

SOLID-STATE FT-101 TRANSCEIVER

SOLID-STATE BREAK THROUGH 13 FET's, 3 Integrated Circuits, 27 Silicon Transistors, 38 Silicon Diodes • Computer Type Plug-in Modules

THE FT-101 FITS: car, camper, trailer, boat, airplane, suitcase, or the home base. Movable, portable, or fixed, the FT-101 fits them all.

A 12 volt DC or 117/234 volts AC power source—plus antenna—puts you on the air on all bands 80 through 10 meters. When all the receiver noise, the FT-101 draws less current than a desk light. Power amplifier tubes can be switched off or on by front panel rocker switch. Minimum current draw is a minimum.

For mobile operation a noise blanker is mandatory—the FT-101 has it! Complete with signal threshold control, the blanker picks out noise spikes and leaves only clean signal copy. The rugged factory sealed solid-state VFO plays on frequency over the roughest roads.

Portability demands light weight, small size, and power source flexibility. The FT-101 weighs 30 pounds complete with built-in 12 volts DC and 117/234 volts AC volt power supplies. Compact solid-state construction affords convenient transporting in overnight style luggage.

The FT-101 is not only designed for mobile or portable use, but excels as a primary base station. The transceiver features high receiver sensitivity and transmits power capable of driving the most powerful linear amplifiers available today.

Features such as built-in VOX, 25 kHz and 100 kHz callipers, high Q permeability tuned RF stages, and a 6 kHz Clarifier provide deluxe base station operation. In addition to these features an optional CW filter and companion solid-state VFO is available at modest cost.

The FT-101 is fully guaranteed for one year following date of sale. Standard plug-in modules are available on an exchange basis and continuing service is provided for your complete satisfaction.

SPECIFICATIONS

Maximum Input Power: 250 W PEP SSB, 100 W CW, 50 W AM
Sensitivity: 0.3 Microvolt for 10 db S/N
Selectivity: 2.4 kHz (6 db down), 4.2 kHz (40 db down)
• CW Filter — 0.6 kHz (6 db down), 1.2 kHz (40 db down) option
Frequency Range: 1.8 to 2.0, 3.5 to 4.7 to 7.8, 10 to 14.5, 21 to 21.5, 27 to 27.5, 28 to 30 MHz
(X-101 option for 1.8-2.0 MHz band)

FREQUENCY REJECTION STANDARDS

Carrier Suppression: 40 db down minimum
Unwanted Sidebands: 40 db down minimum
Distortion Products: 30 db down minimum
I.F. and Image Ratio: 50 db down minimum

GENERAL

Frequency Stability: Less than 100 Hz drift in any 30 min.
Antenna Impedance: 50 to 100 ohms—SWR 2:1 or less
Audio Output: 3 watts, 150-2200 Hz, 4 Ohm impedance
Devices and Tubes: 13 FET's, 3 IC's, 27 Si-Ts, 38 Si-Ds, 12BY7A driver, Two 6X5A's
Power Source: 12 volt DC, or 100, 117, 200, 220 V AC
Power Consumption: AC, Receive 3 A, Transceive 3 A, DC, Receive 3 A, Standby 3 A
Dimensions: 13" x 14" x 11" (approx)
Weight: 30 pounds

How The FT101 Works

The FT101 uses a classic double superhet arrangement with a crystal controlled high frequency oscillator. This type of circuitry was used by many rigs of its era, such as the TS510 and TS520 by Trio/Kenwood and the FT560 and FT401 by Yaesu to name but a few of dozens. The simplified block diagram in Fig. 2 shows the FT101 operating 15 metre band, and using this example let us follow the signal path through the transmitter.

Speak into the microphone and a few millivolts of audio are amplified by PB1315 for application to the balanced modulator circuitry on board PB1184. The output of PB1184 is a set of two sidebands, either side of a suppressed carrier at a frequency just under or just over

The Best Buy?

The first publicity blurb

1978 FT101ZD. This is entirely new design which probably was numbered "101" for marketing purposes. It is a single superhet and is basically an economy version of the FT901 from which it was presumably developed. It is an excellent piece of equipment. It is not the subject of this article.

FT101EE as FT101E but speech processor an optional extra. FT101EX economy version omitting speech processor 12 volt power supply unit, microphone and fan. 160M, WWV, and three 10 metre crystals also omitted.

The basic circuitry and performance has not changed greatly since the FT101 Mark 2, and price and condition are the main consideration when purchasing a second hand unit. Some Mark 1's have been fitted with an official Yaesu upgrade kit (new noise blanker fitted on top of the VFO, new RF board, new mixer/high frequency IF module, plus extensive re-wiring and modification of other boards) and are more or less equivalent of a Mark 2 if the work has been correctly done. A few models can be fitted with an external speech processor and with a few small mods, a Mark 2 or B which is in good condition can be made to out perform an unmodified FT101E.

