

# FT-707

HF SSB TRANSCEIVER

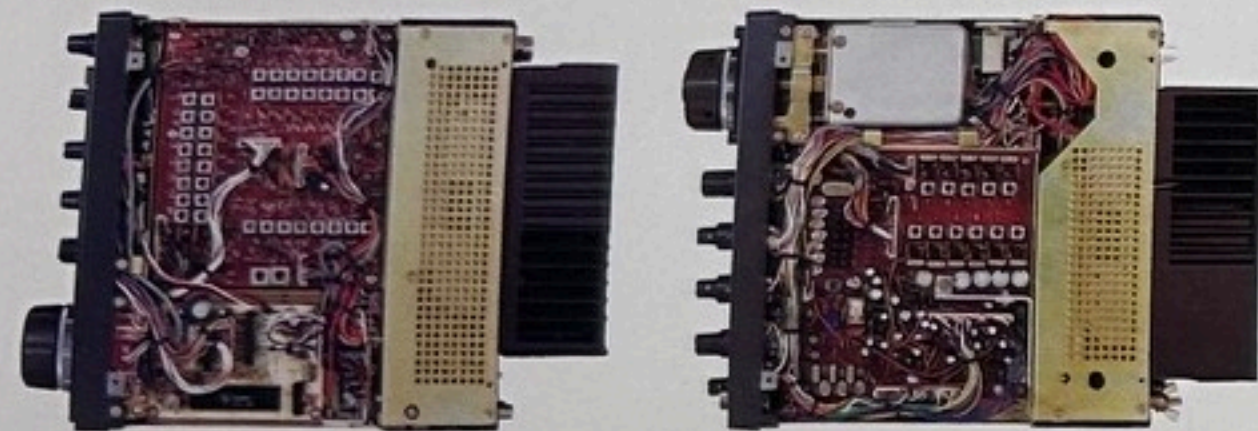




# FT-707 SERIES

## HF SSB TRANSCEIVER

The FT-707 "Wayfarer" is the beginning of a new generation of compact solid state transceivers. Though hardly larger than a book, the FT-707 is a full-feature transceiver with performance you might expect only in a "top of the line" transceiver. Ideally suited for your home station or as a traveling companion, the FT-707 is the radio of the 1980's.....and it's brought to you by the active hams at YAESU.



TOP VIEW

BOTTOM VIEW

### COMPACT SIZE

Recent developments in solid state technology have enabled Yaesu design engineers to provide sophisticated features without consuming the huge amounts of space required only yesterday. For once, you won't have to sacrifice quality to get compact size.

### ALL SOLID STATE

The solid state final amplifier includes individual low-pass filter networks, for excellent reduction of harmonics that can cause TVI. This superb amplifier will provide 100 watts output on 80 through 10 meters, yet it is very forgiving of minor SWR conditions in your antenna system (you still get 50% of the rated output at 3:1 SWR!).

### NEW BANDS FACTORY INSTALLED

When the new amateur bands become available, you won't want to go through the time and expense of overhauling your present equipment. With the FT-707, you get complete coverage of 80 through 10 meters, including the new 10, 18, and 24 MHz bands, all factory installed!

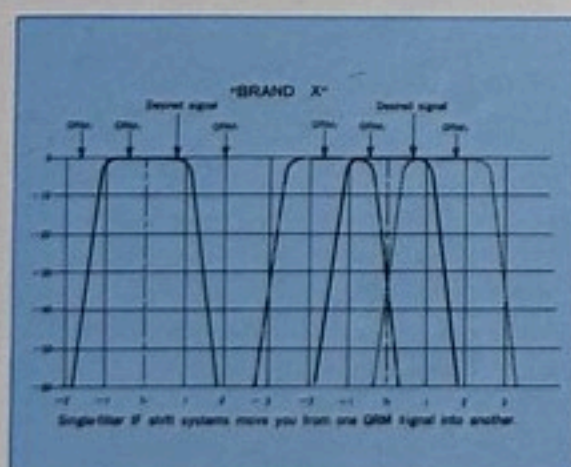
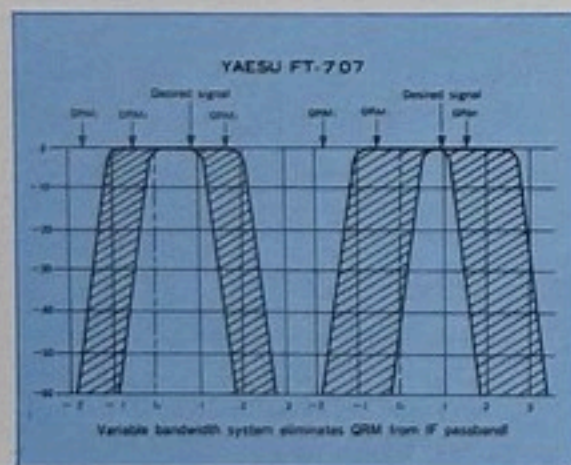
### LED INDICATOR SYSTEM

Have you ever had to squint while driving in order to read the output meter on your transceiver? You'll never have that problem with the FT-707: the front panel meter has been replaced by a string of red, yellow, and green LEDs that provide easy-to-read indication of the relative power output, received signal strength, and the ALC voltage level. This leaves you free to concentrate on the road instead of your S-meter!

### VARIABLE IF BANDWIDTH CONTROL

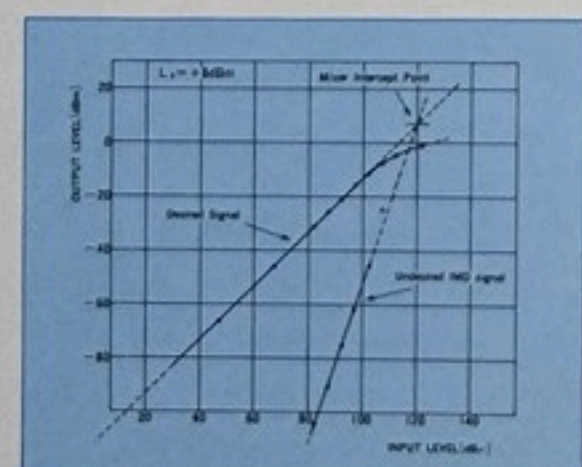
An exciting feature of the FT-707 is the variable IF bandwidth control, which provides adjustment of the width of the IF passband continuously from 2.4 kHz down to 300 Hz (-6 dB). Sixteen poles of crystal filtering in this system allow you to eliminate high pitched SSB "buck-shot" or unwanted CW signals with the twist of a knob.

Don't be fooled by lesser systems, such as "IF shift," these can move you from one interfering signal into another. But the FT-707 variable bandwidth actually narrows the bandwidth, eliminating the adjacent-channel interference!

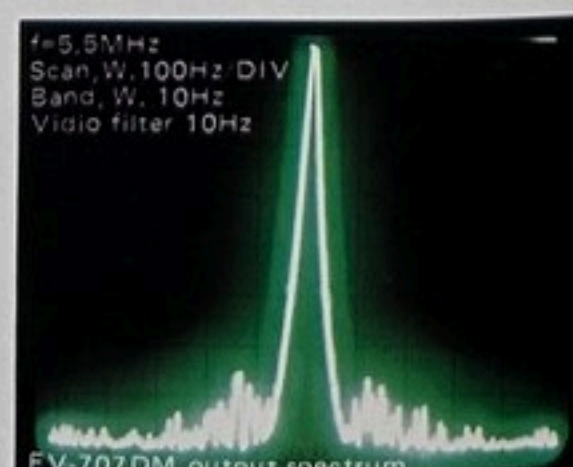
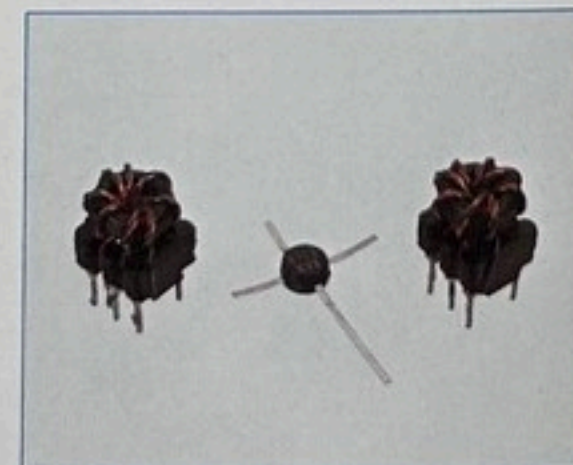


### WIDE RECEIVER DYNAMIC RANGE

The rugged front end of the FT-707 includes an exceptionally strong Schottky diode ring module, followed by a broadband power transistor post-amp, for excellent intercept characteristics. Individual filter networks in the front end reject out-of-band signals, and the unbelievably clean local oscillator chain results in a very low noise floor. This means you get the sensitivity you need for weak-signal work, along with the strong signal performance you need for battling those 40 meter broadcast signals. Compare the FT-707 to all the others—it probably will sport the best receiver you have ever used.



Choose USB, LSB, CW-Wide (using SSB filter), CW-Narrow (using optional CW filter), or AM operation.



- Two-rate manual scanning switches allow slow or fast QSY with fingertip ease when using the optional FV-707DM Digital VFO.
- All solid state design, including final amplifier stage. Advanced transmitter design provides exceptionally low distortion and spurious emission characteristics.
- Built-in 25 kHz calibrator.
- Selectable AGC: slow-fast.
- Built-in VOX provides hands-free SSB operation, in addition to semi-break-in CW.
- LED level meter provides indication of the received signal strength, relative power output, and ALC voltage level.
- Push this button for crystal-controlled operation (crystals optional).
- State-of-the-art noise blanker eliminates most types of pulse noise which can obliterate weak signals.
- Receiver offset tuning for precise zeroing on drifting signals.
- Bright indicators remind you when the calibrator, fixed channel, internal VFO, and external VFO are in use.
- Digital plus analog frequency readout for accurate determination of the operating frequency. Digital display is a true frequency counter, which does not require recalibration when switching modes.
- Choose USB, LSB, CW-Wide (using SSB filter), CW-Narrow (using optional CW filter), or AM operation.
- Advanced receiver front end design provides the wide dynamic range required in demanding base station installations. Don't be surprised when your FT-707 out-performs that "boat anchor" receiver that cost you thousands of dollars!
- AF and RF gain controls located on concentric shafts for total operator convenience.
- Continuously variable width of the IF passband, from 300 Hz to 2.4 kHz. Sixteen poles of crystal filtering assure you of interference-free reception on today's crowded bands.
- Just rotate this switch to change bands—no other retuning is necessary. And take note: the new 10, 18, and 24 MHz bands are factory-installed, so you won't face the cost of an update later!
- Front-panel VOX gain and delay controls let you choose the pace of your operating.

### EXCITING DIGITAL EXTERNAL VFO: FV-707DM (OPTION)

The optional FV-707DM Digital VFO provides up/down scanning in 10 Hz steps (so close together that you'll think you're using a regular analog VFO). Scanning control—up/down, fast/slow—may be exercised from the optional scanning microphone, perfect for operation while mobile.

The FV-707DM includes 12 memory channels for instant return to favorite operating frequencies. Receiver offset tuning is also included, for following drifting signals. The two-loop PLL circuit is a sophisticated new design which produces a very clean output signal, important for spurious-free transmitter and receiver operation. And to top it all off, the FV-707DM is less than an inch tall, designed for mounting directly beneath the FT-707 transceiver. The resulting package is the smallest digitally tuned memorizing transceiver available on the amateur market today!

### CONVENIENCE FEATURES

You have VOX and semi-break-in CW, with gain and delay controls on the front panel. A 25 kHz crystal calibrator, selectable AGC, advanced noise blanker, and carefully engineered front panel layout provide you with fumble-free, predictable operation. In the CW mode, you even have the choice of the 2.4 kHz SSB filter in conjunction with the variable bandwidth system (CW-W), or the optional 600 Hz or 350 Hz CW filter, also using the variable bandwidth (CW-N). Contesters and DXers alike know that this kind of attention to the finer points means seconds saved when they count—and more QSO's in the log.

### DIGITAL PLUS ANALOG FREQUENCY DISPLAY

The FT-707 includes digital plus analog frequency readout, for accurate frequency display. The bright LED digital display is coupled to a true frequency counter, which means you never have to recalibrate when changing modes.

## SPECIFICATIONS

### GENERAL

Frequency coverage: 80 m 3.5–4.0 MHz, 40 m 7.0–7.5 MHz, 30 m 10.0–10.5 MHz, 20 m 14.0–14.5 MHz, 17 m 18.0–18.5 MHz, 15 m 21.0–21.5 MHz, 12 m 24.5–25.0 MHz 10 m 28.0–29.9 MHz Modes of operation: LSB, USB, CW, and AM Power requirements: 13.5 volts DC, negative ground Current consumption: DC 1.5 amps receive, DC 20 amps transmit Case size: 93(H) x 240(W) x 295(D) mm incl. heat sink Weight: Approx. 6.5 kg

### TRANSMITTER

Power input: SSB/CW 240 watts DC, AM 80 watts DC Carrier suppression: Better than 40 dB Unwanted sideband suppression: Better than 50 dB at 14 MHz, 1 kHz mod. Spurious emissions: At least 50 dB down Frequency response: 350–2700 Hz (-6 dB) Third order distortion products: At least 31 dB down Frequency stability: Less than 300 Hz drift over 30 minutes after 10 minute warmup;

less than 100 Hz drift after 30 minute warmup Modulation type: (SSB) Balanced modulator, (AM) Amplitude modulation of a low power stage Antenna output impedance: 50 ohms Microphone impedance: 500–600 ohms (low impedance)

### RECEIVER

Sensitivity: SSB/CW 0.25  $\mu$ V for 10 dB S/N, AM 1.0  $\mu$ V for 10 dB S/N Selectivity: SSB 2.4 kHz (-6 dB), 4.0 kHz (-60 dB); CW\* 0.6 kHz (-6 dB), 1.2 kHz (-60 dB); CW\*\* 350 Hz (-6 dB), 1.2 kHz (-60 dB); AM 3.6 kHz (-6 dB), 6.8 kHz (-60 dB) Image rejection: 60 dB (80–12 m), 50 dB (10 m) Audio output impedance: 4–16 ohms Audio output: 3 watts @ 4 ohms @ 10% THD Variable bandwidth control: Continuous from 300 Hz to 2.4 kHz (SSB/CW modes only)

\* with optional 600 Hz CW filter  
\*\* with optional 350 Hz CW filter

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

PRINTED IN JAPAN



## ● FT-707LINE

### RACK MOUNT YOUR STATION

The futuristic FT-707 line can be an attractive addition to your shack, den, or workshop. Use the MR-7 Rack to assemble your FT-707 series equipment in a functional, convenient manner. Your ham station need never be an eyesore again!



### FV-707DM DIGITAL VFO

Twelve memories, up/down scanning in 10 Hz steps, and receiver offset tuning provide unparalleled operating convenience for you—today's active amateur. You can store frequencies tuned on either the transceiver or the FV-707DM, then just press a button for instant return to the memorized frequency. Less than an inch high, the FV-707DM is designed for mounting directly beneath the FT-707 transceiver, yielding a digitally tuned transceiver package not much larger than a book!



### SPECIFICATIONS

Output frequency:	4.9–5.6 MHz
Output level:	150mV rms at 50 ohms
Output impedance:	50 ohms
Frequency stability:	±75 Hz from switch-on (0° – 50°C)
Memory channels:	12
Power requirements:	13.5 VDC, negative ground (supplied by FT-707)
Current consumption:	0.5 amps maximum
Case size:	27(H) x 238(W) x 235(D) mm
Weight:	Approx. 1.6 kg



## FP-707 POWER SUPPLY

The FP-707 provides the 13.5 volt DC power required by your FT-707 transceiver. Excellent regulation—a quality not often found in power supplies this compact—means you never have to worry about stability when you go key down. See your Yaesu dealer today!



## SPECIFICATIONS

Output voltage:	13.5V DC $\pm$ 0.2V (no load)
Output current:	20 amps @ 50% duty cycle
Regulation:	Better than 5% at rated load
Ambient temperature:	-20° - +50°C
Input voltage:	100/110/117/200/220/234 V AC 50/60 Hz
Size:	93(H) x 240(W) x 235(D) mm
Weight:	7.4 Kg

## FC-707 ANTENNA COUPLER

The FC-707 antenna coupler lets you present a 50 ohm load to your FT-707 transceiver all across the band, thus assuring you of maximum power output. Low-loss components are used throughout this ultra-compact antenna coupler, for high efficiency. If your antenna system is not up to snuff all across the band, let the FC-707 handle it—and ask your Yaesu dealer for a hands-on demonstration of the entire FT-707 line. You'll be glad you did.



## SPECIFICATIONS

### Frequency coverage:

80m	3.5–4.0 MHz	17m	18.0–18.5 MHz
40m	7.0–7.5 MHz	15m	21.0–21.5 MHz
30m	10.0–10.5 MHz	12m	24.5–25.0 MHz
20m	14.0–14.5 MHz	10m	28.0–29.7 MHz

### Input impedance:

50 ohms

### Max. variation in load impedance:

10–250 ohms

### Maximum transmitter power:

150 W RF @ 50 ohms

### Power meter calibration scales:

15 W, 150 W

### Insertion loss:

0.5 dB max.

### Rear panel antenna connection:

UHF type connector

### Dimensions:

238(W) x 55(H) x 180(D) mm

### Weight:

2.0 kg

### SWR calibration:

To 5:1 SWR