC	Rating mAh	Wall Charger	Desk Charger	Radio Series	HRO Price Battery Only
FNB-12S	12	600	NC-18	NC-50	FT-23/33/73/411/470	\$71.95
FNB-17	7.2	600	NC-28	NC-50	FT-23/33/73/411/470	\$52.95
FNB-27	12	600	NC-18B	NC-50	FT-26/76/415/416 / 530/815/816	\$62.95
FNB-41	9.6	600	NC-60	NC-50	FT-10R/40R	\$58.95
FNB-42	9.6	1100	NC-60	NC-50	FT-10R/40R	\$62.95
FNB-52LI	3.6		NC-66		VX-1R	\$36.95
FNB-64	7.2	700	NC-73B		VX-110/150	\$43.95
FNB-80LI	7.4	1300		CD15A	VX-7R	CALL

SWL Receivers



VR-500 \$CALL

HRO Discount Price



This high performance miniature communications receiver provides general coverage reception from 100 kHz to 1300 MHz on CW, SSB (LSB and USB), AM and FM (wide and narrow).

- Receives 0.1 to 1300 MHz (cellular blocked).
- Dual watch.
- Band scope.
- 8 character alpha numeric display.
- 1000 memory channels, skip memory 100 channels, 10 channel search band, 10 channel dual receive, one priority channel.



FRG-100B \$CALL

HRO Discount Price

Receive CW, SSB, AM, and FM, 50 kHz to 30 MHz general coverage receiver. Features are push-button selectable from the front panel. A back-lit LCD shows frequency (down to 10 Hz) and operating status.

50 fully-tunable memory channels store frequency, mode and filter selection. Selectable steps of 10 Hz, 100 Hz, 1 kHz standard—other increments are user programmable. Multi-function scanning (memory, band, selectable group, priority) with carrier or time-delay resume. Has adjustable BFO, reverse BFO offset, and selectable CW sideband. Optional 250 or 500 Hz crystal filters. Includes adjustable SSB carrier offset, selectable AGC rate, noise blanker, all-mode squelch and RF attenuation controls. Programmable on/off timer / sleep timer.



VR-5000 \$599.95

HRO Discount Price

This multimode desktop scanning receiver has continuous frequency coverage from 100 kHz to 2.6 GHz (cellular frequencies are blocked and non-restorable). Features direct keypad entry and a wide variety of scanning capabilities.

The 2000 memory channels may be separated into as many as 100 memory banks. Memory banks and memory channels may have alphanumeric labels. Sort channels by frequency, alphanumeric name or operating mode. Special pre-loaded bank of most popular shortwave broadcast stations. List may be user edited.

Built-in world clock. Dual receive, band scope graphical activity monitor, field strength meter, audio waveform meter, "Smart Search™" memory loading feature. Optional DSP-1 digital signal processor, DVS-4 digital voice recording unit and FVS-1 voice synthesizer.



HANDHELDS

Single Band

HRO Discount Prices
VX-110-\$CALL
VX-150-\$CALL



VX-150
 16 Keys

VX-110
 8 Keys

The VX-110/VX-150 ultra compact VHF FM handheld transceivers are the latest in single band handhelds from Yaesu. They are packaged under the Vertex label.

- Frequency: TX: 144-148 MHz, RX: 140-174 MHz.
- 5 watts with three selectable power levels Hi/ Med/ Low.
- Direct keypad entry.
- 209 memory channels.
- CTCSS (encode/decode).
- DCS (encode/decode).
- 7 character alphanumeric display.
- Optional ADMS-1F Windows PC Programmable.
- Smart Search™ Auto Memory Loading.
- Automatic number identification.
- ARTS system.
- Tone search scanning.
- Mil-spec 810D/E.
- Backlit keypad.

Dual Band

HRO Discount Price
FT-60-\$CALL



FT-60R
 2 m / 70 cm

Extensive Receive Frequency Coverage

NEW!

Emergency Automatic ID for Search & Rescue

- Receive coverage 108-520MHz and 700-999MHz (cellular frequencies blocked) for monitoring Amateur, Public Safety, Business, Marine, Aircraft, Government communications.
- 1000 memory channels w/Alphanumeric labels.
 - 10 memory banks.
 - 5 Watt output.
 - CTCSS and DCS (encode/decode) with split tone; DCS encode only capable.
 - One-touch NOAA access.
 - 9 DTMF Auto-dial memories.
 - WIREST™ Internet Linking
 - Huge LCD Display.
 - ARTS™
 - Rugged die-cast, water resistant construction.
 - Two front panel Programmable Keys.
 - Automatic Repeater Shift.



VX-2R
 2 m / 70 cm

\$CALL

HRO Discount Price

Super Special!

The world's smallest dual-band HT with up to 1.5 W of output power is your gateway to VHF, UHF, shortwave broadcast, marine and aircraft bands or WIREST™ Internet linking.

- Covers 500 kHz to 999 MHz (cellular blocked).
- Over 1300 memory channels.
- Dual channel "priority" operation.
- VOX (optional VC-25 headset required).
- 3 watts out on 2m (2 on UHF) with optional E-DC-21 DC Adapter cable.
- Multiple scanning functions.
- RF squelch only.
- Cloning between two VX-2 series.
- Narrow/wide deviation setting.
- ARTS™ auto-range transponder system.
- Automatic repeater shift.
- Channel counter searches.
- Busy channel lock-out.
- DC voltage meter.

Tri-Band

VX-5R
 6m / 2m
 70 cm

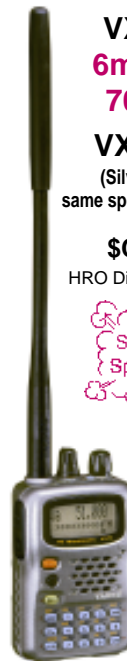
VX-5RS

(Silver Color same specs as VX-5R)

\$CALL

HRO Discount Price

Super Special!



This miniature tri-band FM transceiver has extensive receive frequency coverage:

- (0.5-15995 Mhz, 48-728.990 Mhz, 800-998.990 MHz cellular blocked). Receives AM and FM broadcast, HF short-wave, VHF and UHF TV, VHF AM aircraft, and a wide range of commercial and public service frequencies.
- Provides 5 W out on 50-54 MHz & 144-148 MHz; 4.5 W on 430-450 MHz.

CTCSS and DCS built-in, dot matrix LCD, optional barometric sensor unit, dual watch, Spectra-Scope™ graphical display, 220 memories, 16 digit 9 memory DTMF autodialer, ADMS Windows™ PC programmable.

Quad-Band

VX-7R
 2 m
 220MHz
 70 cm
 6m

VX-7RB

(Black color same specs)

\$CALL

HRO Discount Price



The VX-7R is the world's first submersible amateur handheld. It has true dual receive. Output is 5 watts on 6m / 144 / 440 MHz and 300mW on 220MHz.

- Covers 500 kHz to 999 MHz (cellular blocked).
- Over 900 memories.
- Dual receive V-V, U-U V-U.
- CTCSS/DCS encoders/decoders built-in.
- 256 color status indicator strobe LCD.
- Submersible (3 feet for 30 minutes).
- WIRE compatible.
- "Split-tone" capability including DCS encode-only.
- 7.4 volt 1300 mAh lithium ion battery.
- ARTS capable.
- ON/OFF timers.
- "Quick-draw" swivel-mount belt clip.
- 24 hour clock.
- Spectrum scope display.

Yaesu Handhelds

Model	Frequency	Mode	Pwr Supply	Power Out	Current Transmit	Drain Receive	Sensitivity	Height in (cm)	Width in (cm)	Depth in (cm)	Weight oz (g)	HRO Price
FT-60R	2m/70 cm	FM	7.2 VDC	5 W	1.5 A	125 mA	.16 µV / 12dB	4.3 (10.9)	2.3 (5.8)	1.2 (3.0)	13.5(370)	CALL
VX-2R	.5- 999 MHz@	FM	3.6 VDC	1.5W††	500 mA	150 mA	.16 µV / 12dB	3.2 (8.1)	1.9 (4.7)	1 (2.5)	4(125)	CALL
VX-7R	50/144/440MHz	FM/AM	7.4 VDC	5 W †	1.6/1.7/1.4 A	150mA	.16 µV / 12dB	3.4 (8.7)	2.3 (5.8)	1.1 (2.8)	8.9(255)	CALL
VX-5R	.5- 999 MHz@	FM	7.2 VDC	5 W **	1.9 A	200 mA	.16 µV / 12dB	3.8(9.6)	2.5 (6.4)	1.3 (3.2)	10 (313)	CALL
VX-110	144-148 MHz#	FM	7.2 VDC	5W	1.3 A	130mA	.16 µV / 12dB	4.2 (10.8)	2.3 (5.8)	1.1 (2.65)	11.5 (325)	CALL
VX-150	144-148 MHz#	FM	7.2 VDC	5W	1.3 A	130mA	.16 µV / 12dB	4.2 (10.8)	2.3 (5.8)	1.1 (2.65)	11.5 (325)	CALL

*Power output can be increased depending on the battery pack selected. #Extended Rx range @Cell phone blocked. **2 and 6m 4.5 W UHF. †300 mW on 22- MHz. ††1.5 W 2m/1 W UHF.

HT ACCESSORIES

Accessory	Model	10R 40R 50 R	60R	11 41	51R	23R 33R 73R	26 76	209RH	103R 203R 703R	411 811 911	415 815	416 418	470	530	VX-1R	VX-2R	VX-5R	VX-7R	VXF-1 VXF-10 VX-150	HRO Discount Price
Headset/Boom Mike	YH-2					*	*	*	*	*	*	*	*	*						\$30.95
Mike "Y" Adapter	CT-30	*																		\$10.95
Microphone Adapter	CT-44		*																	\$14.95
VOX Headset	VC-22			*																\$62.95
VOX Headset	VC-25		*												*			*		\$84.00
Speaker/Mike	MH-32			*		*	*	*	*	*	*	*	*	*						\$30.95
Speaker/Mike	MH-34B4B	*	*																	\$38.50
Speaker/Mike	MH-30C2B			*		*				*							*			\$45.95
Speaker/Mike w/Earphone Jack	MH-35A2B			*																\$35.95
Speaker/Mike	MH-57A4B																	*		\$30.95
Speaker/Mike waterproof	CMP-460A																	*		\$49.95
Ear Piece Mike	MH-37A4B		*														*			\$40.00
Ear Piece Mike	MH37B2B	*		*	*	*	*	*	*	*	*	*	*	*	*			*		\$30.95
Ear Piece Mike	VC-27																	*		\$30.95
Ear Phone	FEP-10	*													*					\$9.95
Microphone adapter	CT-91																	*		\$10.95
Tone Squelch	FTS-17A						*			std	std	std	std	std						\$47.95
DC/DC adapter	PA-6					*				*			*							\$30.95
DC/DC adapter	EDC-5B	*	*				*				*	*		*			*	*		\$26.95
DC/DC adapter	EDC-6	*	*														*	*		\$7.95
DC Adpt w/Trickle Charger	EDC-12			*																\$38.95
DC/DC adapter	EDC-15														*				*	\$38.95
Wall Charger 117 VAC	NC-28B					*	*			std	std	std	std	std						\$14.95
Wall Charger 110 VAC	NC-34B						*													\$14.95
Wall Charger 117 VAC	NC-60B	*									*	*								\$16.95
Wall Charger 117 VAC	NC-66B														*				*	\$18.95
Wall Charger 117 VAC	NC-72B																*			\$18.95
Wall Charger 117 VAC	NC-88B		*																	\$24.00
Wall Charger 220 VAC	NC-18C					*		*	*	*	*	*	*	*						\$15.95
Wall Charger 220 VAC	NC-28C					*	*			*	*	*	*	*						\$26.95
Wall Charger 220 VAC	NC-34C					*	*			*	*	*	*	*						\$29.95
Rapid Charger	CD-15																	*		\$29.95
Rapid Charger	CD-15A																		*	\$29.95
Quick charger	NC-50	*		*	*	*	*			*	*	*	*	*						\$92.95
Desk Top Rapid Charger	VAC-370		*																	\$79.95
Desk Top Rapid Charger	VAC-400B																		VX150/110	\$69.95
Battery 600 mAh 12V	FNB-12S					*				*			*							\$71.95
Battery 600 mAh 7.2 V	FNB-17					std				std			std							\$52.95
Battery 600 mAh 12 V	FNB-27						*			*	*		*							\$62.95
Battery 600 mAh 9.6 V	FNB-38			*	*						*	*		*						\$75.95
Battery 600 mAh 9.6 V	FNB-41	*																		\$58.95
Battery 1100 mAh 9.6 V	FNB-42	*																		\$62.95
Battery 600 mAh 6.0 V	FNB-49	*																		\$19.95
Battery 1100 mAh 7.2 V	FNB-V47	*																		\$55.95
Battery 700 mAh 3.6 V	FNB-52LI													*						\$36.95
Battery	FNB-58LI																*			\$69.95
Battery 1400 mAh	FNB-80LI																	*		\$83.95
Battery 1000 mAh	FNB-82LI														*					\$38.95
Battery 1300 mAh 7.4 V	FNB-83		*																	\$65.95
Battery	FNB-53																		*	\$19.95
Battery case AA batteries	FBA-17					*				*		*								\$25.95
Battery case AA batteries	FBA-20														*					\$22.95
Battery case AA batteries	FBA-23																*	*		\$25.95
Battery case AA batteries	FBA-25		*																	\$20.95
Cloning Cable	CT-27	*	*																	\$14.00
Cloning Cable	CT-35			*																\$9.95
Mike Adapter	CT-44														*					\$12.95
Ant Adapt BNC - Rev SMA	CN-2	*															*			\$8.95
Ant Adapt SMA - BNC	CN-3	*	*												*					\$11.00
Belt Clip	Clip 10	*															*			\$7.95
Radio case	CSC-V10	*																		\$35.95
Radio Case FNB-26/27	CSC-52										*	*								\$19.95
Radio case FNB-41/FBA-15	CSC-68	*																		\$16.95
Radio case FNB-40	CSC-69	*																		\$16.95
Radio Case	CSC-73	*															*			\$19.95
Radio Case (soft)	CSC-88																	*		\$15.95
Leather Case	LCC-150/TT																		VX150/110	\$23.95
Leather Case w Swivel	LCC-150S/TT																		VX150/110	\$31.95
BNC-SMA Adapter	CN-3																	*		\$8.95
Barometric Sensor Pressure Unit	SU-1																*	*		\$39.95

Specials are Listed on the Secure HRO Web Page: <http://www.hamradio.com>