

YAESU FT-950



160 - 6 meters, 100 Watts of Reliable Power from a cool radio!

Solid SSB and CW power on 160 through 6 meters adjustable in increments from 5 watts to the full 100 watt output. AM - 5 to 25 watts output. • Ultra-stable and high-power Final Amplifier Stage incorporates a high efficient reliable RD100HHF1 MOS FET in a push-pull configuration, using a supply voltage of 13.8 V, cooled by a huge 1400 cc die-cast aluminum heat sink with a high coefficient of thermal conductivity. • A thermostatically-controlled 2.35"/60mm axial cooling fan engages at 40 deg C/104 deg F, and it features four speeds, depending on the degree of cooling required. The large bearing surface of the fan, its floating mount, and the unique heat sink design combine to make the cooling system incredibly calm and quiet, yet very efficient.

General Coverage Receiver 30 kHz to 56 MHz

Enjoy the full range 30 kHz to 56 MHz general receiver coverage of the FT-950 for shortwave listening across the HF spectrum.

High Speed Automatic Antenna Tuner

The 100 memories of matching-point data make it possible for you to tune around the bands without the need to re-tune as you go. The special antenna tuner memories ensure efficient operation, as well as lightning-fast matching at new operating frequencies, as needed.

Yaesu's Popular Front Panel Proprietary High-visibility Fluorescent Display (VFD)

The front panel oversized VFD Display provides higher brightness and contrast compared to TFT displays, allowing clearer viewing from a wider range of angles than on other transceivers

Front Panel Block Diagram Display for Function Status

The front panel "Block Diagram" display shows the current status of a number of functions in the receiver of the FT-950. With one glance, you can see your settings for a number of critical functions of the radio. And you will also see Bar Graphs depicting several different DSP filter settings at the same time for quick alignment. allowing you to visualize the frequency components as you hear them. This function also enables you to make adjustments to, such as, the Notch Filter, Contour control or (on transmit) the Parametric Microphone Equalizer. At the same time, you may use the Oscilloscope to look at the X-Y characteristics of an incoming signal with variable level and sweep speed, or to check CW tone pitch, etc. **Swept-Frequency SWR Display - As you tune across the Amateur band and transmit at different frequencies, the DMU-2000 will plot the SWR across the band, alerting you to any unusual SWR situations, etc. ** Memory Channel List - You may edit and confirm your memory frequency channels, with easy on your big screen, such as to add an

alpha/numeric "Tag" to each memory for quick recall of the channel's identification.

**** World Clock Display** -The World Clock function includes a world map with entries for a number of locations throughout the world, so that you will see what the time of day at the other end of our QSO or anywhere in the world. Of great advantages value to serious DXers is the Sunrise/Sunset depiction, which shows the "Gray Line" area where propagation frequently is enhanced. An alarm feature is also included, to alert you of a schedule time.

**** Rotator Control Function** - The Rotator Control Function includes the Great Circle Map that allows you to aim your directional antenna accurately (e.g. Tokyo seems to be located West from San Francisco though it is more actually located to the NNW direction) and the imbedded database of worldwide cities may be used to determine a specific bearing to a DX location, if you like. The Rotator Control function further lets you control the left(C-C-W)/right(C-W) rotation of your Yaesu G-800/1000/2800DXA series rotator, in addition to permitting speed control and setup of preset beam headings. And, if you use your after-market keyboard for input of your latitude and longitude, the DMU-2000 will lie out compute and display a Great Circle Map centered on your location! You may also connect a GPS Unit (one capable of output of NMEA0183 position data) to your DMU-2000 to download precise position data.

**** Log Book Feature** - By connecting an after-market keyboard and monitor to the DMU-2000, you can utilize the on-board logging capability of the FT-2000. The Log Book includes an extensive database of DX information, and you may archive your log data to the supplied CF card using one of the popular and available logging formats like ADIF, Cabrillo, etc.

World Famous Yaesu Flywheel-effect Oversized High-quality Main Tuning Dial

The front panel's oversized 2.67" (58 mm) Main Tuning Knob is crafted using a heavy brass alloy (knob weight: 6.7 oz./185 g) for easy flywheel-effect frequency excursions or precision tuning of weak digital signals, thanks to the precision magnetic rotary-encoder tuning mechanism coupled to the Main Tuning Knob. The torque of the tuning knob shaft may be adjusted by rotating the Main tuning dial while holding the dial skirt for just the right amount of drag you prefer. All it will take is one spin of the dial for you to know that you are in command of a serious radio. The Main Tuning Dial is the same structure used for the FT DX 9000/ FT-2000 series radios utilizing traditional dial structure along with a specially designed rotating skirt that creates a small air gap. This air gap reduces sweat accumulation on the operator's fingertips, enhancing tuning precision during long operating sessions.

Triple-conversion super-heterodyne receiver

Triple-conversion super-heterodyne receiver architecture using 69.450MHz 1st IF with the powerful 1st IF 3kHz/6kHz/15kHz selectable roofing filters (MCF), you will enjoy the advanced technology of the FT-950's multi-function 30 kHz 32-bit Floating Point IF DSP. The triple-conversion design features a 1st IF of 69.45 MHz, a 2nd IF of 450 kHz, and a 3rd IF of 30 kHz (FM: 24 kHz), with each stage's advanced filtering protecting the stages to follow from unwanted signal voltage, leading to a quiet, ultra-robust receiver with impeccable total system performance

Yaesu 32-bit floating point IF DSP

The Yaesu 32-bit floating point IF DSP - legendary known and reputed among the serious DXers and enthusiasts - will give you the edge over all other DSP-based radios. The IF Digital Signal Processing system of the FT-950 is based on the TI TMS320C6713 32-bit floating point DSP IC. All DSP superb functions can be selected by simply rotating the SELECT dial located to the left side of the main dial.

Robust Receiver Front End

The RF amplifier stage is designed for low and high intercept, utilizing two strong series-connected 2SC3356 bipolar transistors with negative feedback for consistent, repeatable performance. The low noise figure and carefully-controlled stage gains ensures that only the precise amount of gain needed is actually utilized. And the front-panel "IPO" switch lets you select direct feed to the first mixer (IPO), Preamp 1 (RF AMP1), or Preamp 2 (RF AMP2) which adds the second preamplifier stage in series, according to the antenna in use and the noise and interference conditions present at the time. IPO (Intercept Point Optimization) is the function that you can set the total front end gain to optimize RF stage performance. The ultra-strong first mixer of the FT-950 features SPM5001 FETs in an active, doubly-balanced configuration optimized for a severe multi-signal environment. The active design results in no net loss in the mixer circuit itself, simultaneously eliminating the need for pre-amplification prior to direct feed of received signals to the first mixer.

Digital PLL for Outstanding Local Oscillator Performance

The receiver section exhibits strong-signal-handling capabilities in multi-signal environments by employing an essential ultra-low-noise local oscillator system that produces a very clean first IF signal. The spurious-free dynamic range and close-in blocking performance are substantially enhanced with the high Carrier-to-Noise (C/N) ratio of the FT-950 high-speed digital PLL.

Three (3) Factory Installed 1st IF Roofing Filters

The 69.450 first IF stage features three/3 roofing filters (15 kHz, 6 kHz, and 3 kHz) optimized by mode for best performance on today's most crowded bands. Each roofing filter is a four-pole, fundamental-mode monolithic crystal filter design to produce excellent shape factor. Under any busy band conditions, the roofing filters positioned right after the first mixer of the FT-950 are designed to and definitely improve the 3rd-Order Intercept Point performance for all stages that follow.

CONTOUR Control function with natural analog touch

The incredibly sharp "brick wall" filters of the IF DSP system can expose characteristics of incoming signals that you have never heard before; not all of them are really pleasant to listen to all of the time. But, using the CONTOUR control, you can roll off low-frequency or high-frequency components so as to shape the receiver passband differently, or null out part of the mid-range area, with continuous adjustment throughout the passband. By nulling out interfering or irrelevant frequency components, the desired frequency components will significantly rise out of the background noise, improving fidelity and signal-to-noise (S/N) ratio.

World-renowned variable IF WIDTH and IF SHIFT Interference Reduction Systems

While leaving the pitch of the incoming signal and bandwidth of the IF passband unchanged, the IF Shift system allows you to vary the actual passband higher or lower in frequency, eliminating interference that you encounter outside the passband. You can also improve your reception by choosing to narrow the bandwidth of the IF SHIFT function and then varying the passband with the IF SHIFT by selecting these settings with the SELECT dial. (The IF SHIFT control is concentric with the IF WIDTH control.) The variable IF WIDTH system has a default center bandwidth of 2.4 kHz for SSB and CW, and 500 Hz for RTTY and PSK operation. By simply rotating the IF WIDTH control counterclockwise, the passband may be reduced to as little as 500 Hz (or 1.8 kHz on SSB). And if you like to listen in a wider

bandwidth for greater fidelity on SSB, the SSB bandwidth may be expanded to 3000 Hz to possibly improve the audio-sound of the station you are working. And for improved AM Broadcast reception, you may use the one-touch NAR function to toggle between 9 kHz (wide) and 6 kHz (narrow), depending on interference, for better audio. While the IF WIDTH is generally used for setting the IF DSP bandwidths, you may also utilize the one-touch NAR (Narrow) function to reduce the passband narrower to your pre-selected center bandwidth (SSB: selections available from 200/400/600/850/1100/1350/1500/1650/1800 Hz CW: selections available from 100/200/ 300/400/500 Hz, Factory preset default : 1800 Hz/SSB, 500 Hz/CW, 300 Hz/RTTY and PSK).

IF Noise Blanker

The IF Noise Blanker is ideal for suppression of automotive ignition noise, and it may be utilized in conjunction with the Digital Noise Reduction system, or by itself. The IF Noise Blanker gain can be precisely adjusted via a menu for the blanking level to be applied.

DSP Digital Noise Reduction

For reduction of random noise types, the FT-950 utilizes a powerful Digital Noise Reduction filter that contains fifteen different noise analysis parameters specially created after thousands of hours of on-the-air testing. You may choose any of these parameters to effectively reduce most noise under nearly any conditions at any given time.

Manual IF Notch and Beat-reducing Automatic Digital Notch Filter (DNF)

Selecting the NOTCH function with the SELECT dial will enable the FT-950's very high "Q" IF Notch, producing a deep notching effect typically in excess of 70 dB. Using the Menu mode to choose the "digital" NOTCH function, a uniquely designed DSP Auto Notch (DNF) filter can also be engaged independently from the "manual" Notch function, to reduce multiple carriers within the passband

Analog-sounding High-quality Digital SSB Modulation

The YAESU DSP digital modulation technique not only provides an analog-sounding high-quality digital SSB modulation envelope, but also allows the transmission bandwidth to be adjusted by the operator.

Transmit Monitor Feature

The IF Transmission Monitor allows you to listen to accurate reproduction of the transmitter's IF signal for making precise adjustments to the Parametric Equalizer, SSB Bandwidth, and/or Speech Processor. The Monitor Level may be adjusted from the front panel.

Renowned YAESU Speech Processor for that Contest or DX Pile-up Punch

The power of IF DSP is brought to the world of Speech Processing with the powerful new DSP Speech Processor design incorporated into the FT-950. The built-in Speech Processor is designed to obtain the optimum frequency response to increase intelligibility at the receiving side of a difficult path. The compression level for the Speech processor can be adjusted from the menu to obtain the best performance during your DX pile-up operation or when propagation conditions vary.

Parametric Microphone Equalizer

Within each of the three bands (low-frequency, mid-range, and high-frequency) provided, you may adjust the center frequency of the equalization, the bandwidth over which the equalization is applied, and the amplitude (either peaking or nulling) within that range. Enjoy high quality transmission audio you set to your specific preference!

Built-in TCXO for State-of-the-Art Stability

A highly-stable Temperature-Compensated Crystal Oscillator (TCXO) is built into the FT-950, providing 0.5 ppm stability at room temperature, and better than 1 ppm stability over an ambient temperature range of 14 to 122 deg F (-10 to +50 deg C), making the FT-950 ideal for your PSK31, EME or other applications requiring high stability.

CW Zero-in Feature

The sidetone generated when you transmit (as set by the CW Pitch selection from the menu with a range of 300-1050 Hz) allows you to match that pitch to that of an incoming signal perfectly. As you tune closer to that pitch, the CW Tuning Indicator (selected in the menu to enable this tuning function to change the Clarifier Display to the CW Tuning Display) provides a visual and graphical depiction of the tuning process, with a marker moving towards the center of the scale display when the incoming signal is precisely aligned with yours.

CW Spot Feature

The CW SPOT switch engages a spotting tone that matches the offset of your transmitted signal (as set by the CW Pitch selection), allowing you to match that pitch to that of an incoming signal perfectly. The CW pitch frequency will be shown while pressing the "SPOT" switch. There's no more accurate way to be sure you're exactly on frequency!

Additional CW Capabilities

- Separate KEY jacks on the front and rear panels
- Built-in Electronic Keyer with 4-60 WPM Speed control
- Electronic Keyer Weight control
- Keyer paddle Dot-Dash reversal
- "Bug" keying emulation
- CW Full Break-in
- Five-channel Message Memory (50 characters each)
- Automatic insertion of incrementing contest number into stored messages
- Automatic "Beacon" keyer mode
- CW "VOX" Delay is adjustable: 30 ms - 3000 ms
- CW Mode reversal (USB or LSB injection)
- CW keying available during SSB operation

Contest-ready Antenna Selection Capabilities

The FT-950 is designed with today's fast-moving contest operator in mind. Two antenna jacks (SO-239) are provided along with one-touch access capability. The antenna selection is memorized in each VFO and memory channel register, and the radio remembers which antenna you last used on that band or memory!

Quick Split Function

Pressing the "SPLIT" key for about one second or more engages the "Quick Split" feature, which automatically separates the receive and transmit frequencies by 5 kHz (the TX frequency will be 5 kHz higher). You may also engage this feature by just pressing the combination LED switches near each VFO dial ("Main Dial" and "CLAR/VFO-B") to select which VFO to use as TX (or RX).

TXW (Transmit Frequency Watch) function

When operating Split, pressing the "TXW" key will instantly let you receive on your transmit frequency to hear activity in the pile-up you are trying to break through.

And much more for the active HF and 50MHz enthusiasts ...

- Quick Memory Bank (QMB) for instant storage and recall of frequency/mode information.
- Five-channel digital voice message memory function for repetitive voice messages with each channel capable of storing up to 20 seconds of audio using the optional DVS-6.
- The optional FH-2 Keypad provides message storage and recall of voice and CW messages together with remote control functions.
- VOX (Voice-operated TX/RX control)
- MOX (Manual TX/RX control)
- All-mode Squelch function
- 50-tone CTCSS Encoder/Decoder for FM operation
- Automatic Repeater Shift function with 88.5Hz PL Tone Encoder for 29 MHz FM.
- Wide/Narrow modes for AM and FM
- LOCK function
- Flexible, easy-to-use VFO/Memory command selections: VFO A VFO B , VFO A VFO B, VFO/Memory, Memory VFO A, VFO A Memory
- Memory Channel Offset Tuning function (MT)
- Versatile Scanning Capability
- Versatile Menu Mode for customization of setup and features
- Constant-level rear-panel (transmit + receive) audio sound recording jack
- Comprehensive external RS-232C computer control (CAT) protocol
- The Rotator Control function which enables you to control the speed and direction of a YAESU G-800DXA, G- 1000DXA, or G-2800DXA rotator using 10 key pad.
- Various easy connection availability for RTTY, SSTV, PSK31, JT65 (EME) and other digital modes
- Optional VL-1000 Quadra System HF - 50MHz Linear Amplifier for fully-automatic operation
- General coverage reception: 30 kHz - 60 MHz (specifications guaranteed only in Amateur bands)
- Mode-optimized Automatic AGC decay selection (OFF/SLOW/MID/FAST)
- Versatile Memory system: 99 channels and up to 5 Memory Groups
- Four-position receiver front-end attenuator (0/6/12/18 dB) for operation in noisy or strong signal reception environment