

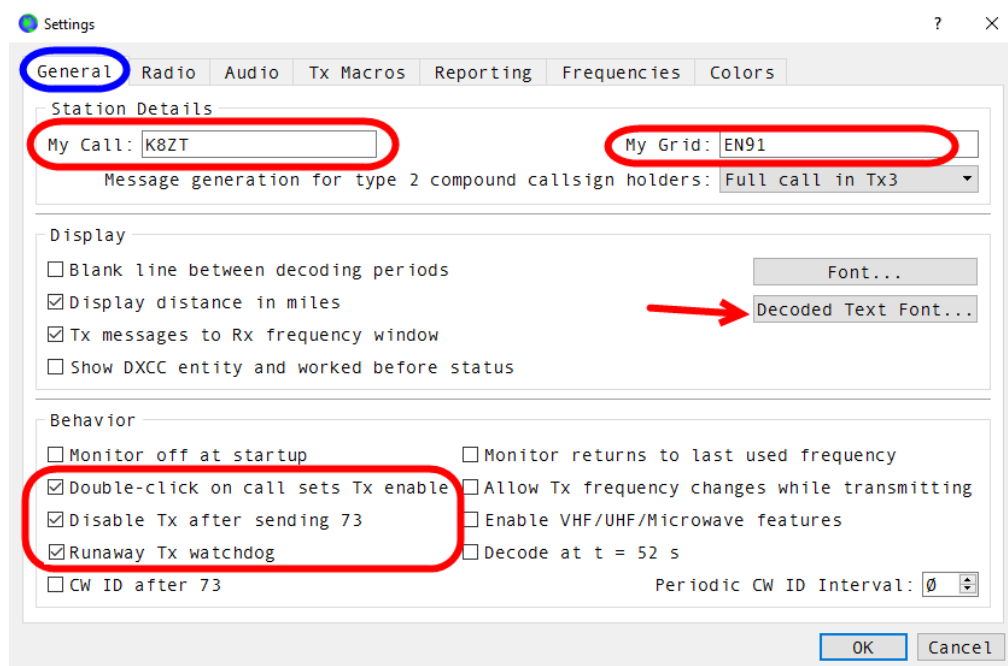


Elecraft K3S on FT8/FT4/JT65/JT9/MSK144- Setting Up & Using WSJT-X

Link to this Doc- <http://tiny.cc/K3S-WSJT-X>

Installing and Setting Up Software

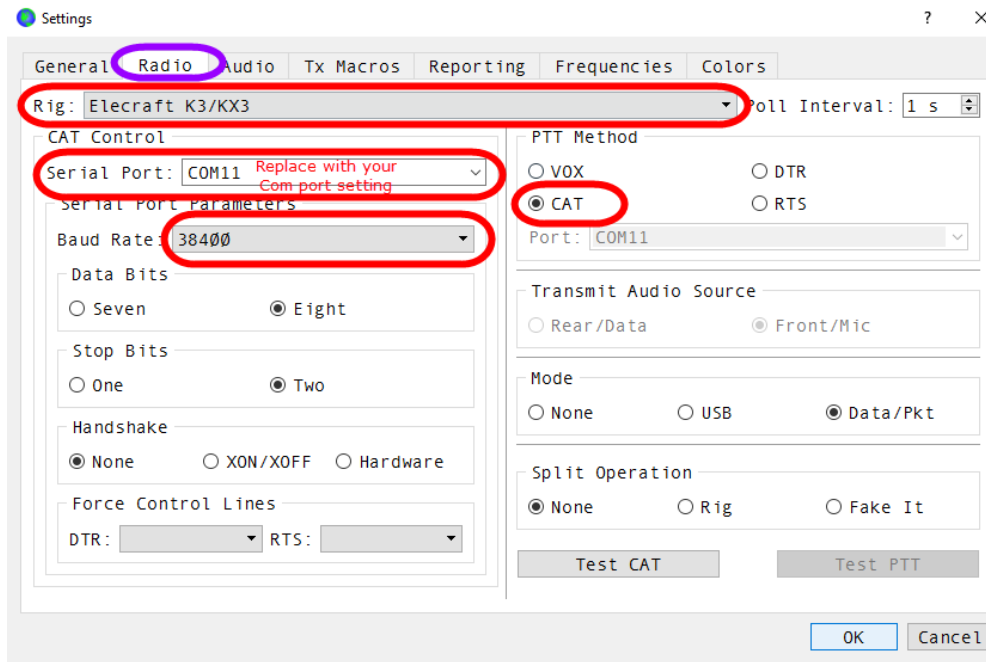
1. Using the Elecraft instructions, get the K3S rig control working using the USB connection. Check it using **Elecraft K3 Utility** and note the **Com #** for rig control
2. **Install a time synchronization software** (windows time sync is not sufficient). Three good choices:
 - a. Meinberg NTP Time Server Monitor- [link](#)
 - b. Thinkman- [link](#)
 - c. Dimension 4
3. **Download and install the free WSJT-X software-** <http://physics.princeton.edu/pulsar/k1jt>
4. Setup the **WSJT-X** software
 - a. From top menu select **File...Settings**
 - b. **Settings** screen dialog box will open
5. Start with **General Tab**
 - a. Enter your information for **My Callsign** and **My Grid**
 - b. Check boxes for:
 - i. **Double-click on calls sets Tx enabled** (this will automatically send your first



message to the station, as soon as your “turn” comes around)

- ii. **Disable Tx after sending 73** (this will automatically disable transmitting after 73 has been sent and return you to Monitor mode)
- iii. **Runaway Tx watchdog** (this prevents repeated Transmitting if you become distracted and/or happen to leave and forget to return to Monitor mode)
- c. **Decoded Text Font...** (Not necessary, but my personal preference. I have Andale Mono Slashed installed in Windows and prefer its slashed zeros differentiated from “O”s in callsigns)
- d. Click OK to save

6. Radio Tab



- a. **Rig:** Choose Elecraft K3/KX3.
- b. **Serial Port:** Enter Com # from step #1 above
- c. **Baud Rate** set to 38400
- d. Check “Cat” for **PTT method**
- e. **Mode** set to “Data/Pkt”
- f. Click OK to save

7. Audio

- a. This was actually one of the hardest parts of the software setup because *both of these values will vary depending on the number of “Physical”, USB and/or “Virtual” sound devices Windows recognizes for your computer*

b. Sound Card Settings

- i. **Input:** Choose Microphone from list provided from Windows (look for wording containing USB in the name)

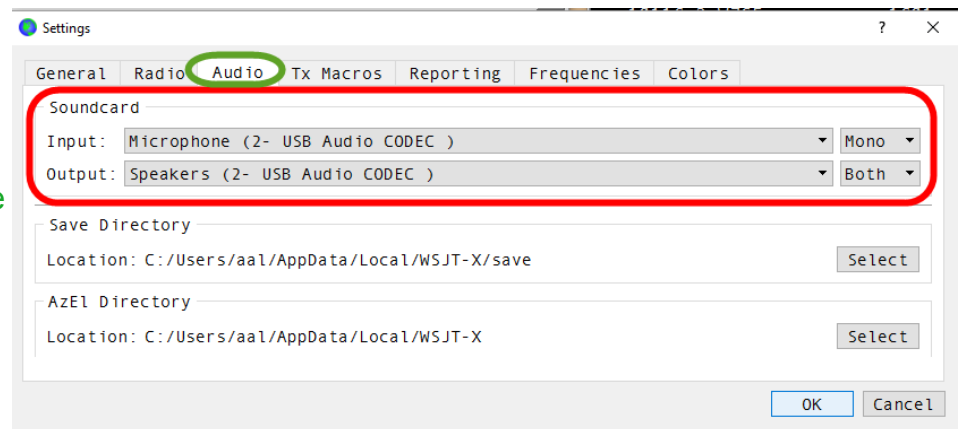
- ii. **Output:**
Choose
Speakers
from list (look
for USB in the
name)

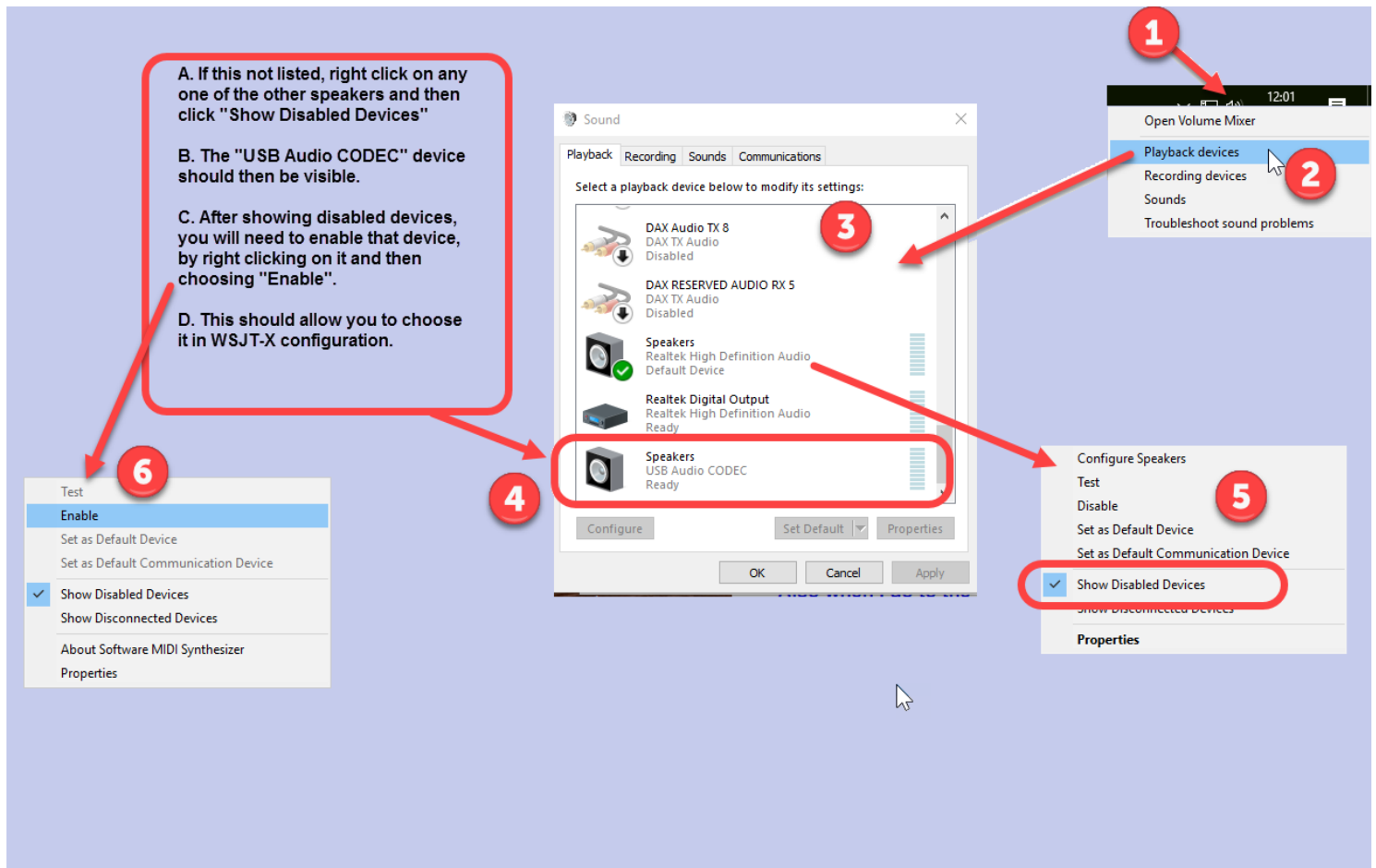
c. Click OK to Save

d. If either the two
audio sources are
not showing up as

available, you may need to adjust a few Windows setting to make them available

- i. Open the Playback and/or Recording Devices either from right clicking the small speaker icon on the taskbar or using Windows Control Panel
- ii. First, check to make sure that disabled devices are showing.
- iii. If not make sure you choose to show them
<https://www.youtube.com/watch?v=JxtSfR0pQvg>
- iv. After showing disabled devices, you will need to enable that device.
- v. See attached image-





8. You can leave the other four setting tab's value as their default settings
9. Exit WSJT-X software.

Configuring K3S Settings

1. Mode

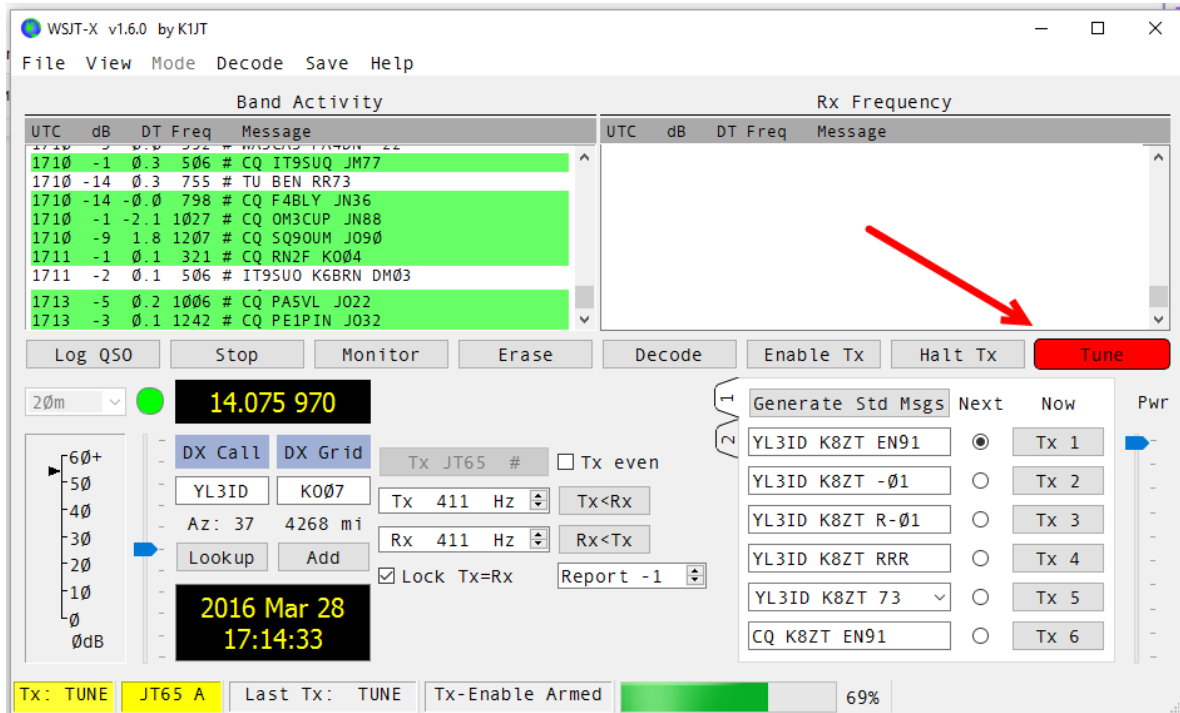
- Press **MODE** button choose **DATA**
- Press **DATA MD** (press and hold the AFX Button)-
 - Using VFO B knob, rotate to choose **DATA A**
 - Do not choose **AFSK A**
- The **BAND WIDTH** should be set for maximum (**BW 4.0**)

2. Power

- JT65 requires very little power (maximum should probably be ~40 watts)
- I set this for 5 watts using **PWR** knob

3. Adjusting the Mic Gain/ALC

- Use **METER** button (press and hold **DISP**) to select **CMP/ALC** (you click and hold this button to cycle through choices of **SWR/RF** and **CMP/ALC**)
- Connect a dummy load (preferable) or an antenna to appropriate coax output of radio
- Start WSJT-X software



- Click the **"Tune"** button, the radio will go into transmit mode, transmitting a pure tone
- Increase the **MIC** gain on K3S until you start to see bars in the **ALC** display
- Decrease the **MIC** gain on K3S just until you barely see 4 BARS in the **ALC** display, then stop. (I have tried with **ZERO BARS** based on others suggestions, both seem to work the same for me.)*
- Click **"Tune"** button in software to toggle off radio transmitting
- Toggle **K3S's METER** to **SWR/RF**
- Click the **"Tune"** button in software, radio will go into transmit mode, and you should see approximately the **RF** power displayed that you set in previous step.

- j. *Congratulations, you should now be able to make FT-8 contacts with your K3S, you will want to read the help section on more details on how the WSJT-X software works*
- k. If you have not already done so, please install a time sync program such as- [Meinberg NTP](#)
- l. If you see activity on the receive graph, but a WSJT-X is not decoding see the tips below from **Loren - WA3WZR** & **Andy NC4AB** on changing windows priority
- m. Join the [WST-X Yahoo](#) Group to keep up-to-date

Addendum & Notes From e-mail Response (Thanks to all contributors)

My progress on FT8/JT65/JT6- [see below](#)

Jim, N4ST- I was told by an Elecraft service tech to set up the K3S for ~4 Bars of ALC when operating digital modes, including the JT modes. He said the K3S was different from most rigs and that a few bars of ALC would keep things clean while preventing "power hunting" that can occur if the K3S has inadequate audio drive. This was new to me, but that's how I have been operating.

Q. Dennis, N6KI - What would be the differences in your procedure if a plain K3 is utilized ? **A.**
K8ZT- The ability to use the USB port on K3S allows both rig control and audio in/out with one cable. See also K1IG's note below.

George, K1IG-

- a. On the Radio Tab (Paragraph 5), set "Split Operation" to Rig. This will let the software run the K3 in split mode and optimize the transmit passband. You can then set the WSJT-X Mode to JT9+JT65 and operate in either mode without having to switch back and forth. If you leave "Split Operation" on None and try to transmit out of the transmit passband, the K3 won't transmit.
- b. To test the connectivity, hit the Test Cat button. It will turn green if the serial/USB connection is good. Hit the Test PTT button next -- it should turn red and the K3 should go into transmit mode (no signal will be transmitted). Hit the button again to go back to receive mode.
- c. If using a K3S (or a K3 with the [KIO3B Upgrade](#)) plug the USB cable in and select the USB channel for I/O in the Audio menu.

Paul, AF7HL- The piece I'm still missing is integration with logging software. If this could be extended to describe integration with, say, LOG4OM, that would be really helpful.

Nicholson-Cleave K- "Log4OM integrates well through OMNI-Rig. Maybe JTAAlert (available at <http://hamapps.com/>) is also re..."

Loren - WA3WZR - **If you having trouble with WSJT-X decoding**, you may want to try increasing the priority of the wsjtx.exe task (via task manager), to "high", to see if the increased time slices would grab more of the signal from the sound card. So the bottom line, if you are seeing issues with WSJT-X not decoding, reduce background CPU as much as possible, and if that is not possible, then

increase the priority of the **wsjtx.exe** task until it does. Here is a link, from **Andy NC4AB**, describing how to [Set Priority for Tasks in Windows 10](#).

Additional Links for Information on Using WSJT-X and FT-8

- A. WSJT References Page- <http://physics.princeton.edu/pulsar/k1jt/refs.html>
- B. JT-Utilities- Useful helper applications for JT65-HF & WSJT-X - <http://hamapps.com>
- C. Setting up JT ALERTS with WSJT-X Video- PSK/JT Report & Maps- <https://www.pskreporter.info>
- D. WSJT-X - Filling in the missing pieces- The Splatter, on-line newsletter of the York Region ARC (9 July 2015)- <http://yrarc-splatter.blogspot.com/2015/07/wsjt-x-filling-in-missing-pieces.html>
- E. **FT8 Operating Guide by ZL2IFB.**
- F. The Old Codger's Guide to JT65A and JT9 via WSJT-X Software, by Andy K3UK- <http://obriensweb.com/wsjtx.html>
- G. Rob Hall, KV8P Toledo Hamfest presentation on JT-65*- <http://www.tmrahamradio.org/files/JT65Presentation.pdf>.

** I want to give Rob a big thank you for getting me started on JT-65*

I. My progress on FT8/JT65/JT6

- A. Here is a [link to my FT/JT Log](#) (please note it is not updated in real time and entries may take a few hours or days to be added.)
- B. Here are the [DXCC Totals](#)
- C. Here are the [State Totals](#)
- D. Here are [My Stats](#)