

CQ Reviews:

The Yaesu Musen FTdx 570 S.S.B./C.W. Transceiver

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It is pretty difficult to make a good piece of gear even better, except to add a few extra facilities. This is what the Yaesu Musen people have primarily done with the FTdx-570 transceiver, the successor to the popular FTdx560. Since the latter has been reviewed in a previous issue of *CQ*,¹ we shall not go into all the details on the normal features, technical aspects and performance which also apply to the FTdx570. For these it is therefore suggested that reference be made to the earlier review. Nevertheless, a recap of the main things to be expected of these transceivers might be in order as follows:

Transceive operation with s.s.b. (u.s.b. or l.s.b.) or c.w. is provided with full coverage of the 3.5-28 MHz amateur bands, each over a 500 kHz range with the identical linear-tuning rate calibrated in 1 kHz steps. The transmitter input power is rated at 560 watts p.e.p. with s.s.b. and 500 watts d.c. for c.w. on all bands.

Other features include: 2.4 kHz selectivity (with extra position for an optional 600 Hz

c.w. filter); 10 MHz WWV band; provisions for two additional auxiliary 500 kHz segments between 3.5 and 30 MHz; 25 and 100 kHz calibrating markers; high-ratio tuning control with spinner-type knob; fast- or slow-a.g.c.; built-in v.o.x. with panel-located sensitivity control; manual or v.o.x.-type c.w. break-in; adjustable c.w. sidetone oscillator; ± 5 kHz receiver off-set tuning; front-panel switch for changing between internal or external v.f.o.'s (external v.f.o. is optional accessory) to permit quick change between common or independent frequency control of receiver and transmitter sections; a.l.c.; full metering for receiver S-units, transmitter a.l.c. level, p.a. cathode current or relative power output; 8- and 600-ohm a.f. outputs; phone-patch input; socket for 6-meter transverter accessory; built-in 117/220 v.a.c. power supply. The b.f.o., v.f.o. and calibrating setups are transistorized; otherwise, vacuum tubes are used throughout.

In addition to these the Model FTdx570 incorporates a built-in speaker, a cooling fan and a true transistorized noise blanker.

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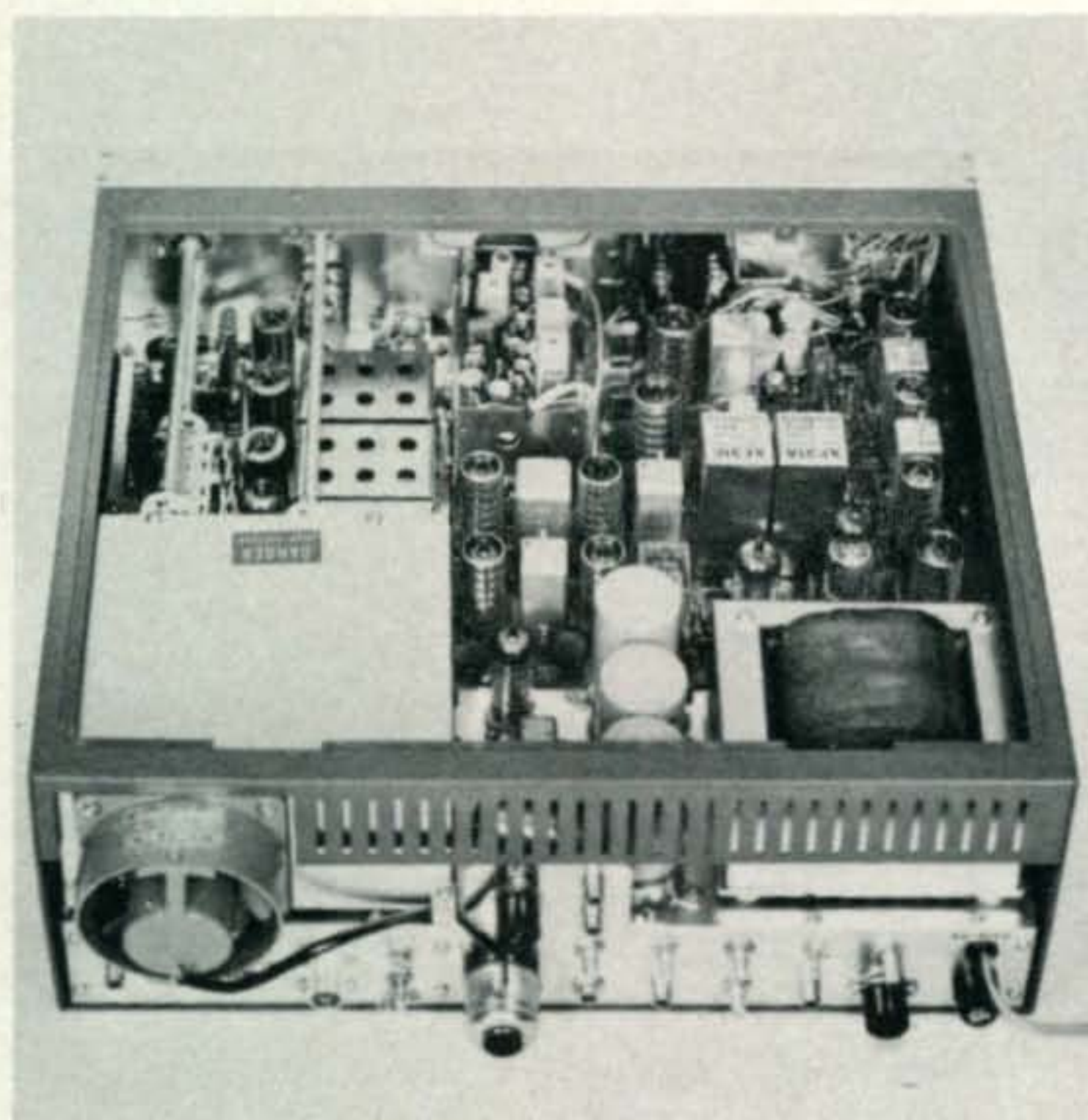
¹"*CQ* Reviews the Yaesu Musen FTdx560 Transceiver," *CQ*, May 1970, p. 34.

New Details

The built-in speaker, which eliminates the

The Yaesu Musen FTdx570
s.s.b./c.w. transceiver.





Rear top view of the FTdx570 showing the exhaust fan at the back of the p.a. enclosure the only openings of which are at the interior sides to enable heat to also be drawn from the entire unit. The noise blanker is installed on a circuit board at the top of the v.f.o. at the upper center.

need for an additional unit, faces downward at the bottom of the cabinet. Such an arrangement normally might impair intelligibility, but due to the tilt-up type case for the transceiver and the particular response characteristics of the speaker, easy and excellent readability is maintained.

The cooling fan is located at the rear of the p.a. compartment. It is an exhaust type that draws out warm air from not only the p.a., but also from other sections of the unit for which strategically located slots are provided at the p.a. enclosure. At the same time the fan draws cool air into the unit.

The noise blanker supplants the original

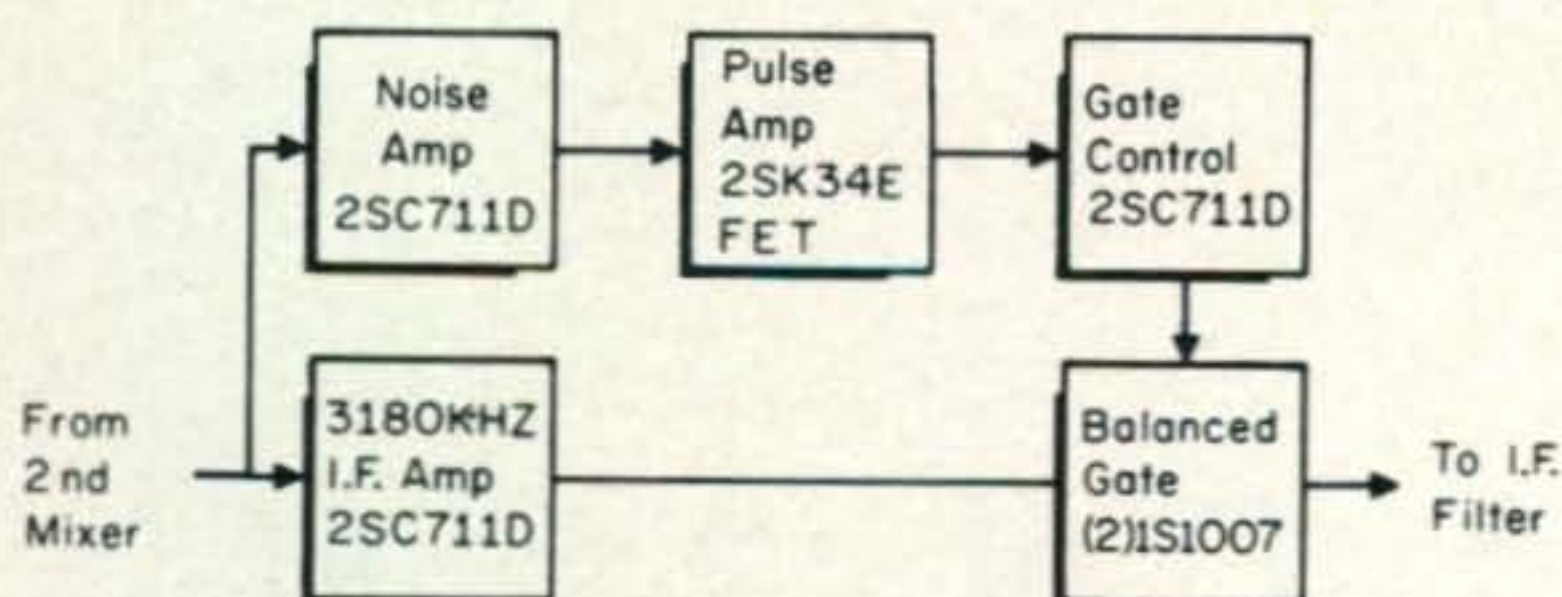


Fig. 1—Block diagram for the noise blanker used in the FTdx570. Noise pulses, obtained from the mixer output, are amplified, detected and appropriately shaped to operate the gate at the filter input. The gate employs two diodes in a balanced setup that eliminates switching transients. This provides quieter operation.

a.f.-type noise limiter. A block diagram of the setup is shown at fig. 1. Although it is a somewhat conventional lineup, the actual circuitry and constants are such that make it one of the most superb performing jobs we've run across, not only fantastically eliminating impulse noise, but also preventing desensitization of the receiver by noise pulses that otherwise would decrease the receiver gain through the a.g.c. action created by the noise pulses.

An improvement over early FTdx560 models is a change at the product detector whereby cleaner audio quality is obtained with high input-signal levels. A change also has been made in the c.w. wave-shaping that produces more desirable keying characteristics.²

The 600 Hz (@ 6 db) c.w. filter is exceptionally sharp for one of its type, since it has very steep skirts that result in a 2:1 shape factor with a 60 db bandwidth of only 1.2 kHz. Its overall effectiveness is thus better than some of the 400-500 Hz filters we've encountered with shape factors usually in the order of 4.1. The filter is automatically switched in when the transceiver is set up for c.w. operation. This filter is an optional factory-installed accessory; however, it can be supplied for installation as a do-it-yourself kit.

With a receiver sensitivity of 0.3 μ v or better for 10 db S+N/N on all bands, an unwanted-sideband suppression of at least 50 db (at 1 kHz), the excellent selectivity with the optional c.w. filter, an output of at least 300 watts p.e.p. on s.s.b. and 260 watts on c.w., plus all the other features of the FTdx-570 make it a transceiver that gives you a high-performing and flexible setup to meet the essential needs of today's amateur-radio communications.

The FTdx 570 is priced at \$549.95, complete, including all crystals for complete coverage of the 28 mHz band. All you need to get on any band is a mic (or key) and antenna. The optional c.w. filter, factory-installed or as a kit, is \$39.95. These are products of Yaesu Musen, Ltd., Tokyo, Japan, and are marketed in the U.S.A. exclusively by Spectronics, 1491 E. 28th Street, Signal Hill, California 90806. —W2AEF

²The given changes also are included in later models of the FTdx 560.

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