

The radio... **YAESU**

HF Enthusiasm

Single Side Band DNA passed down over 70 years

FTX-1 series

HF/50/144/430MHz ALL MODE TRANSCEIVER

FTX-1 Field

10W Version for Field Operation

FTX-1 optima

10W Field Operation and 100W Base Station



The Image is showing "FTX-1 optima" using a third-party stand for the Field Head.

*Stand is not included

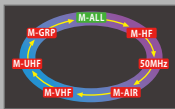
FTX-1series

HF/50/144/430MHz ALL MODE TRANSCEIVER

No Future without the Past

Dawning of a new era for Wide-Coverage Transceivers with Epoch-making features from the pioneer of Single-Side Band radios for over 70 years

- 1 HF/VHF/UHF** | MAG (Memory Auto Grouping) : Memory Channels are automatically grouped and can be recalled by Band Groups – HF, VHF, UHF and others.
- 2 HF/VHF/UHF** | QMB (Quick Memory Bank) : Frequency, mode and all settings and parameters of the current receiving signal can be quickly stored and recalled.
- 3 VHF/UHF** | PMG (Primary Memory Group) : PMG channels can always be scanned and heard - which is useful when watching the channels Club members use to communicate.
- 4 VHF/UHF** | AMS(Automatic Mode Select) : AMS automatically determines whether the receiving signal is C4FM Digital or FM and sets the receiver to the appropriate mode.



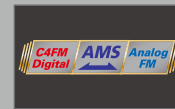
MAG (Memory Auto Grouping)



QMB (Quick Memory Bank)



PMG (Primary Memory Group)



AMS (Automatic Mode Select)

Transmit Frequency Band	160 Meters	80 Meters	40 Meters	30 Meters	20 Meters	17 Meters	15 Meters	12 Meters	10 Meters	6 Meters	2 Meters	70 cm
Receiver Frequency	0.03MHz ————— 174MHz										400MHz-470MHz	
	10										400	Frequency [MHz]

* Guaranteed within Amateur band only

FTX-1Field 10W Version for Field Operation

6W with the supplied Battery / 10W with external DC power supply for Field Operation



Included items: • Field Head • SBR-52LI Li-ion Battery • SSM-75E Hand microphone

FTX-1optima 10W Field Operation and 100W Base Station

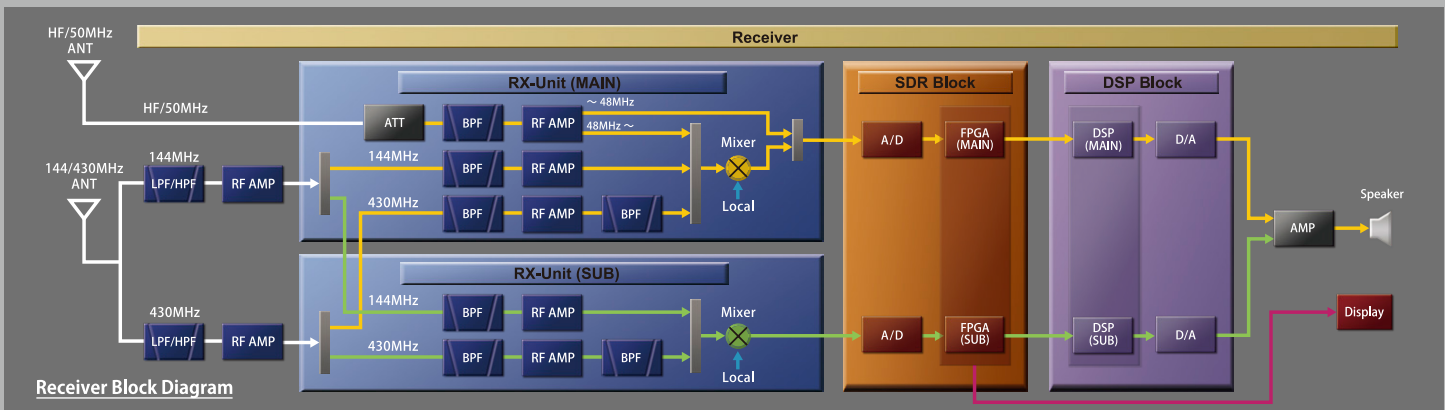
Expanding the fun with 100W RF power amplifier for Base Station in addition to Field Operation



Included items: • Field Head • SBR-52LI Li-ion Battery • RF Power Amplifier • SSM-75E Hand microphone

The YAESU RF-Front End with Superb Interference Rejection

While the FTX-1 is compact, it boasts excellent proximity two-signal characteristics thanks to a powerful RF Front-End design with 10-divided BPF (Band Pass Filter) in amateur bands from HF through UHF and RF amplifier with a low NF (Noise Figure) which is excellent in intermodulation characteristics. In addition, a high-purity 110.592MHz oscillator circuit configuration supplies a high-quality sampling clock signal with excellent C/N characteristics to the A/D converter.

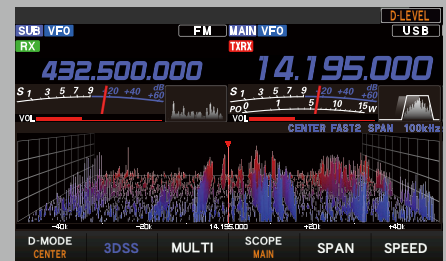


Equipped with 3DSS (3-Dimensional Spectrum Stream) High-Resolution 4.3-inch TFT Color Touch Panel Display

The large 4.3-inch wide full-color touch panel display affords outstanding visibility and intuitive management of the operating frequency, meters and main function settings.

3DSS (3-Dimensional Spectrum Stream)

The 3DSS Real-time spectrum scope presents the constantly changing band conditions in three dimensions (3-D). The signal strength flows in time to the rear of the screen, then an operator can intuitively view the constant changes in a signal's strength. The frequency can also be instantly changed on the scope screen by touching the peak of desired signal.



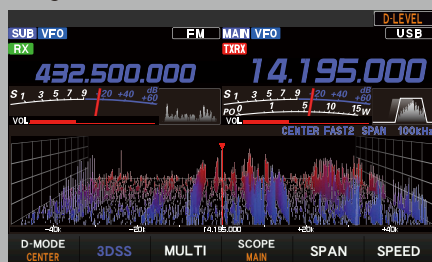
3DSS Display

3 Display Modes are switchable according to the User's preference and usage

With one-touch operation, the user can switch between 3 display modes to suit operation usage and preferences.

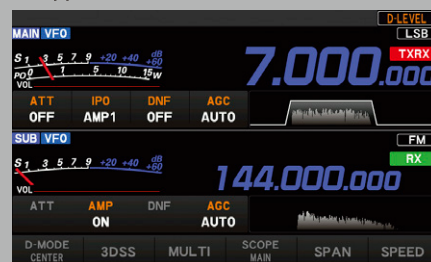
Dual-Band Display (Right/Left)

Horizontal Dual-Band Display showing MAIN on right side/ SUB on left side



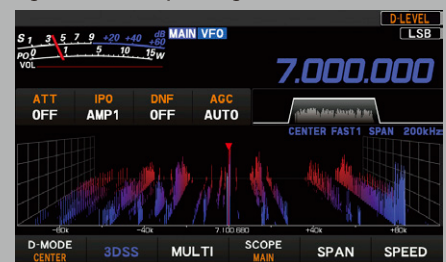
Dual-Band Display (Up/Down)

Vertical Dual-Band Display showing MAIN on upper side/ SUB on lower side



Single-Band Display

Single-Band Display showing only the receiving signal status of operating band



Various Functions support Comfortable Operation

True Dual-Band Operation including C4FM/C4FM Simultaneous Receive

Super-DX expands the Communication Range

Memory Channel Scope

FUNC (Function) Dial useful to change and recall settings

"PRESET" mode suitable for FT8 operation

Compatible with WIRELESS-X, APRS® Data Communication

QRP Mode to set output power to 5W and below

VFO Mode Indicator presents the current operation status at a glance

Micro SD Card Slot

Versatile Array of functions for CW Operation

C4FM Digital Technologies: Outstanding Audio Quality, AMS etc..

Convenient Functions for FM Mode

Accessories for Field Head

SBR-52LI

Lithium Ion Battery Pack
10.8V 6,400mAh

(Supplied with FTX-1 Field/
FTX-1 optima)

6W stand-alone operation is possible by attaching
the SBR-52LI to rear of the Field Head (5W for QRP)
※ 10W with an external power supply

- The image is the rear of Field Head
attached with SBR-52LI



FC-80

HF/50MHz 10W
Automatic Antenna Tuner
• supplied with spacer

FC-80 is light and thin automatic antenna tuner which
can be attached to rear of the Field Head. By using the
supplied spacer, FC-80 and SBR-52LI or SCF-1 can be
combined to attach to the rear of the Field Head.

- The image is the rear of the Field Head
attached with FC-80



*Cannot be attached with
SBR-52LI simultaneously
SCF-1
Cooling Fan

When operating with an external DC power supply, SCF-1
can be installed to rear of the Field Head for effective
cooling for a continuous transmission such as data
communication. No tools are necessary for installation,
and it can be quickly replaced by SBR-52LI as necessary.

- The image is rear of the Field Head attached
with SCF-1

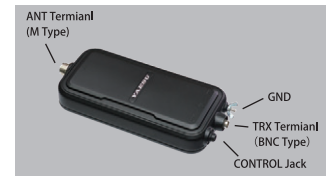


FC-90

HF/50MHz 10W Long wire/ 50Ω
compatible Automatic Antenna Tuner

FC-90 is a compact automatic antenna tuner
compatible with both long wire and 50Ω
antenna. By connecting with a cable, it can be
installed close to the antenna.

- FC-90



SPG-1

Protection Guard



SSM-75E

Hand Microphone



YH-77STA

Lightweight
Stereo Headphone



FGPS-5

GPS Antenna Unit



Bluetooth®

BU-6
Bluetooth Unit



*BU-6 must be
installed in the
radio

Bluetooth®

SSM-BT20
Bluetooth Headset



*not connectable
directly to the
Field Head

FC-40

Long wire compatible
External Auto Antenna Tuner



SPA-1

100W (144/430MHz: 50W) RF Power Amplifier
Option for FTX-1 Field (supplied with FTX-1 optima)
HF/50MHz Automatic Antenna Tuner, 2.5W High-Quality and
powerful speaker, HF/50MHz 2 ANT terminals are equipped.



MHG-1

Side Carry Handle
(for SPA-1 only)



Extension Cable for the
FTX-1 Series

SCU-66 5ft (1.5m)
SCU-66L 10ft (3m)

ATAS-25

Active Tuning Antenna
(Manual Type)
Max. Input Power: HF/50 MHz:
100 W (SSB/CW, 50% Duty),
50 W (AM/FM)
144/430 MHz 50 W (ALL MODE)

*When operating with the Field
Head, 13.8V external power
supply is necessary.

ATAS-120A

Active Tuning Antenna
(Automatic Type)
Max. Input Power:
120 W (SSB/CW, 50% Duty)

ATBK-100

Antenna Base Kit
for ATAS-120A
(For Base operation
on 6m, 2m or 70cm band)



Desktop Microphones

M-1

Reference
microphone



M-100

Dual element
microphone



M-90D

Desktop
Dynamic
microphone



M-90MS Kit

Dynamic
microphone
Stand Kit
*Microphone stand
is not included



M-70

Desktop
microphone



Specifications

General	
Tx Frequency Range	1.8MHz - 450MHz (Specified performance, Amateur bands only) 70MHz - 70.5MHz (Specified performance, UK Amateur bands only)
Rx Frequency Ranges	30kHz - 174MHz, 400MHz - 470MHz (operating) 1.8MHz band - 430MHz band (specified performance, Amateur bands only)
Emission Modes	A1A (CW), A3E (AM), J3E (LSB, USB), F3E (FM), F7W (C4FM), F1D, F2D
Frequency Steps	1*/5/10/20Hz (CW/SSB/AM), 5/6.25/10/12.5/20/25kHz (FM) *FINE tuning "ON"
Antenna Impedance	50Ω, unbalanced
Operating Temperature Range	+14°F to +122°F (-10°C to +50°C)
Frequency Stability	±0.5ppm (after 1 minute @ +14°F to +122°F [-10°C to +50°C])
Supply Voltage	DC10.8V (SBR-52LI) DC13.8V ± 15% (EXT DC Jack)
Power Consumption (Approx.)	Rx (no signal) 0.6A, Rx (signal present) 0.9A Tx (Field, 6W) 2.5A, Tx (Field, 10W) 3A, Tx (optima, HF/50MHz 100W) 21A Tx (optima, 144MHz 50W) 9A, Tx (optima, 430MHz 50W) 12A
Dimensions (W x H x D)	FTX-1 Field: 8.4" x 3.5" x 2.2" (213 x 89 x 55mm) FTX-1 optima: 8.4" x 3.5" x 9.4" (213 x 89 x 240 mm)
Weight (Approx.)	FTX-1 Field: 2.75 lbs (1.25kg) FTX-1 optima: 8.6 lbs (3.9kg)
Transmitter	
Power Output	FTX-1 Field: 0.5 - 6W (0.5 - 2.5W AM Carrier) @SBR-52LI 0.5 - 10W (70MHz band: 0.5 - 6W) (0.5 - 2.5W AM Carrier) @EXT DC 13.8V FTX-1 optima: HF/50MHz band: 5 - 100W (5 - 25W AM Carrier) 144/430MHz band: 5 - 50W (5 - 13W AM Carrier)
Modulation Types	J3E (SSB): Balanced A3E (AM): Low-Level (Early Stage) F1D, F2D, F3E (FM): Variable Reactance F7W (C4FM): 4-level FSK
Maximum FM Deviation	±5.0kHz / ±2.5kHz (Narrow)
Harmonic Radiation	Better than -50dB (1.8MHz - 29.7MHz Amateur bands) Better than -60dB (50MHz Amateur band, FTX-1 Field 10W) Better than -63dB (50MHz Amateur band, FTX-1 optima 100W) Better than -51dB (70MHz Amateur band, FTX-1 Field 6W) Better than -60dB (70/144/430MHz Amateur band, FTX-1 optima 50W)

Transmitter		
SSB Carrier Suppression	At least 60dB below peak output	
Undesired Sideband Suppression	At least 60dB below peak output	
Bandwidth	3kHz (LSB/USB), 500Hz (CW), 6kHz (AM), 16kHz (FM/C4FM)	
Audio Response (SSB)	Not more than -6dB from 300 to 2700Hz	
Microphone Impedance	600Ω (200 to 10kΩ)	
Receiver		
Circuit Type	Direct sampling Superheterodyne (below 48MHz) Single Conversion IF Sampling (48MHz and above)	
Intermediate Frequencies	MAIN: 44.5 - 49.5MHz, SUB: 41.3 - 44.3MHz (48MHz and above)	
Sensitivity (TYP)	SSB/CW (BW: 2.4kHz/10dB S+N/N), 30% modulation @400Hz) 1.8 - 30MHz 0.16 μV (IPO: AMP2), 50 - 54MHz 0.125 μV (IPO: AMP2) 70 - 70.5MHz 0.16 μV (IPO: AMP2), 144 - 148MHz 0.125 μV (AMP ON) 430 - 450MHz 0.125 μV (AMP ON) AM (BW: 6kHz/10dB S+N/N, 30% modulation @400Hz) 0.5 - 1.8MHz 7.9 μV, 1.8 - 30MHz 2 μV (IPO: AMP2) 50 - 54MHz 1 μV 以下 (IPO: AMP2), 70 - 70.5MHz 2 μV (IPO: AMP2) 144 - 148MHz 1 μV (AMP ON), 430 - 450MHz 1 μV (AMP ON) FM (BW: 12kHz, 12dB SINAD, 3.5kHz DEV @1kHz) 28 - 30MHz 0.25 μV (IPO: AMP2), 50 - 54MHz 0.2 μV (IPO: AMP2) 70 - 70.5MHz 0.25 μV (IPO: AMP2), 144 - 148MHz 0.125 μV (AMP ON) 430 - 450MHz 0.125 μV (AMP ON)	
Selectivity (WIDTH: Center)	Mode	-6dB -60dB
	CW (BW=0.5kHz)	0.5kHz or better 0.75kHz or less
	SSB (BW=2.4kHz)	2.4kHz or better 3.6kHz or less
	AM (BW=6kHz)	6kHz or better 15kHz or less
	FM (BW=12kHz)	12kHz or better 25kHz or less
Image Rejection	70dB or better (1.8MHz - 28MHz Amateur bands) 60dB or better (50MHz, 70MHz, 144MHz, 430MHz Amateur bands)	
Maximum Audio Output	FTX-1 Field: 1.5W, FTX-1 optima: 4W (1.5 + 2.5 W) (4Ω with 10% THD)	
Audio Output Impedance	4 to 16Ω (4Ω: nominal)	
Conducted Radiation	Less than 4nW	

■ Specifications are subject to change without notice, and are guaranteed within the amateur bands only.
Frequency ranges and functions will vary according to transceiver version; check with your dealer.

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YAESU

Radio for Professionals

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