The Answer ...

Equipped with Extra Sharp 6-pole Crystal Roofing Filters

The Premium HF / 50 MHz Transceiver FT DX 5000

The Newly designed 9 MHz 1st IF of the FT DX 5000 main receiver implements sharp 6-pole* crystal roofing filters. *8-pole / 3 kHz
Superior close-in dynamic range affords the serious DX'er the best performance possible.

The New Premium
HF/50 MHz 200 W Transceiver

HF/50 MHz 200 W Transceiver

FTDX 5000MP *Limited* 200 W / Class-A 75 W

±0.05 ppm OCXO included
300 Hz, 600 Hz, and 3 kHz Crystal Roofing Filters included

Supplied Accessories

■ FH-2 Remote Control Keypad

Message Keyer, Audio Message Memory Command and Selection

■ MH-31 B8 Hand Mic

Optional Accessories

■ SM-5000 Station Monitor (Optional for FT DX 5000MP Limited)

Specifications: Speakers : 65 mm (2.55 in) x 25 mm (0.98 in) x 2 sets Audio Output: 1.5 W+1.5 W (@ 8 Ω)

High-Resolution Spectrum Scope with LBWS

You can monitor activity on the VFO-A band. The RF Band Scope function allows you to view activity within a span of 25 kHz, 50 kHz, 100 kHz, 250 kHz, 500 kHz, 1 MHz, or 2.5 MHz. Choose CTR (center) or FIX modes, to limit lower and upper frequencies, and control signal levels with ATT (attenuator) 0, -10, or -20 dB. Additionally, LBWS (Limited Band Width Sweep) function allows you to reduce the bandwidth in order to increase the sweep speed.

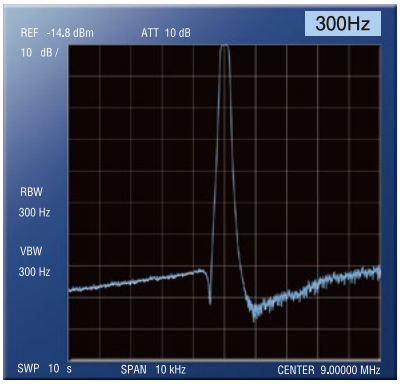
■ M-1 ReferenceMicrophone

- Revolutionary dual microphone configuration
- Nine-band graphic equalizer
- Treble Boost Cowling produces a unique tonal texture

The Answer ...
Equipped with Extra Sharp Crystal Roofing Filters

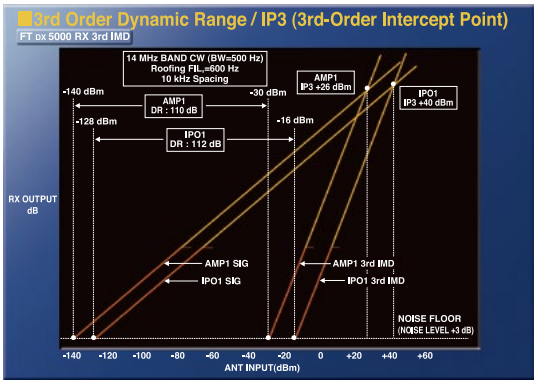
◎Newly designed sharp Crystal Roofing Filters

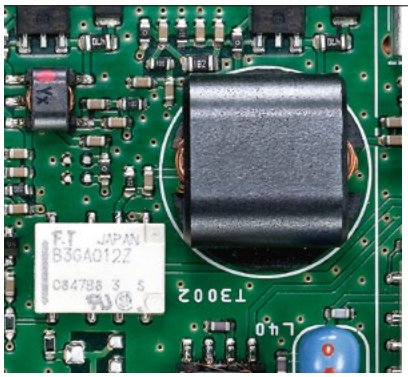
Newly designed sharp 6-pole Crystal Roofing Filters produce excellent shape factor for the VFO - A / Main Receiver. They are selectable between 300 Hz, 600 Hz, 3 kHz, 6 kHz, and 15 kHz, and are optimized by mode for best performance. You are prepared to enjoy serious DX operation on today's crowed bands with the incomparable crisp and sharp 300Hz narrow filter!



Characteristics and frequency response of Roofing Filter (300Hz)

◎Enjoy the superb and astonishing IDR 112dB, IP3 +40dBm



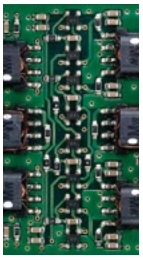


The completely new "4 selectable IPO positions" for various antennas and band conditions!

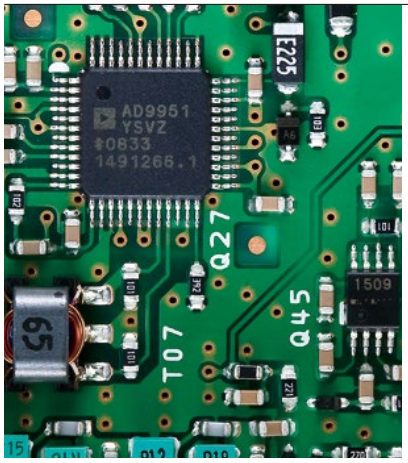
The 2SC4536 (NE46134) in the series RF amplifier design, produce a low distortion and low noise figure RF amplifier, which allows the receiver to perform at its best under the most diverse operating conditions. The new IPO System allows selection of four RF gain set-up conditions from the front panel. Choose IPO1 to feed a signal level to the mixer for the best possible IP performance. Choose IPO2 for no RF amplification.

The Double Quad Double Balanced Mixer system – Obtaining the best performance for your ultimate DX operation

Eight, 3SK294 Dual Gate MOS FETs are employed for the 1st mixer in a 2 x 4 configuration to establish the Double Quad Double Balanced Mixer. The Double Balanced Mixers using FETs have low losses by themselves so there is no need to obtain more gain than is required at the RF amp, resulting in the best desirable design for the RF Front End.



Mixer

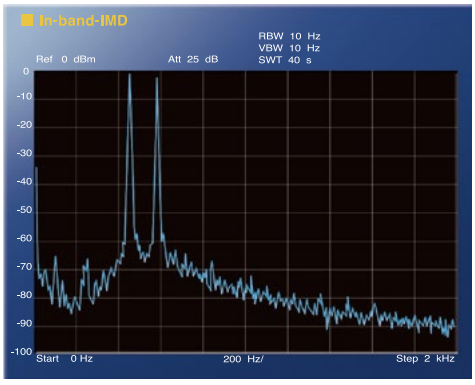


The uncompromised 400 MHz HRDDS system for the high quality local oscillator

In seeking to improve the strong-signal-handling capabilities of the receiver section, ultra-low-noise local oscillator system that produces a very clean 1st IF signal is essential. The high C/N ratio of the 400 MHz HRDDS (High Resolution Direct Digital Synthesizer) system that was implemented in the FT DX 9000 Series, has also been employed in the FT DX 5000 Series.

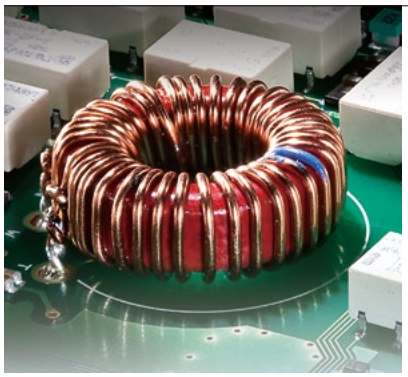
New-design Broad-range OCXO Reference Oscillator

The 10 MHz OCXO (Oven Controlled Crystal Oscillator), with industry leading frequency stability rated at ±0.05 ppm over the temperature range of +14 °F to +140 °F (-10 °C to +60 °C) , Serves as the master reference oscillator for the FT DX 5000MP.



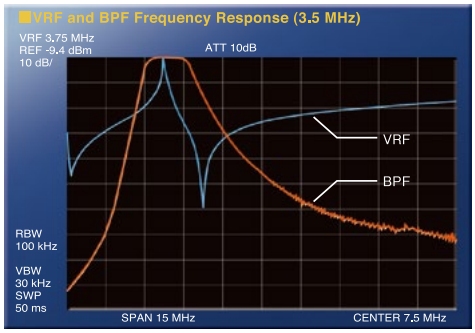
In-band-IMD

RX=14.200MHz CW-USB IPO1 9MFIL=300Hz
DSPFIL=300Hz AGC=SLOW PITCH=500Hz



Variable RF Filter (VRF) – Covering the 1.8 - 28 MHz

To provide protection for the RF stages, as well as the two IF stages, the front end filtering system utilizes a combination of 15 fixed bandpass filters and Yaesu's exclusive VRF Preselector system. Those two RF filter systems protect the early stages of the receiver from overload caused by strong out-of-band signals. The high-Q VRF system is much narrower in bandwidth than the fixed bandpass filters, and it is crafted using high-permeability toroidal coils and tuning capacitors, producing 62 tuning steps for optimal rejection of broadcast or commercial service interference.



10 dB/Div・2 MHz/Div・SPAN 15 MHz (Blue VRF / Orange BPF)

The 32-bit Floating Point IF Digital Signal Processing System

■World-renowned Variable IF WIDTH / IF SHIFT Interference Reduction Systems

The IF Shift system allows the actual passband to be moved higher or lower in frequency, eliminating interference that is encountered outside the passband, while leaving the pitch of the incoming signal and the bandwidth of the IF passband unchanged. You can also improve reception by choosing to narrow the bandwidth of the IF WIDTH function and then varying the passband with the IF SHIFT.

■Passband Response CONTOUR Control with an 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, and not all of them are really pleasant to listen to. 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.

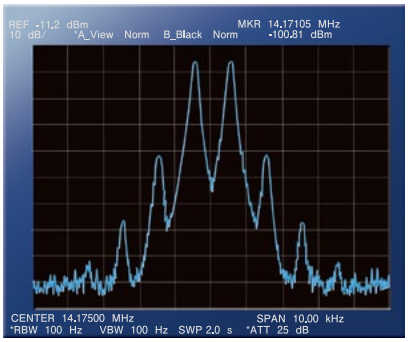
Ultra-Clean Transmitter Design

■ High-power, Super-stable Final Amplifier Stage (200 W, Class-A Mode – 75 W)

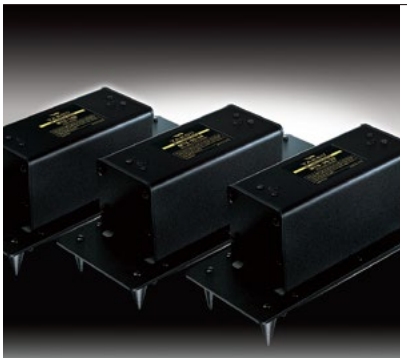
The FT DX 5000 MP utilize push-pull VRF150 MOS FET devices (VDSS=170 V, VGS= ± 40 V, PD=300 W), operating at 50 V, with user-adjustable bias control to ensure the optimum suppression of intermodulation distortion products.

■ Ultimate Low Distortion Class-A Final Amplifier

The FT DX 5000 includes provision for operation in a "Class-A" mode at 75 Watts output, utilizing high bias current to produce very low transmitter intermodulation products; the 5th and higher order IMD is typically suppressed 65 dB or better!

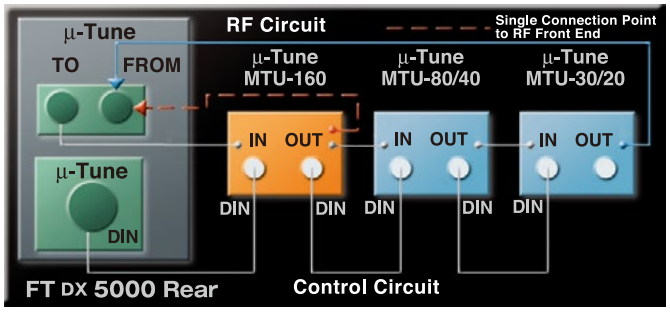


■Class-A



Optional Fully-automatic External μ-tuning with 1.1"(28 mm) Coil

On the lower Amateur Radio Bands, high signal voltages impinging on a receiver can create noise and intermodulation effects that may cover up weak signals you are trying to pull through. Now, three optional tuning modules (MTU-160, MTU-80/40, and MTU- 30/20) are available to cover all the Amateur Radio bands from 160-meters to the 20-meter band!



■ RF μ-Tune unit Connection Diagram

The Optional DMU-2000 External Data Management Unit will enhance your DX operation!

The same operating and station information, available with the FT DX 9000 Series, can be conveniently displayed by adding the optional DMU-2000 Data Management Unit and an after-market PC display (Analog screen resolution: 800 x 600/SVGA, 1024 x 768/XGA standard).

■ Spectrum Scope Display

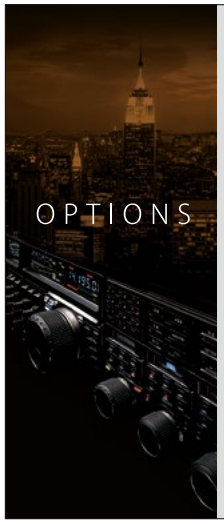
■ Audio Scope/Oscilloscope Display

■ World Clock Display

■ Swept-Frequency SWR Display

■ Memory Channel List

■ Rotator Control Function



QUADRA SYSTEM

●VL-1000
HF-50 MHz 1 kW Linear Amplifier*1
(50 MHz: 500 W/USA Version)
Automatic Antenna Tuner Built In

●VP-1000
VL-1000 Power Supply*1

RFμ-Tune Kits
Wt. abt. 5.7 Lbs(2.6 kg)/ 5 W x 4.7 H x 13 D in (127 x 120 x 328mm)

●RF μ-Tune Kits A
For 160 m Band
●RF μ-Tune Kits B
For 80/40 m Band
●RF μ-Tune Kits C
For 30/20 m Band

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

●SCU-17
USB Interface Unit
(Requires SCU-21)

●SCU-21
Connection Cable

●SP-2000
External Speaker
with Audio filters

●SM-5000
Station Monitor with stereo speaker system

●DMU-2000
Data Management Unit*2

●M-1
Reference
Microphone

●M-100
Dual-Element
Microphone

●MD-200A8X
Ultra High
fidelity Desktop
Microphone

●MD-100A8X
Desktop
Microphone

●YH-77STA
Lightweight Stereo
Headphone

●SCU-27 Antenna Rotator Connection Cable

*1 USA and Asian versions only *2 After-market PS/2 Keyboard and personal computer monitor are required for use of DMU-2000 and are not supplied.