

COMPUTER AIDED HF ALL MODE TRANSCEIVER



FT-747GX

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DESCRIPTION

The FT-747GX is a compact SSB/CW/AM and (optionally) FM transceiver providing 100 watts of PEP output on all hf amateur bands, and general coverage reception continuously from 100 kHz to 30 MHz.

Housed in metallized high-impact plastic, the FT-747GX is perhaps the lightest 100W hf transceiver ever produced. A front panel mounted loudspeaker and clear, unobstructed display and control layout make this set a real joy to use.

Convenient features include operator selectable coarse and fine tuning steps optimized for each mode: 25 Hz and 2.5 kHz for SSB and CW, 1 and 10 kHz for AM, and 5 and 12.5 kHz for FM with the optional FM Board.

Dual (A/B) vfos are provided, along with twenty memory channels which store mode and skip-scan status for auto resume scanning of selectable memories, controllable from the microphone UP/DOWN keys. Eighteen of the memories can also store independent transmit and receive frequencies for easy recall of split-frequency operations.

Wideband (6 kHz) AM and narrowband (500 Hz) CW IF filters are included as standard, along with a clarifier, switchable 20 dB receiver attenuator and noise blanker to optimize reception under

OPTIONS

Optional accessories include your choice of the MD-1B8 Desktop Scanning Microphone or the MH-1B8 Handy Scanning Microphone, the microprocessor controlled FC-757AT or FC-1000 Automatic Antenna Tuners or FL-7000 500-watt Automatic Solid State Linear Amplifier, and a TCXO (Temperature Compensated Crystal Oscillator) for added frequency stability. Also available are the FRB-757

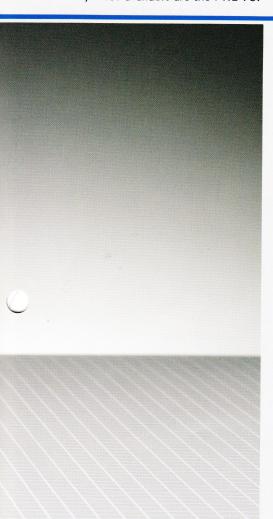
Relay Box for t/r switching of linear amplifiers, and the FAS-1-4R Remote Antenna Selector, which allows selection of up to four additional antennas when used with the FC-757AT or FL-7000. The FC-700 manual antenna tuner can also be used with the FT-747GX.

Special power supplies for the FT-747GX include the FP-757HD Heavy Duty Series Regulator Power Supply with forcedair cooling and automatic thermal fan control, or the FP-700 standard power

supply for low power and light duty applications. Both supplies can be wired for 100/110/117/200/220 or 234 VAC.

Matching External Loudspeakers include the SP-767 and SP-767P (with phone patch). CAT System interface units available are the FIF-65A (for Apple II) and the FIF-232C for other computers equipped with an RS-232C serial port capable of 4800 baud.

For mobile installation you will want the MMB-38 Mounting Bracket.

















FL-7000

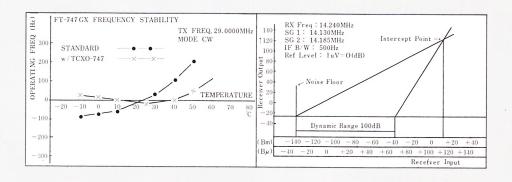


SP-767



varying conditions. User programming for more advanced control by an external computer is possible through the CAT (Computer Aided Transceiver) System.

The transmitter power amplifier is enclosed in its own diecast aluminum heat-sink chamber inside the transceiver, with forced-air cooling by an internal fan allowing full power FM and packet, RTTY, SSTV and AMTOR operation when used with a heavy duty power supply.



SPECIFICATIONS

F17476X Technical supplement

GENERAL

Tuning Steps (selectable)

SSB & CW: 25 Hz or 2.5 kHz/step AM: 1 kHz or 10 kHz/step

FM*: 12.5 kHz or 5 kHz/step

Frequency Stability (0° to +40°C)

SSB, CW, AM: ±200 Hz FM: ±300 Hz

Frequency Accuracy

SSB, CW, AM: ±200 Hz

FM: ±300 Hz

Antenna Impedance (nominal)

50 ohms, unbalanced

Supply Voltage

13.5 VDC ±10% (negative ground)

Maximum Current Consumption

19A (@ 100W output)

Dimensions

238 (W) X 93 (H) X 238 (D) mm

Weight

Approx. 3.3 kg (7.25 lb)

RECEIVER

Frequency Range

100 kHz to 29.9999 MHz (continuous)

Circuit Type

CW, SSB, AM: double conversion

FM*: triple conversion

Clarifier Range

 $\pm 9.975 kHz$

Sensitivity (for 10dB S+N/N, exc. FM)

 $0.5 \sim 1.5 \, \text{MHz} > 1.5 \, \text{MHz}$ $0.25 \mu V$

SSB/C\V: AM:

 $0.5 \mu V$ 2 µV

1.0 µV

FM*:

0.7 µV for 12 dB SINAD

(above 28 MHz)

Squelch Sensitivity

SSB/CW/AM: 2.0 µV above 1.5 MHz

 $4.0\mu V$ within $0.5\sim 1.5$ MHz

FM*:

 $0.32 \mu V$

Intermediate Frequencies

47.055 MHz, 8.215 MHz,

455 kHz (FM only*)

Image Rejection

Better than 70 dB within 1.5~30 MHz

IF Rejection

Better than 60 dB within 1.5~30 MHz

Selectivity (-6/-60 dB)

SSB, CW(W), AM(N): 2.2/5 kHz

CW(N): 500 Hz /1.8 kHz

AM(W): 6/14 kHz; $FM(-6/-50 \, dB)^*$: 8/19 kHz

Maximum Audio Power Output

At least 1.5W into 8 ohms w/10% THD

Audio Output Impedance

4 to 8 ohms

TRANSMITTER

Frequency Range

160 m band - 1.5 to 1.9999 MHz

80 m band - 3.5 to 3.9999 MHz

40 m band - 7.0 to 7.4999 MHz

30 m band - 10.0 to 10.4999 MHz

20 m band - 14.0 to 14.4999 MHz

17 m band - 18.0 to 18.4999 MHz

 $15 \, \text{m} \, \text{band} \, - \, 21.0 \, \text{to} \, 21.4999 \, \text{MHz}$

 $12 \, \text{m} \, \text{band} \, - \, 24.5 \, \text{to} \, 24.9999 \, \text{MHz}$

10 m band - 28.0 to 29.9999 MHz

Emission Types

LSB, USB (J3E); CW (A1A); AM (A3E)

and optionally FM (F3E)

Power Output

SSB, CW & FM*: 100W PEP/DC,

AM: 25W carrier

SSB Carrier Suppression

Better than 40 dB below peak output

Unwanted Sideband Suppression (SSB)

Better than 50 dB (1 kHz tone)

Spurious Radiation

Harmonic:

better than -50 dB

Non-Harmonic: better than -40 dB

Audio Response

Less than -6 dB from 400 to 2600 Hz

3rd Order Intermodulation Distortion

Better than -25 dB (@ 100W PEP)

Modulation System

SSB/CW: active balanced modulator

AM:

early stage (low level)

FM:

variable reactance

Maximum FM* Deviation

± 2.5 kHz

Microphone Impedance

500 to 600 ohms

*FM operation requires optional unit.

Specifications subject to change without notice.



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YAESU MUSEN CO., LTD.

C.P.O.BOX 1500, TOKYO, JAPAN

YAESU U.S.A.

17210 Edwards Rd. Cerritos, California, 90701 U.S.A.

YAESU EUROPE B.V.

Snipweg 3, 1118AA Schiphol The NETHERLANDS