Yaesu FT-857 Quirks

The Yaesu FT-857 has a number of "undocumented features", some of which are very interesting. In no particular order, here are my *favorite* quirks.

XX Holding FAST for one second on the supplied microphone will toggle power.

XX The small wire on the power supply connector simulates the FT-897's internal battery sense line. When this wire is grounded, the FT-857 operation changes subtly. With the display backlight in AUTO 2 (the default) and the sense wire grounded, the display light extinguishes after about three seconds, identically to AUTO 1 mode. Also, the supply current drawn by the rig when it is turned OFF drops from about 8mA to about 2.5mA.

XX The KEY jack has ALC on the tip and either TXREQ (Transmit Request?) or TX GND (amplifier key-line driver) on the ring. A jumper inside the rig selects between the two. TX REQ provides full QSK keying when grounded, but no sidetone. The relay chatters like mad!

XX The microphone connector provides serial control capability (CAT) if Menu 059 is changed from NOR to CAT and a simple interface cable is constructed (see **Using the FT-857 Microphone Jack for Serial Control**).

XX When the rear panel CAT/Linear jack is set to LIN mode (Menu 020), four bit band data is available for controlling an auto-band switching amplifier, band pass filters, or automatic antenna selections matrices. The band codes are shown in the following table (in volts):

Band	D	C	B	A
160	0	0	0	5
80	0	0	5	0
60	0	0	5	5
40	0	0	5	5
30	0	5	0	0
20	0	5	0	5
17	0	5	5	0
15	0	5	5	5
12	5	0	0	0
10	5	0	0	5
6	5	0	5	0
2	5	0	5	5
440MHz	5	5	0	0

Note there is no provisions for the 222MHz band in this scheme, and 60m shares its code with 40m.

XX When the IPO is engaged, turning OFF the preamplifier, supply current INCREASES by about 10mA(!).

XX The optional filters have a coding embedded on their PC boards. This code tells the FT-857's controller whether a filter is installed in either or both of the slots and its bandwidth. The rig responds by changing the text on the filter select menu (multi-function row N) and adjusting the BFO injection frequency. Filters without this coding may require use of IF Shift to center the passband. The code for each of the three Yaesu optional filters is shown below, with 1 = open circuit and 0 = ground:

ODF2	OFD1	OFD0	Filter
1	0	0	300Hz
1	0	1	500Hz
1	1	0	2.3kHz

All other combinations are apparently ignored. See the sidebar for drawings.

Miscellaneous Positive Opinions

XX Three user-programmable soft keys are available

XX Internal CW keyer speed may be controlled by a front panel knob (SEL) instead of only via menu. OR, output power may be adjusted using this control (but not both). There are other choices as well.

XX VOX may be separately activated for the DATA jack. Thus, PSK31 (etc.) cabling may be greatly simplified.

XX There is an analog meter output provided on the faceplate. This meter can show several parameters both in receive and in transmit.

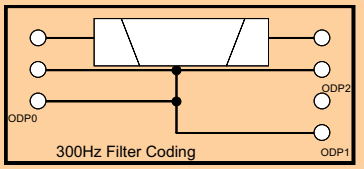
Miscellaneous Negative Opinions

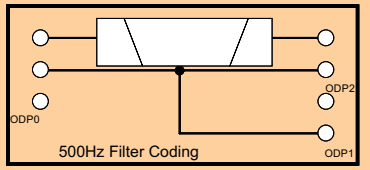
XX The RIT Clear is too strange and awkward to be useful

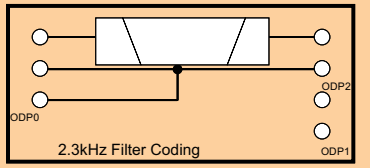
XX CW pitch steps of 100 Hz are too coarse

XX Suffers from the same strong in-band birdies as the FT-817 (look at 7240 for example). IF shift is not as effective in cancelling out these birdies, and the DSP notch filter doesn't kill them completely either.

CW Filter Coding







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