

All Things Yaesu

Microphone Connection Basics

Since about 1975, Yaesu HF rigs have been designed with low-impedance (600- ) inputs. Prior to that time, 50-k microphones were utilized. Starting in 1980, many HF rigs used a standard 8-pin round connector, and the wiring of this plug has been consistent through the years. On the FTdx9000 series, a standard 3-pin XLR was incorporated (In addition to an 8-pin jack on the rear panel), allowing direct connection of studio microphones. The pin configurations are shown in the next section.

Note that many HF rigs also include a "PATCH" jack on the rear panel. This is a common RCA jack, wired in a "Y" manner with the Mic input from the front panel. For the do-it-yourselfer, the PATCH jack provides a simple means of connecting a microphone to a Yaesu rig. There usually is also an RCA-type PTT jack on the rear panel.

Pin Connections

8-pin Round (FT-1000/2000/dx9000/990/847/736/747/757/767/650/840/920)

Pin 6: PTT

Pin 7: Ground

Pin 8: Microphone In

4-pin Round (FT-7/101/101Z/201/221/223/225R/227R/301/901/902)

Pin 1: Ground

Pin 2: Microphone In

Pin 3: PTT

Pin 4: No Connection (\*Ground on FT-221R)

3-pin XLR (FTdx9000 Front Panel)

Pin 1: Ground

Pin 2: Microphone (+)

Pin 3: Microphone (-)

-pin Round (FT-290/690/790)

Pin 1: Ground

Pin 2: Microphone In

Pin 3: PTT

6-pin Modular (FT-100/90/8100R)

Pin 4: Ground

Pin 5: Microphone In

Pin 6: SWI (Connect PTT line via series 27-k resistor to this pin)

6-pin Modular (FM Mobiles: FT-1500/1802/2800/7800/8800/8900)

Pin 3: +8V

Pin 4: Ground

Pin 5: Microphone In

Pin 6: PTT

8-pin Modular (FT-450/817/857/897/900)

Pin 2: Ground

Pin 3: PTT

Pin 4: Microphone In

Pin 5: Microphone Ground

Handle-Talkie 4-pin Mini-plug (VX-1/2/3/5/110/150/170)

Tip: Speaker Out

Ring 1: PTT

Ring 2: Microphone In

Shield: Ground

DSP and Carrier Point Settings

Yaesu has, since the 1980s, provided means for adjusting the carrier insertion point (identical to "F SHIFT" used on receive, only this is on your transmitted signal). This allows the operator to roll off lows, or roll off highs, to change the articulation or bass response of your voice wave-form.

Beginning with the FT-1000MP, DSP settings were added to many rigs, allowing the bandwidth to be varied, and additionally it was possible to perturb the envelope to do things like peaking both high and low while putting a null in the center of the transmitted passband, etc.

It is impossible for us at Hell Sound to know what settings will sound "best" on your voice, in your station environment, with your microphone, for your interest (DX, Contest work, rag-chewing, or maximum fidelity) The recommendations below are just starting points. Listen to yourself in a separate receiver (with its antenna disconnected) to determine what sounds best in your unique situation.

FT-1000MP Series (Including Mk-V and Field)

Menu 5-9: 6.0

Menu 7-7: Set "SSB-T" to 300-3100 Hz for DX/Contest, 100-3100 Hz for more fidelity.

Menu 4-4: Set to "OFF" while setting Menu 7-7 to your liking, then try each selection ("1" through "4") while listening in separate receiver to see if any of these improve your voice signal's characteristics. Oftentimes "OFF" is best.

Menu 8-9: Generally, you don't need to touch this one. However, the settings are identical, in principle, to those found in the discussion below for the FT- 920. Try them while listening on a separate receiver.

Speech Processor: Don't be afraid to use it; the audio quality is excellent for most applications.

FT-2000/FTdx9000

Because Menu numbers may change over time, the "Title" of the Menu item is used below, to avoid confusion across different production lots.

BQ1: -6 dB at 200 Hz, Bandwidth of 2 (set to -10 dB if using PR 40 and you get Reports of too much bass).

BQ2: -6 dB at 900 Hz, Bandwidth of 2.

BQ3: +6 dB at 2100 Hz, Bandwidth of 2. Set to +10 dB for DX/Contest work.

SSB TX BW: Set to 400-2600 Hz for DX/Contest work, 300-2700 Hz for everyday operation, 100-2900 Hz for more fidelity. Note that power output meter will show "lower" power as bandwidth is increased; this is normal, reflecting lower power density per Hertz of passband.

FT-847

Menu 42: On (this engages the "Extended" Menu).

Menu 92: +5 to +10 to start, +15 for DX/Contest work.

Menu 93: -5 to -10 to start, -15 for DX/Contest work.

Note: The ideal setting may differ between USB and LSB, depending on other alignments in rig. The LSB settings are "inverted" from USB, so a setting of -10 on LSB and +10 on USB should sound the same.

FT 857 D

Menu 46 DSP High Pass filter Default at 100. Set that to 200 to 300 on the low end

Menu 48 DSP Mic Equalizer

To set up the DSP Microphone Equalizer feature:

1. Press and hold in the [DSP] key for one second. This instantly activates Menu Mode No-048 [DSP MIC EQ].
2. Rotate the DIAL to select one of the following equalization choices: OFF: Microphone Equalization Off  
LFF: High Cut (lower frequencies are emphasized)  
HPF: Low Cut (higher frequencies are emphasized)  
BOTH: High/Low Cut (mid-range frequencies are emphasized)
3. When you have made your selection, press and hold in the [FUNC] key for one second to save the new setting and EXIT to normal operation.

You also have menus 016 Carrier Balance -300 to +300 LSB Transmit and 017 Carrier Balance -300 to +300 USB Transmit Adjusting these controls will give you more low response or high response. As always listen to your test signal through headphones connected to a second receiver. You will hear the balance that will please you.

As always study the operation guide for further information.

FT-920

Menu U-59 (TLSS): +100 for DX, +150 for Contest work, -100 for rag- chewing.

Menu U-60 (PROC LSS): +100 for DX, +150 for Contest work, -100 for rag- chewing.

Menu U-62 (T LSS): +100 for DX, +150 for Contest work, -100 for rag- chewing.

Menu U-63 (PROC USS): +100 for DX, +150 for Contest work, -100 for rag- chewing.

Menu U-51: Set to OFF initially.

- 1: Mid- and high-frequency emphasis.
- 2: High frequency emphasis (DX/Contest setting).
- 3: Low- and high-frequency emphasis, dip in middle.
- 4: Wide "broadcast" setting.