

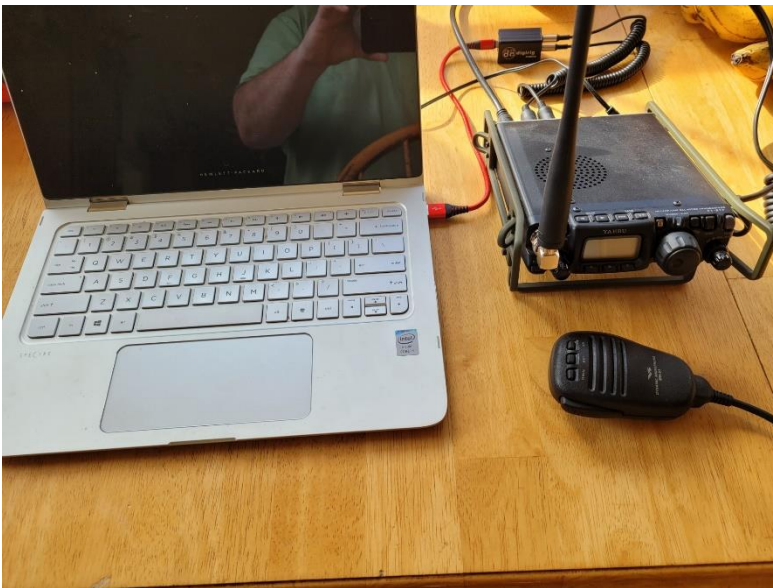
Setup and Configuration for FT-817 and Digirig

Overview

The purpose of this document is to assist other fellow amateur radio operators establish digital communications using a Yaesu FT-817 and Digirig sound card interface device. Although this document will focus on getting up and running for FT8 transmissions using WSJT-X, once established these same settings should allow you to branch out into other digital communication modes and applications.

For the purposes of this document, we will be using a Windows 10 based PC and other tests have shown that Windows 11 will work simply fine as well. Other operating systems will still work with the documentation except for the Windows Sound Settings section of this document.

Figure 1 – Equipment Used



Digirig and Cables

For our purpose, we decided to not only purchase the Digirig sound card interface device, but the FT-8XX cables as well. If you are using homemade cables, assuming your cables are made correctly, the remainder of this document should still apply

NOTE: We found that the cables from Digirig are extremely well made, although they do take a bit of force to connect properly to the radio. Initial failure attempts were directly attributed to the fact we were not seating the cables correctly into the radio itself.

Using the Digirig device you will want to connect your Audio cable to the DATA port on the back of the radio and into the Audio port on the Digirig. You will want to connect your Serial cable to the ACC port on the back of the radio and into the Serial port on the Digirig. Then ultimately, you want to connect your Digirig device to the computer using the USB port (see Figures 2 – 4 below).

Figure 2 – Rig Back Panel



Figure 3 – Audio and Serial Cables Connected

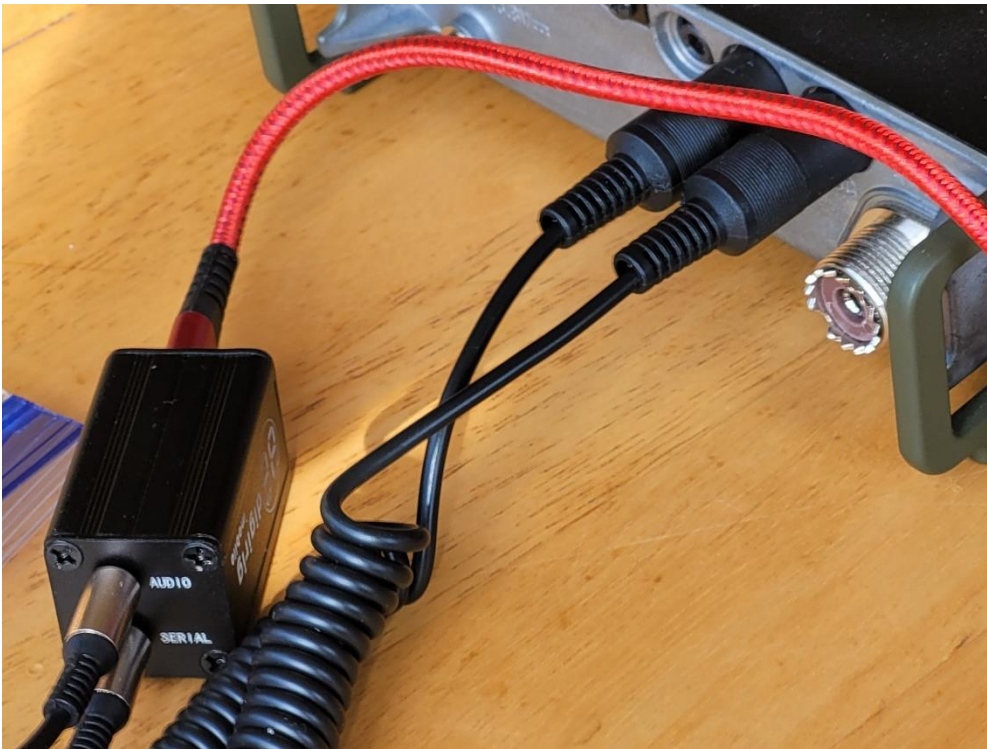
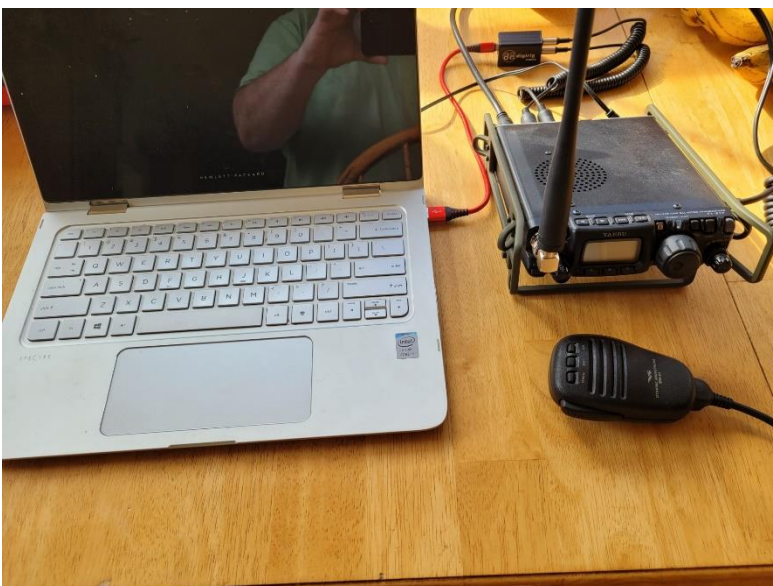


Figure 4 – Fully Connected Station



Once all the cables have been correctly installed and seated into their appropriate locations, turn on the radio and then turn on the computer.

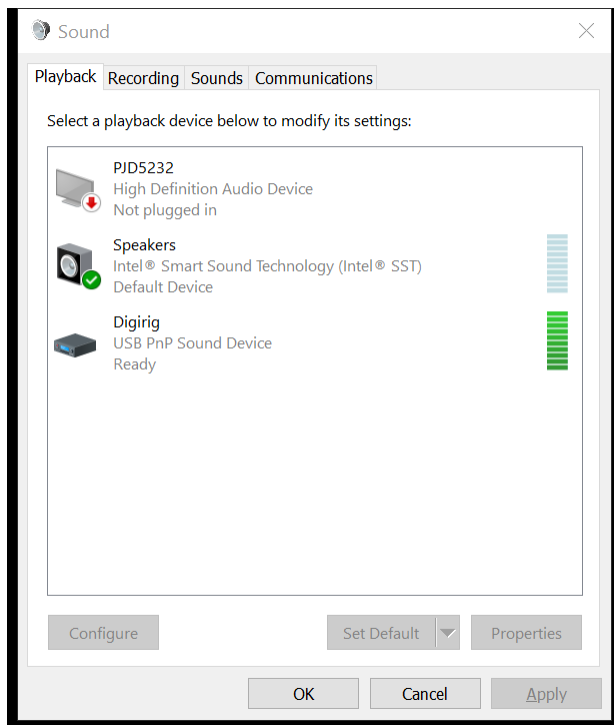
As the computer turns on, it will automatically recognize the Digirig device and install the appropriate drivers. A COM port will be supplied and visible inside of Windows Device Manager. We are still documenting this process – but same process regardless which USB sound card interface you use. It is the same plug and play type of setup well documented across the Internet for FT-8XX radios using USB connectivity.

Windows Sound Settings

When we first got started, we used the documentation supplied directly from the Digirig website and that was a great resource to get us started. Here is the page we used: [Setting Audio Levels For Digital Modes – digirig](#). Over time however, we did play around with various settings to fit our specific needs. The following are our specific Windows sound settings.

First, a great recommendation set forth in the document mentioned above by Digirig is to rename the devices. We found that in all the various setup and configuration dialog boxes we needed to visit, it was much easier to identify the device to be used.

Figure 5 – Windows Sound Properties



The playback sound levels were chosen at random through various tests and uses of this rig setup. We are finding that; we may need to back these levels down a bit. See what works best with your rig and share!

Figure 6 – Playback Sound Levels

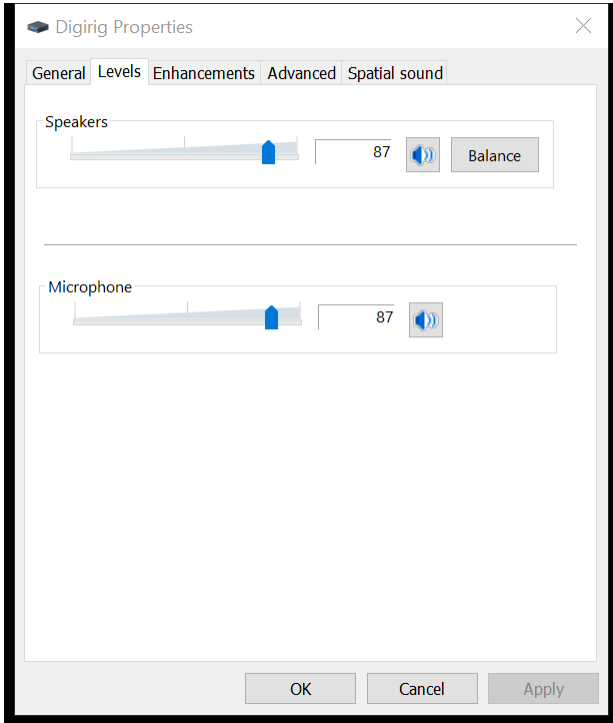
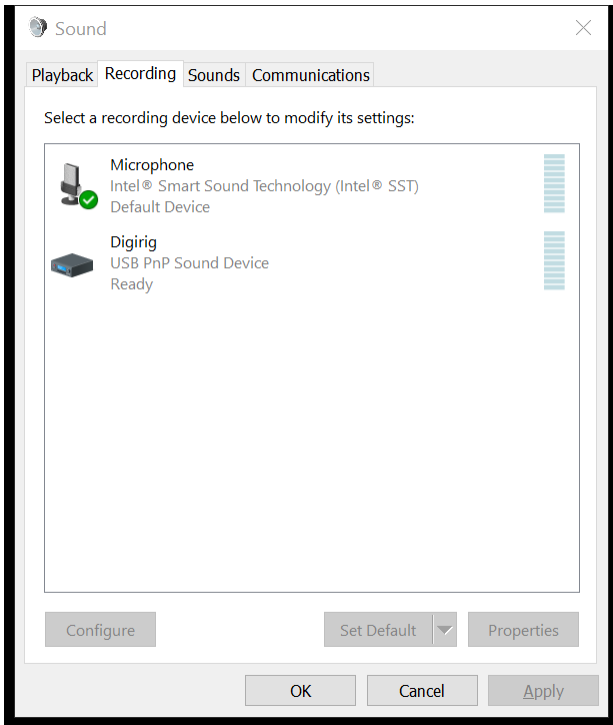
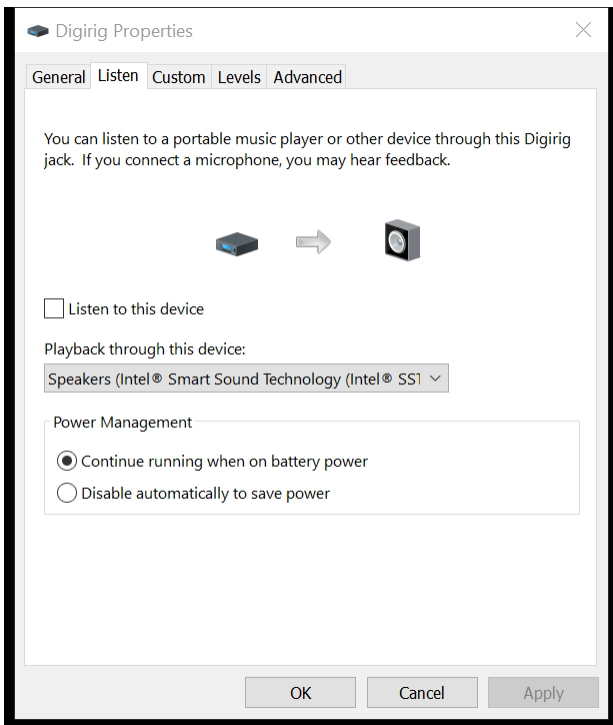


Figure 7- Recording Device Properties



NOTE: You can use the computer to listen to the sounds coming in and out of the radio, however we find this to be very annoying and hard to listen to, especially in a public atmosphere for POTA, or even a "deployment" on the backyard patio table. Except for troubleshooting scenarios, we DO NOT enable the Listen settings that are recommended in other sets of documentation.

Figure 8 – Listen Properties



As recommended by other sources, if the AGC is supported on your computer, it would be in your best interest to turn it off. See Figure 9 below.

Figure 9 -AGC Setting

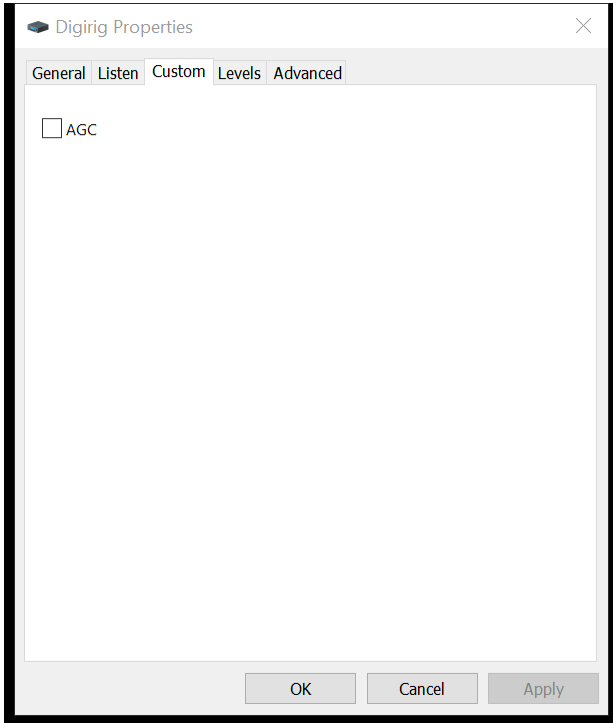
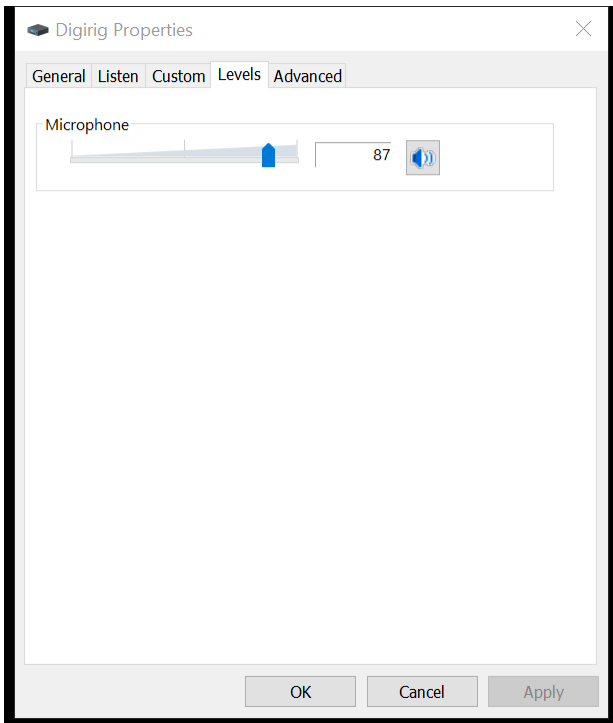


Figure 10 – Recording Levels



In summary, these are the Windows Sound settings and configuration this currently working for us. Much of this can be debated on which settings are right and which are wrong. **But if they work...let it go!** Have fun using your equipment vs. debating about it.

FT-817 Menu Settings

This will be yet another document outlining the digital modes settings for the Yaesu FT-817. However, our document would not be complete without them. And like the sound settings above, others may have different configurations. But this work!

The following are the settings and menu options that must be configured on the radio:

MODE: DIG

Seems so obvious, but I cannot stress this enough. Except for a random YouTube video, we were watching after many failed attempts, DO NOT forget to use the DIG mode on the FT-817.

MENU SETTINGS:

3: 9600 MIC 100
14: 38400
24: 0
25: 50
26: USER-U
27: 0
29: 50
45: SQL (Although others do recommend RF-GAIN) **
46: 50
51: 50

** This is a setting we will be playing around with more to see if we can get a more granular control over the Receiving level indicator within WSJT-X. We can function using both settings.

NOTE: DO NOT FORGET TO USE DIG MODE. Our single largest failure in initially getting all this work was not using the DIG mode on the FT-817. This is something seems so obvious but is never really discussed OR DOCUMENTS in other self-help guides.

Closing

Hopefully, someone will find this document helpful. We struggled at first to get everything functional. All this information is readily available from other sources, but never really put together in one (1) spot. And again, this is what is working for us. If you have other setup and configurations that work, please feel free to share.

Also, we are going to be applying these same techniques to the FT-857D we have sitting around. So, watch for additional documentation, especially on how to make the Windows applications play nicely on a single computer when using multiple radios (i.e., Cloning and Renaming your WSJT-X Configuration).

Thank you for your time and have a blessed day!

73 de KDMAD
Michael A. Drawbaugh
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Band Activity				Rx Frequency					
UTC	dB	DT	Freq	Message	UTC	dB	DT	Freq	Message
20m									
162730	-12	-0.4	718	AE4WX AG4JO EM74	162000	-17	-0.9	1083	CQ N4BUA EL87
162730	-5	-0.9	1411	K3MLB N3OP FM16	162022	Tx		650	N4BUA KD3MAD FN10
162730	8	-1.0	663	CQ KN6JSX EM18	162030	10	-0.9	1083	CQ N4BUA EL87
162730	-9	-0.7	1336	N4DR KD2PWN R-18	162045	Tx		650	N4BUA KD3MAD FN10
162730	-15	-1.2	1853	AE4WX KE5FAR EM36	162115	Tx		650	N4BUA KD3MAD FN10
162730	-18	-1.0	900	KB4CNQ KO4LEM -05	162216	Tx		650	CQ KD3MAD FN10
					162230	-3	-0.9	649	KD3MAD N3OP FM16
					162245	Tx		650	N3OP KD3MAD -03
					162300	-3	-0.9	650	KD3MAD N3OP R-16
					162300	-12	-1.0	650	N3OP W3YNI -01
					162315	Tx		650	N3OP KD3MAD RR73
					162330	-3	-0.9	650	KD3MAD N3OP 73
					162330	-18	-1.0	650	N3OP W3YNI -01
					162400	-19	-1.0	651	N3OP W3YNI -01
					162430	-20	-1.0	650	N3OP W3YNI -01
					162430	-16	-0.9	1014	CQ BOTA WF7B FM16
					162449	Tx		650	WF7B KD3MAD FN10
					162500	-12	-0.8	1014	NODOW WF7B +07
					162515	Tx		650	WF7B KD3MAD FN10
					162530	-11	-0.8	1014	NODOW WF7B RR73
					162545	Tx		650	WF7B KD3MAD FN10
					162600	-16	-0.8	1015	KO4FHS WF7B -10
					162530	-12	-1.0	1903	CQ BOTA KC1RAY FN41
					162615	Tx		650	KC1RAY KD3MAD FN10

CQ only Log QSO Menus

20m **14.074 000** Tx 650 Hz Tx even/1st Hold Tx Freq Rx 1903 Hz Report -12 Auto Seq Call 1st

DX Call: KC1RAY DX Grid: FN41 Az: 74 319 mi Lookup Add

2022 Aug 07 16:27:43

Generate Std Msgs Next Now Pwr

KC1RAY KD3MAD FN10	<input checked="" type="radio"/>	<input checked="" type="radio"/>	Tx 1
KC1RAY KD3MAD -12	<input type="radio"/>	<input type="radio"/>	Tx 2
KC1RAY KD3MAD R-12	<input type="radio"/>	<input type="radio"/>	Tx 3
KC1RAY KD3MAD RR73	<input type="radio"/>	<input type="radio"/>	Tx 4
KC1RAY KD3MAD 73	<input type="radio"/>	<input type="radio"/>	Tx 5
CQ KD3MAD FN10	<input type="radio"/>	<input type="radio"/>	Tx 6

FTB Last Tx: KC1RAY KD3MAD FN10 | 6 13/15 WD:6m