

Getting started in digital (digital data modes):

updated: 11:35 AM 10/23/2023

When I started out with digital data modes, I had an HF transceiver and a computer. I tuned the transceiver to 3581, set the radio mode to Upper Side Band, set my computer to run FLDIGI, set the digital mode in FLDIGI to MFSK-32. Then I held my plug-in computer MIC up to the receiver's speaker. I did this every Tuesday night at 730PM local time.

I copied the net control station (K7KY) very well, and it was exciting to watch his transmission show up on the receive pane in FLDIGI. The net I was copying was, of course, the ORCA Digital Net, run out of Brookings, Oregon, run by Doug Gustafson, K7KY, and his wife, Mindy Hamilton, W7ZAP.

I copied that net for many months before deciding I wanted to participate (listen before you transmit is also important here). I first participated by holding my transceiver's mic up to the computer's speaker, squeezing the push-to-talk button on the MIC, and hitting transmit in FLDIGI, but that did not work very well because MIC handling noises and random background noises in the house created errors in my transmissions. Most participants on the net were using an external sound card directly wired between computer and radio. I wanted one, but which one?

After watching Jaye, KE6SLS, use a Signalink USB unit one Field Day, I bought one. I liked it because:

1. The Signalink has built-in VOX, so I didn't have to manually switch my transceiver to transmit and back or use the transceiver's finicky VOX circuit or CAT control for T/R
2. The Signalink has front panel controls for TX gain, RX gain, and VOX Delay right on the front panel.

I bought the Signalink with a cable and "jumper block" specific for my radio, and was off to the races.

After a number of months, I wanted CAT control, so that I could use FLDIGI to control the rig's frequency. This required the purchase of a USB Serial Converter/Adapter specific to my radio. I bought a CT-62, which I could also use to program my Yaesu radios. Back in FLDIGI, I tried FLRIG, RigCat, and HamLib for CAT control and liked HamLib the best. My older HF transceiver did not have a CAT control port, so I used my newer Yaesu FT-817 radio. It was a dream come true. I could use my computer to run digital modes on my radio. I started participating regularly. Ham radio was fun once again. Yes, the 817 is a QRP rig. I routinely got excellent signal reports from ORCA's NCS in Oregon. And, because the 817 has VHF and UHF in addition to HF, I could participate in local VHF activities. I have been working on a how-to, and will post it here eventually.

For now, I am writing this as a means of encouraging hams to do the same thing that I did, or something similar. When I started out, nobody had a radio with a built in computer sound card and/or a CAT interface. Now that's common in many new radios.

No matter what radio or computer you have or where you are starting out from on digital data modes, I recommend you use the computer mic to radio speaker approach just to see what's out there. VHF/UHF digital data modes can work with a handheld transceiver. I now have FLDIGI, FLAMP, FLMSG, FLRIG, Ham Radio Deluxe, Digipan, MMSSTV, UISS, RMS Express, VARA, VARA-FM, WinPac, APRS, and WSJTX installed on my computer *. Do I use all of them every day? No. Am I an expert at using all of them? No. Digital data modes** can be fun. Jump in. The water's fine.

Maybe because I started with FLDIGI, I recommend others do the same. I call it my "Swiss Army Knife" for digital radio. I use FLDIGI for many things besides what I mentioned above. For example, need to tune without holding down the key or mic button or putting your rig into transmit manually? Just click the "TUNE" button in FLDIGI, take your hands off the mouse and keyboard, and apply them to the RF hardware. (The Signalink hears the TUNE tone, and switches your radio to transmit.) (No, I don't use my serial CAT connection for T/R switching – that's all done by the Signalink) (Yes, I do use my CAT connection for programming memories and other things for my radio, but that's a whole other topic. That topic probably

won't be covered here because there's no one thing that works with all radios, all computers, etc. - each setting is specific to the radio and the computer. The number of combinations of radios, sound cards, and computers is nearly limitless. I have helped several hams get up and running, and have given several talks at my local ham club. I might post a link to a PDF or two that I prepared for those talks, time permitting.

*I am excluding JT-8 JT-65, FT8Call/JS8Call, FSQ, WSPR, and others, that I may have installed and configured, but have not had enough experience with to say if I like them or not. Also, I have purposely left out a how-to on Packet Radio, where my only experience has been with using a physical external hardware TNC, rather than a virtual, software TNC.

****Very important:** When I say "Digital" here or say "Digital Data Modes". I add "Data Modes" to "Digital" so you will know I don't mean "Digital Voice", such as D-Star, Fusion, DMR, or something like Echolink or IRLP. These are modes that are not specifically Digital DATA Modes. By data, I mean text, etc. like when you do a keyboard-to-keyboard QSO with another ham - two hams, two computers, linked by radio. The term "digital" has been coopted by various disciplines, mostly to differentiate "analog" from "digital", such as in music, photo, video, television, etc.

Get on the air. And listen, before you transmit. Always.

Links:

Orca Digital Net information can be found here:

<http://orcadigitalnet.com/>

Here is a link to Tigertronics, makers of the Signalink:

<https://www.tigertronics.com/>

Here is a link to a site by Dave Frese, W1HKJ, for FLDIGI information:

<http://www.w1hkj.com/>

The above sites will give you much more information (including troubleshooting) than I have space for type here. I repeat what I said in one of my Digital Modes workshops: It's not plug-n-play. Then, it's definitely not plug-n-play in another digital workshop.

It's not easy, but it is rewarding, once you get it all up and running. Rewarding not only because it's fun, but also because you will have the satisfaction of knowing that you have done something that's not easy, and gotten it to work.

Here is a link to a site by K1JT, Joe Taylor, where you will find the WSJT suite of digital software such as JT-8 JT-65, and FT8Call/JS8Call that I am not very familiar with:

<https://wsjt.sourceforge.io/>