

HF/50MHz 100 W Transceiver
FT-950



The radio... YAESU
Choice of the World's top DX'ers

Yaesu again brings you innovation, quality, functions and features that you will find nowhere else!

The FT-950 is the newest radio in the direct lineage of the FT DX 9000 and FT-2000 series radios.

It has been developed to fit the needs of both casual and serious DX enthusiasts as well as new HF licensees eagerly seeking to discover the magic of the HF and 50 MHz bands.

Triple-conversion super-heterodyne receive architecture uses 69.450 MHz 1st IF, with powerful 1st IF 3 kHz/6 kHz/15 kHz selectable roofing filters (MCF). You will enjoy the advanced technology of the multi-function 30 kHz 32-bit Floating Point IF DSP.

Add the optional DMU-2000 Data Management Unit that provides an array of display capabilities, and include the optional, ultra-sharp, fully-automatic, RF μ -Tuning Preselector System.

You may customize your FT-950 with the same great options that are available with the FT DX 9000 and FT-2000 Series Transceivers!

The DXer's Choice : FT-950



HF/50MHz 100 W Transceiver

FT-950

High-speed Direct Digital Synthesizer (DDS) and High-spec Digital PLL
for Outstanding Local Oscillator Performance

Factory installed selectable 1st IF 3, 6, & 15 kHz Roofing Filters

Triple-Conversion Receiver Design using 69.450 MHz 1st IF

Ultra-strong Receiver Front End Includes 8 Bandpass Filters

Built-in TCXO for State-of-Art Stability (0.5 ppm @ room temperature)

Advanced Multi-function 30 kHz 32-bit Floating Point IF DSP
IF WIDTH, IF SHIFT, NOTCH, and CONTOUR Features



High-performance Receiver Design inherited from the proud lineage of the FT DX 9000/FT-2000 Series radios

Triple-conversion Receiver Design with Optimized Stage Balance

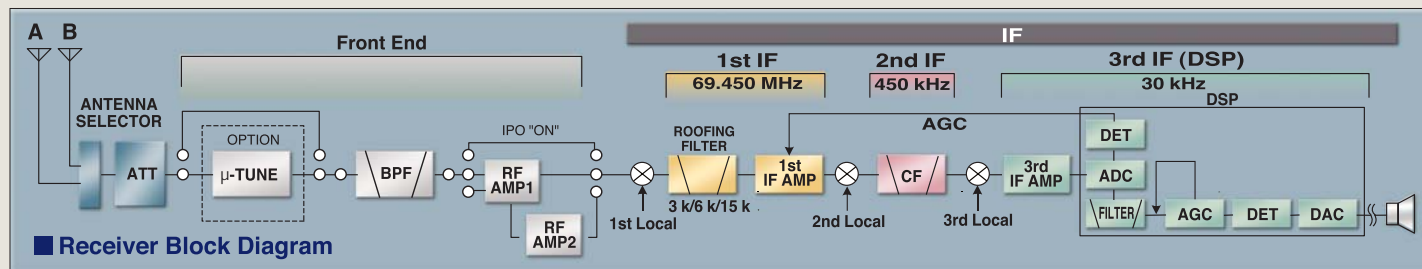
The triple-conversion design features a 1st IF of 69.45 MHz, a 2nd IF of 450 kHz, and a 3rd IF of 30 kHz (FM: 24 kHz). Each stage's advanced filtering protects the stages that follow from unwanted signal voltage, creating a quiet, robust receiver with unmatched total system performance.

Robust Receiver Front End

The RF amplifier stage is designed for low and high intercept. Two strong series-connected 2SC3356 bipolar transistors with negative feedback assure consistent, repeatable performance. The low noise figure and carefully controlled stage gains ensure that only the precise

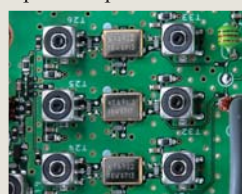
amount of gain needed is actually utilized. The front panel "IPO" switch lets you select direct feed to the first mixer (IPO), Preamp 1 (RF AMP1), or Preamp 2 (RF AMP2) which adds a second preamplifier stage in series. Adapt the RF front end according to the antenna in use and the noise and interference conditions present at the time.

IPO (Intercept Point Optimization) allows you to 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 of gain in the mixer circuit itself, thus eliminating the need for pre-amplification and permitting direct feed of received signals to the first mixer.

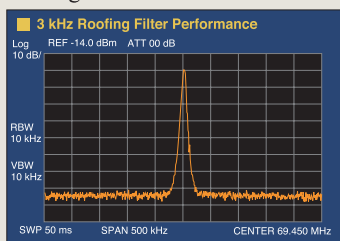


Factory installed 1st IF Roofing Filters

The 69.450 first IF stage features three roofing filters (15 kHz, 6 kHz, and 3 kHz) automatically selected 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 busy band conditions, the roofing filters are positioned right after the first mixer of the FT-950, and significantly improve the 3rd-Order Intercept Point performance for all stages that follow.

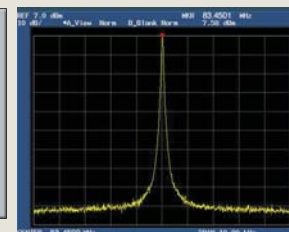
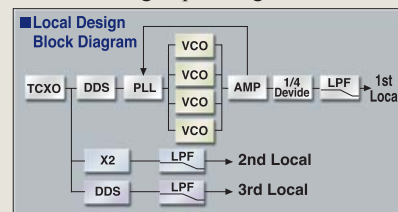


3 roofing filters (15 kHz, 6 kHz, and 3 kHz)



High-speed Direct Digital Synthesizer (DDS) Digital PLL for Outstanding Local Oscillator Performance

An ultra-low-noise local oscillator system that produces a very clean first IF signal is essential to improve the strong-signal-handling capabilities of the receiver section, in a multi-signal environment. 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.



The legendary 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

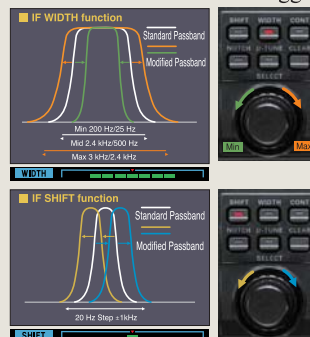


The IF Digital Signal Processing system of the FT-950 is based on the TI TMS320C6713 32-bit floating point DSP IC. Select the best DSP function by simply rotating the SELECT dial located to the left side of the main dial.

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 WIDTH 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). 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-quality 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 further 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).



WIDTH	USB/LSB	CW,RTTY,PKT	AM	FM,PKT(FM)
WIDE (Max)	3 kHz	2.4 kHz	-	-
WIDE/Default	2.4 kHz	500 Hz	9 kHz	15 kHz
WIDE (Min)	1.8 kHz	2.4 kHz(CW)/500 Hz (RTTY,PKT)	-	-
NAR/Default	1.8 kHz	500 Hz(CW)/300 Hz	6 kHz	9 kHz
NAR (Min)	200 Hz	100 Hz	-	-

CONTOUR Control function with natural analog feel

The incredibly sharp "brick wall" filters of the IF DSP system can reveal characteristics of incoming signals that you have never heard before, and not all of them are really pleasant to listen to all the time. Using the CONTOUR control, you can roll off low-frequency or high-frequency components to shape the receiver passband differently, or null out part of the mid-range area. With continuous adjustment throughout the passband, you may null 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.

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

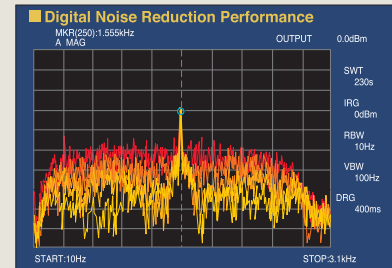
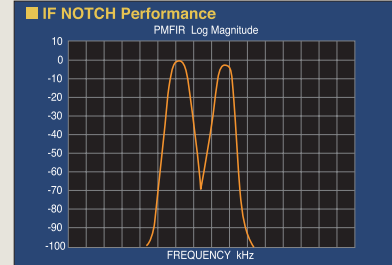
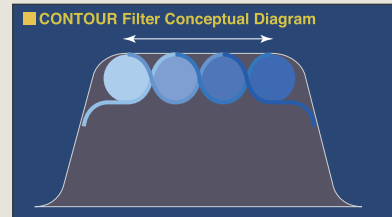
Selecting the NOTCH function with the SELECT dial will enable the FT-950's very high "Q" IF Notch Filter, producing a deep notching effect typically in excess of 70 dB. Using the Menu mode to choose the "digital" NOTCH function, a uniquely designed DSP Auto Notch (DNF) filter can also be engaged. Independently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

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 given conditions.

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.



The Secret of the FT DX 9000/FT-2000/FT-950 on the lower bands RF μ-Tuning Ultra Sharp Preselector System (option)

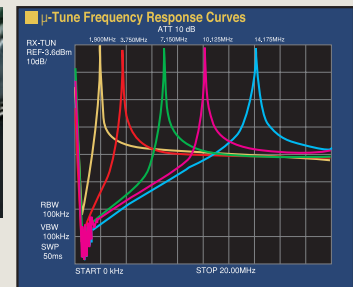


resolution, high torque stepper motor (4-phase unipolar motor/2-phase magnetization system) with angular resolution of 1.8deg, and the synchro belt drive has an estimated lifetime of more than 10,000 hours of actual operation. For 160-meter operation, the ferrite core diameter is 2.2" (55 mm)! The RF μ-Tune system tracks your operating frequency, although you can manually skew the frequency response when special interference conditions require it.

If you turn the RF μ-Tune system off when leaving your frequency or QSYing to other bands, the RF μ-Tune system will be re-centering the μ-Tune filter on your current operating frequency when the μ-Tune is re-engaged.



High-durability Synchro Belt Drive and High-resolution Stepper Motor



10 dB/Div · 2 MHz/Div



Inside the RF μ-Tune Unit



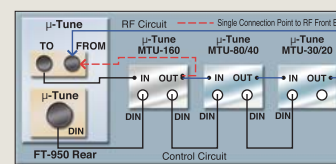
Large-Area (1.1"/28 mm) Coil

Optional Fully-automatic External RF μ-Tuning Ultra-sharp Pre-selector with 1.1" (28 mm) Coil for High Q

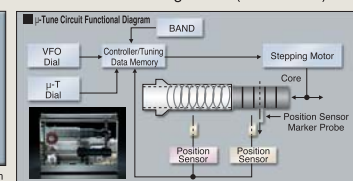
The Secret of superior performance of the FT DX 9000/FT-2000 Series on the lower bands is the RF μ-Tuning system. This same system is now available as an option for the FT-950!

On the lower Amateur bands, the signal voltages impinging on a receiver can create noise and intermodulation effects that can cover up weak signals you're trying to pull through. Three modules (MTU-160, MTU-80/40, and MTU-30/20) are available – these modules may be connected externally with no internal modification required!

The RF μ-Tuning filters utilize a stack of large 1.1" (28 mm) Ni-Zn Ferrite cores, driven through a silver-plated coil assembly by a precision stepper motor. The resulting high Q (typically over 300) provides a very steep resonance peak near your operating frequency. (On the 160 m band, typically -3 dB@±12 kHz, -30 dB@±450 kHz.) And the 3rd order Intercept Point (IP3) is increased by 4 dB with the RF μ-Tuning system. The ferrite cores utilized in the μ-Tune filters are driven by a high-



RF μ-Tuning Kit Connection Diagram



Superb Viewing and Display Clarity in the FT DX 9000/FT-2000 Tradition

Proprietary High-visibility Fluorescent Display (VFD)

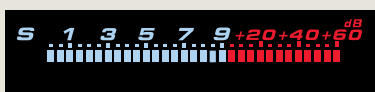
The oversized VFD display provides higher brightness and contrast compared to TFT displays, allowing clearer viewing from a wider range of angles than on other transceivers.



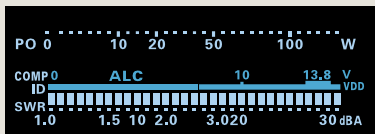
Bar Graph S/PO Meter

For maximum visibility and accuracy of meter readings, including S and PO, the bar graph display has been deployed. With successive presses of the METER button on the front panel, you will obtain meter readings of Speech Compression Level, ALC Level, SWR, Final Amplifier Voltage and Final Amplifier Current.

When receiving



When transmitting



(All bar segments and characters are shown on for display purpose only)

Unique "Block Diagram" Display shows receiver system status instantly!

The "Block Diagram" display shows the current status of a number of functions in the receiver of the FT-950. At a glance, you can see the settings for a number of critical functions of the radio. At the same time, you will see Bar Graphs depicting the settings of the DSP filters. You will always be aware of the receiver configuration.



Independent Analog Clarifier Display

The Clarifier function of the FT-950 is very simple to operate. You can operate a modest split in a DX pile-up, or you can compensate for some off frequency stations in a local ragchew QSO. The offset is displayed both numerically and graphically, and is easy to read.



Quick Split Function

Pressing the "SPLIT" key for 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 operate split frequencies just by pressing the combination LED/switches located near each VFO dial knob ("Main Dial" and "CLAR/VFO-B"), to select which VFO will control TX and 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.

IF Noise Blanker

The IF Noise Blanker is ideal for suppression of automotive ignition noise. It may be utilized in conjunction with the Digital Noise Reduction system, or by itself. The IF Noise Blanker gain can be precisely adjusted from the MENU mode for the blanking level to be applied.

The Joy of Radio Operation...



Actual Size

Flywheel-effect Oversized High-quality Main Tuning Dial

- The front panel oversized Main Tuning Knob (2.67" / 58 mm) is crafted from 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 main tuning dial torque may be adjusted to provide just the amount of drag you prefer, by rotating the Main tuning knob while holding the dial skirt. 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. The dial knob is fitted with a skirt that creates a small air gap beneath the operator's fingertips. This air gap reduces sweat accumulation on the operator's fingertips, enhancing tuning precision during long operating sessions.
- Just as on the FT DX 9000/FT-2000 Series, the most important switches for operational control are arrayed around the Main Tuning Knob. For easier and quicker operation, memory control and VFO selection keys are gathered on your right side while QMB (Quick Memory Bank) and operation mode keys (NAR, SPLIT, TXW) are on your left.

Interference-reduction Controls - Arrayed on the Right Side of the Front Panel

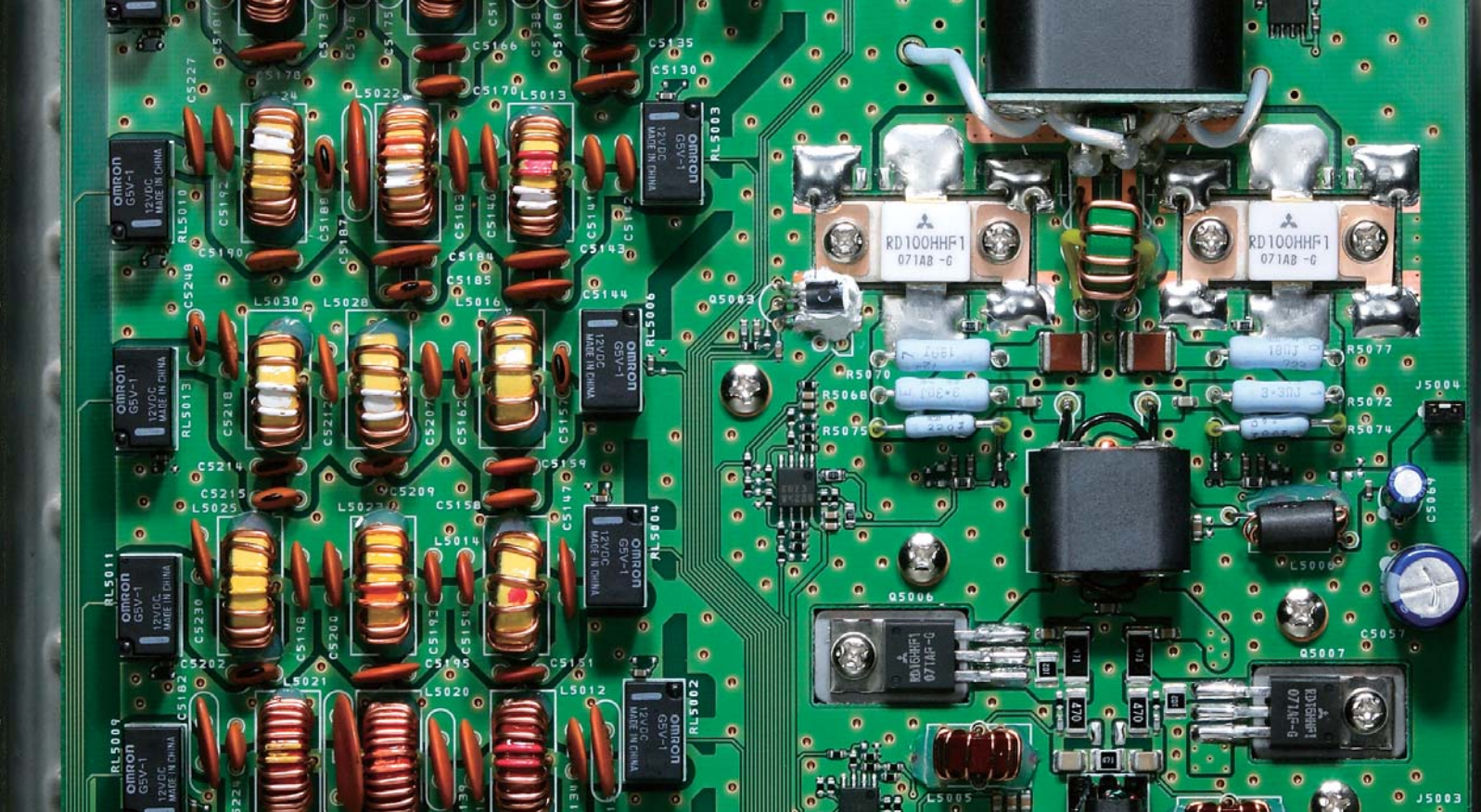
The most important interference-reduction controls, IF SHIFT, IF WIDTH, CONTOUR, and NOTCH, are all arrayed close to each other on the left side of the front panel - your hands never need to wander far when battling tough QRM!

Multi-function Dial for Speedy Operational Commands

The multi-function knob, at the right bottom corner of the front panel, serves many often-used tasks. The knob controls VFO-B (frequency up/down, tuning in 100 kHz or 1 MHz steps or band change). It also controls supportive functions for VFO-A (band change, tuning in 100 kHz or 1 MHz steps, MCH/GRP and Clarifier (offset) tuning).



- Band Stacking VFO Memory function with operation mode (three frequency channels on each band)
- 10-Key Direct Keyboard Frequency Entry



Super-Clean Transmitter Design

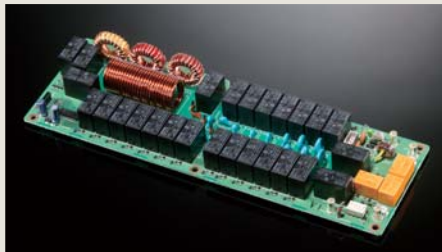
Ultra-stable and high-power Final Amplifier Stage

The FT-950 incorporates a highly efficient and reliable RD100HHF1 MOS FET, in a push-pull configuration, using a supply voltage of 13.8 V and cooled by a huge 1400 cc die-cast aluminum heat sink with a high coefficient of thermal conductivity. A thermostatically-controlled 2.35"/60 mm 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.



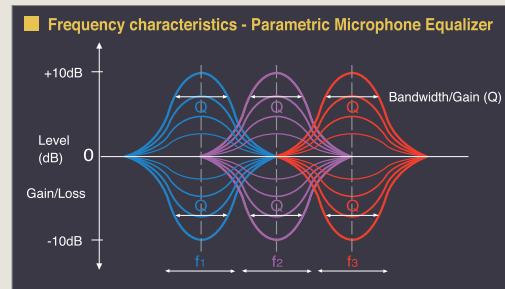
High Speed Automatic Antenna Tuner

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.



Parametric Microphone Equalizer

Within each of the three audio 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 transmit audio that you set to your specific preference!



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 tailor the optimum frequency response and 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 DX pile-up operation or when propagation conditions vary.

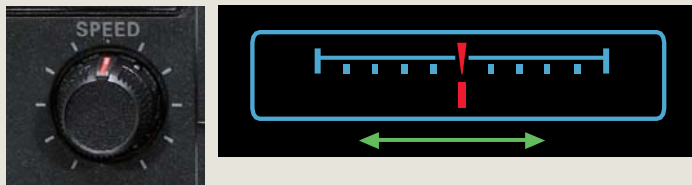
Transmit Monitor Feature

The IF Transmission Monitor allows you to listen to an 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.

The answers to the real CW enthusiasts needs

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 the sidetone pitch to the incoming signal perfectly (select the CW Tuning Display in the MENU to enable this function). As you tune closer to the sidetone pitch, the CW Tuning Indicator 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

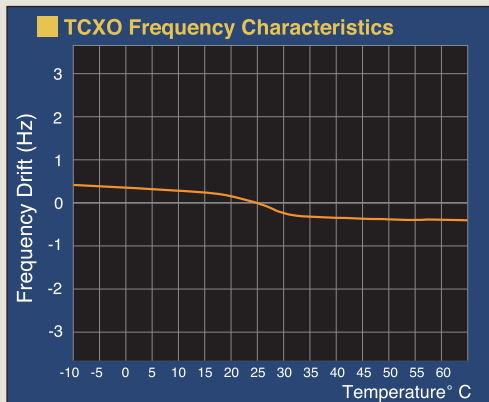
Leading-edge Features for Serious Operators

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!

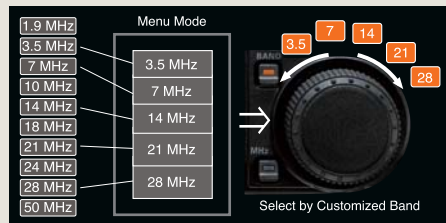
Built-in TCXO for State-of-the-Art Stability

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.



"My Bands" Feature

In order to increase operating efficiency, you may use the Menu system to command the FT-950 to skip over any Amateur bands on which you do not operate (for your contest operation to eliminate WARC bands from the band stepping sequence, etc.).



CS Key

The CS (Custom Selection) key, located below and to the left of the Main tuning Dial, lets you select any Menu item for one-touch access via the CS key. This lets you bring up your favorite Menu item without having to scroll through the many available Menu selections.



And much more for the DX enthusiasts ...

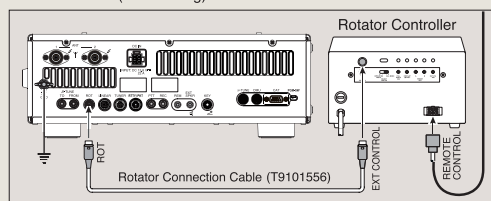
- Quick Memory Bank (QMB) for instant storage and recall of frequency/mode information.
- Five-channel digital voice message memory function for repetitive voice messages. Each memory channel is capable of storing up to 20 seconds of audio using the optional DVS-6.
- The optional FH-2 Keypad provides 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 88.5 Hz 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
- Contest-level rear-panel (transmit + receive) audio sound recording jack
- Comprehensive external RS-232C computer control (CAT) protocol
- Rotator Control function which enables you to control the speed and direction of a YAESU G-800DXA, G-1000DXA, or G-2800DXA rotator using the 10 key keypad.



Rotation speed control: 0 - 100%

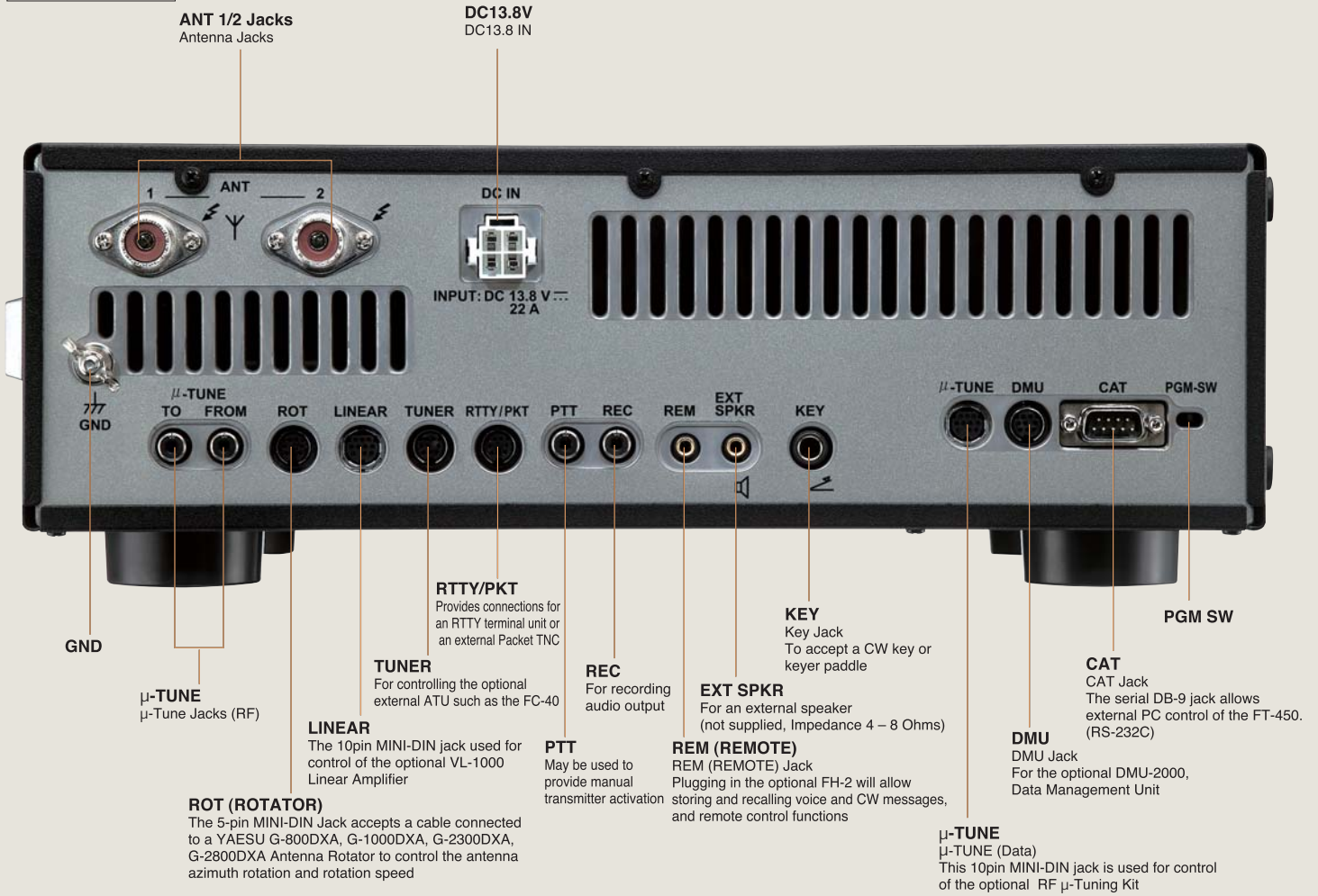


"Overlap" indicator
Direction (0 - 360 deg)

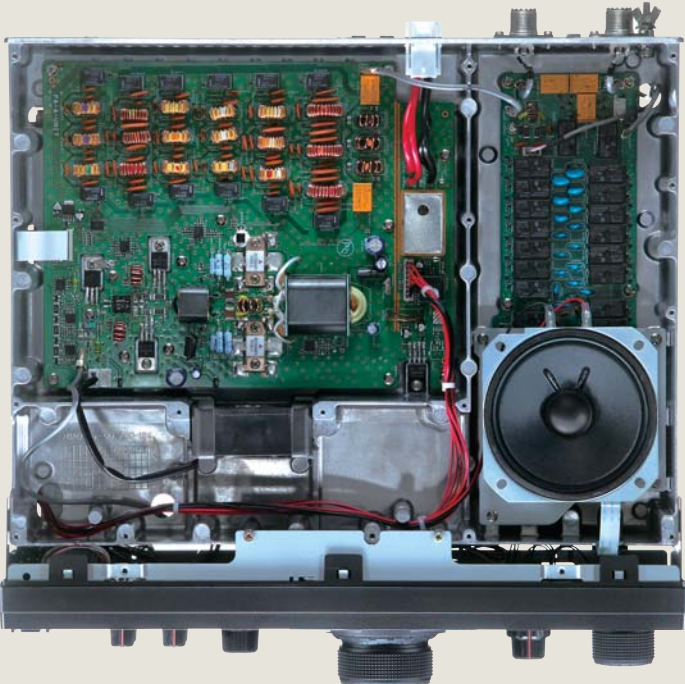


- Various easy connection availability for RTTY, SSTV, PSK31, JT65 (EME) and other digital modes
- Optional VL-1000 Quadra System HF - 50 MHz Linear Amplifier for fully-automatic operation
- General coverage reception: 30 kHz - 60 MHz (specifications guaranteed only in Amateur bands)
- Mode-optimized 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

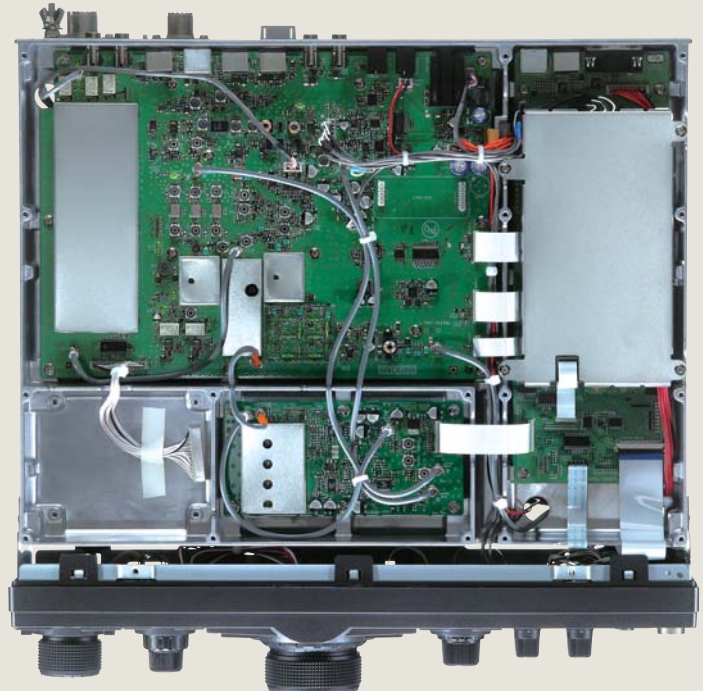
Rear Panel



Top View



Bottom View



- Supplied Accessories: MH-31B8 Hand Microphone (1), DC Cable (1)

Enjoy the ultimate operating ease with your FT-950... External Data Management Unit (DMU-2000 : Option) to enhance your DX operation!

A wide array of information, useful and enjoyable displays, identical to those available on the FT DX 9000 Series and the FT-2000 Series, can also be yours by adding the optional DMU-2000 Data Management Unit and an after-market PC display (not supplied).

YAESU THE RADIO AMATEUR'S WORLD MAP



PC monitor display and keyboard are after-market items, not supplied with the FT-950. The MD-200Aax Desktop Deluxe Dynamic Microphone, the FH-2 Remote Control Keypad and the DMU-2000 Data Management Unit are optional items.

DMU-2000 Data Management Unit (Option)



DMU-2000 : Inside

DMU-2000 Data Management Unit (Option)

After-market PS/2 Keyboard and PC monitor display are required for use of DMU-2000 and are not supplied.

Spectrum Scope with LBWS

The RF Band Scope allows you to view activity within a span of 25 kHz, 100 kHz, 250 kHz, 500 kHz, 1 MHz, or 2.5 MHz, depending on your requirements, with a fixed sweep speed for seamless transition between spans. Additionally, the YAESU-exclusive LBWS (Limited Band Width Sweep) allows you to reduce the bandwidth to 50 %, 30 %, or 10 % of the original, imparting a corresponding increase in the sweep speed, if you

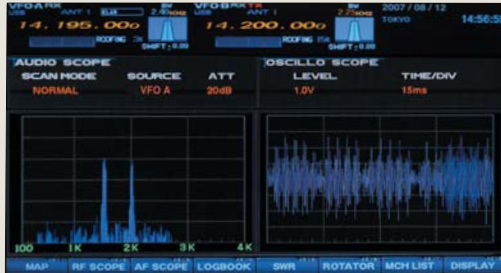
like. By sweeping just a limited portion of the main Band Scope at high speed, you will get a superbly detailed view of activity in that segment of the overall band, allowing you precise zero-in capability not found with competing products. With a 50 % bandwidth reduction, you will get double the speed; with reduction to 30 % of the original sweep, you will get a 3X increase in speed, and by reducing the bandwidth to 10 % you will get a whopping 10X increase in the sweep speed. You can use the "←" and "→" keys to move the remaining window, as desired. You may choose the Spectrum Scope Function (which will plot your current operating frequency in the middle of the monitor screen) or the Band Monitor Function (which will be checking the whole band you are currently operating). With the Band Monitor Function, you will be able to set the lowest starting frequency to your preference (for CW or SSB operation). Once you have set it up, the lowest starting frequency will not be purged, even if you change your bandwidth.



Audio Scope/Oscilloscope Display Function

The Audio Scope Function and the Oscilloscope Function of the DMU-2000 may be the most useful capability of the Data Management Unit. The Audio Scope portrays the audio spectrum of either the receiver passband or your transmitted signal, allowing you to visualize the frequency components as you hear them. This function also enables you to make adjustments to 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.



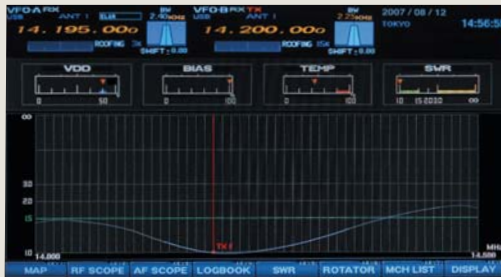
• Spectrum Scope Display



• Waterfall Display

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 easily edit and confirm your memory frequency channels on your big screen. You can add alpha/numeric "Tags" to each memory for quick recall of the channel's identification.

NO	FREQUENCY	MODE	CH TAG	RPT	TONE FREQ
01	7.000.000	LSB	L33	3BPT	OFF
02	7.000.000	LSB			
03	7.000.000	LSB			
04	7.000.000	LSB			
05	7.000.000	LSB			
06	7.000.000	LSB			
07	7.000.000	LSB			
08	7.000.000	LSB			
09	7.000.000	LSB			
10	7.000.000	LSB			

World Clock Display

The World Clock function includes a world map with entries for a number of locations throughout the world. You will see the time of day at the other end or anywhere in the world. Of great 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 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.

DATE	TIME	CALL	RST	RST	BAND	MODE	RECH
01	07:00	7.000	599	599	7.0	LSB	L33
02	07:00	7.000	599	599	7.0	LSB	L33
03	07:00	7.000	599	599	7.0	LSB	L33
04	07:00	7.000	599	599	7.0	LSB	L33
05	07:00	7.000	599	599	7.0	LSB	L33
06	07:00	7.000	599	599	7.0	LSB	L33
07	07:00	7.000	599	599	7.0	LSB	L33
08	07:00	7.000	599	599	7.0	LSB	L33
09	07:00	7.000	599	599	7.0	LSB	L33
10	07:00	7.000	599	599	7.0	LSB	L33

Specifications

General	
Rx Frequency Range	30 kHz - 56 MHz (operating) 160 - 6 m (specified performance, Amateur bands only)
Tx Frequency Ranges	160 - 6 m (Amateur bands only)
Frequency Stability	±0.5 ppm (after 1 minute @77° F [+25° C]) ±1.0 ppm (after 1 minute @14° F ~ +122° F [-10° C ~ +50° C])
Operating Temperature Range	14° F ~ +122° F (-10° C ~ +50° C)
Emission Modes	A1A (CW), A3E (AM), J3E (LSB, USB), F3E (FM), F1B (RTTY), F1D (PACKET), F2D (PACKET)
Frequency Steps	1/10 Hz (SSB, CW, & AM), 100 Hz (FM)
Antenna Impedance	50 Ohms, unbalanced 16.7 - 150 Ohms, unbalanced (Tuner ON, 160 - 6 m Amateur bands, TX only)
Power Consumption (Approx.)	Rx (no signal) 1.8 A Rx (signal present) 2.1 A Tx (100 W) 22 A
Supply Voltage	DC 13.8 V ±10% (Negative Ground)
Dimensions (WxHxD)	14.4" x 4.5" x 12.4" (365 x 115 x 315 mm)
Weight (Approx.)	21.6 lbs (9.8 kg)
Transmitter	
Power Output	5 - 100 watts (2 - 25 watts AM carrier)
Modulation Types	J3E (SSB): Balanced, A3E (AM): Low-Level (Early Stage), F3E (FM): Variable Reactance
Maximum FM Deviation	±5.0 kHz / ±2.5 kHz
Harmonic Radiation	Better than -60 dB (160 - 10m Amateur bands: Harmonics) Better than -50 dB (160 - 10m Amateur bands: Others) Better than -65 dB (6m Amateur band)
SSB Carrier Suppression	At least 60 dB below peak output
Undesired Sideband Suppression	At least 60 dB below peak output
3rd-order IMD	-31 dB @14 MHz 100 watts PEP
Bandwidth	3 kHz (LSB/USB), 500 Hz (CW), 6 kHz (AM), 16 kHz (FM)
Audio Response (SSB)	Not more than -6 dB from 300 to 2700 Hz
Microphone Impedance	600 Ohms (200 to 10 kOhms)

- Supplied Accessories: MH-31BS Hand Microphone (1), DC Cable (1)

Options

 <p>• Includes Scope Unit CF Card Unit DMU-2000 Data Management Unit After-market PS/2 Keyboard and PC monitor are required for use of DMU-2000 and are not supplied.</p>	 <p>DVS-6 Voice Memory Unit</p>	 <p>FH-2 Remote Control Keypad</p>	 <p>MD-200A8X Desktop Deluxe Dynamic Microphone</p>	 <p>MD-100A8X Desktop Microphone</p>	 <p>YH-77STA Stereo Headphones</p>	 <p>FC-40 Automatic Antenna Tuner (for Long wire antenna)</p> <p>The FC-40 is a microprocessor-controlled antenna impedance matching network designed to provide all-amateur-band transmitting capability with the FT-950 of transceivers, when used with an end-fed random wire or long whip antenna.</p>
<p>RF μ-Tune Kits Wt. Abt. 5.7 Lbs (2.6 kg) / 5 W x 4.7 H x 13 D in (127 x 120 x 328 mm)</p>			<p style="text-align: center;">QUADRA SYSTEM</p>  <p>HF-50 MHz 1 kW Linear Amplifier (50 MHz: 500 W/USA Version) VL-1000 Automatic Antenna Tuner Built In</p> <p>VL-1000 Power Supply VP-1000</p>			
<p>160m Band RF μ-Tune Kits A</p> 	<p>80/40m Band RF μ-Tune Kits B</p> 	<p>30/20m Band RF μ-Tune Kits C</p> 				

• Up to three/3 μ-Tune Kits may be installed. All and any μ-Tune Kits shall be installed by the users.

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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Receiver	
Circuit Type	Triple-conversion Superheterodyne
Intermediate Frequencies	69.450 MHz/450 kHz/30 kHz (24 kHz for AM/FM)
Sensitivity	SSB (BW: 2.4 kHz, 10 dB S+N/N) 4 μV (0.5 - 1.8 MHz) (IPO "ON") 0.2 μV (1.8 - 30 MHz) (AMP 2) 0.125 μV (50 - 54 MHz) (AMP 2) AM (BW: 6 kHz, 10 dB S+N/N, 30 % modulation @400 Hz) 28 μV (0.5 - 1.8 MHz) (IPO "ON") 2 μV (1.8 - 30 MHz) (AMP 2) 1 μV (50 - 54 MHz) (AMP 2) FM (BW: 15 kHz, 12 dB SINAD) 0.5 μV (28 - 30 MHz) (AMP 2) 0.35 μV (50 - 54 MHz) (AMP 2) There is no specification for frequency ranges not listed.
Squelch Sensitivity (RF AMP 2 "ON")	SSB/CW/AM 2 μV (0.1 - 1.8 MHz) 2 μV (50 - 54 MHz) FM 1 μV (28 - 30 MHz) 1 μV (50 - 54 MHz) There is no specification for frequency ranges not listed.
Selectivity (WIDTH: Center)	Mode -6 dB -60 dB CW/RTTY/PKT 0.5 kHz or better 750 Hz or less SSB 2.4 kHz or better 3.6 kHz or less AM 6 kHz or better 15 kHz or less FM 15 kHz or better 25 kHz or less
Image Rejection	70 dB or better (160 - 10m Amateur bands) 60 dB or better (6m Amateur band)
Maximum Audio Output	2.5 W into 4 Ohms with 10% THD
Audio Output Impedance	4 to 8 Ohms (4 Ohms: nominal)
Conducted Radiation	Less than 4000 μW

DMU-2000 Data Management Unit Specifications

Power Requirements	AC 90 V ~ 264 V 50/60 Hz
Current Consumption (@117V AC)	Typ. 50 VA
Weight (approx.)	5.9 lbs (2.7 kg)
Dimensions (WxHxD)	3.9" x 5.3" x 13.8" (100 x 135 x 350 mm) (without knobs/switches)

Specifications are subject to change, in the interest of technical improvement, without notice or obligation, and are guaranteed only within the amateur bands.