Windows 11

The Impact on Amateur Radio Operations Education Session

Presented By:

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Introductions

MAD Technology Solutions, LLC is a full-service IT consulting services firm providing services in the following key areas:

- ◇ Technology Management; CIO4U™ Management Consulting Services
- ◇ Business Solutions; custom programming and data analysis and reporting
- ◇ Managed Services; heavy Cloud focus and Microsoft CSP partner
- ◇ More Importantly; we are FCC licensed amateur radio operators and are directly impacted just like you!

Goals and Objectives

The following are the goals and objectives for the Microsoft Windows 11 – The Impact on Amateur Radio Operations educational session:

- ◇ Understand what's coming
- ◇ Understand when it's coming
- ◇ Learn how you can control this event
- ◇ Real World Experience with Amateur Radio Applications (CHIRP, RT Systems, Inc.. Winlink, Echolink, etc.)
- ◇ This is not Windows or digital applications training. Here to raise awareness and offer feedback
- ◇ If you find this valuable, we can perhaps schedule more specific Elmer Time in the future

Why Microsoft Windows 11

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DESCRIPTION

Windows 11 has all the power and security of Windows 10 with a redesigned and refreshed look. It also comes with new tools, sounds, and apps. All part of the **Microsoft Product Lifecycle**. All of it comes together to bring you a refreshing experience on your PC. Specifications for using Windows 11 are:

SPECS

- 1 GHz or faster CPU chip with 2 or more cores (64 bit)
- 4 GB RAM Memory; 64 GB or larger storage
- Secure Boot compatible with Trusted Platform Module (TPM) version 2.0
- NOTE: There are already ways to get around these items (at your own risk)

TIP:

Windows 11 (21H2) will follow the Modern Lifecycle, meaning in general major change every 6 – 7 years with support living on for 12 – 14 years. Minimum of 12 months notice to End of Life.

i.e.

Windows 10 – 2015
Windows 11 – 2021
??? – 2026/2027

How to Get Windows 11?

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DESCRIPTION

There are several ways to get the new Windows 11 as outlined below, but by far the most common way would be to accept and download Windows 11 through normal Windows Update process:

USE CASES AND SCENARIOS

- Windows 11 Upgrade Assistant: “It’ll come in the night like a Monster”. Options to continue. NO ACTION – Delays Update!
- The upgrade rollout is currently under way and will continue into 2022. We are doing some behind-the-scenes testing and validating for your specific PC. Windows Update will provide an indication **if and when your PC is eligible**. You can check by going to Settings/Windows Update.
- You can buy a new computer with Windows 11 pre-installed OR Create an installation image that will perform a clean installation of Windows 11 on pre-existing computers.
- It’s free. But only Windows 10 PCs that are running the most current version of Windows 10 and meet the minimum hardware specifications will be able to upgrade. You can check to see if you have the latest updates for Windows 10 in Settings/Windows Update. New installation images will search for Digital License Key. Prevents piracy.

What About Windows 10?

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DESCRIPTION

Windows 10 is not going away, at least not right away

Q&A

- Can I continue to use Windows 10?
- Yes. We will continue to support Windows 10 until October 14, 2025.
- Will I be able to revert to Windows 10?
- Yes. After you have installed the Windows 11 upgrade, there is a 10-day period where you can move back to Windows 10 while keeping files and data that you brought along with you. After the 10 days, you will need to back up your data and do a “clean install” to move back to Windows 10.

The Point: Impact on Amateur Radio

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When using Windows 11, we were able to:

- First things first, CHIRP!
- A very close second, RT Systems, Inc.
- Operation Cyber Wind, Winlink is good to go!
- Other VoIP Enabled Applications: Echolink; WiRES-X
- FLRIG and FLDIGI
- WSJT-X
- NOTE: ANY WEB-BASED APPLICATION, including most logging tools and applications will be fine.
- DISCLAIMER: OUR FINDINGS INDICATE, YOUR EXPERIENCE WILL BE BASED UPON YOUR RADIO(S).

TIP:

This PowerPoint Presentation was also created and now presented using Windows 11

Application Overview

NEW USER EXPERIENCE

Windows 11 does have a very new user experience and redesigned Desktop, Start Menu and Taskbar.

KEY AREAS AND VISUALS

- Start Menu and Taskbar: centered by default (personalized – see my screen)
- DEMO: Show Start Menu
- DEMO: Show Taskbar
- Quick Access: Pin Items to Start Menu or better yet: Pin to Taskbar / Send to Desktop

CHIRP

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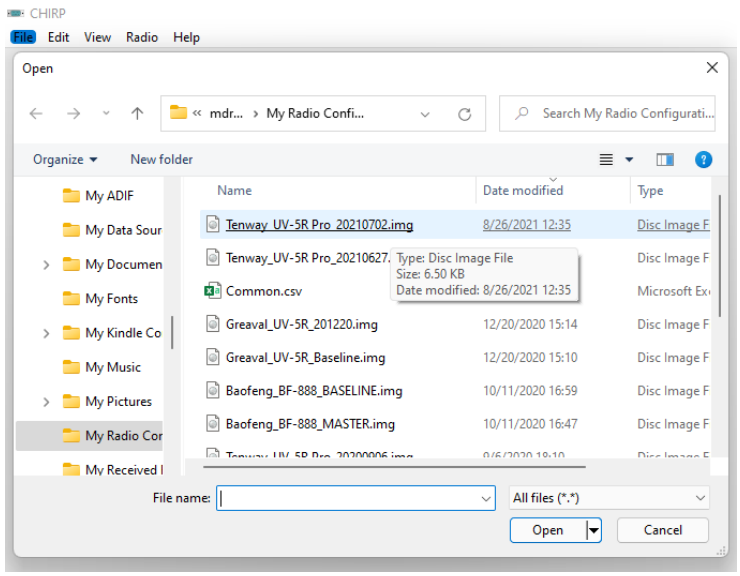
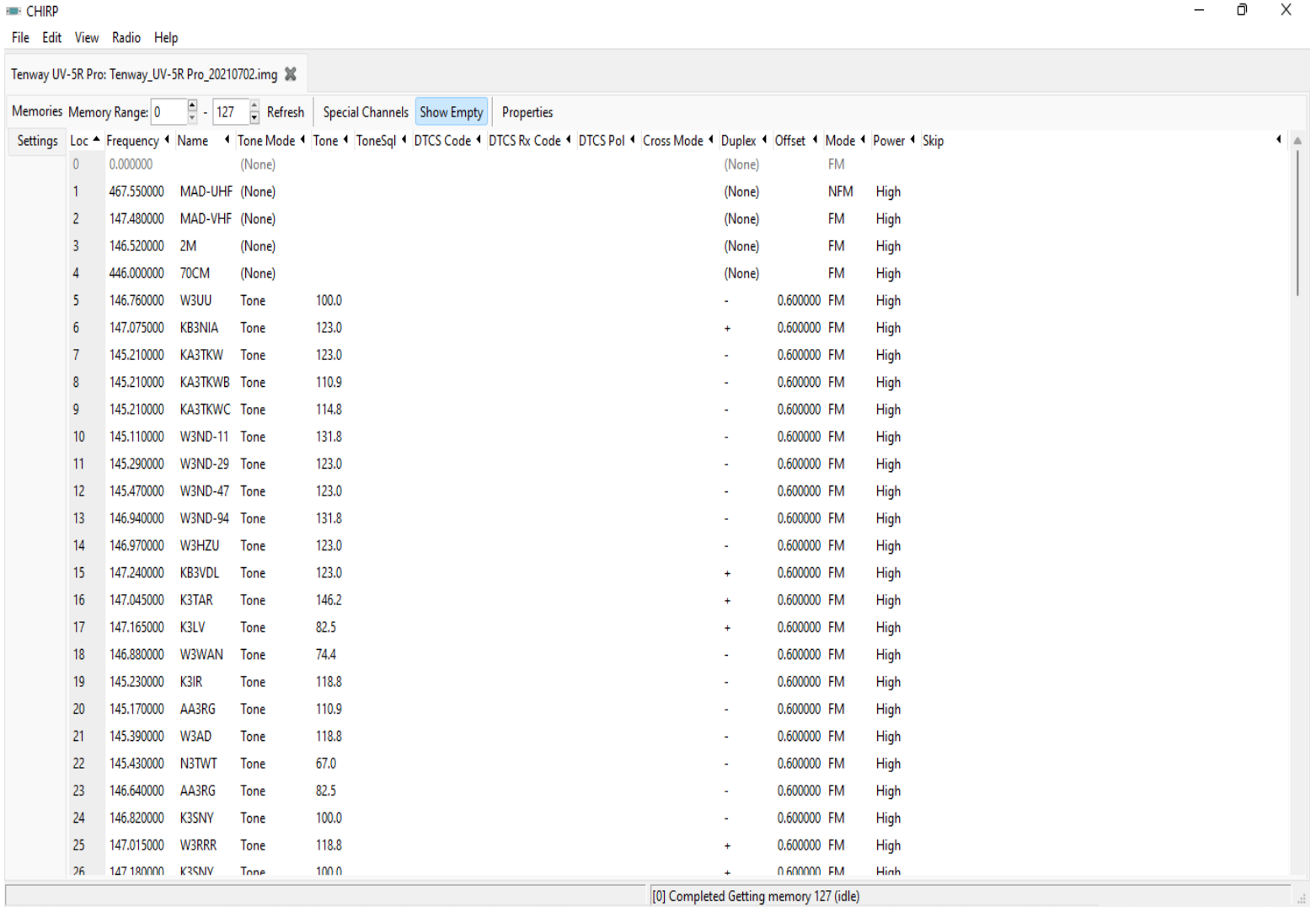
To program radios using CHIRP:

1. Click on Start Menu
2. Click on All Apps button
3. Scroll to locate CHIRP and Click on Icon
4. Or locate icon on Desktop or Taskbar
5. WARNING: Serial to USB driver was initially missing. Located and will be posting to W3UU website along with this deck.





RT SYSTEMS, INC.

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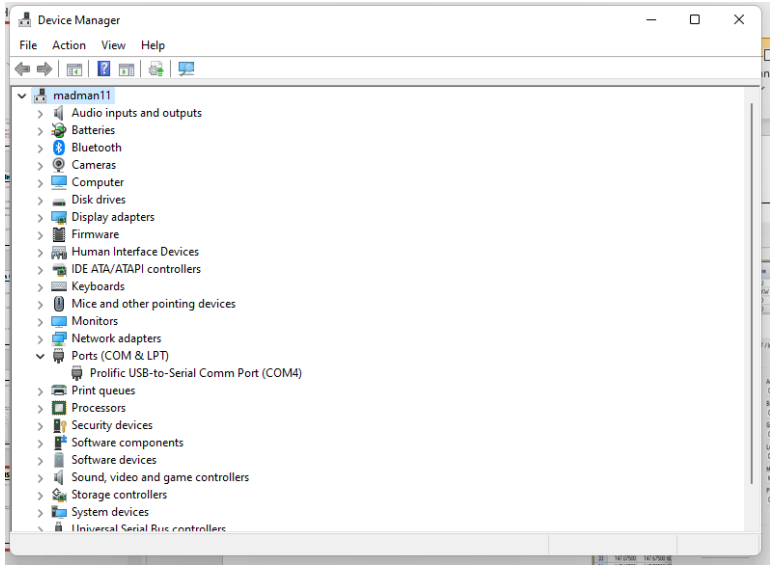
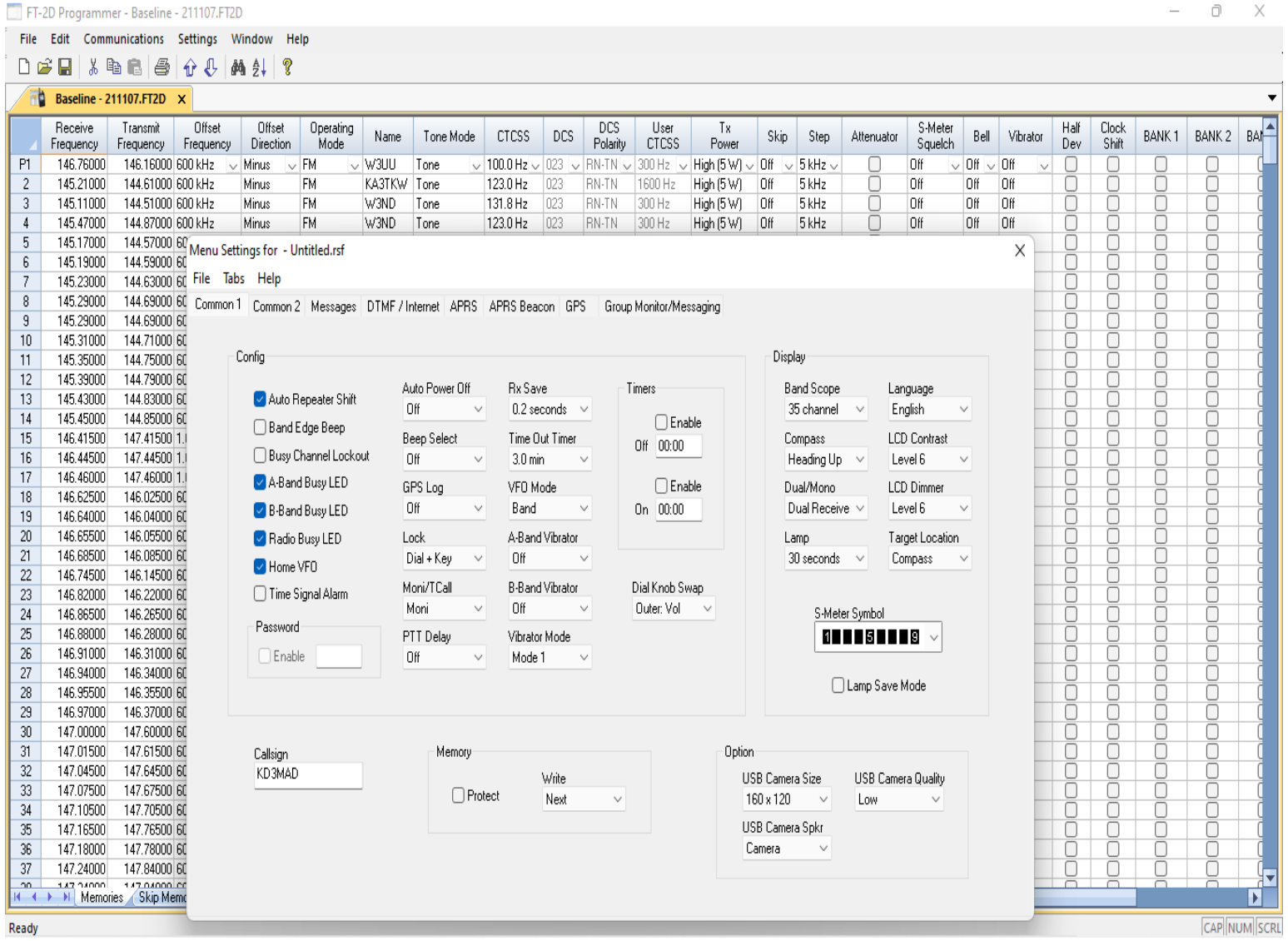
To start programming with RT Systems:

1. Click on Start Menu
2. Click on All Apps button
3. Scroll to locate CHIRP and Click on Icon
4. Or locate icon on Desktop or Taskbar
5. WARNING: Serial to USB driver was initially missing. Located and will be posting to W3UU website along with this deck.





WINLINK

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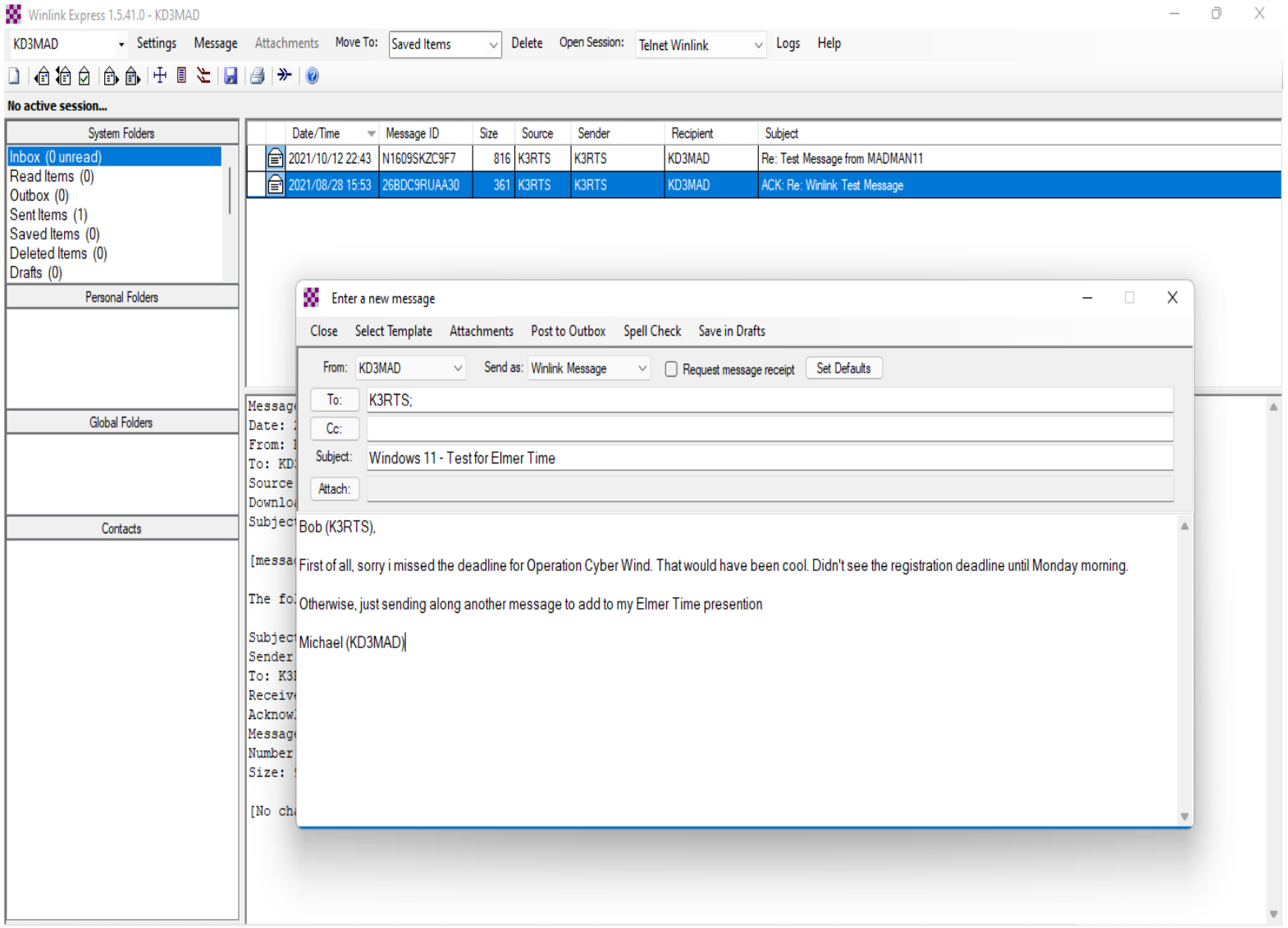
To start communicating with Winlink:

1. Click on Start Menu
2. Click on All Apps button
3. Scroll to locate Winlink and Click on Icon
4. Or locate icon on Desktop or Taskbar



NOTE:

For the purposes of this presentation, we are using Telent for connecting Winlink sessions to the servers. We are NOT using any RF. But again, confident it will work just fine once the nuances of your specific radio are worked out.

EchoLink and WiRES-X

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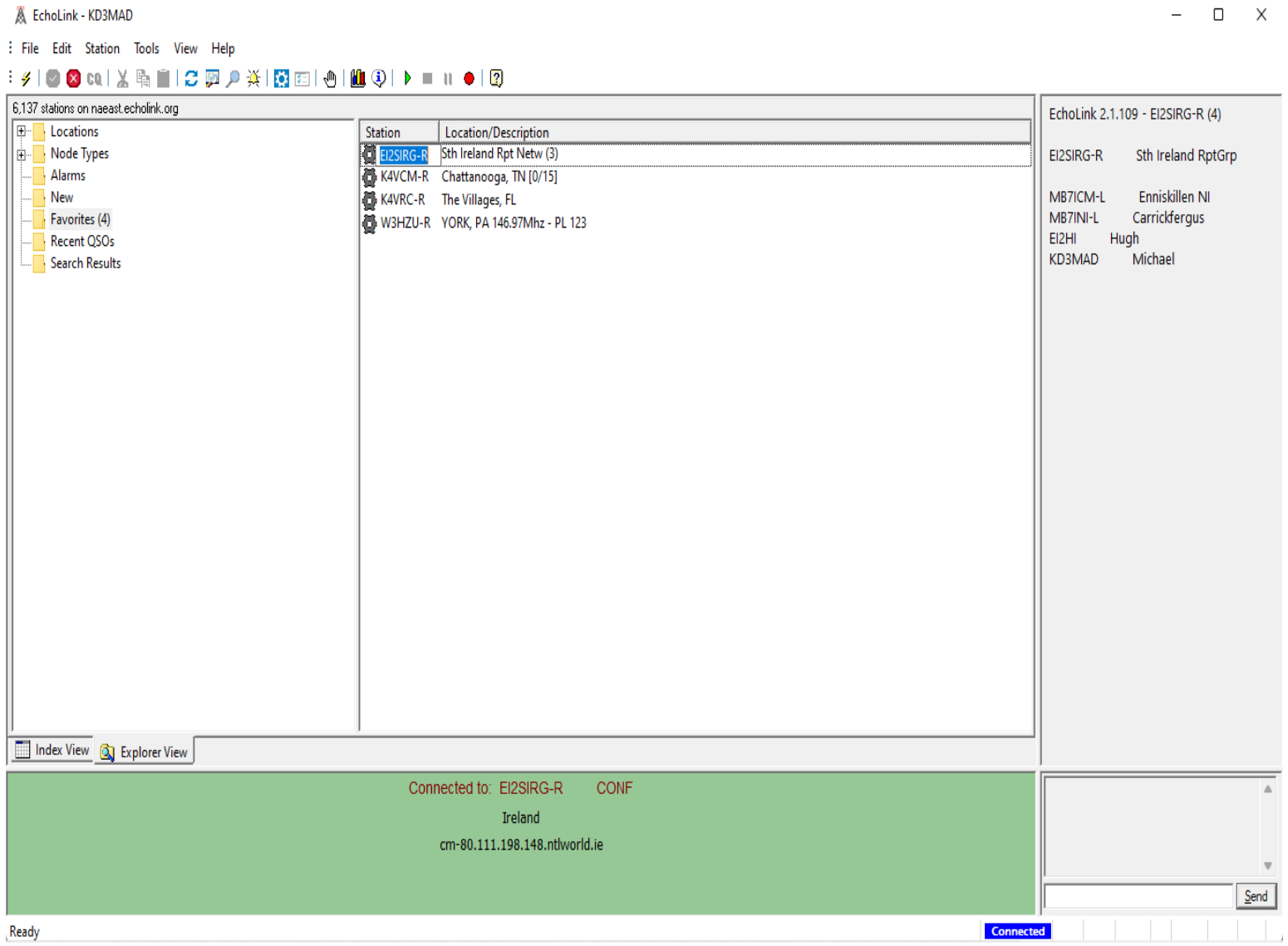
To start communicating with VoIP:

1. Click on Start Menu
2. Click on All Apps button
3. Scroll to locate EchoLink and Click on Icon
4. Or locate icon on Desktop or Taskbar

NOTE:

We ran out of time to full implement WiRES-X for this presentation. However, after resolving the Prolific Serial to USB driver issue and have capabilities of programming the radio, we are 99% confident that WiRES-X will run just fine on Windows 11. Same cables and drivers are used for communications as programming. We will report back further on this in the next W3UU newsletter.

As for EchoLink, we listened to and checked into the weekly news net on the Southern Ireland Repeater Network during portions of the work on this presentation.



FLDIGI

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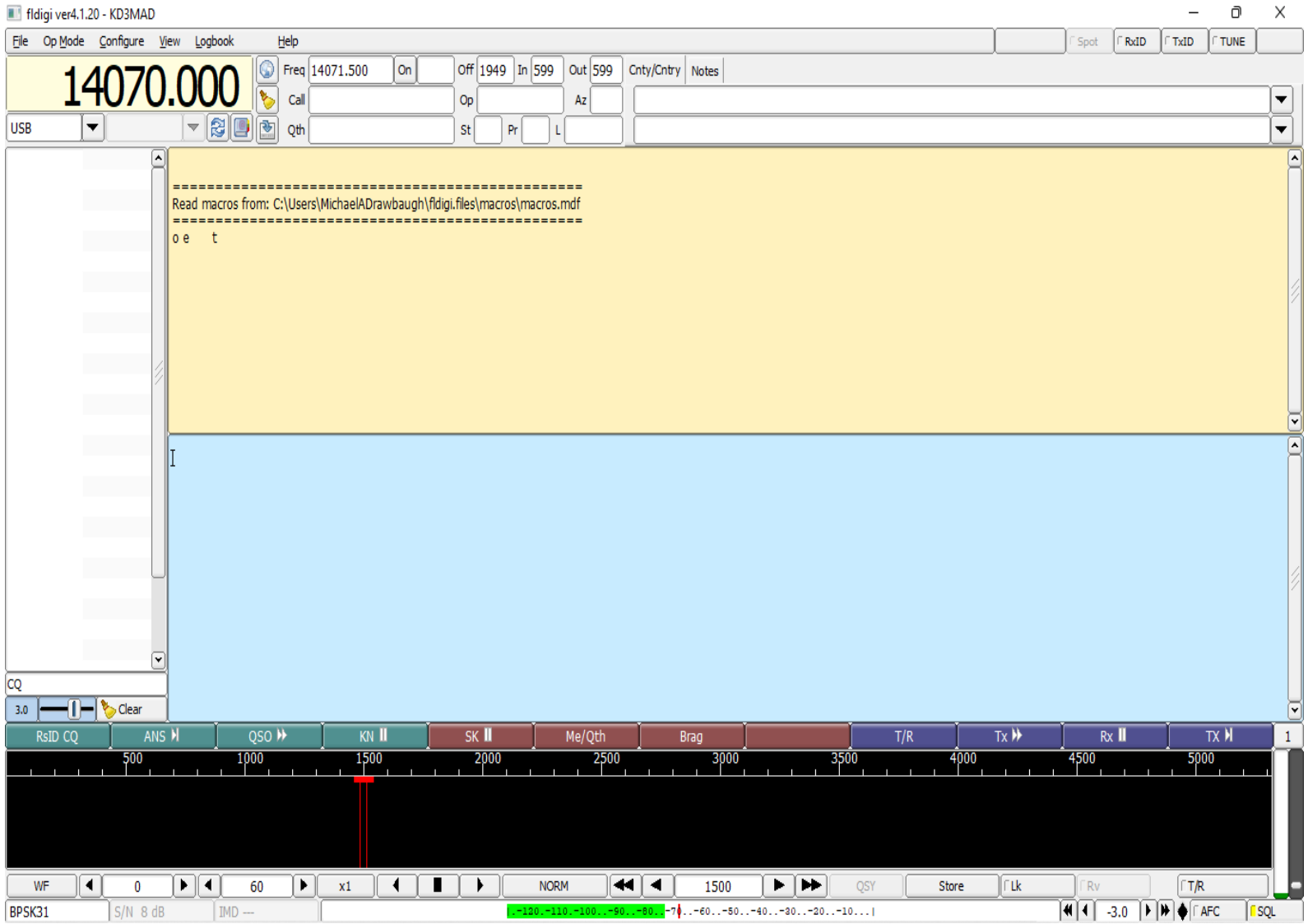
To enter Project Information/Properties:

1. Click on Project tab
2. Click on Project Information command
3. Enter information into the Project Information dialog box
4. Click OK button when finished



NOTE:

FLRIG, used to control the radio through computer software will give you more trouble than FLDIGI. Again, the recurring theme we uncovered is that the individual radio setup and configurations will cause more issues than Windows 11 itself (along with finding the correct drivers)

If it works on Windows 10, it will work on Windows 11

WSJT-X

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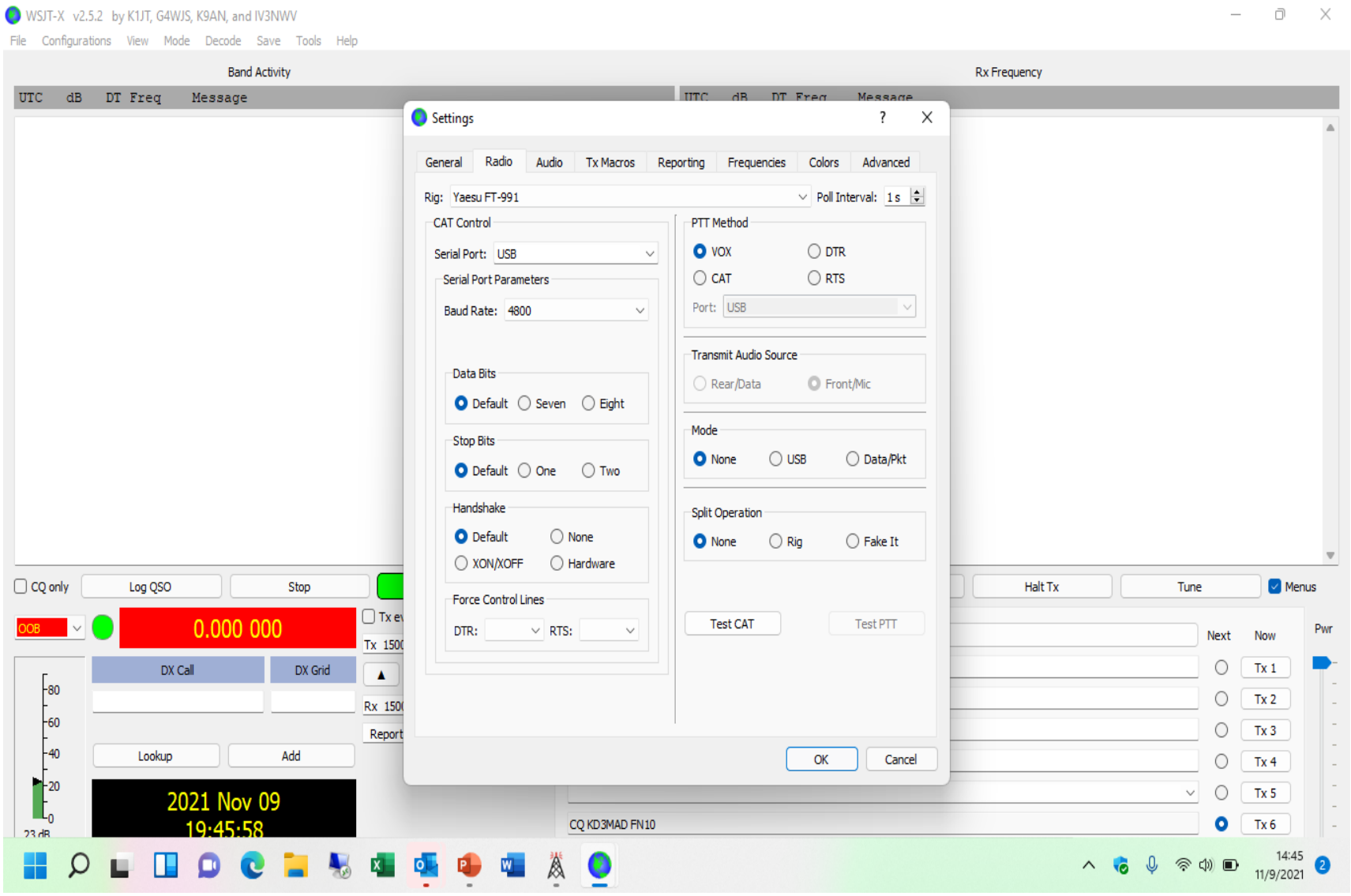
To start communicating with FT8:

1. Click on Start Menu
2. Click on All Apps button
3. Scroll to locate WSJT-X and Click on Icon
4. Or locate icon on Desktop or Taskbar

NOTE:

Although we ran out of time to fully vet WSJT-X, we also are looking for Elmer to help us obtain a production class FT8 platform. Something we have not personal obtained but based upon findings should run without issue given proper cabling and drivers (The mantra of Windows 11 and Amateur Radio).



Final Thoughts and Q&A

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Windows 11 has proven to be a safe and stable platform on which to run amateur radio applications, **as long as you have access to appropriate drivers.** Serial and other low level device communications have changed little over the years but **are still version specific to new hardware and chipsets, both computer and transceiver.**

The two (2) critical ones we ran into where the CH341SER Serial to USB for UV-5R and PL2303 Prolific Serial to USB for Yaesu FT-50R, Yaesu FT-2D and Yaesu FT-817ND. Those are specific to our radios. You'll be able to find suitable drivers for your vendors as well!

KEY TAKE AWAY – If it worked on Windows 10, try it on Windows 11. Don't accept if baseline Windows 11 drivers fail that you are at a dead end. Try the most recent for Windows 10 and move on from there. So, I say again, drivers that are stable and reliable will be key for amateur radio success on Windows 11 as it was Windows 10.

NOTE: Reminder, we did perform a clean install on a laptop. This is SOP for our business and personal equipment. Windows Updates are generally fine for the masses but will such a vast user group…YOU WILL HEAR ABOUT PROBLEMS!

P.S. We talked a lot about Windows 11 and hardware. We are continuing to explore other areas including USB-based transceivers coupled with SDR and peripheral devices such as a NanoVNA and others. We'll report back on items such as RTL-SDR, SDR# and NanoSaver.

Additional Resources

To learn more about Windows 11, the update experience and amateur radio applications, check out the following hyperlinks:

- Microsoft Windows 11 Website: Explore Windows 11 OS, Computers, Apps, & More | Microsoft
- Microsoft Windows 11 PC Health Check: Upgrade to the New Windows 11 OS | Microsoft