



SalCo ARES Digital Data Messaging

Yaesu FT-857D set up and configuration

With CAT control

November 24, 2020
V 2.0

Forward

I would like to thank S. Porter, KT5H and J. Bratton, AA5AD for their assistance in testing and preparation of this guide. It takes a team!

Some additional notes about Winlink Gateways: You may get frustrated or think you can't connect to _____ gateway when it doesn't respond on your first connection attempt (usually 10 tries), but don't give up! The way the Winlink Gateway software works is it "scans" each frequency for approximately 6 seconds before moving to the next. So, for example, our Gateway (AD5EO) has (in essence) four possible gateways – 80 meters narrow and wide modes; and 40 meters narrow and wide modes. The narrow and wide modes reside on different frequencies within the same band. (In our case, 3.584.00 (80m narrow); 3.590.00 (80m wide); 7.096.00 (40m narrow); and 7.103.00 (40m wide). So it takes approximately 24 seconds to complete the cycle. When you click "start" to start the connection from your radio it is probable you will not hit perfectly within the scanning software of the gateway.

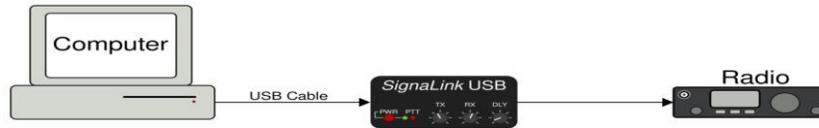
At the time of this writing, we have not included VARA FM in the guide since there are no VARA FM gateways within our reach and we have not completed our own testing to create one as yet. Please be patient!

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Signalink



The Signalink is required for this operation since the FT-857D does not have a built in sound card. The Signalink acts as the “modem” between the computer and the radio converting the information from digital to analog and vice-versa. You can purchase a Signalink USB interface from many different sources for around \$129.00 (February 2019) including the appropriate cable to connect to your specific radio. (For Yaesu FT-857D the cable is an RJ45 to a 6 pin Mini DIN connector) The Signalink is powered by the USB port from your computer.

Ensure you look at the configuration of the jumper wires for your specific radio (Also available at many sources).

SIGNALINK JUMPER SETTINGS

Yaesu FT-857D

6-pin Mini-DIN Data Port (use part # SLUSB6PM, SL1+6PM, or SLCAB6PM)

JP-1	Pin-out	Radio Models	Notes
<p>The diagram shows a 6-pin Mini-DIN connector with pins numbered 1 to 8. Labels on the left include G (Ground), PWR, PTT, MIC, and SPKR. Colored lines indicate the following connections: Pin 1 to SPKR, Pin 2 to MIC, Pin 3 to PTT, Pin 4 to PWR, Pin 5 to G, and Pin 6 to G. Pins 7 and 8 are also labeled G.</p>	<p>Pin 1 – Data In Pin 2 – Ground Pin 3 – PTT Pin 4 – 9600 Out Pin 5 – 1200 Out Pin 6 – Squelch</p>	<p>DR-735T/E</p>	

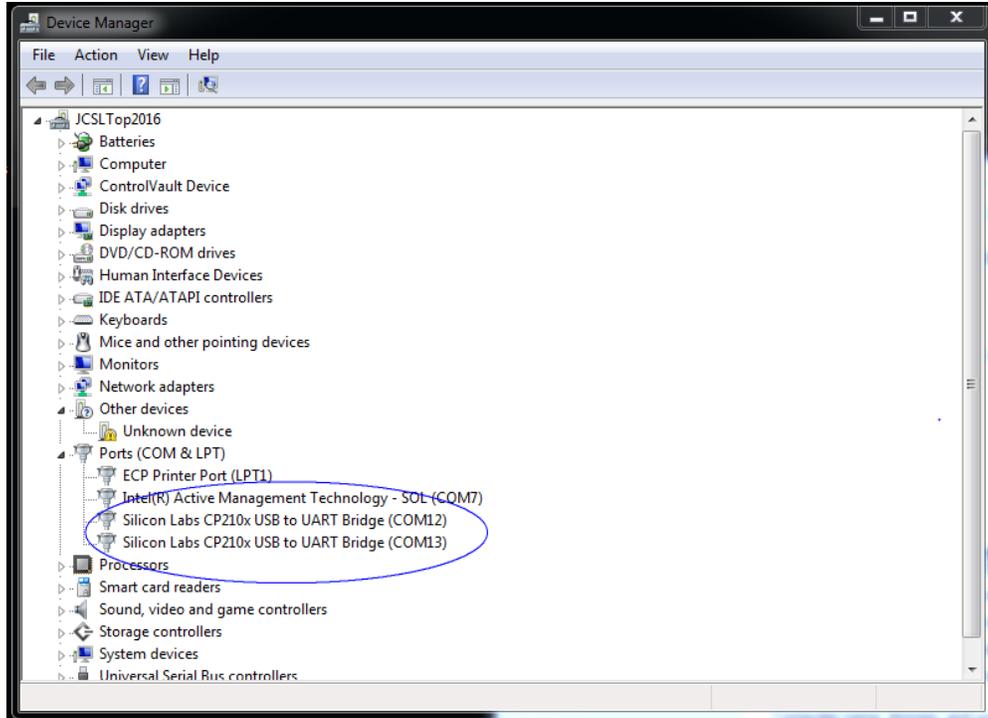
Ensure you radio is powered off. Connect the 6 pin Mini Din connector to the Data port on the back of the radio. Connect the other end of that cable to the RJ45 port on the back of the Signalink. Connect a USB cable (USB A to USB B just like the cable to connect to a printer) to any USB port on your computer, then plug the USB connector on the other end of that cable into the USB B port on the back of the Signalink. (In Windows 7 and above, the computer already has the appropriate drivers and will install them automatically.)

For CAT Control: Procure the Yaesu CT-62 USB CAT cable (one source others are available):

https://www.amazon.com/gp/product/B0041LNISK/ref=ppx_yo_dt_b_asin_title_o02_o00_s00?ie=UTF8&psc=1

Connect the mini Din connector to the CAT/Linear port on the back of the radio, turn the radio on, then connect it to a USB port on your computer.

To ensure you assign the correct COM port number during the software setup, click the window (Orb) at the bottom left of the computer, then click on [Computer] [System Properties] [Device Manager] [Ports (COM & LPT)] make note of the COM port “USB Serial Port (COM x)” where “X” is the number assigned. This will be the COM port number you use in the software setup process. [Close all windows].



NOTE: If you plug the USB cable(s) into different computer USB ports (or add a USB hub), the COM port number WILL change and the USB Audio CODEC name will change. Please keep this in mind as you set up in different locations!

If you do not wish to use computer control (frequency selection) the above steps are unnecessary.

FT-857D Radio Menu Settings

There are a few menu settings on the radio that need to be checked or adjusted:

- Menu 19: [CAT RATE] set to 9600
- Menu 20: [CAT/LIN/TUN] set to CAT
- Menu 71: [PKT 1200] set to 50 (audio input level)
- Menu 73: [PKT RATE] set to 1200

Winlink Express

Download RMS Express from <https://winlink.org/ClientSoftware> ; Winlink Express (right side of page), then scroll to bottom of page for download (do not install yet).

Winlink Express Installation

Install the RMS (Winlink) Express software using the default location for file storage and location. When you start Winlink Express for the first time, you will see: (fill in the items circled in red)

Winlink Express Properties

Call Signs

My Callsign: My Password: (Case sensitive)

Callsign suffix (optional): (Used for country code) Show password

Password recovery e-mail: (Non-Winlink e-mail address where lost password will be sent when requested)

Remove Callsign Request password be sent to recovery e-mail

Auxiliary Callsigns and Tactical Addresses

Add Entry Remove Entry Edit Entry

My Grid Square: Lat/Lon to Grid Square

Winlink Express registration key:

Path to propagation forecast program: C:\tshfbc\

Service Codes

PUBLIC (Use PUBLIC for ham call signs. Separate multiple service codes by spaces.) If you change service codes, you must update the list of channels.

Contact Information (Optional)

Name: Street address 1: Street address 2: City: State/Province: Country: Postal code: Web Site URL (optional): Phone number: Non-Winlink e-mail: Additional information (optional):

Recalculate HF path quality if SFI changes more than: 30

Keep logs for 1 weeks. Keep deleted messages for 30 days.

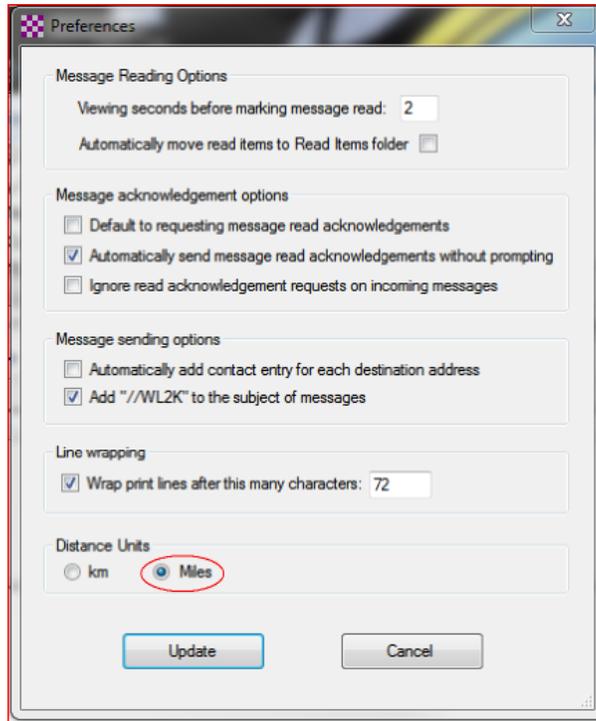
Display list of pending incoming messages prior to download Warn about connections to stations holding messages Allow diagnostic information to be sent to the Winlink Development Team Automatically install field-test (beta) versions of Winlink Express

Update Cancel

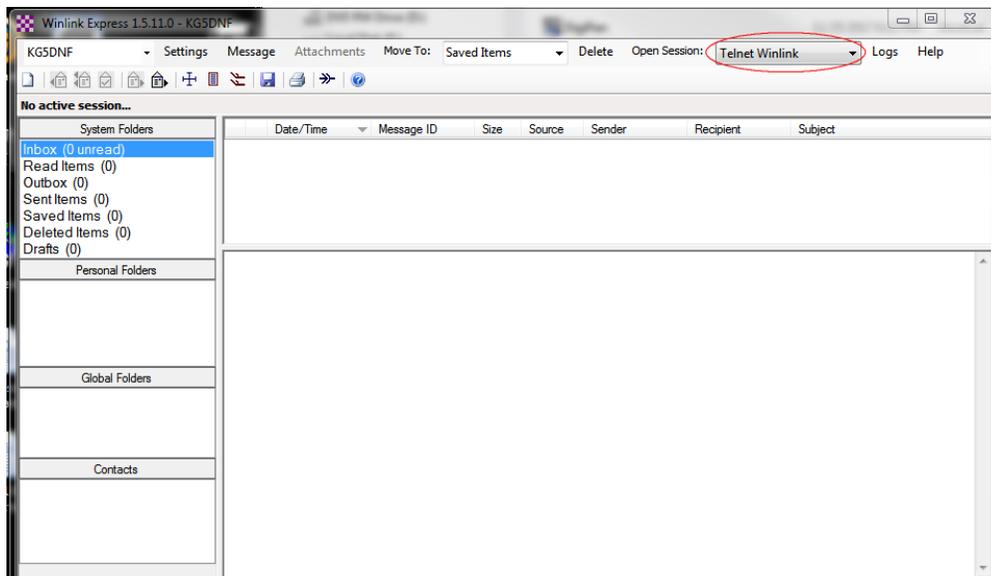
NOTE: a Winlink registration key is not required! (However if you decide to donate to further the research and development of Winlink, the registration fee is currently \$24.00)

Finally, click "Update" to save the changes you made, then click "Close" to close this window. If you prefer to have distances indicated in miles instead of kilometers, "click" on Settings > Preferences

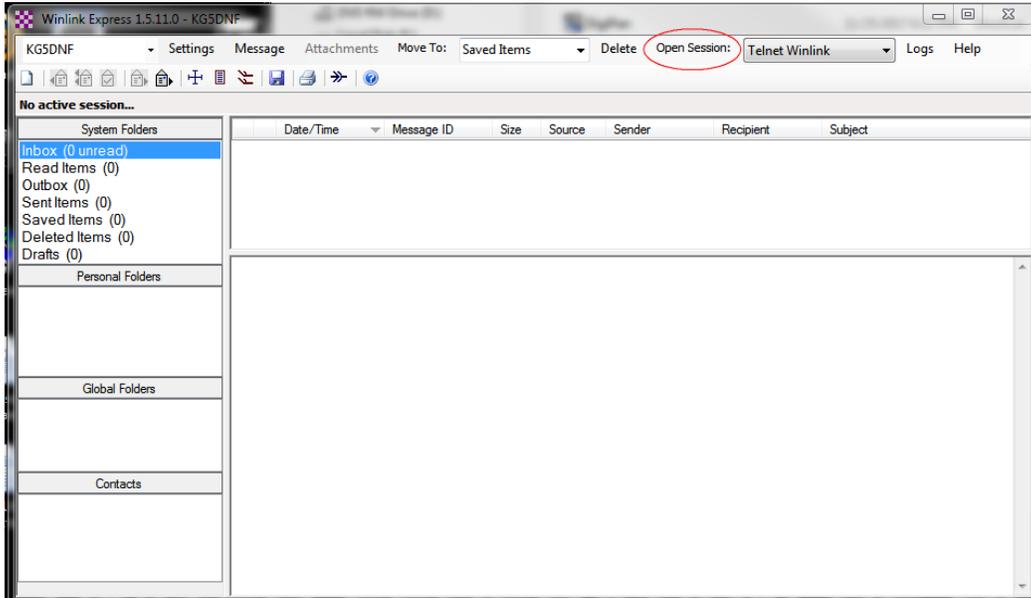
Near the bottom of the new window, you will see radio buttons for kilometers and miles. Click on the button next to miles, then click Update.



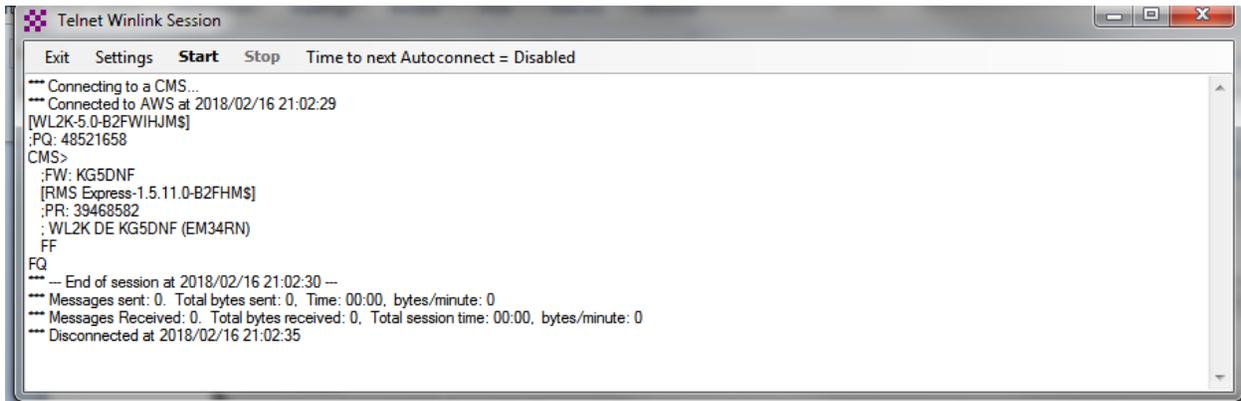
To verify the program was installed correctly (and to complete the installation),
On the pull-down menu near the top of the window, select "Telnet Winlink" from the options:



Then “click” on the “Open Session” text (it actually is a button).



On the window that opens up, press “Start” to begin the session
You will then connect to one of the RMS (Radio Message Servers) via your internet connection.



(NOTE: You may receive a pop-up notification that your password was changed)
After Winlink completes its connection press either Exit or the Red “X” to exit the session. Your call sign (Winlink User Name) has now been registered!

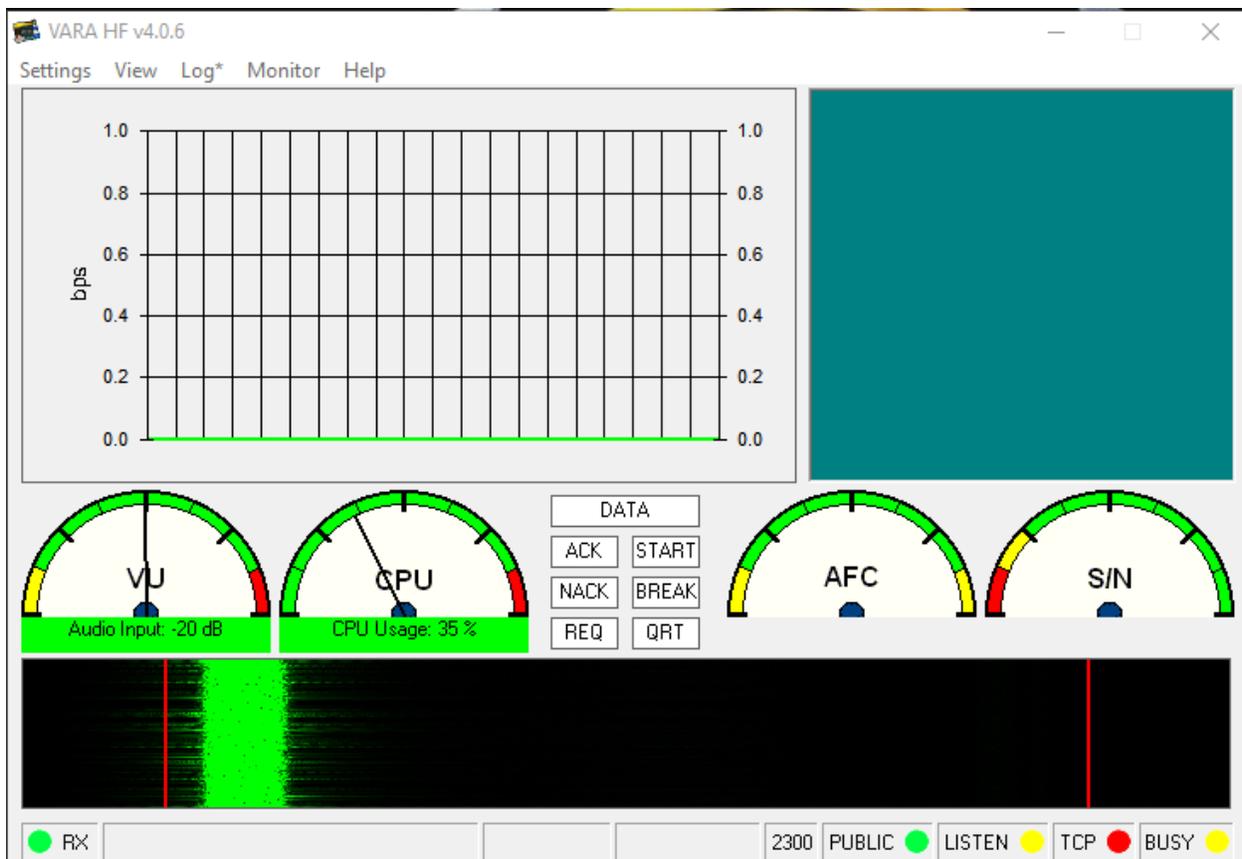
Close this window (click the red [X]).

Winlink VARA HF Setup

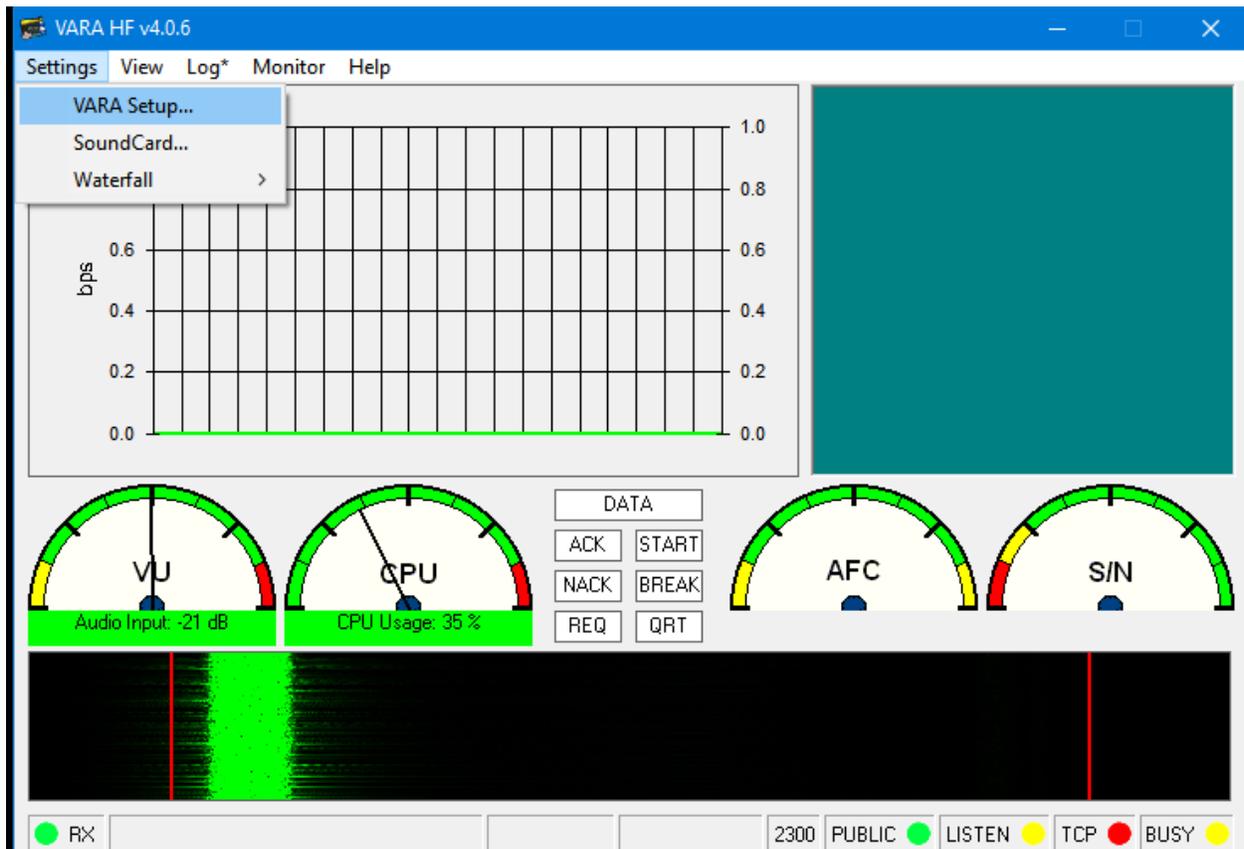
VARA HF is a relatively new (to us) mode of high-speed Digital HF messaging software. It is usable without a license key (\$69.00 at time of writing) but higher speeds will not be available without the license.

Before setting up Winlink Express for VARA HF, you must first close Winlink express, and download the VARA HF software: <https://rosmodem.wordpress.com/> . Once the software has downloaded, install following the screen prompts.

The option at the end of the install is to “Launch Application”. This will allow you to setup VARA HF.



Select [Settings] [VARA Setup]



The Main VARA settings screen will be as follows:

VARA Setup

TCP Ports:

Command	Data
8300	8301

VARA Licenses

Callsign:	Registration Key:
KG5DNF	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
Callsign:	Registration Key:
AD5EO	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
Callsign:	Registration Key:
Callsign:	Registration Key:

Allow VARA check for updates via internet server

500<->2300 Gateway Compatibility

Tuner enhancement

CW ID

RA-Board PTT

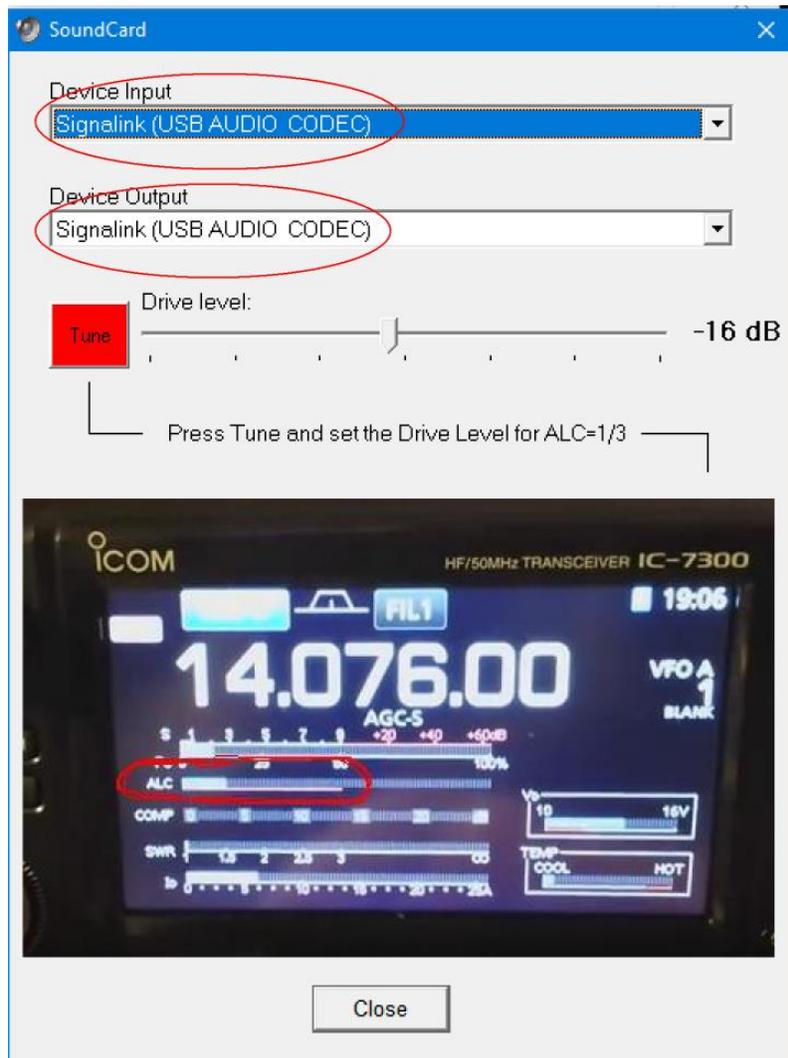
Retries:

10

Close

Enter your calls sign (and registration key if you have one) and ensure the indicated boxes are checked. Then press [CLOSE].

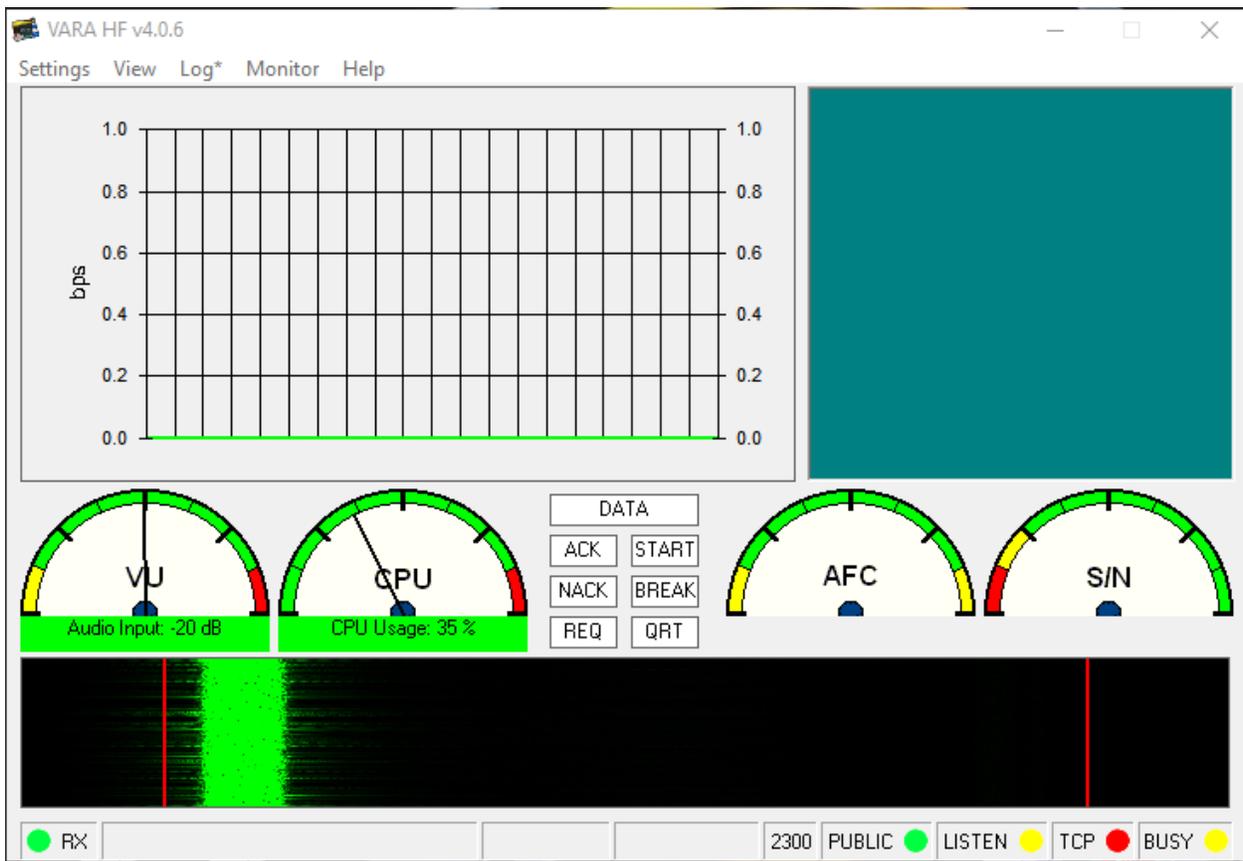
Select [Settings] [Soundcard Setup]



In the two pull-down lists, select the USB Audio CODEC (NOTE: I have renamed my CODECs to appropriately indicate which Soundcard is being used since I have multiples; If you have multiple USB Audio CODECS you may have to try a few times to select the correct one).

When finished, press [CLOSE]

Providing your radio (and soundcard) are turned on, the main screen of VARA should look similar to the following image:



Please note the “VU” meter should have the needle pointing in the green section at or below the midway point. If it is higher than that, you will need to adjust the microphone level.

To do so, leave the VARA main screen up on your display, move your mouse to the lower right corner of the display and [Right Click] on the speaker icon. Click on [Open Sound Settings]

Sound

Output

Choose your output device

Signalink (USB AUDIO CODEC) ▾

Certain apps may be set up to use different sound devices than the one selected here. Customize app volumes and devices in advanced sound options.

[Device properties](#)

Master volume

🔊  45

 Troubleshoot

[Manage sound devices](#)

Input

Choose your input device

Signalink (USB AUDIO CODEC) ▾

Certain apps may be set up to use different sound devices than the one selected here. Customize app volumes and devices in advanced sound options.

[Device properties](#)

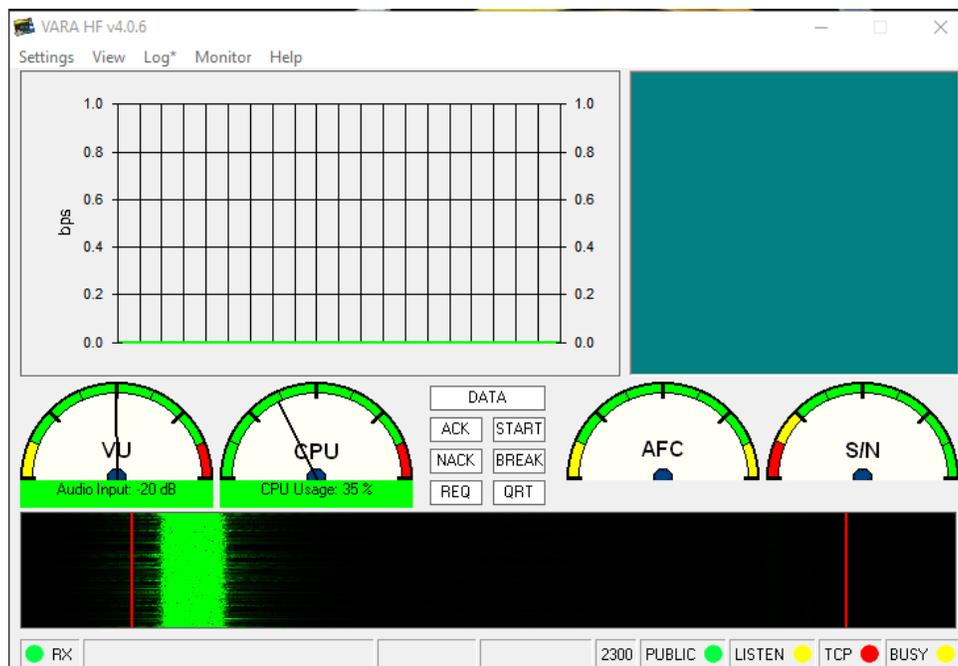
Select the appropriate USB Audio CODEC from the [Input] pull down box, then click [Device Properties]

Device properties

Disable

Volume

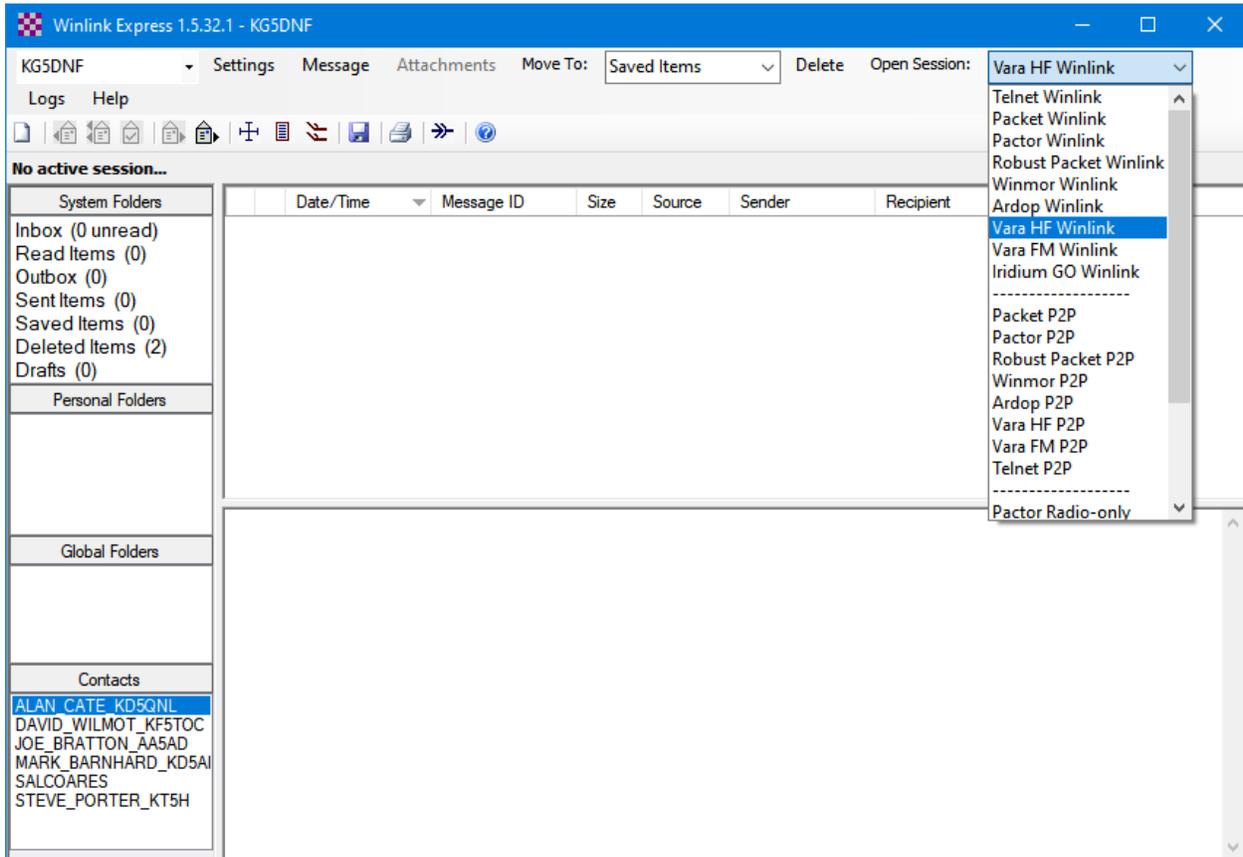
Adjust the [Rx Knob] on the Signalink until the VU meter is adjusted appropriately (at or slightly below the midpoint on the VU meter).



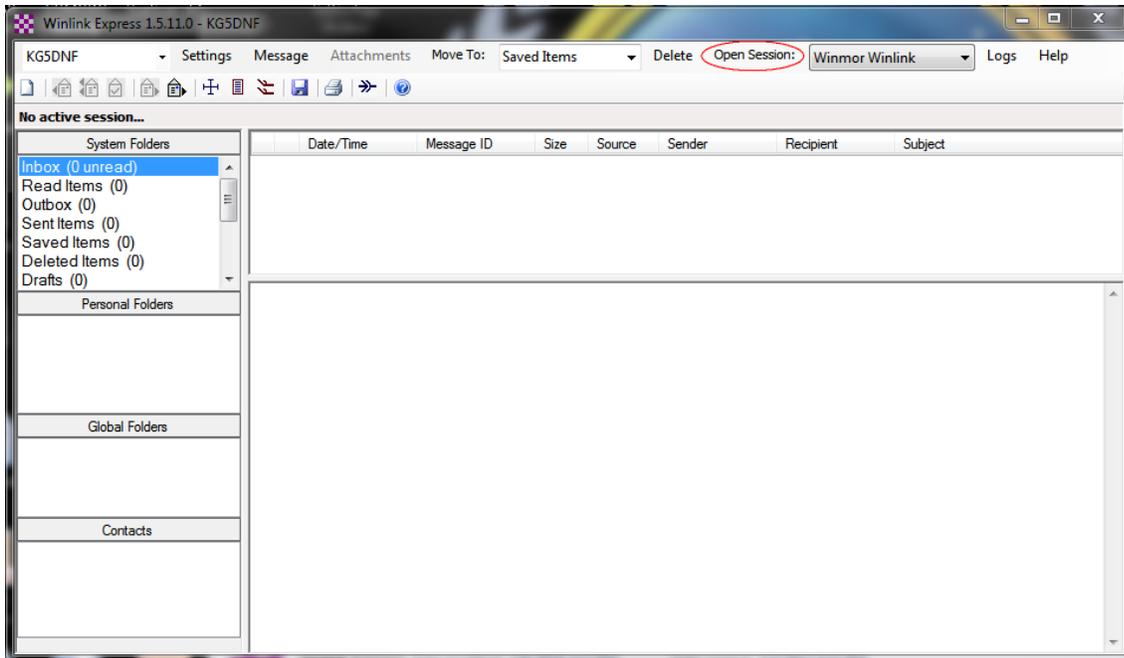
Please note the screenshots for computer settings are from a machine running Windows 10.

Now you may close all these open windows. (VARA and Sound Settings)

Now, restart Winlink Express, Select [VARA HF Winlink] from the pull down:

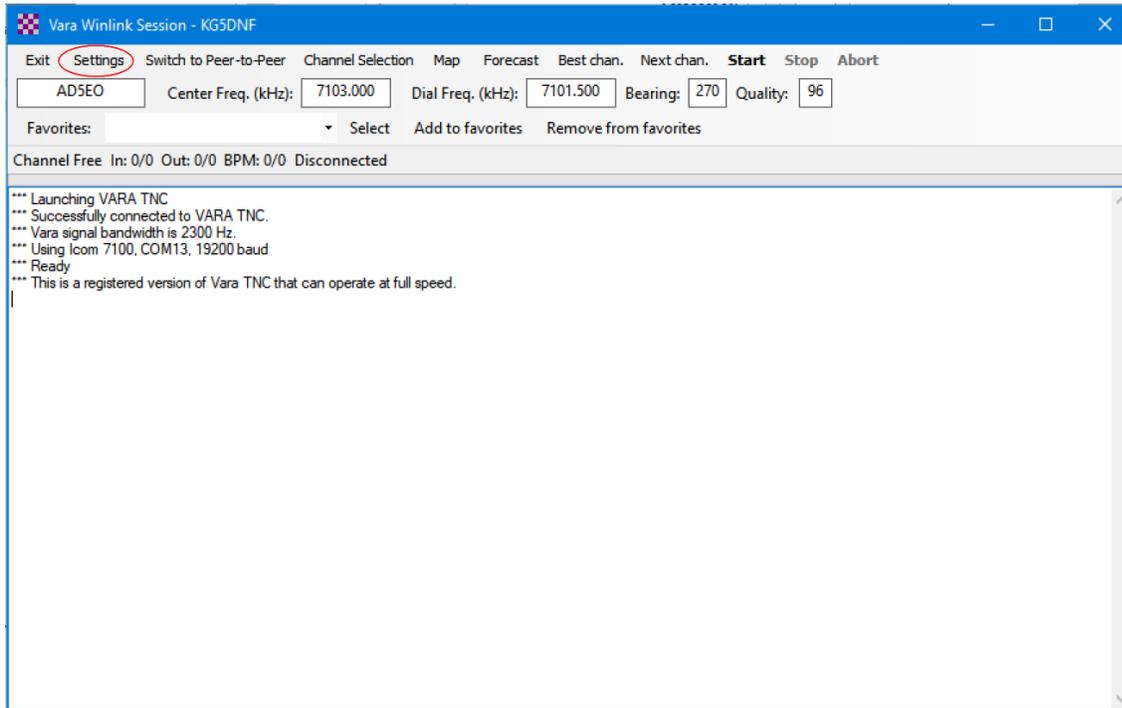


Then press the "Open Session" button:

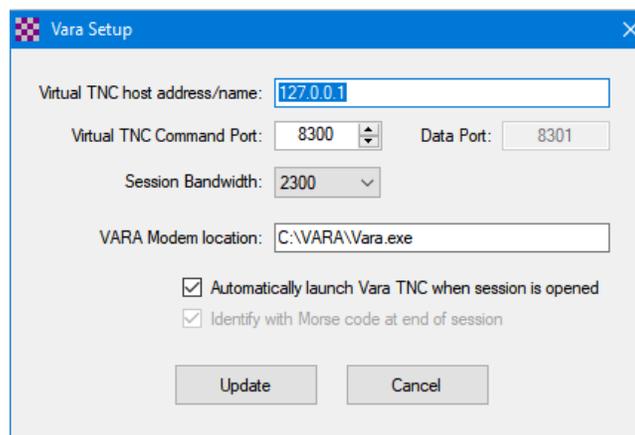


Yes, [Open Session] is an actual button not text!

A new window will appear entitled VARA Winlink Session. Click on [Settings]:



Select [VARA TNC Setup]



Ensure all items are as indicated in the above screenshot. When finished, Click [Update] then click [Close]

Next, click on [Settings] [Radio Setup]

The screenshot shows the 'Vara HF Winlink Settings' dialog box. It is divided into three main sections: 'Radio Selection', 'Radio Control Port', and 'PTT Port (Optional)'.
- In the 'Radio Selection' section, 'Select Radio Model' is set to 'Yaesu FT-857' and 'Antenna Selection' is set to 'Default'. The 'Icom Address' is '88'. The 'USB' radio button is selected, with 'USB Digital' also selected. There are also 'FM' and 'Use Internal Tuner' options.
- In the 'Radio Control Port' section, 'Serial Port to Use' is 'COM13' and 'Baud' is '9600'. 'Enable RTS' and 'Enable DTR' are checked, while 'TTL' is unchecked.
- In the 'PTT Port (Optional)' section, 'Serial Port to Use' is 'External' and 'Baud' is '9600'. 'Enable RTS' and 'Enable DTR' are checked.
- At the bottom, there are 'Update' and 'Close' buttons.

Select Yaesu FT-857 from the [Select Radio Model] pull down

Ensure [USB Digital] is selected

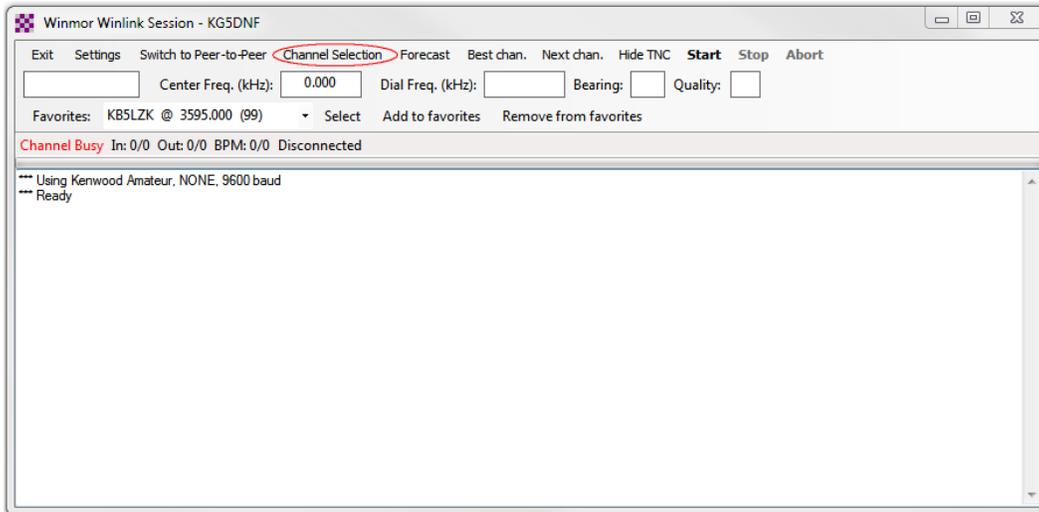
Select the Radio Control (Com Port) that was identified earlier (NOTE: If you do not wish to use CAT Control, this step is unnecessary)

Set the Baud rate to 9600

And finally, Set the PTT Port to [External] from the pull down options

(NOTE: The Yaesu FT-857D does not use USB-D (Upper Side Band – Data) since the signal is being transmitted through a Signalink!) then click [Update], then [Close].)

The next step is to click on [Channel Selection]:



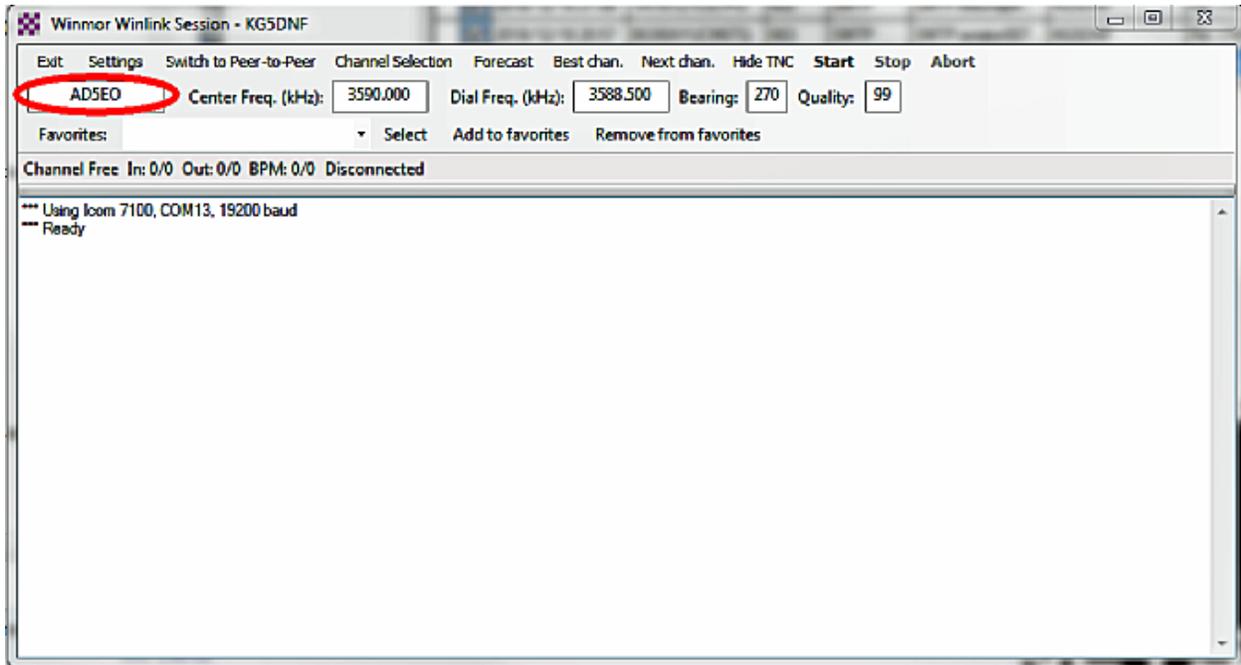
A new window will appear. Select (click) on [Update Table Via Internet]:

HF Channel Selector

Exit Select **Update Table Via Internet** Update Table Via Radio Forecast SFI All RMS

Callsign	Frequency (kHz)	Mode	Grid Square	Hours	Group	Distance (km)	Bearing (Degrees)	Path Reliability Estimate	Path Quality Estimate
AD5EO	3590.000	1600	EM34QN	00-23	PUBLIC	8	270	99	99
KB5LZK	3598.500	1600	EM34UT	00-23	PUBLIC	36	039	99	99
AD5EO	7103.000	1600	EM34QN	00-23	PUBLIC	8	270	96	96
KB5LZK	7101.200	1600	EM34UT	00-23	PUBLIC	36	039	96	96
KD7UHR	3588.500	1600	EM58BQ	00-23	PUBLIC	516	027	89	55
K0SI	3586.500	1600	EM39UA	00-23	PUBLIC	496	002	89	56
KC5GOI	3598.000	1600	EM13KG	00-23	PUBLIC	447	253	89	54
W9FE	3597.000	1600	EM59AA	00-23	PUBLIC	546	024	89	55
K5LAM-10	3587.500	1600	EM52AF	00-23	PUBLIC	352	137	88	54
N4JGW	3597.000	1600	EM74LR	00-23	PUBLIC	686	086	87	53
NS0A	3510.000	500	EN41WK	00-23	PUBLIC	793	015	86	53
KG5KS-10	3595.000	1600	EM45JP	00-23	PUBLIC	171	045	86	56
NF9D	3595.000	1600	EN51TW	00-23	PUBLIC	896	023	85	52
WX4PCA-10	3591.000	1600	EM73NU	00-23	PUBLIC	708	094	85	51
WW4MSK	3592.500	1600	EM74UW	00-23	PUBLIC	754	084	85	52
KF5FNP	3583.500	1600	EM30WI	00-23	PUBLIC	469	175	85	50
W6IDS	3577.500	500	EM79NV	00-11	PUBLIC	900	047	84	52

Once the table has been updated you select which station you wish to connect to by double clicking on the call sign. Please note that considerable information is provided here: The frequency used by the RMS station, where it is located, distance from your location, bearing (in degrees) from your location and the path reliability and quality projected at the current time.



Note that the information from the channel selection window has been propagated into the fields on the Winmor Winlink Window, AND your radio should have been automatically set to match the frequency and mode (USB) ONLY if you are using CAT control

At this point, I usually manually enable the tuning on my AT-100ProII to ensure it doesn't attempt to tune while the Winlink program is attempting to establish communications with the RMS server. Also, it is extremely important to note that LDG recommends a power level setting of 35 watts OR lower to ensure the tuner is not damaged by the intensity of the signal. (You may be surprised how little power is required to make contact! I usually start at 5 watts and increase only if band conditions are unfavorable.)

When ready, press "Start" on the VARA Winlink screen to initiate contact. If all settings are correct, your radio will switch between transmit and receive is indicated by the Winmor TNC Soundcard screen with the waterfall. Do not assume program problems if you do not initially make contact with a station. All the facets of USB communication come into play including band fading.

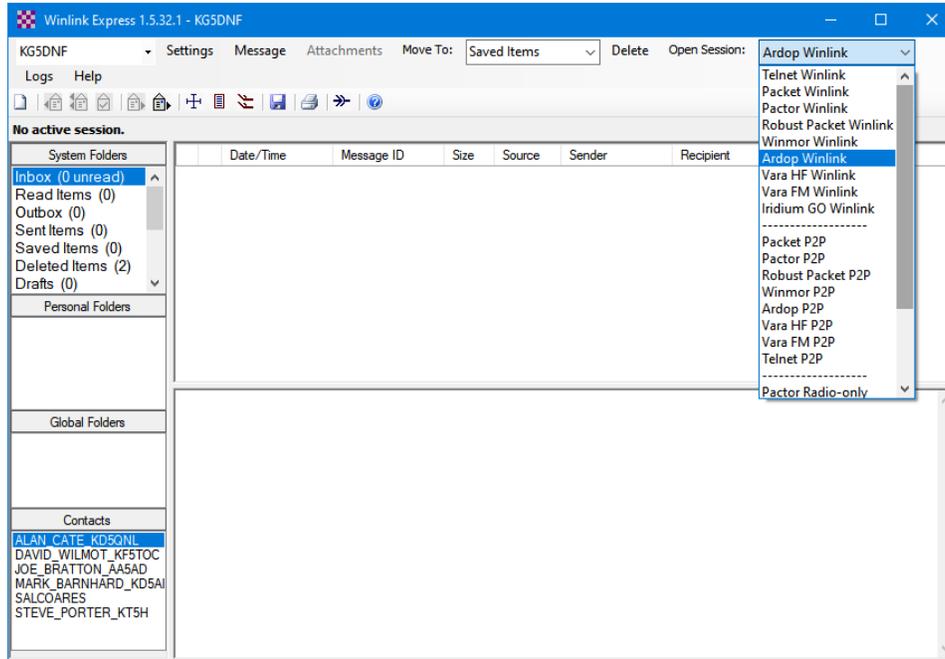
Sit back and enjoy the show! This type of message transmit and retrieval is nowhere near as fast as an internet connection, however, it will get through when internet infrastructure is inoperable.

When the connection has completed, you may exit all windows back to the main Winlink Express window. If you have received a message you will see it in the System Folders (Inbox) section of the main Winlink Express screen.

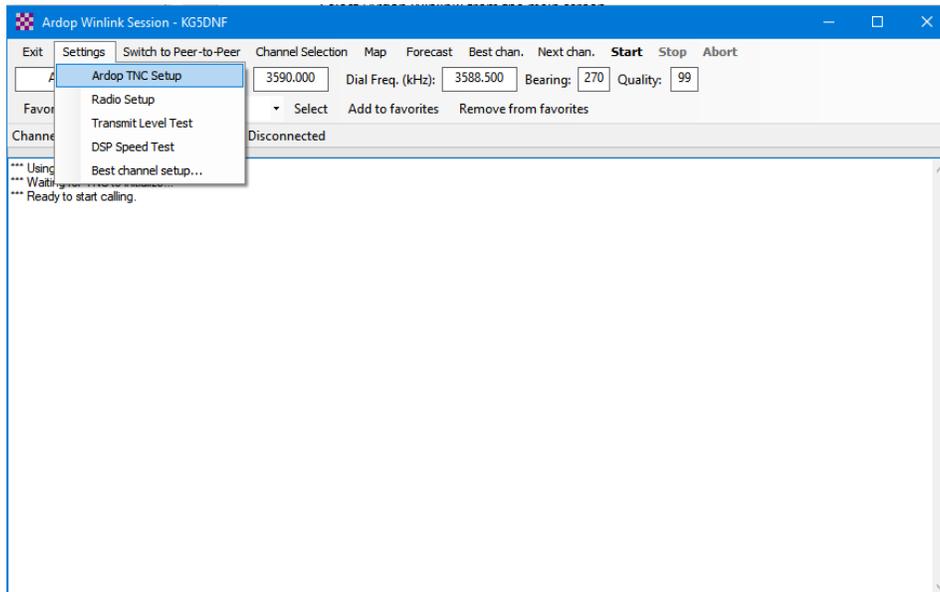
Winlink ARDOP Setup

Winlink ARDOP Setup is similar to the VARA HF setup! But you will have to configure the same settings the first time you open the ARDOP window.

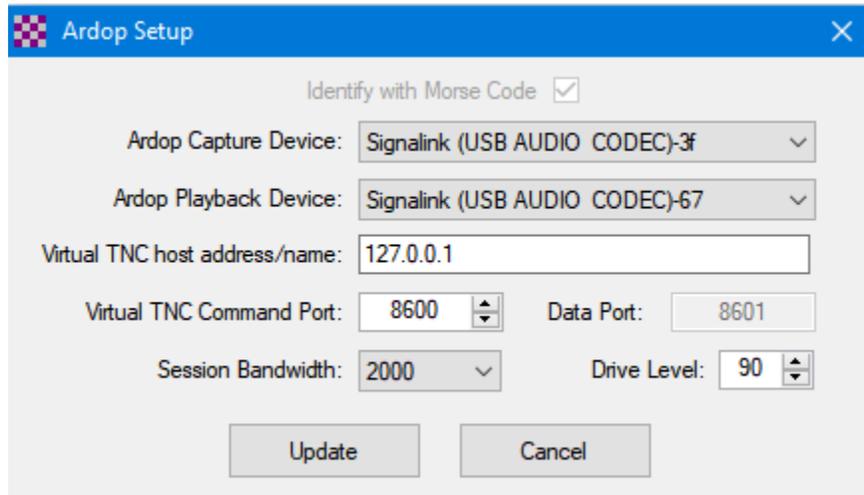
Select [Ardop Winlink] from the main screen



Then press [Open Session] – the Ardop session window opens. Select [Settings] [Ardop TNC Setup].

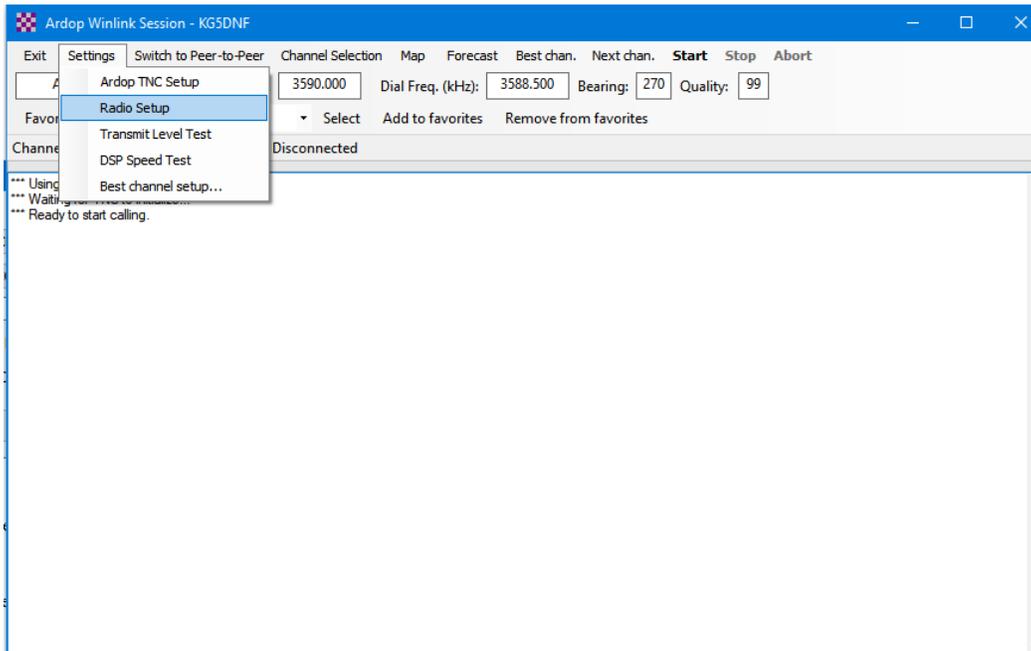


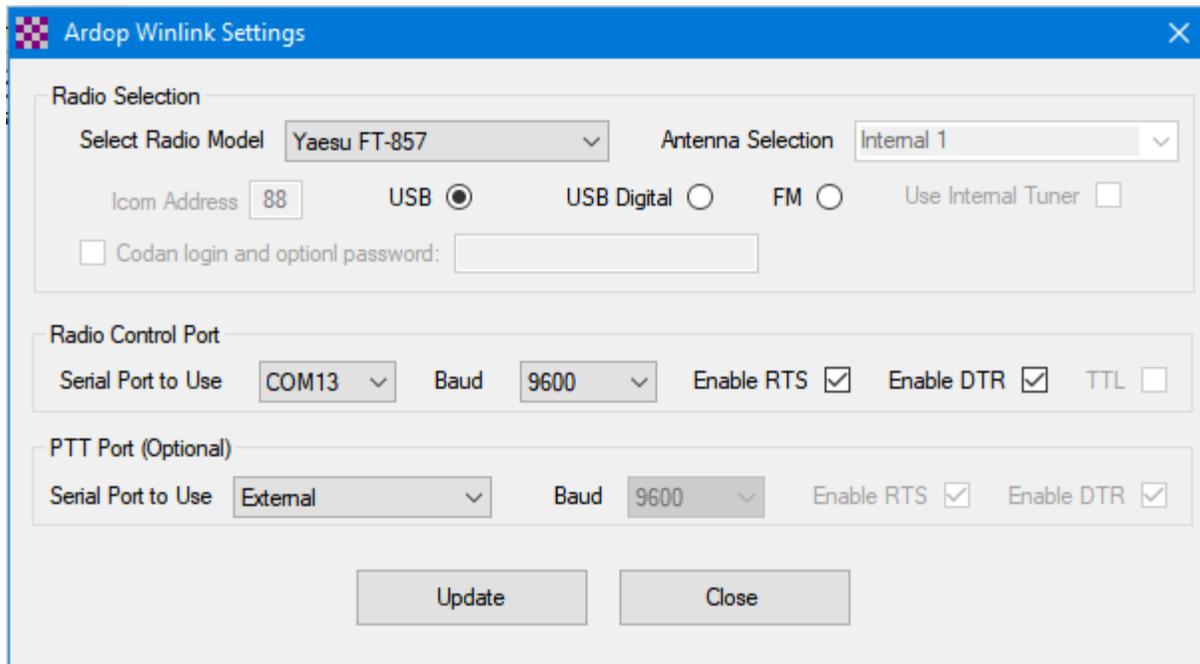
A new screen (Ardop Setup) opens. Select your appropriate Ardop Capture Device and Ardop Playback Device from the pull-down options. Everything else should remain at default values.



When changes have been completed, click [Update] then click [Close]

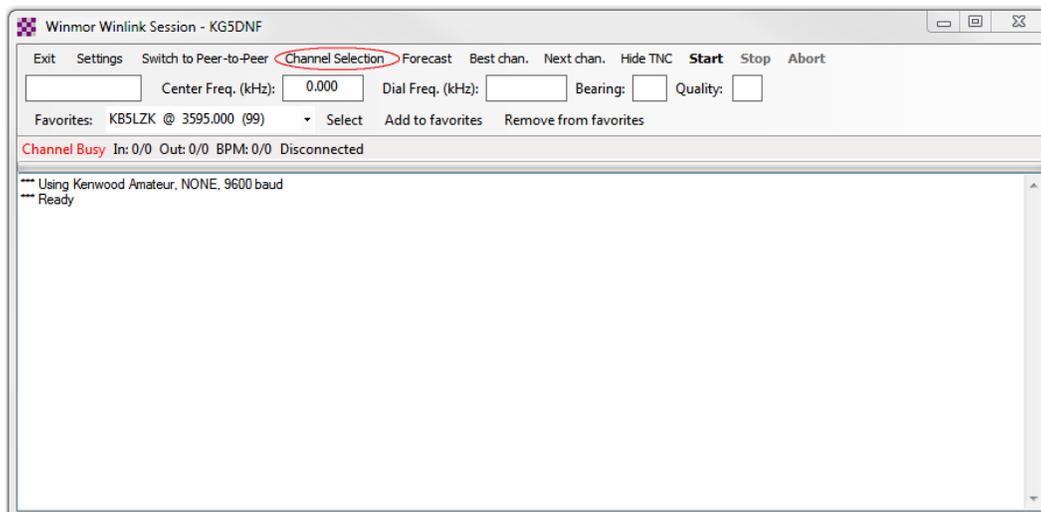
Next, click [Settings] [Radio Setup]





Set [Select Radio Model] to Yaesu FT-857
 Set mode to [USB] (again since you are using a Signalink as your TNC, USB Digital is not supported).
 Set [Serial Port to Use] to the Com port number previously identified. (NOTE: If you do not wish to use CAT control, this step is unnecessary.)
 Set Radio Control Port Baud Rate to [9600].
 Set Ptt Port Serial Port to use to [External].
 Click [Update] then click [Close].

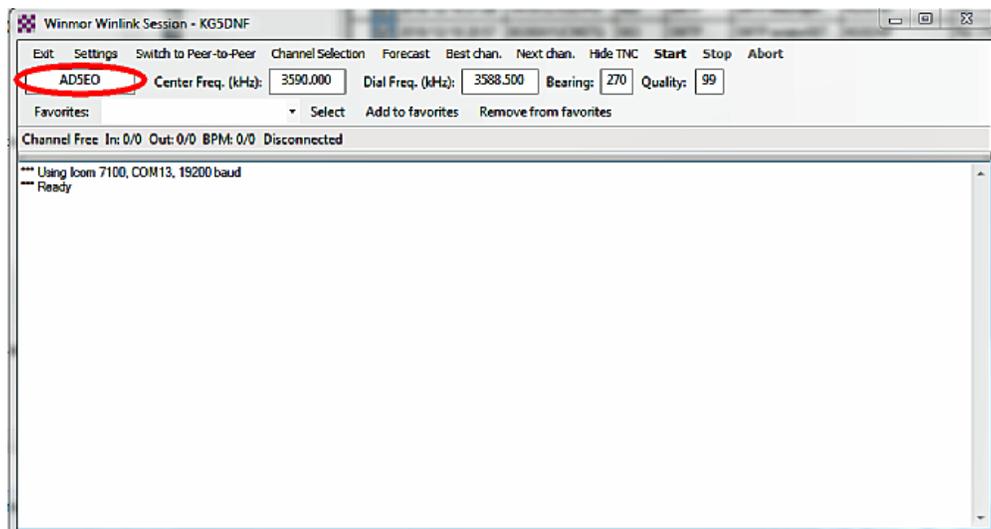
The next step is to click on [Channel Selection]:



A new window will appear. Select (click) on [Update Table Via Internet]:

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KD7UHR	3588.500	1600	EM58BQ	00-23	PUBLIC	516	027	89	55
K0SI	3586.500	1600	EM39UA	00-23	PUBLIC	496	002	89	56
KC5GOI	3598.000	1600	EM13KG	00-23	PUBLIC	447	253	89	54
W9FE	3597.000	1600	EM59AA	00-23	PUBLIC	546	024	89	55
K5LAM-10	3587.500	1600	EM52AF	00-23	PUBLIC	352	137	88	54
N4JGW	3597.000	1600	EM74LR	00-23	PUBLIC	686	086	87	53
NS0A	3510.000	500	EN41WK	00-23	PUBLIC	793	015	86	53
KG5KS-10	3595.000	1600	EM45JP	00-23	PUBLIC	171	045	86	56
NF9D	3595.000	1600	EN51TW	00-23	PUBLIC	896	023	85	52
WX4PCA-10	3591.000	1600	EM73NU	00-23	PUBLIC	708	094	85	51
WW4MSK	3592.500	1600	EM74UW	00-23	PUBLIC	754	084	85	52
KF5FNP	3583.500	1600	EM30WI	00-23	PUBLIC	469	175	85	50
W6IDS	3577.500	500	EM79NV	00-11	PUBLIC	900	047	84	52

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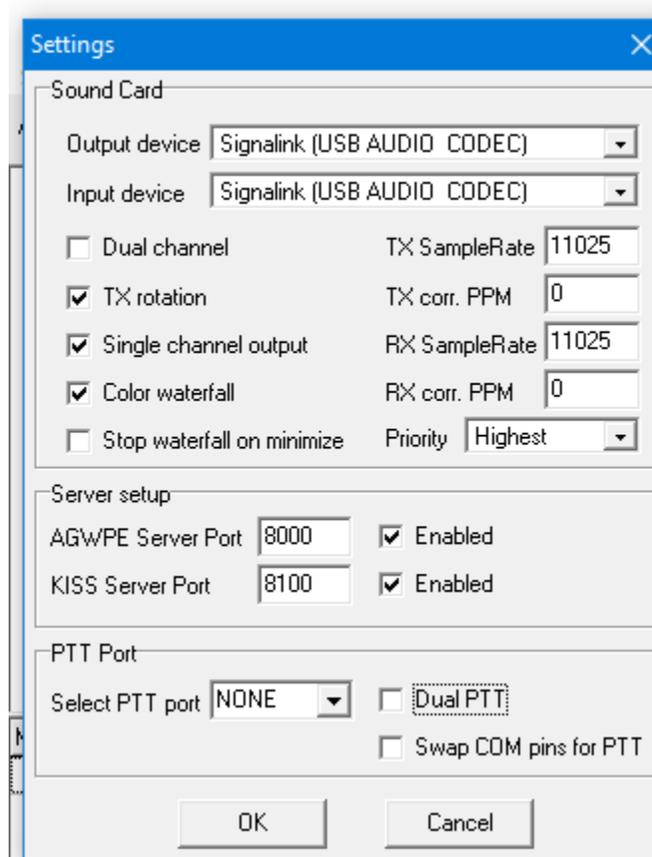
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Winlink Express Packet

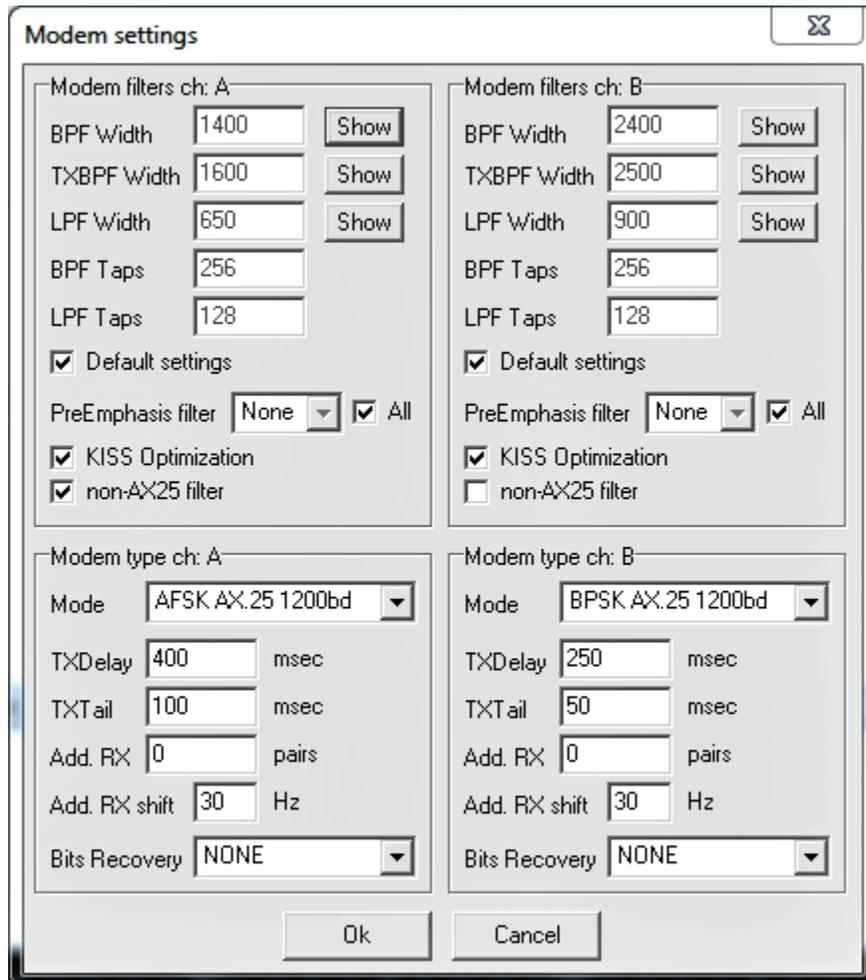
In order to be able to connect to a Winlink RMS Packet Gateway, you'll need an additional piece of software which can be found here: <http://uz7.ho.ua/packetradio.htm> . Once to the page, scroll down until you see a link entitled soundmodemXX.zip (the XX indicates the highest number listed). Download and use the standard installation options.

Open the newly created desktop shortcut [soundmodem]. Traverse your way to [Settings] [Devices]



Select the appropriate CODEC for your USB connection to the Signalink. Double check that the remaining items are as indicated, then click [OK].

Next click [Settings] [Modems]



Ensure all settings are as pictured above, then click [OK].

Since packet operation uses the AX.25 protocol, soundmodem MUST be running before you start Winlink Express. First start Soundmodem then start Winlink Express. Select [Packet Winlink] as the operating mode, then press [Open Session] to open the Packet Winlink window.

Click on [Settings]

Packet Winlink/P2P Setup

TNC Connection

Packet TNC Type: KISS

Packet TNC Model: ACKMODE

AutoConnect Time: Disabled

Serial Port: TCP

TCP Host/Port: 127.0.0.1 8100

If Auto Connect is enabled, open session when Winlink Express is started

TNC Parameters

1200 Baud 9600 Baud

TX Delay (Milliseconds): 400 300

Maximum Packet Length: 128 255

Maximum Frames: 4 7

Frack: 2 2

Persistence: 160 224

Slot time: 30 20

Maximum Retries: 5 5

Disable Xmit Level Adjust Transmit Level: 300 300

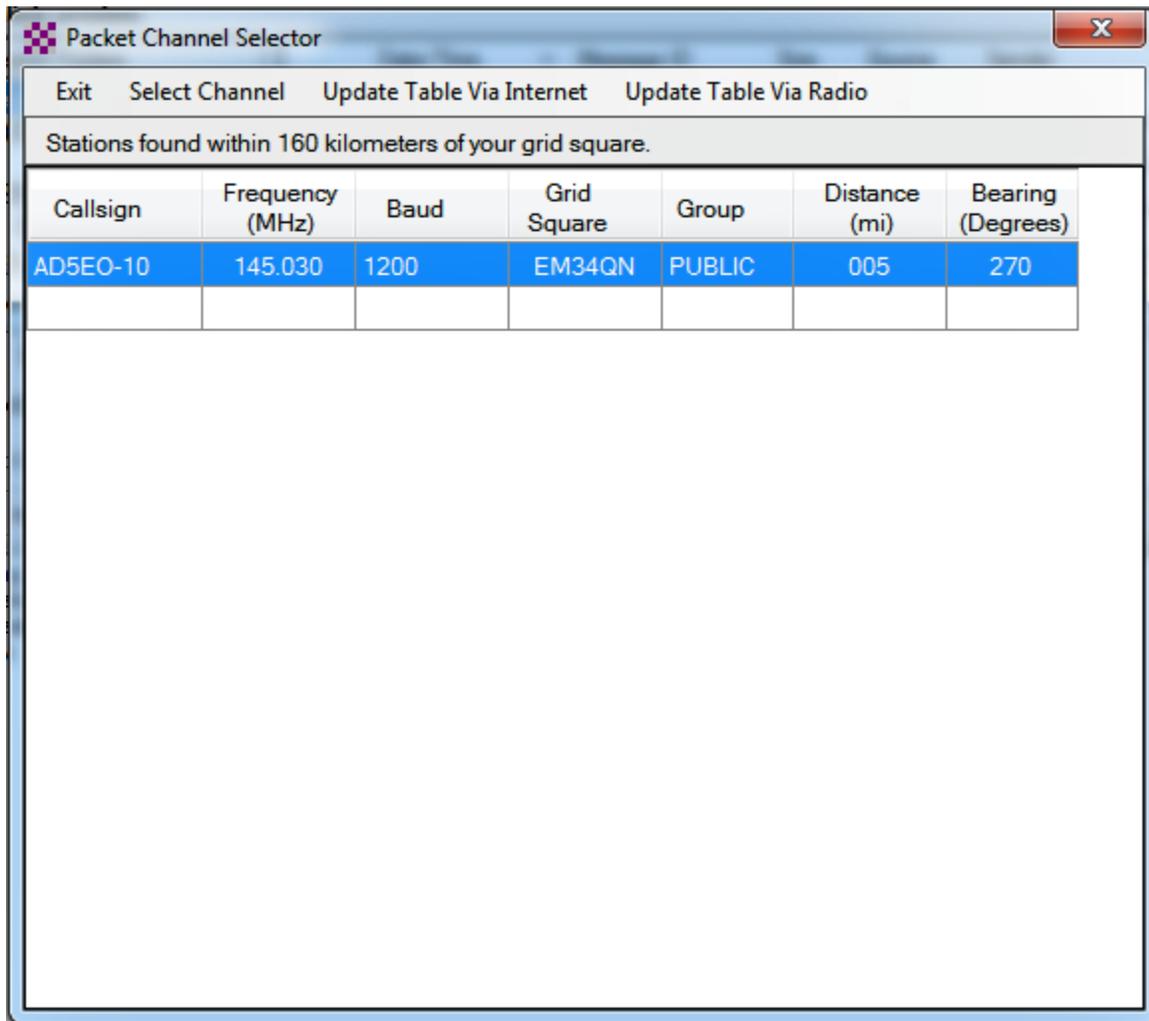
Enable IPoll

Update Cancel

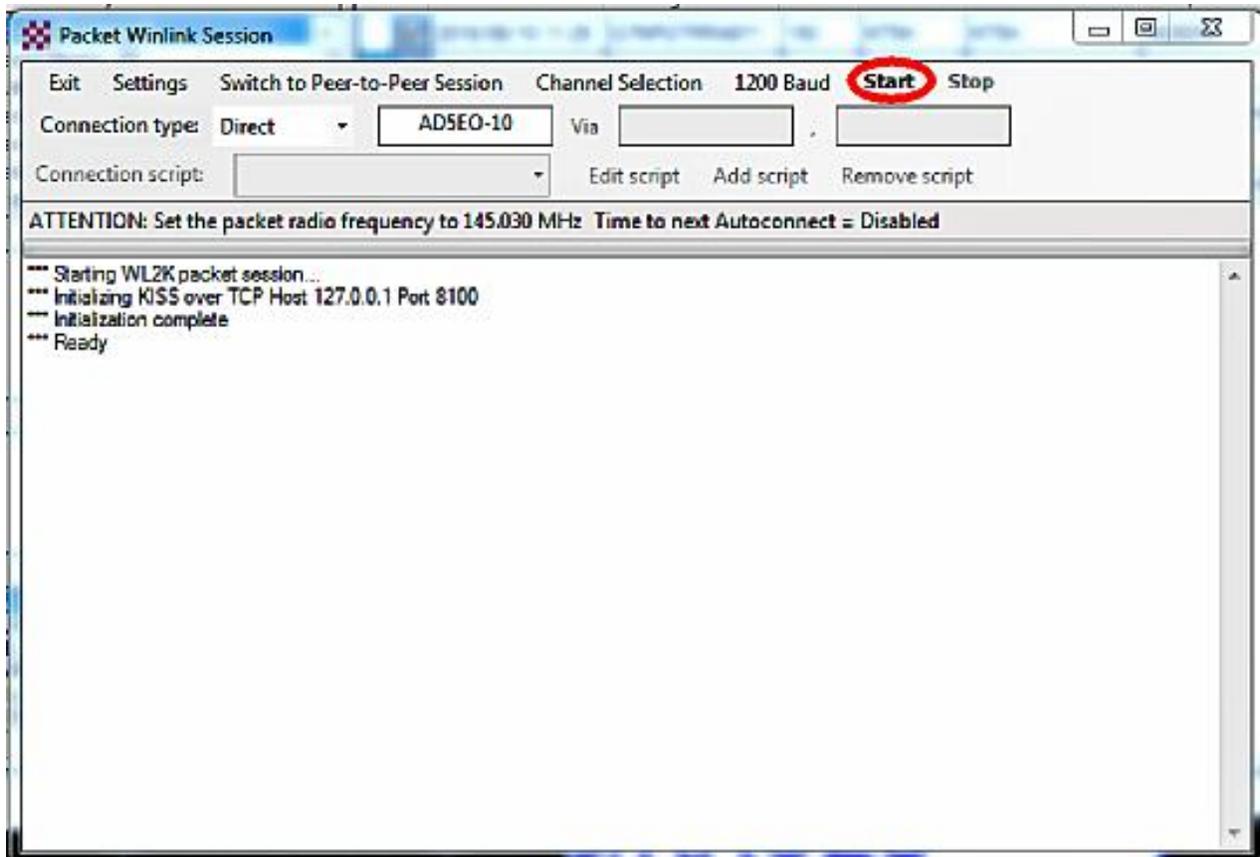
Ensure all fields are as indicated, then click [Update]

Click on [Channel Selection]

If you haven't already done so, update the table via the internet.



Double click to the station you wish to connect to, then this window will close.



You should see that the station field has been populated from your previous selection, AND your radio tuned to the correct frequency.

To connect to the selected RMS Packet Gateway, click the [Start] text.

After the two stations have completed their business, “Disconnect Reported” will be at the bottom of the text in the main window.

Close the Winlink Packet window by clicking on the red [X]. Then (if finished) close Winlink Express by clicking on the red [X].

BUT you’re not done! **Soundmodem is still running**. You may or may not see the soundmodem window currently on your screen (this happens). If this is the case, open the hidden icon section, right click on the soundmodem icon, then click [close]. If you do not do this, Soundmodem will stay running in the background and the next time you wish to connect to a Packet RMS Gateway you’ll have issues.

FLDIGI/FLARQ/FLRIG/FLMSG

Download fldigi files from: <https://sourceforge.net/projects/fldigi/files/> (fldigi-#### setup.exe). Save to your desktop, then move to a convenient location. While you are at sourceforge, also download FLMSG and FLRIG (save to your desktop, then move to a convenient location.)

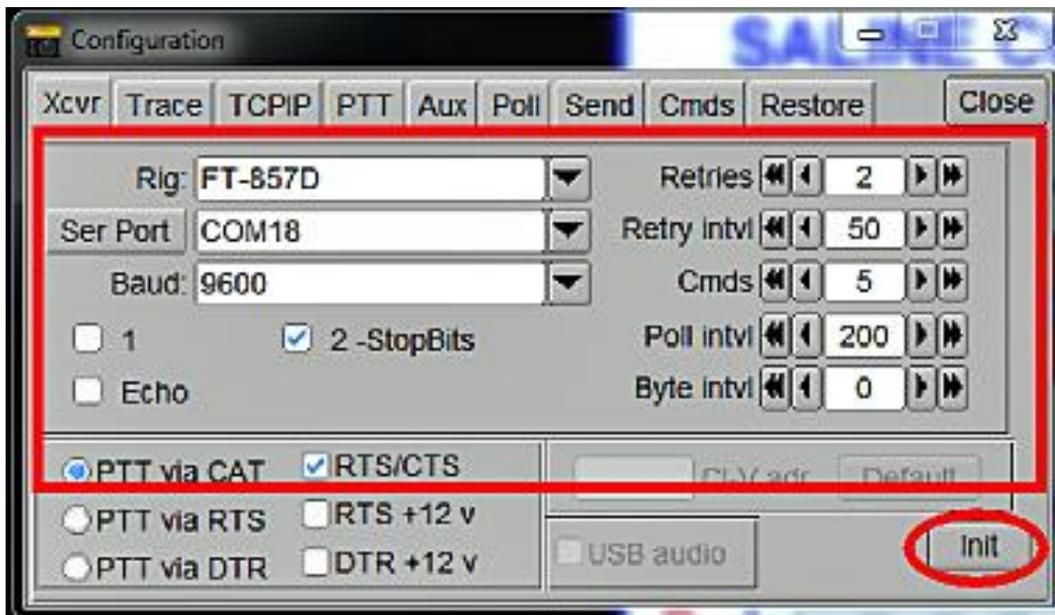
Name	Modified	Size	Downloads / Week
fldamp	2019-01-31		388
fldrigr	2019-01-31		443
fldmsg	2019-01-31		2,179
fldigi	2019-01-29		1,786

Double click FLRIG and allow for standard installation (adding the desktop icon). When installation is done, close the program window, we'll come back to configuration shortly.

Next, double click FLMSG and allow for standard installation (adding the desktop icon). When installation is done, close the program window, we'll come back to configuration shortly.

FLRIG Configuration

Open FLRIG then click on [Config] [Setup] [Transceiver].

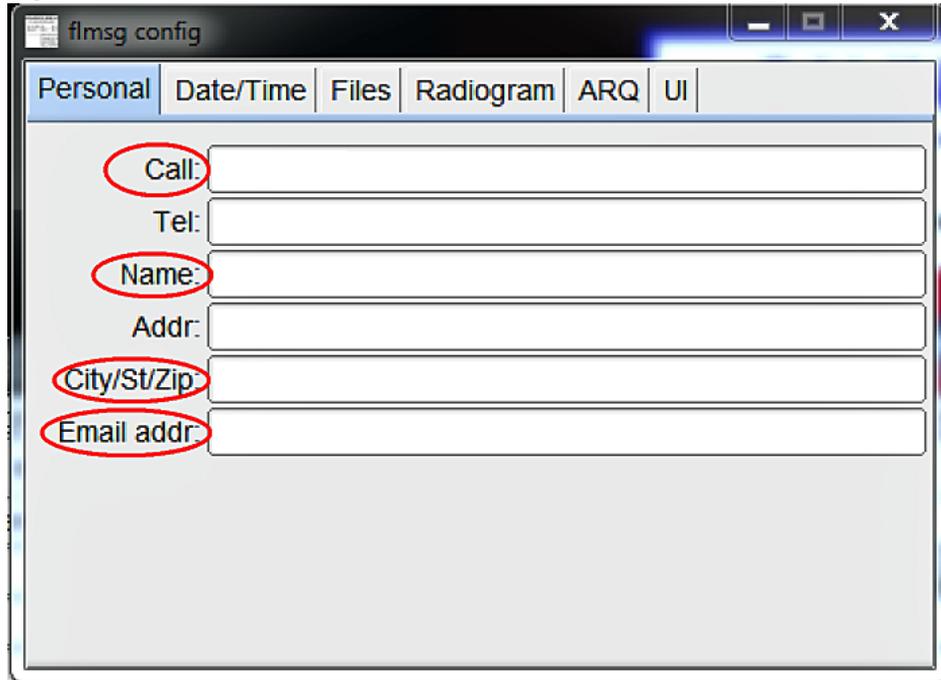


Configure these settings into the appropriate places (using the correct COM port number!). When finished making the settings (with your radio on), click the [Init] button. If any of the configuration settings are incorrect an error message will appear.

When finished and tested, click the red [X] to exit the program.

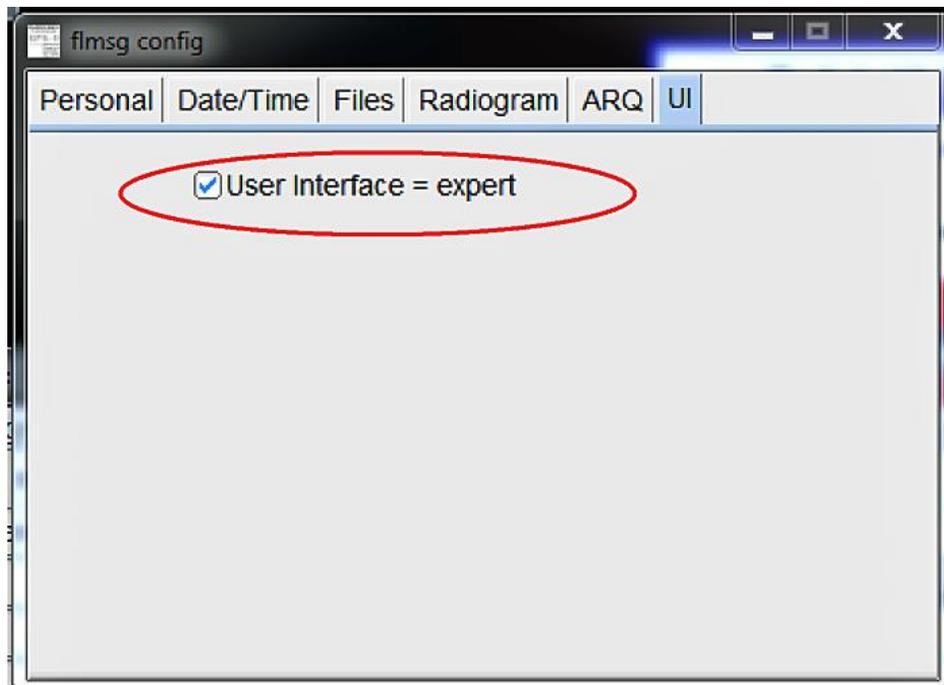
FLMSG Configuration

Click on the shortcut you made when installing FLMSG to open it for configuration. Then click on [Config] [Personal Data].



The screenshot shows the 'flmsg config' window with the 'Personal' tab selected. The window has a title bar with standard minimize, maximize, and close buttons. Below the title bar is a tabbed interface with tabs for 'Personal', 'Date/Time', 'Files', 'Radiogram', 'ARQ', and 'UI'. The 'Personal' tab is active, displaying several text input fields. Each field is preceded by a label: 'Call:', 'Tel:', 'Name:', 'Addr:', 'City/St/Zip:', and 'Email addr:'. Each of these labels is circled in red. The input fields themselves are empty.

Fill in the blanks with the appropriate information, then click on the [UI] tab.



The screenshot shows the 'flmsg config' window with the 'UI' tab selected. The window has the same title bar and tabbed interface as the previous screenshot. The 'UI' tab is active, displaying a single checkbox labeled 'User Interface = expert'. The checkbox is checked, and the entire label and checkbox are circled in red.

Marking this checkbox will give you full access to all FLMSG form functions. When finished, you may exit the entire program by clicking on the red [X] twice.

FLDIGI Configuration

Double click on the FLDIGI setup file. Once the program opens, click on [Configure] [UI] [Operator]

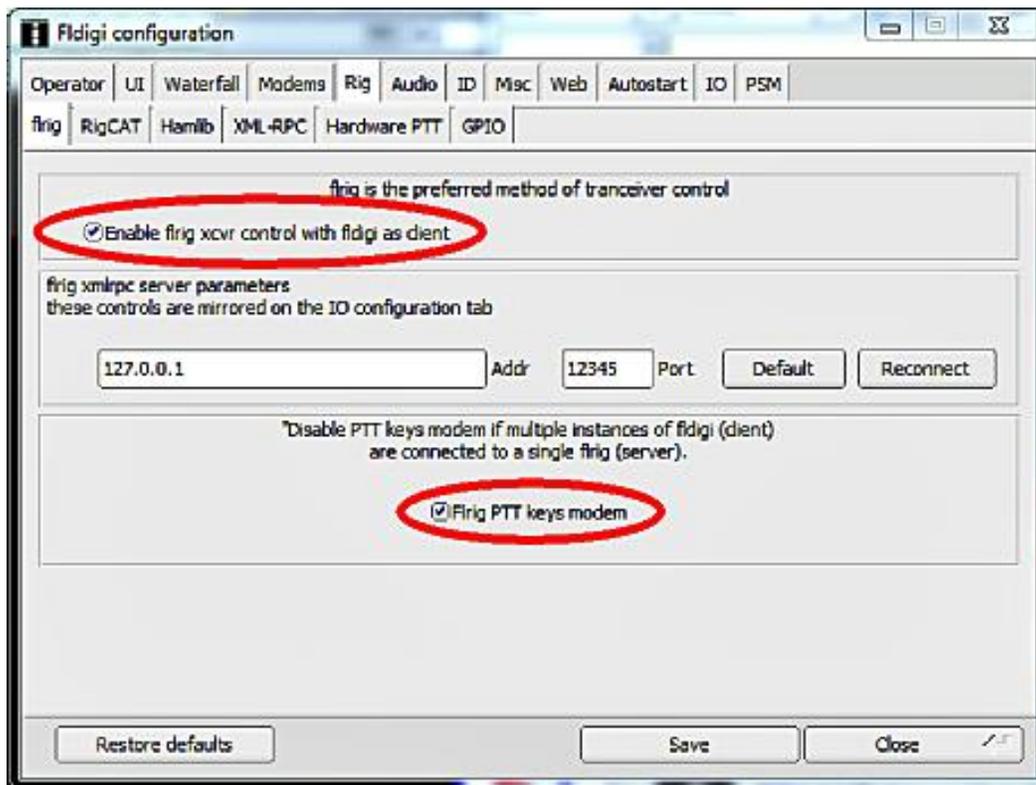
The screenshot shows the 'Fldigi configuration' window with the 'Operator' tab selected. The 'Station / Operator' section contains the following fields:

- Station Callsign: (highlighted with a red circle)
- Station QTH: (highlighted with a red circle)
- Station Locator: (highlighted with a red circle)
- Operator Callsign: (highlighted with a red circle)
- Operator Name: (highlighted with a red circle)
- Antenna: (empty text box)

At the bottom of the window, there are three buttons: 'Restore defaults', 'Save', and 'Close'.

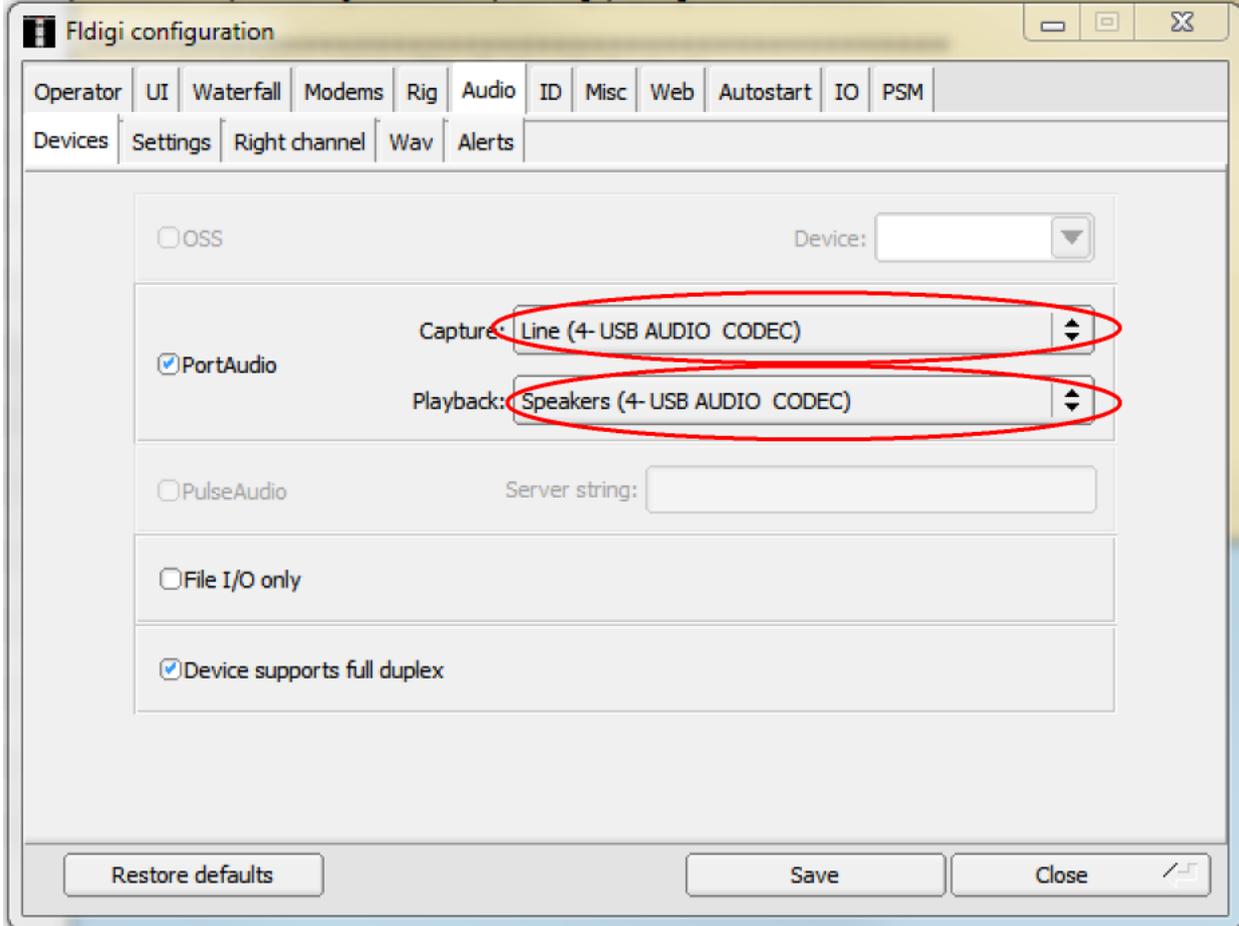
Fill in the indicated areas, Station QTH is the name of your city and State, Station Locator is your maidenhead grid location. Once completed, click [Save]

Next, click on the [RIG] tab.



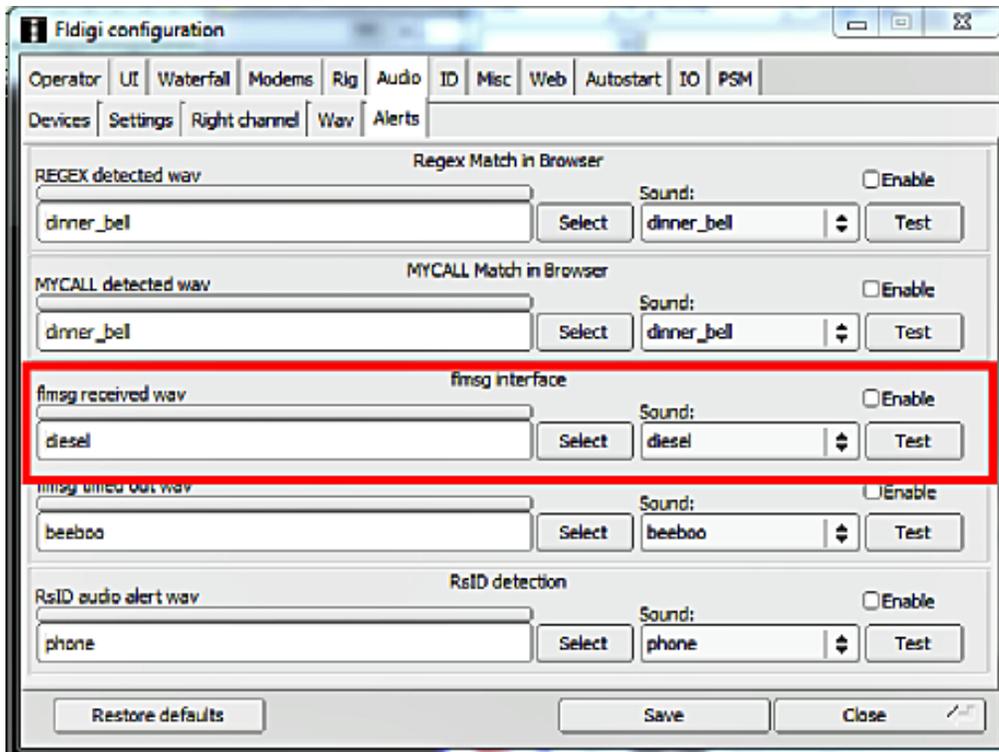
Once these settings are made/verified, click [SAVE].

Click on the [Audio] Tab.



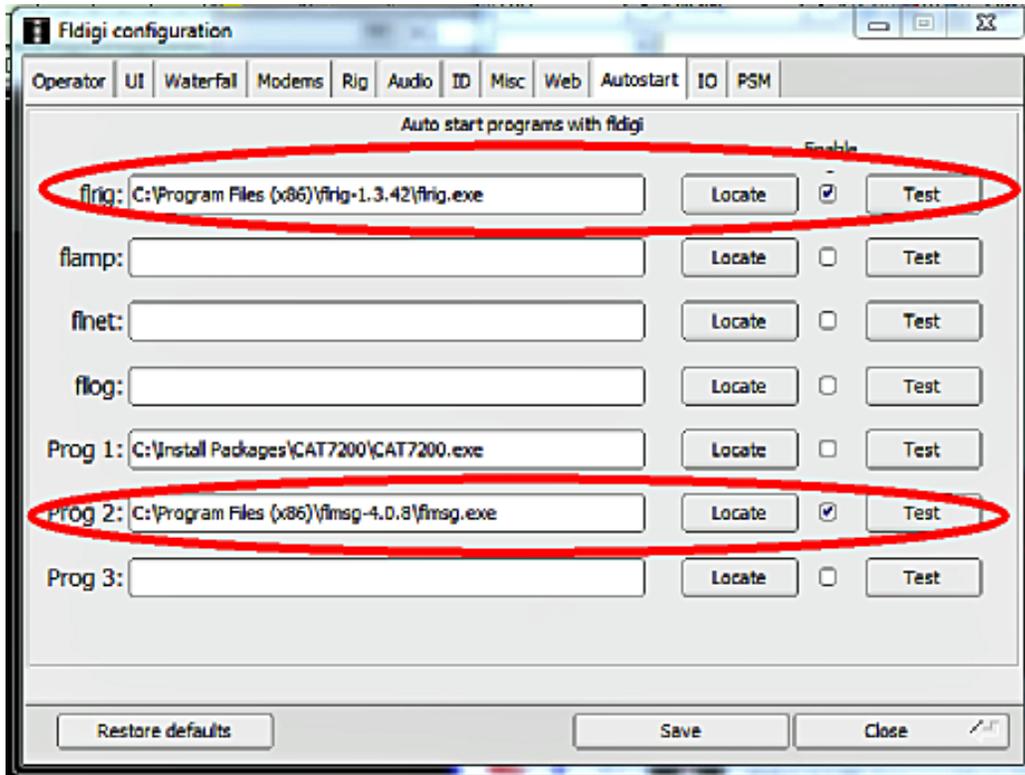
Select the appropriate entry associated with the USB Audio CODEC listed on your computer. (The number will probably be different on your computer.) Once completed, click [Save].

You can minimize FLMSG once it has started. If you wish to receive and audio alert when a new message arrives, click on the [Audio][Alerts] tab.



In fmsg received wav, click on the arrows in the Sound box to choose which sound you wish to assign. Once done, click [Save].

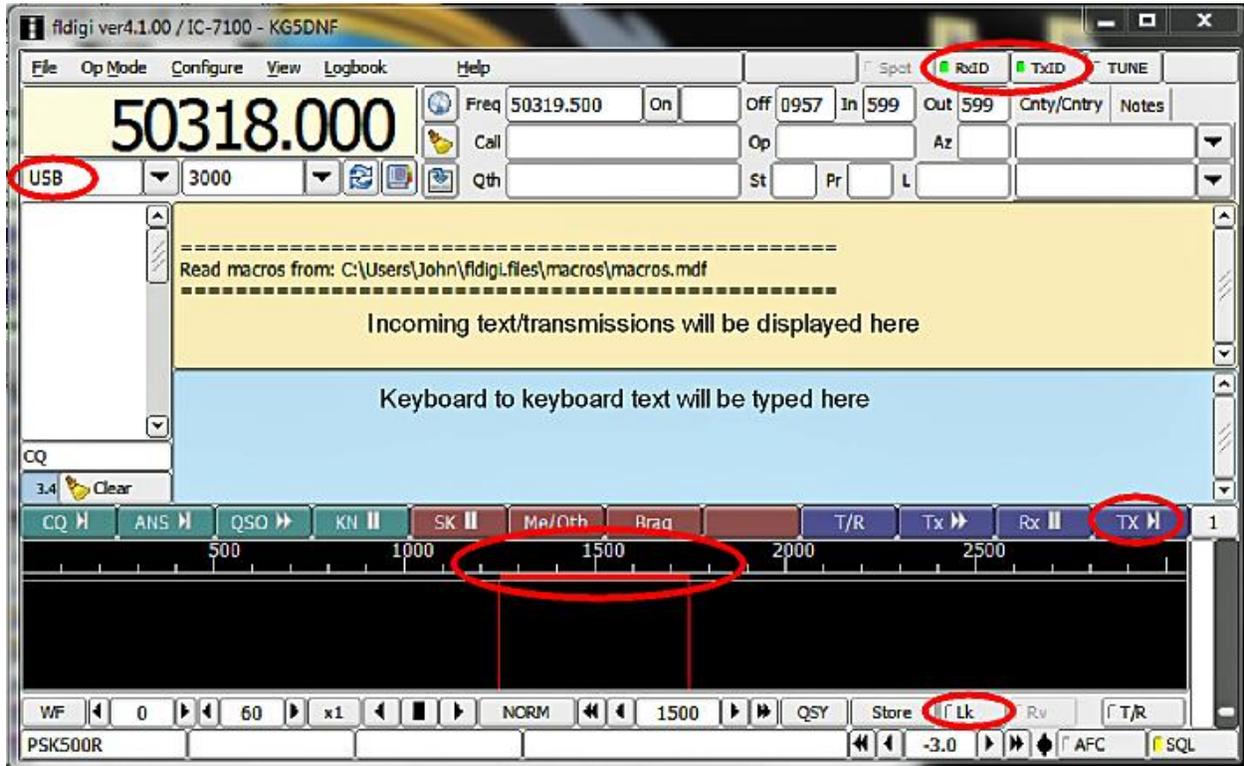
Now click on the [Autostart] tab. (This is a feature that allows you to have different modules automatically start when you start FLDIGI.)



All the executable files will be in the [Program Files (x86)] folder! For FLRIG and FLMSG, click [Locate] then browse your way to the appropriate folder and file. Once located, click open and the blank field should be populated. For these programs to automatically execute, click on the “Enable” box.

NOTE: It makes no difference which Program Number box you place the FLMSG executable file in. Once all this is done, click [Save].

FLDIGI Main Screen setup



Please ensure that both RxID and TxID are checked to allow for automatic mode switching. If using HF or 6 meters, ONLY Upper Side Band is used (6 meter FM can also be used).

NOTE: you will see a red rectangle on your waterfall. This is the center frequency for the passband. It is easy to change by clicking with your mouse (or tapping with your finger), but changing this location will make the difference between being able to decode incoming transmissions/messages and not (conversely, transmitting with the center of the passband changed will make it difficult for other stations to decode your transmission.) The small Lock [Lk] button will lock your center frequency in place.

Once you have either typed a message or pasted text into the blue window for transmitting, then press the indicated transmit [Tx] button.

Receiving is simple – watch the yellow part of the screen.

You have now completed the configuration settings for the FLDIGI suite.

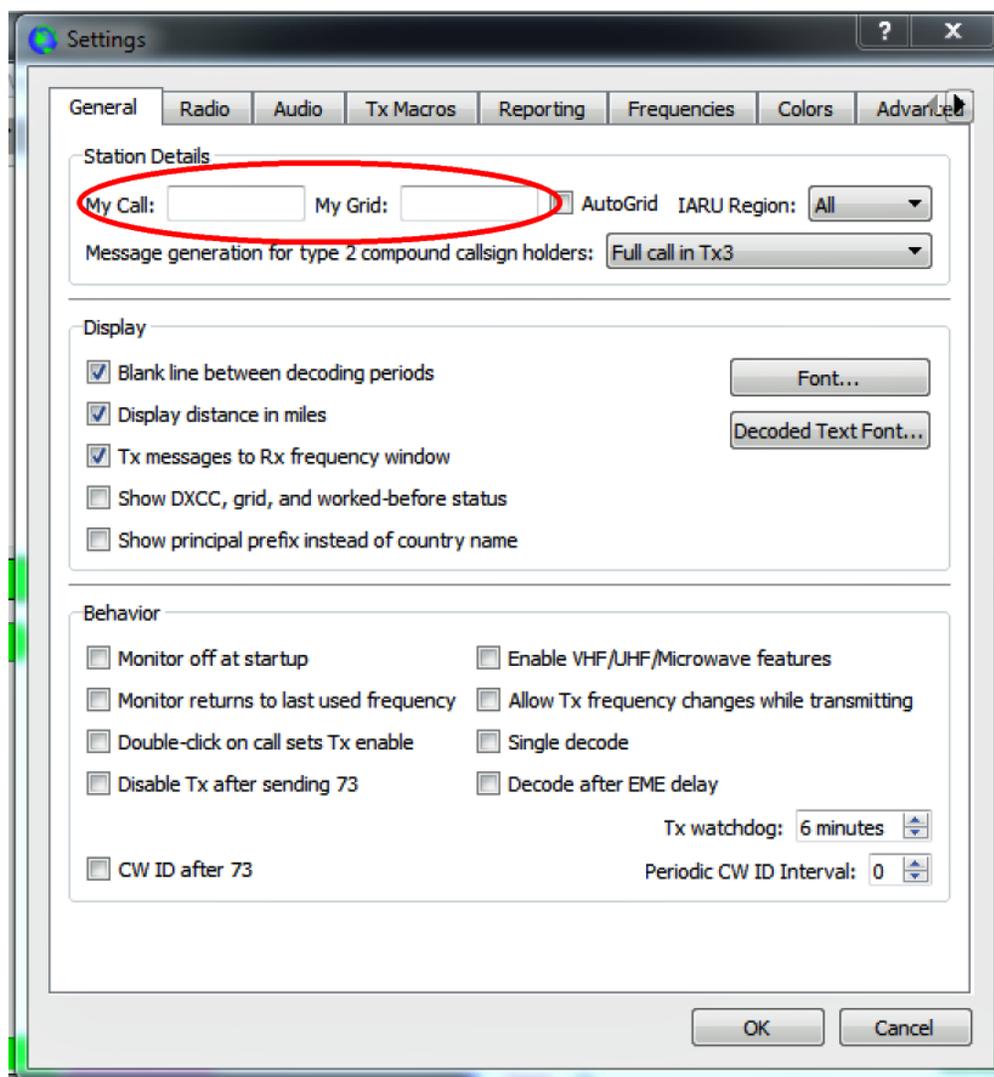
WJST-X Setup and configuration.

WSJT-X implements communication protocols or "modes" called FT8, JT4, JT9, JT65, QRA64, ISCAT, MSK144, and WSPR, as well as one called Echo for detecting and measuring your own radio signals reflected from the Moon. These modes were all designed for making reliable, confirmed QSOs under extreme weak-signal conditions.

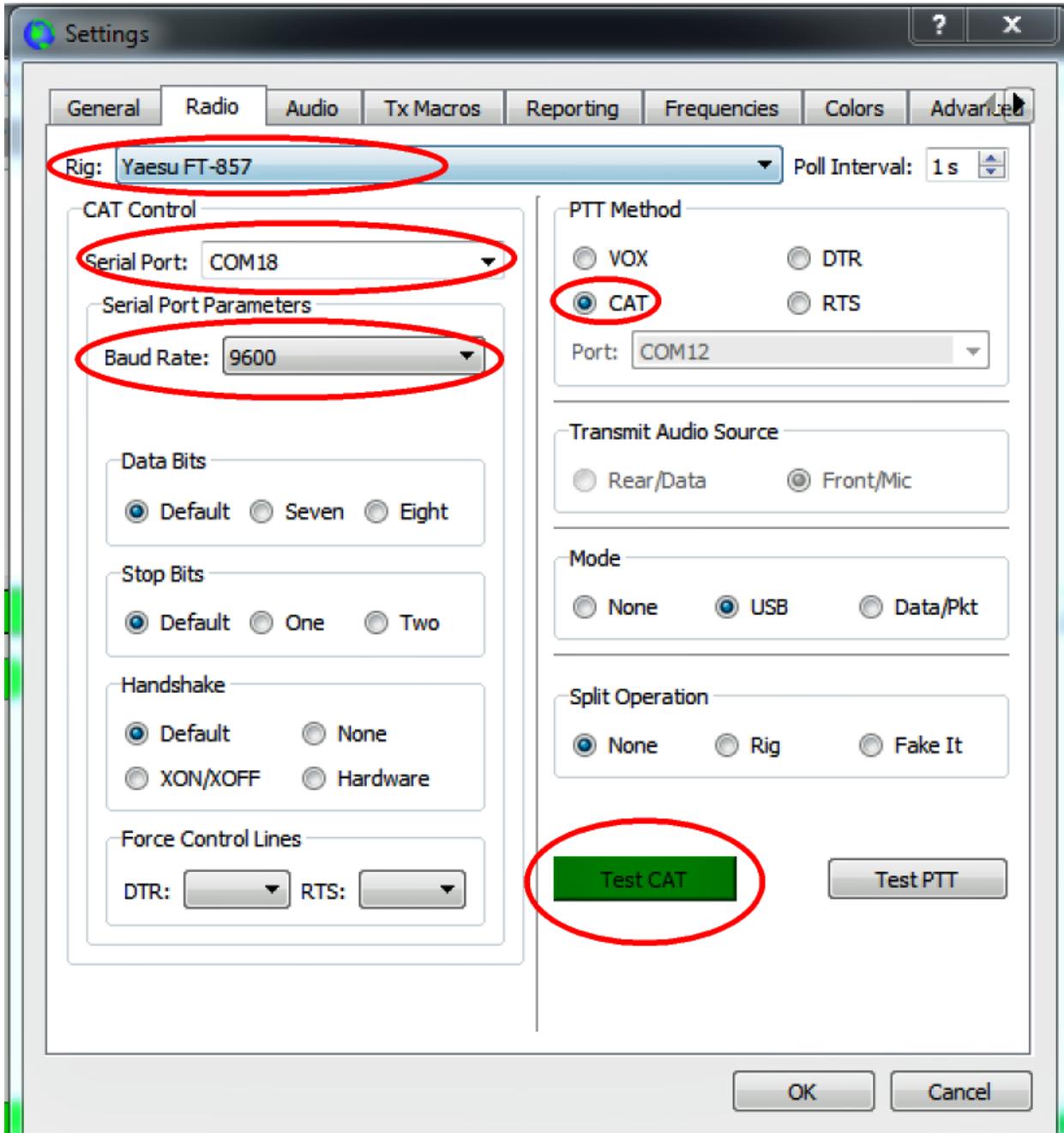
You can download WJST-X here: <https://physics.princeton.edu/pulsar/k1jt/wsjsx.html>
Once the download has finished, click on the executable file to extract the program and use the standard installation locations (adding a desktop shortcut icon).

You can opt to start WJST-X at the completion of the installation.

Once the program is open, click on [File] [Settings] then the General tab. (Fill in the appropriate information.)

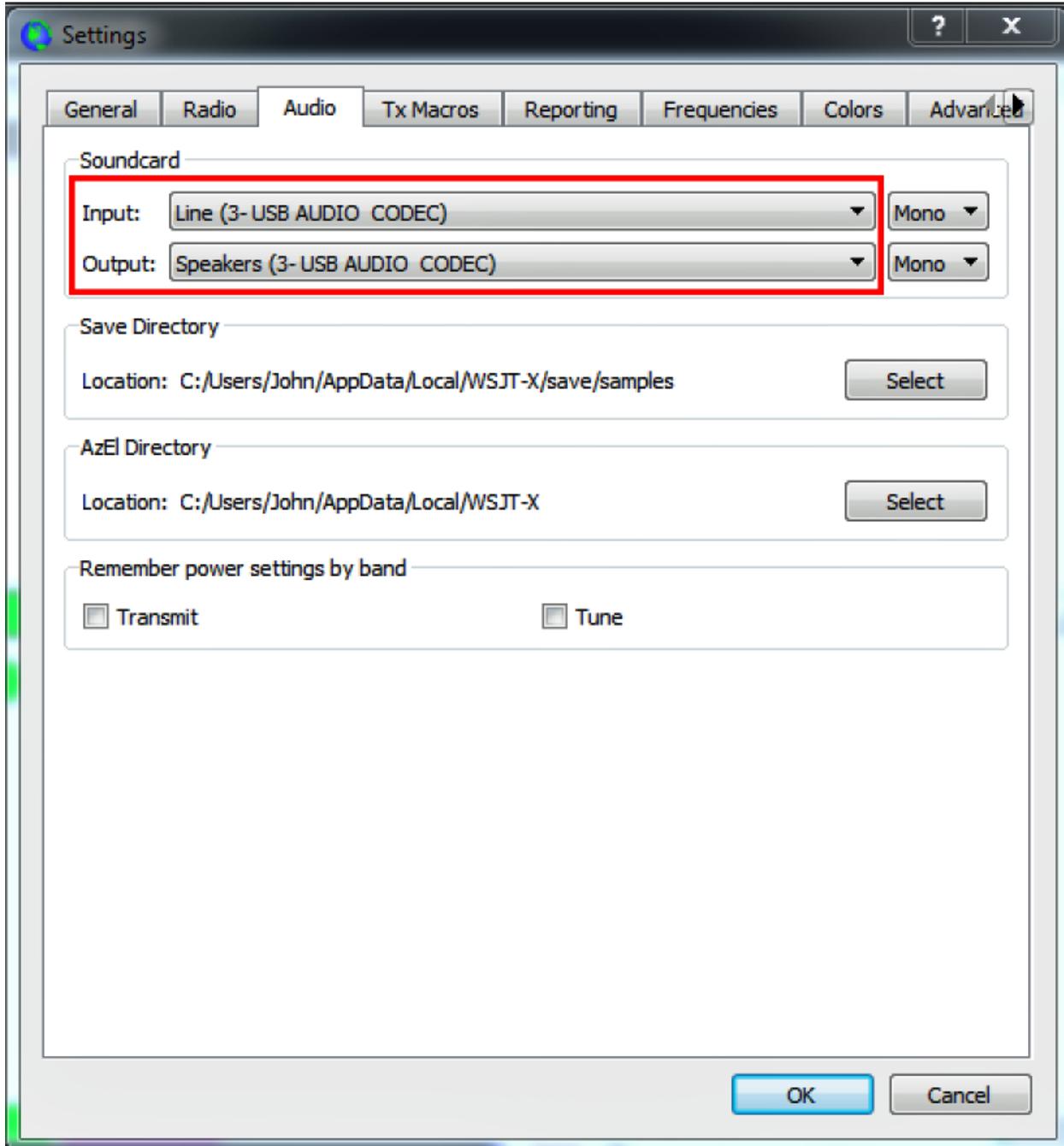


Next, click on the Radio tab. Fill in the values (specific to your COM port) as indicated.

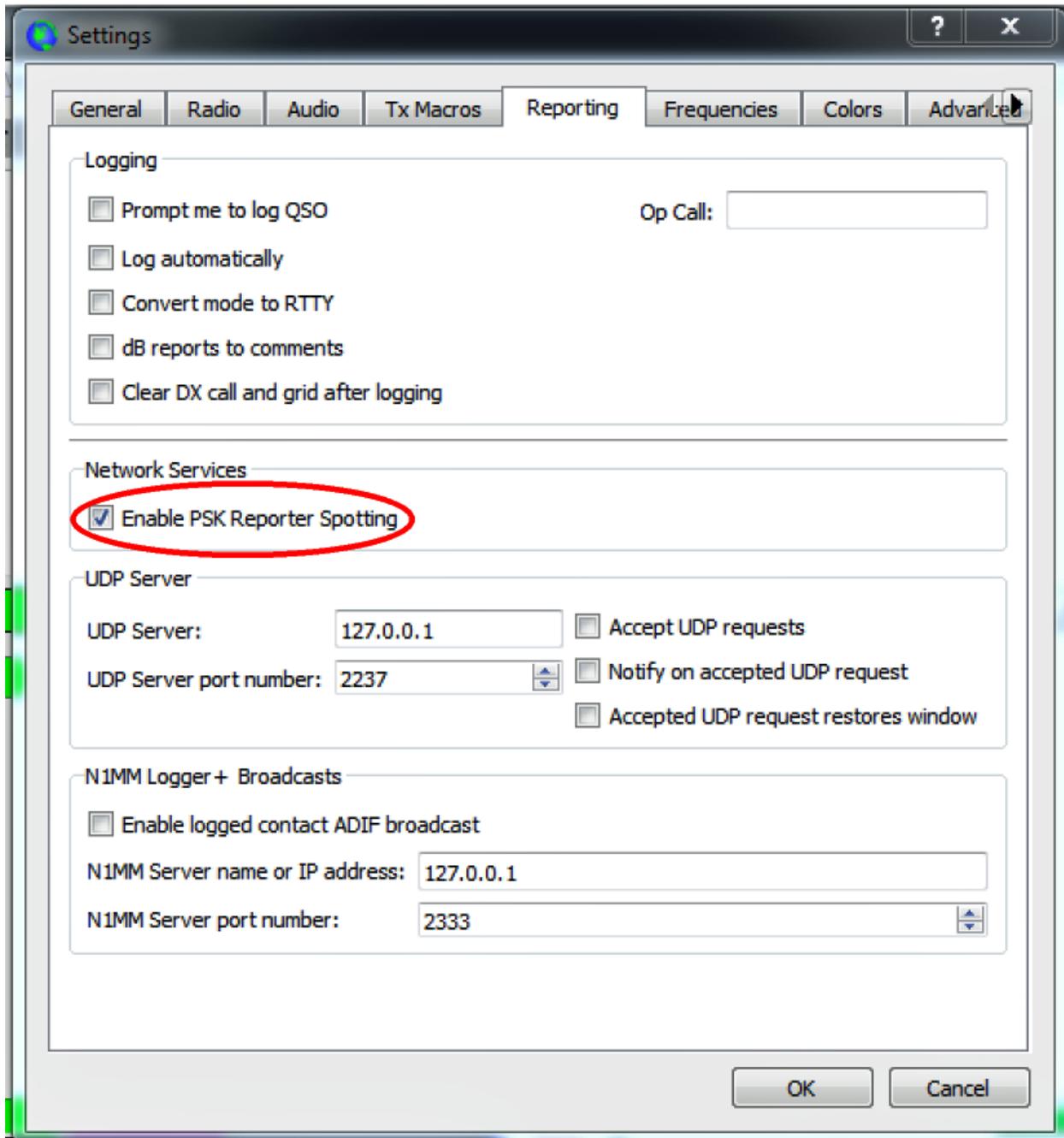


Once finished filling in this information, press the [Test CAT] button, this will check the connectivity between the software and your radio.

Next, click on the Audio Tab. Fill in the appropriate values associated with your USB CODEC.



Finally, click on the Reporting TAB. IF you want the signals you receive to be automatically uploaded to PSK Reporter, check the box indicated.



Lastly, click [OK], you're all set up and ready to run!

JS8 Call

JS8Call is a derivative of the WSJT-X application, restructured and redesigned for keyboard-to-keyboard message passing. It is not supported by nor endorsed by the WSJT-X development group. While the WSJT-X group maintains copyright over the original work and code, JS8Call is a derivative work licensed under and in accordance with the terms of the GPLv3 license. Source code can be found in this public repository: <https://bitbucket.org/widefido/wsjsx/>

Set-up is very similar to WJST-X.