

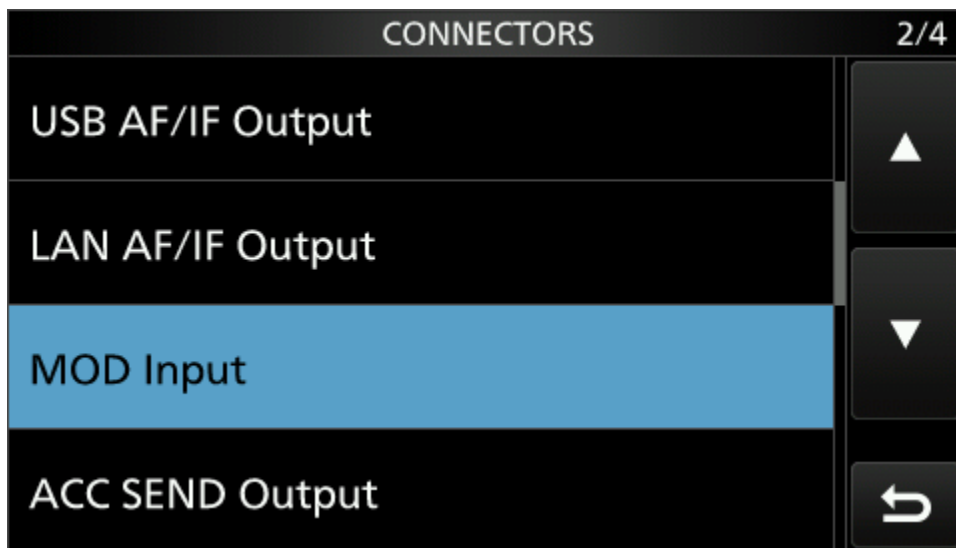
FROM THE W3GMS REPEATER COMMUNITY:

This is one way to setup Icom SDR radios for digital modes. Download Icom drivers FIRST from the Icom website before connecting cables to the radio. The IC-7300 setup also works on the IC-705.

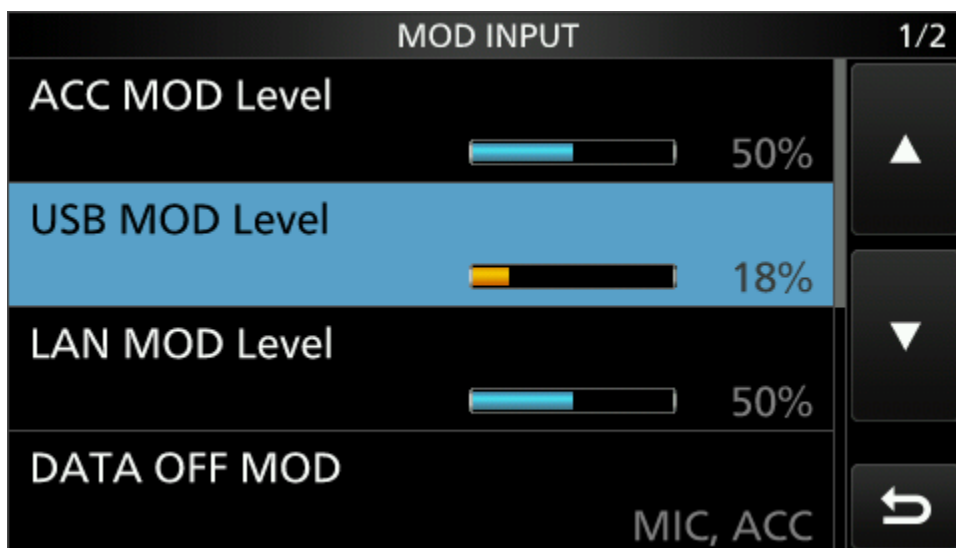
ICOM IC-9700

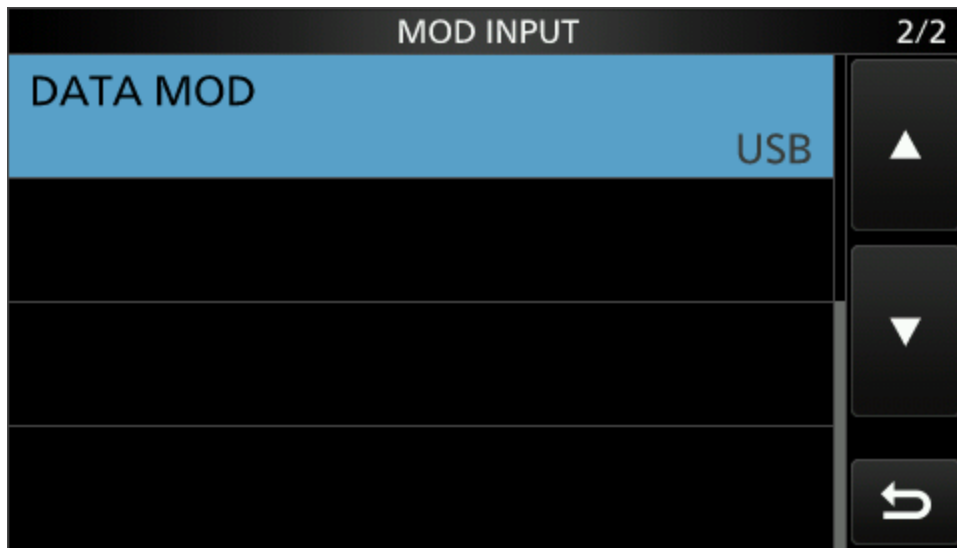
These settings will work with Fldigi (and all associated FL packages), WSJT-X, and SatPC32 all on the same computer providing the same USB port is used.

Select Menu/Set/Connectors/page 2/MOD Input

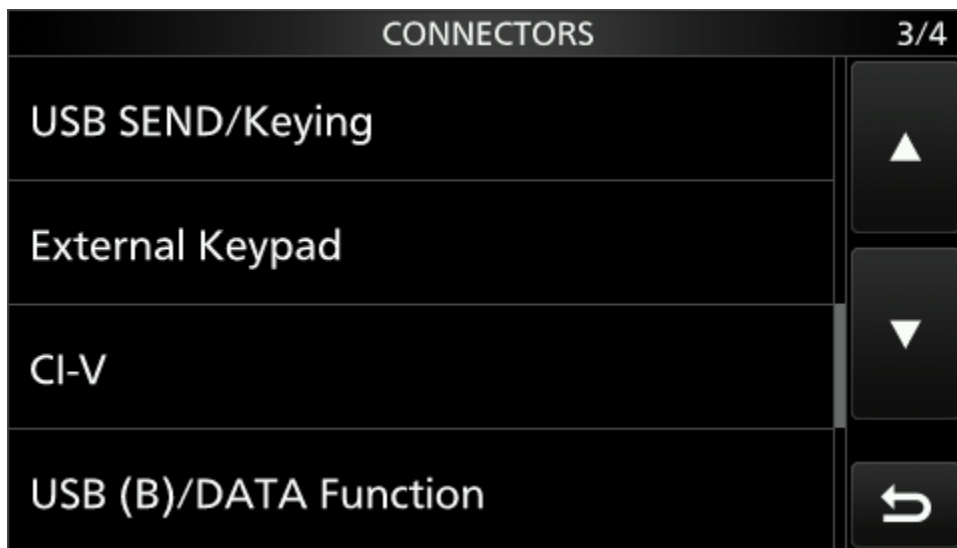


Make your settings as shown:





Now go back one menu to connectors and select CI-V on page 3



Make your settings as shown:

CI-V1/3

CI-V Baud Rate	19200	▲
CI-V Address	A2h	▼
CI-V Transceive	ON	↶
USB/LAN...→REMOTE Transceive Address	00h	↶

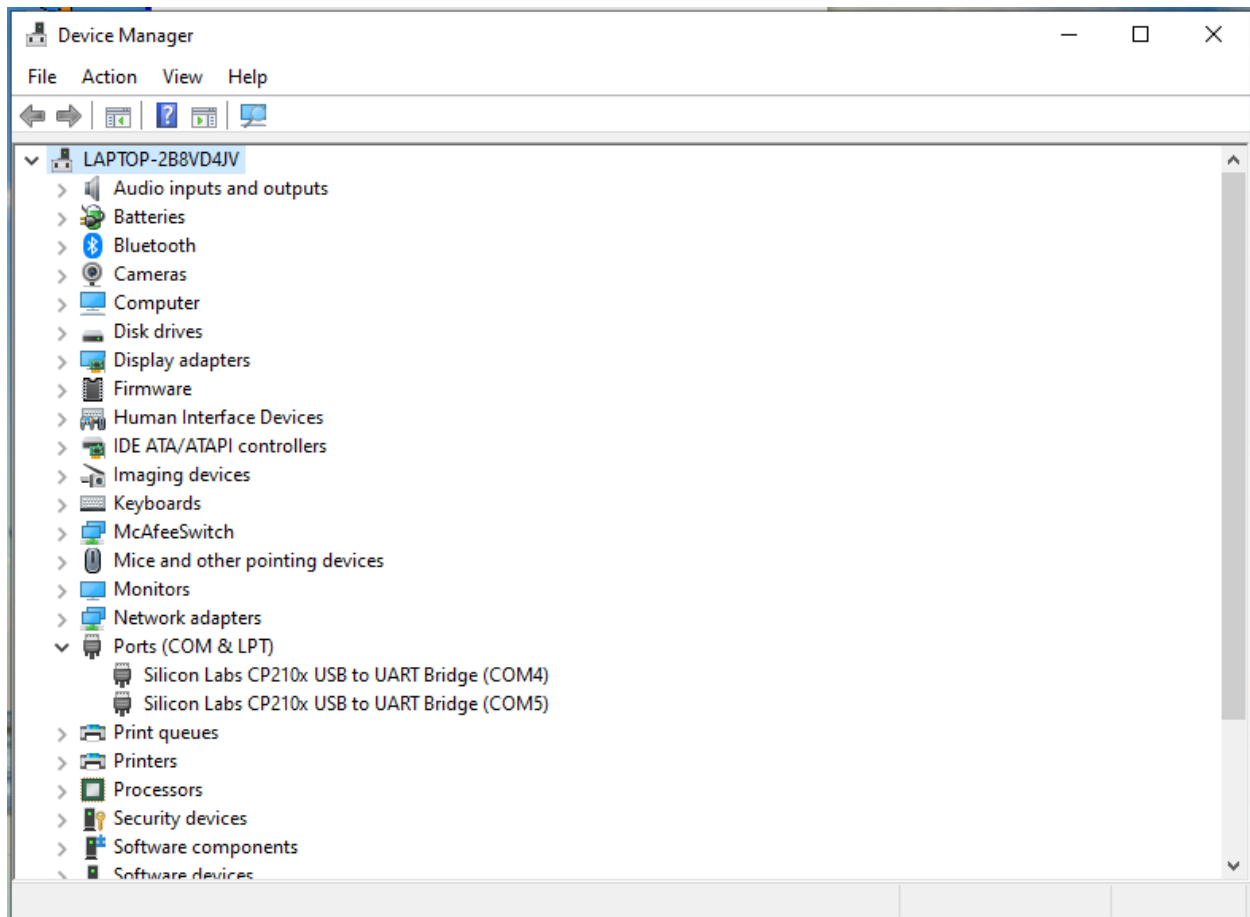
CI-V2/3

CI-V USB Port	Unlink from [REMOTE]	▲
CI-V USB Baud Rate	115200	▼
CI-V USB Echo Back	ON	↶
CI-V DATA Baud Rate	19200	↶

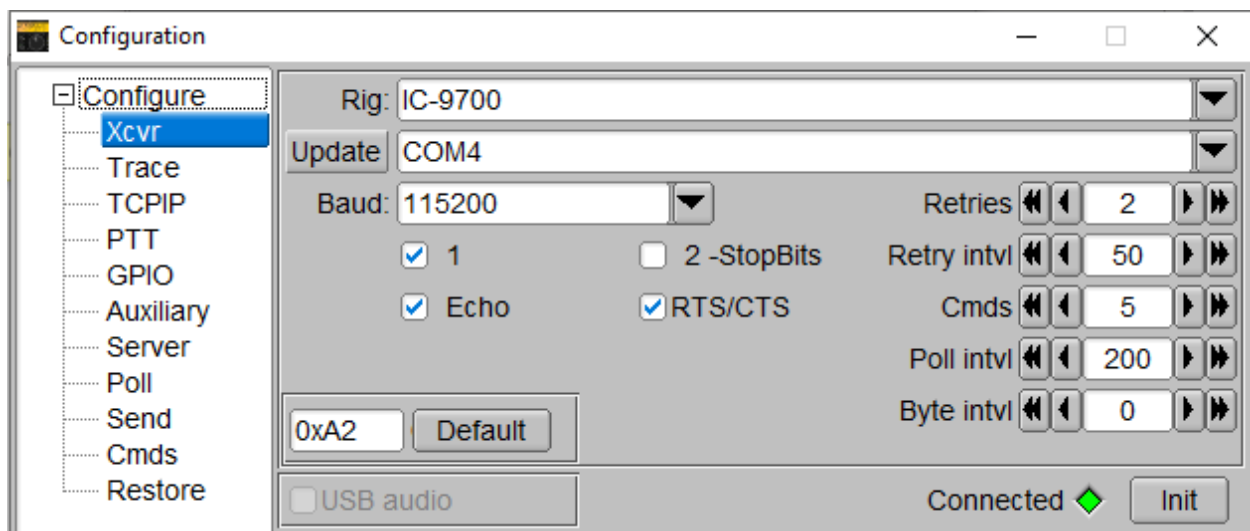
CI-V3/3

CI-V DATA Echo Back	ON	▲
		▼
		↶

Now on to the software. We will start with FLrig. Right click on start menu icon and select “device manager”. We need to identify your two com ports for the radio. They will be located here:



Write both of those com ports down. Also make note of what USB port you are using and make sure you always use the same one. Now download, install and open FLrig. Exit any error messages and select Config/Setup/Transceiver. Make your settings as shown using your com ports you recorded:



Start with the lowest numerical com port first with FLrig. It will work most of the time. If it does not try the other one. After the settings are as shown, clicking the “Init” button should result in a green diamond. Lastly check the PTT tab and make sure that “PTT CAT” is the only box checked. Now download and install FLDigi. Open the program and exit through any errors. Go to file menu “Configure” and select “Config Dialog”. Fill out the station page first.

The screenshot shows the 'Fldigi configuration' window with the 'Operator-Station' tab selected. The left sidebar lists various configuration categories, with 'Operator-Station' highlighted. The main area contains the following fields:

- Station Callsign: KC3NZT
- Operator Callsign: KC3NZT
- Operator Name: Harvey
- Antenna: Elk 5 Element Log Periodic
- Station QTH: Malvern, PA USA
- Station Locator: FN20FA
- State / Provinces: Pennsylvania (dropdown) PA
- Counties / Regions: Chester (dropdown) CHE

At the bottom, there are buttons for 'Collapse Tree', 'Restore defaults', 'Save', and 'Close'.

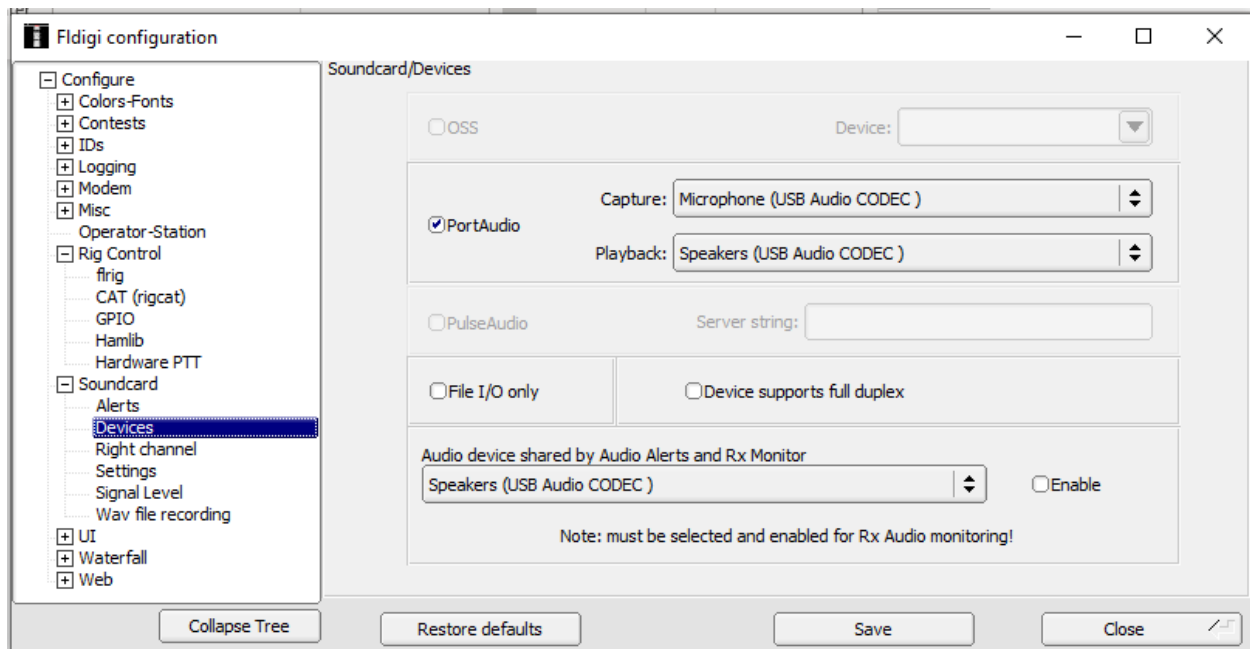
Next select Rig control/flrig and make settings as shown:

The screenshot shows the 'Fldigi configuration' window with the 'Rig Control/flrig' tab selected. The left sidebar shows 'Rig Control' expanded, with 'flrig' highlighted. The main area contains the following settings:

- flrig is the preferred method of transceiver control
- ☒ Enable flrig xcvr control with fldigi as client
- ☒ Shutdown flrig with fldigi
- flrig xmllrpc server parameters
these controls are mirrored on the IO configuration tab
- Addr: 127.0.0.1
- Port: 12345
- Buttons: Default, Reconnect
- *Disable PTT keys modem if multiple instances of fldigi (client) are connected to a single flrig (server).
- ☒ Flrig PTT keys modem

At the bottom, there are buttons for 'Collapse Tree', 'Restore defaults', 'Save', and 'Close'.

Next move to soundcard/devices and make settings as shown:



Next, download and install WSJT-X. As before, exit through any errors that pop up. Then go to file/settings. Make settings as shown:

General

Radio

Audio

Tx Macros

Reporting

Frequencies

Colors

Advanced

Station Details

My Call:

My Grid:

☐ AutoGrid

IARU Region:

▾

Message generation for type 2 compound callsign holders:

▾

Display

☐ Start new period decodes at top

Font...

☒ Blank line between decoding periods

Decoded Text Font...

☒ Display distance in miles

☒ Tx messages to Rx frequency window

☒ Show DXCC, grid, and worked-before status ☐ Show principal prefix instead of country name

Behavior

☐ Monitor off at startup

☒ Enable VHF/UHF/Microwave features

☐ Monitor returns to last used frequency

☐ Allow Tx frequency changes while transmitting

☒ Double-click on call sets Tx enable

☐ Single decode

☒ Disable Tx after sending 73

☐ Decode after EME delay

☒ Calling CQ forces Call 1st

☐ Alternate F1-F6 bindings

Tx watchdog: ▴ ▾

☐ CW ID after 73

Periodic CW ID Interval: ▴ ▾

General Radio Audio Tx Macros Reporting Frequencies Colors Advanced

Rig: Icom IC-9700 Poll Interval: 1 s

CAT Control

Serial Port: COM4

Serial Port Parameters

Baud Rate: 115200

Data Bits

☒ Default ☐ Seven ☐ Eight

Stop Bits

☒ Default ☐ One ☐ Two

Handshake

☒ Default ☐ None

☐ XON/XOFF ☐ Hardware

Force Control Lines

DTR: RTS:

PTT Method

☐ VOX ☐ DTR

☒ CAT ☐ RTS

Port: COM5

Transmit Audio Source

☐ Rear/Data ☒ Front/Mic

Mode

☐ None ☐ USB ☒ Data/Pkt

Split Operation

☐ None ☐ Rig ☒ Fake It

Test CAT Test PTT

General Radio Audio Tx Macros Reporting Frequencies Colors Advanced

Soundcard

Input: Microphone (USB Audio CODEC) Mono

Output: Speakers (USB Audio CODEC) Mono

Save Directory

Location: C:/Users/s08mb/AppData/Local/WSJT-X/save Select

AzEl Directory

Location: C:/Users/s08mb/AppData/Local/WSJT-X Select

Remember power settings by band

☐ Transmit ☐ Tune

If at any point you get a high-pitched noise coming from your speakers during transmit, Check this menu and ensure the settings are as above.

General	Radio	Audio	Tx Macros	Reporting	Frequencies	Colors	Advanced
Logging <input checked="" type="checkbox"/> Prompt me to log QSO Op Call: <input type="text"/> <input type="checkbox"/> Log automatically (contesting only) <input type="checkbox"/> Convert mode to RTTY <input type="checkbox"/> dB reports to comments <input type="checkbox"/> Clear DX call and grid after logging							
Network Services <input checked="" type="checkbox"/> Enable PSK Reporter Spotting							
UDP Server UDP Server: <input type="text" value="127.0.0.1"/> <input type="checkbox"/> Accept UDP requests UDP Server port number: <input type="text" value="2237"/> <input type="checkbox"/> Notify on accepted UDP request <input type="checkbox"/> Accepted UDP request restores window							
Secondary UDP Server (deprecated) <input type="checkbox"/> Enable logged contact ADIF broadcast Server name or IP address: <input type="text" value="127.0.0.1"/> Server port number: <input type="text" value="2333"/>							

That is it for WSJT-X. Now you can go back to the Radio tab and select Test CAT. If successful it should look like this:

General	Radio	Audio	Tx Macros	Reporting	Frequencies	Colors	Advanced
Rig: <input type="text" value="Icom IC-9700"/> Poll Interval: <input type="text" value="1 s"/>							
CAT Control Serial Port: <input type="text" value="COM4"/> Serial Port Parameters Baud Rate: <input type="text" value="115200"/> Data Bits <input checked="" type="radio"/> Default <input type="radio"/> Seven <input type="radio"/> Eight Stop Bits <input checked="" type="radio"/> Default <input type="radio"/> One <input type="radio"/> Two Handshake <input checked="" type="radio"/> Default <input type="radio"/> None <input type="radio"/> XON/XOFF <input type="radio"/> Hardware Force Control Lines DTR: <input type="text" value=""/> RTS: <input type="text" value=""/>				PTT Method <input type="radio"/> VOX <input type="radio"/> DTR <input checked="" type="radio"/> CAT <input type="radio"/> RTS Port: <input type="text" value="COM5"/> Transmit Audio Source <input type="radio"/> Rear/Data <input checked="" type="radio"/> Front/Mic Mode <input type="radio"/> None <input type="radio"/> USB <input checked="" type="radio"/> Data/Pkt Split Operation <input type="radio"/> None <input type="radio"/> Rig <input checked="" type="radio"/> Fake It			
<input type="button" value="Test CAT"/>				<input type="button" value="Test PTT"/>			

Please go to the bottom of the guide to see how to modify your WSJT-X log file to be able to import to LoTW and QRZ.

IC-7300

These settings will work with FLDigi (and all associated FL packages), WSJT-X, and Winlink Express all on the same computer providing the same USB port is used.

Select Menu/Set/Connectors/page 1 make settings as shown:

CONNECTORS		1/4
ACC/USB Output Select	AF	▲
ACC/USB AF Output Level	<div><div></div></div> 50%	▼
ACC/USB AF SQL	OFF (Open)	↶
ACC/USB AF Beep/Speech... Output	OFF	↷

Next select page 2 and make settings as shown:

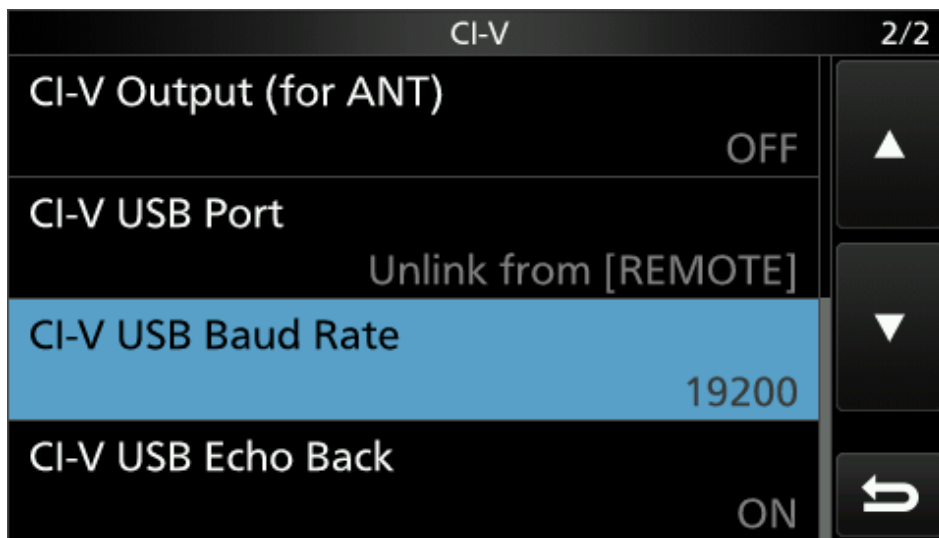
CONNECTORS		2/4
ACC/USB IF Output Level	<div><div></div></div> 50%	▲
ACC MOD Level	<div><div></div></div> 50%	▼
USB MOD Level	<div><div></div></div> 23%	↶
DATA OFF MOD	MIC	↷

Next select page three and make settings as shown. Then select menu item CI-V

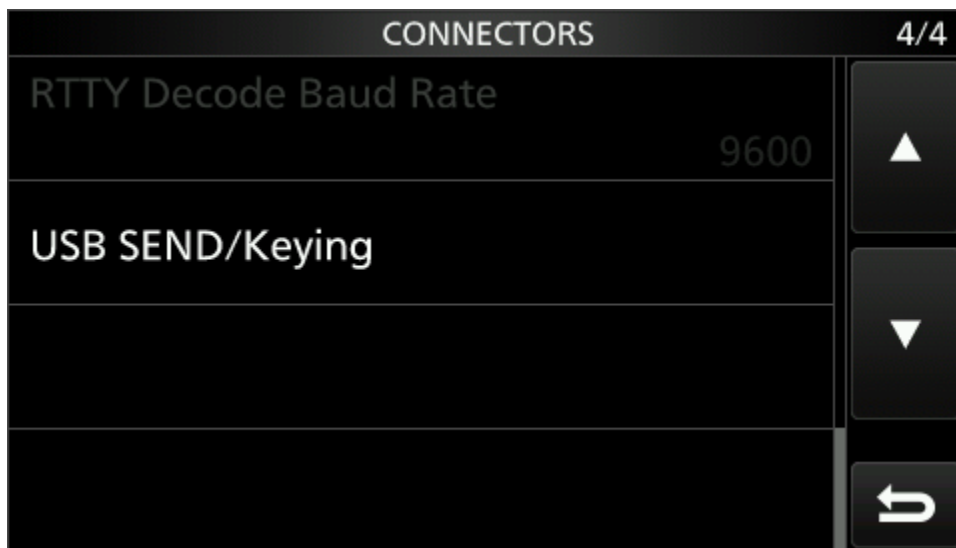
CONNECTORS		3/4
DATA MOD	USB	▲
External Keypad		▼
CI-V		
USB Serial Function	CI-V	↶

Make CI-V settings as shown:

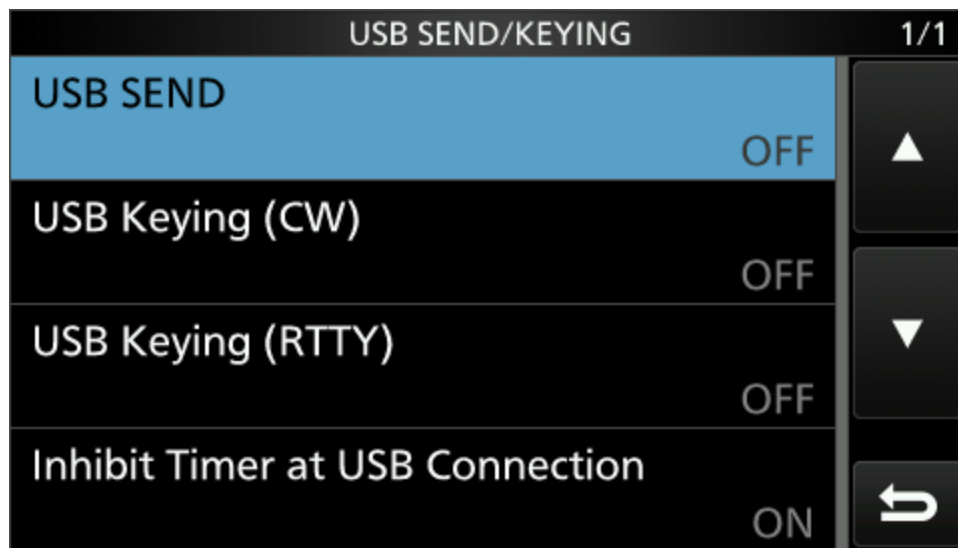
CI-V		1/2
CI-V Baud Rate	19200	▲
CI-V Address	94h	▼
CI-V Transceive	OFF	
CI-V USB→REMOTE Transceive Address	00h	↶



Now go back one screen to Connectors page 4/4



Select USB SEND/Keying and make settings as shown:



That's it for radio settings on the IC-7300. Now we'll take a look at software settings. Download and install FLrig and FLdigi. Open FLrig and clear out any errors. Go to Config/Setup/Transceiver. Change rig to IC-7300, Select the comm port found in device manager as shown above in IC-9700 guide, then select 19200 for baud rate. Lastly, ensure that the rig address is 0x94 which is the default address for the IC-7300. You are now ready to hit "Init" and try out the connection.

Now open FLdigi and select Configure/Config Dialog. Setup operator-station, an example is in the above IC-9700 section. All rig control and sound card settings are exactly as described in the IC-9700 guide. You should be set to transmit at this time. In the top right of the main window, select RxID and TxID. This will allow the software to automatically switch modes to accommodate the signal you are receiving. It is a good idea to go to the configure menu and select Save config. After that, a restart of the program should show that the VFO is tracking with the radio. Tutorials on how to operate the software are available online and will not be covered here.

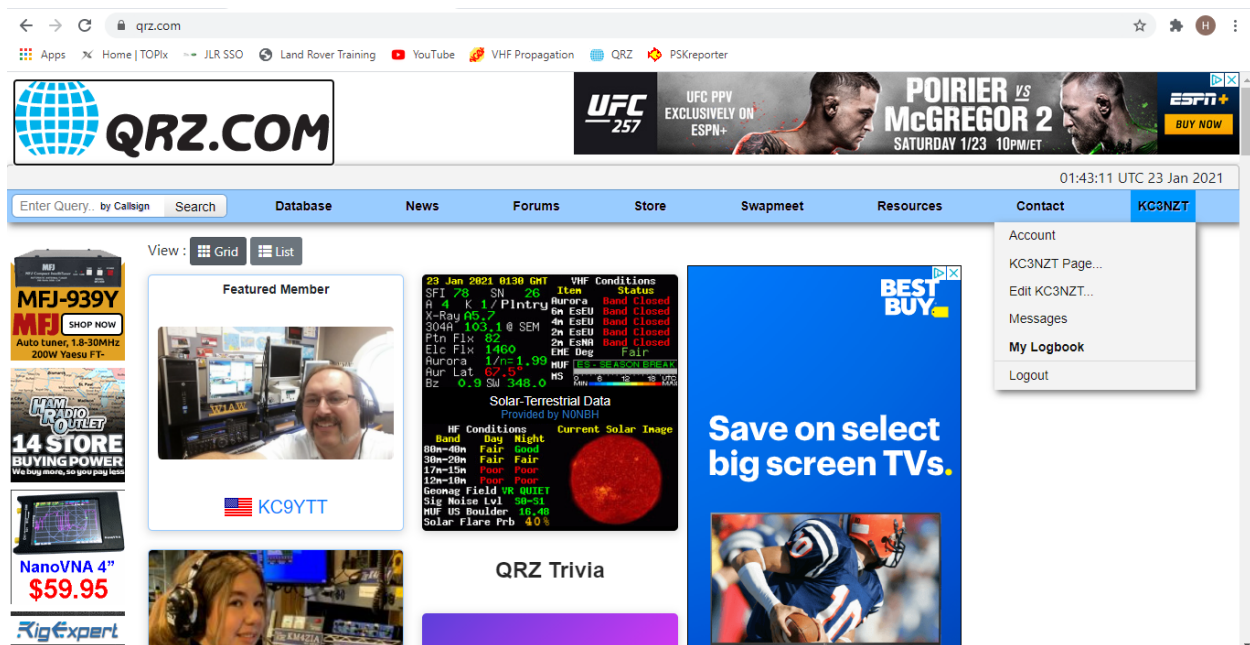
Likewise, WSJT-X settings are similar. The only settings that requires changing from the IC-9700 guide is the rig and baud rate. Select file/settings/radio to change those settings to Icom IC-7300 and 19200. Now select Test CAT and Test PTT. Everything should be operating.

Modifying WSJT-X Logbook Header

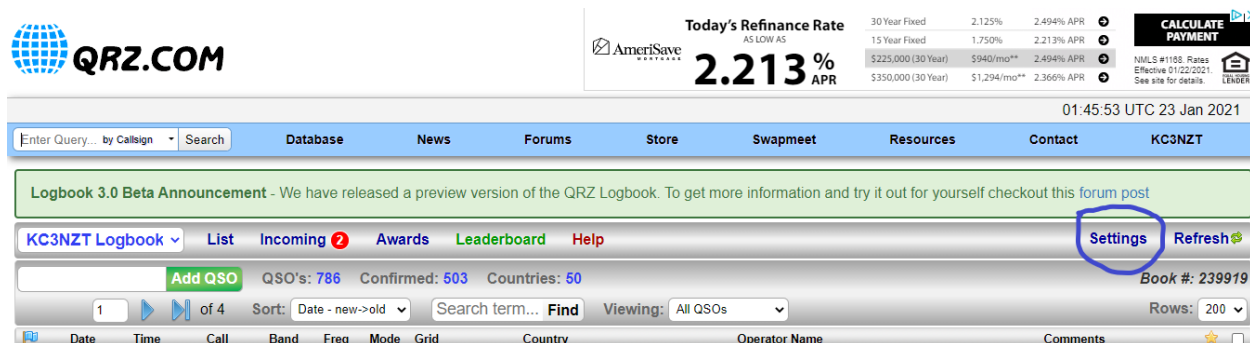
In order to import settings to QRZ.com and LoTW, the log document for WSJT-X needs to be modified. Before this can be done, a contact must be made. So go play radio and make your first contact. Once concluded, a pop-up comes up to log the contact. Press the button that says "Log". Now from the main WSJT-X window go to File/Open log directory. It will open a window with many files in it. You are looking for one called "wsjtx_log.adi". Right click the file and choose "open with". Choose notepad. The very top of the document contains the header. Normally you will see at the end "<eh>". That is the section to modify. It should read as such:



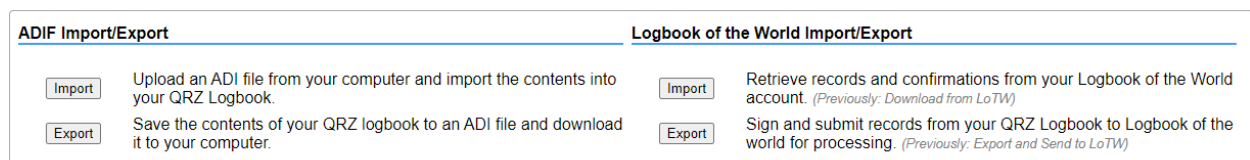
Once modified, save the document. Close the window. Now is a good time to create a shortcut to an easily located spot on your computer. Make sure it is a shortcut and not a copy. Now we will upload the file to QRZ.com and export to LoTW. This requires that you setup a QRZ logbook and already have a LoTW account. Details on how to do this are covered elsewhere on the interwebs. Log into your QRZ account and select your log book as shown below:



Now select settings on the right-hand side as show:



No scroll down to the section that looks like this and select import on the left hand side.



Select you file from the easily remembered location that you placed the shortcut. It will import and automatically sort based on QSO date. If you wish to export to LoTW you can do so by selecting the export button on the right-hand side of the same box. Now QRZ and LoTW have you log file from the software.

Now get on the air and make some more contacts!