

Please use this setup by N1RWY to start with (I've modified them to fit the FT-991A

This set up only concerns Winmor and not Packet Winlink

SET UP for the FT-991A using the internal sound card

(These directions are based on a Win 10 OS. It is good practice to install the drivers before connecting the radio.)

Step 1. Read this post from start to finish

Step 2. Read it again

Step 3. Follow the steps below and do them in order

Step 4. If something isn't working, revert to step 1

A. DO NOT connect a USB cable from your computer to the FT-991 until you load the drivers listed below.

B. Go to the [Yaesu web site](#) and download the drivers for the FT-991. The drivers you are looking for are the: [FT-991/ SCU-17 USB Driver \(Virtual COM Port Driver\)](#) (3.74 MB).

Some users might have a USB to serial converter based on the chips (Prolific, FTDI). These drivers will not work with the 991/991a. You need to download and install the Yaesu drivers.

Download the [FT-991/ SCU-17 USB Driver \(Virtual COM Port Driver\)](#) and follow the directions to install them on your computer. *(Just follow the prompts of the software during install and you will be fine.)*

What will happen is that you will end up installing:

TWO (2) COM ports.

One is an ENHANCED COM port (in **my** case COM 4)
the other is a Standard COM port (in **my** case COM 5)

Now that you have installed the drivers, now you can connect a USB cable from the PC to the 991. You might even hear the PC making some system beep noises as it realizes that it has been connected to an external USB device.

With the 991 **connected** you can check that these COM ports were installed on your machine by going to **Control Panel**, then **Device Manager**, and look under the "**Ports (COM & LTP)**" drop down. You should see two newly added ports:

- Silicon Labs Dual CP210x USB to UART Bridge: Enhanced COM Port (COM 4) (<-OR SOME OTHER NUMBER)
- Silicon Labs Dual CP210x USB to UART Bridge: Standard COM Port (COM 5) (<-OR SOME OTHER NUMBER)

Again, your new ports might be numbered 3 and 4, or 6 and 7, or some other combination. The **key** is that there are **TWO of them**, one is labeled Enhanced, the other Standard.

Note: *These ports will NOT show up unless you have the 991/991a connected to the computer via the USB cable.*

Please note that it can happen that the drivers are not installed but they appear in the device manager (under COM Ports) however without port number. In this case you have to install them manually leaving the USB cable connected. Click on the com port in device mgr and then on update driver. Do this for both Enhanced and Standard COM ports. This happened to me- K3EK

I recommend the [Triplite USB 2.0 Hi-Speed A/B Cable with Ferrite Chokes \(M/M\), 3-ft.](#) cable for the connection to the radio from the computer. Other cables do not have the ferrite or may not have the shielding that you need to have within the cable. MANY errors that show up with software crashing or Hamlib pop up errors, of folks crashing software when on 40m or high power on 20m are due to the cheap USB cables without shielding out there. Get a quality cable and be done with it. Lack of grounding and RFI issues are quick to present themselves when using digital modes. If your keyboard starts to lock up, or your mouse, or the software starts acting sluggish.. check your grounding and address RFI issues.

**** NOTE! ****

If you have different radios that you are connecting to the same laptop for digital (*in my case, a FTDX1200 and the FT-991*), PAY ATTENTION to the different COM ports that are assigned and make sure your are using the correct “pair” of standard and enhanced ports.

Know what you have installed.

Check them in the System Properties!

Once the drivers are loaded, it is a matter of getting the digital software that you want installed and setting it up to talk with the USB port on your laptop.

Remember:

USB drivers (Win 10) **HAVE TO BE** installed first.

DON'T SKIP THIS.

If you do not install the driver first, NONE of this will work.

Just stop reading now. Stop reading and install the driver from the Yaesu site. [Here is the link](#) again.

Once that is done, then move forward to the next step.

Yaesu FT-991/FT-991A MENU SETUP:

These are the MENU settings that I changed from the default values.

031 CAT RATE 9800 (*just make sure the software and radio match the same CAT RATE*)

032 CAT TOT 100ms

033 CAT RTS Enable

062 Data Mode OTHERS (NOT PSK – change to OTHERS)

064 OTHER DISP (SSB) = 1500 Hz

065 OTHER SHIFT (SSB) = 1500 Hz This widens the audio bandwidth

066 DATA LCUT FREQ = OFF

068 DATA HCUT FREQ = OFF

070 DATA IN SELECT = REAR

071 DATA PTT SELECT = RTS

072 DATA PORT SELECT = USB

Yaesu FT-991 Screen settings:

These are the settings on the main screen of the FT-991 that I adjusted (via the F – M List).

MODE: DATA -USB (NOT USB), choose the **DATA-USB** setting.

WIDTH: 2400 or 3000

METER: ALC (I use an external meter to watch RF power out)

RF PWR: 8-50w *start low and work up.*

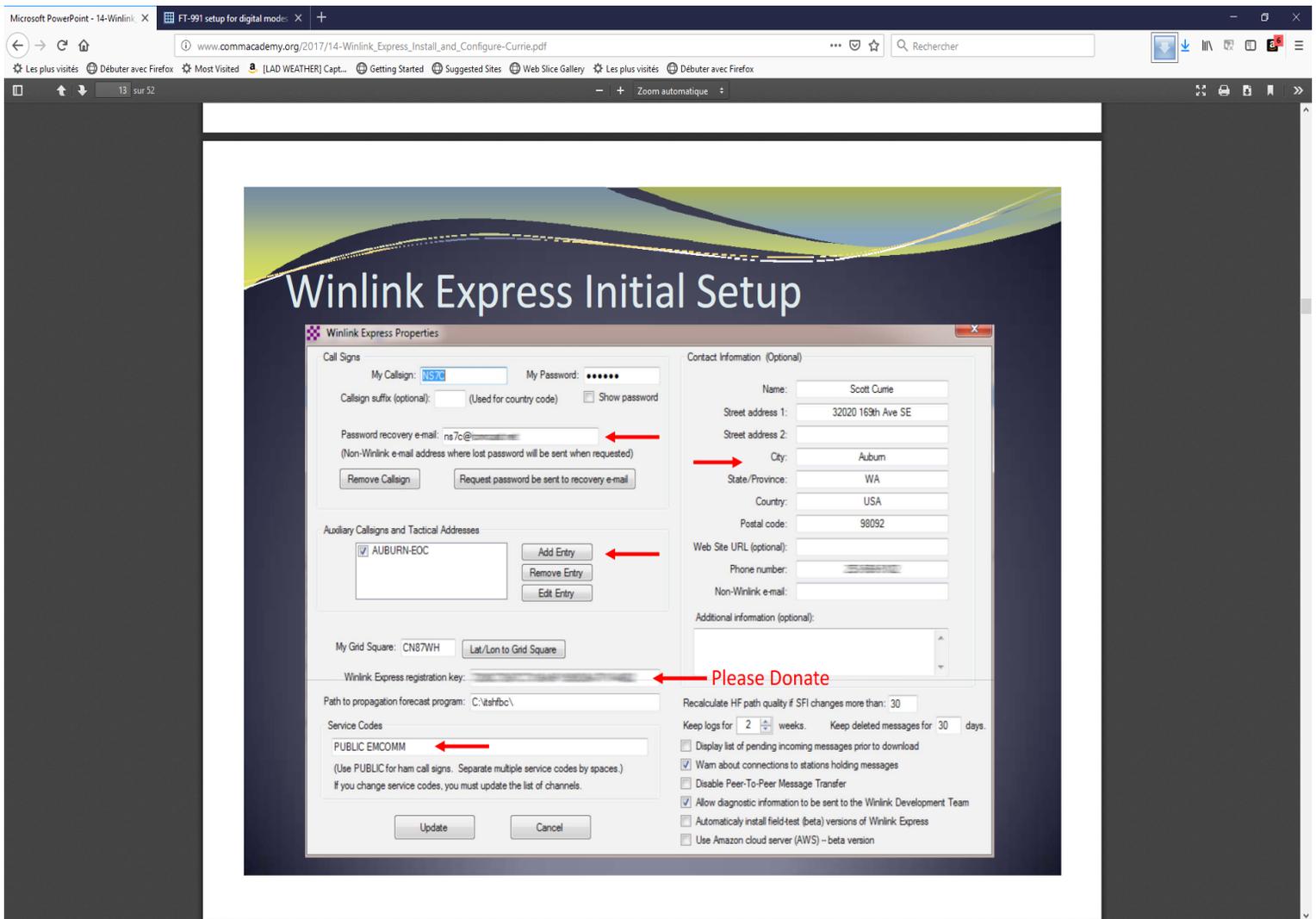
WIDTH: 3000

NAR/WIDE: W 3000

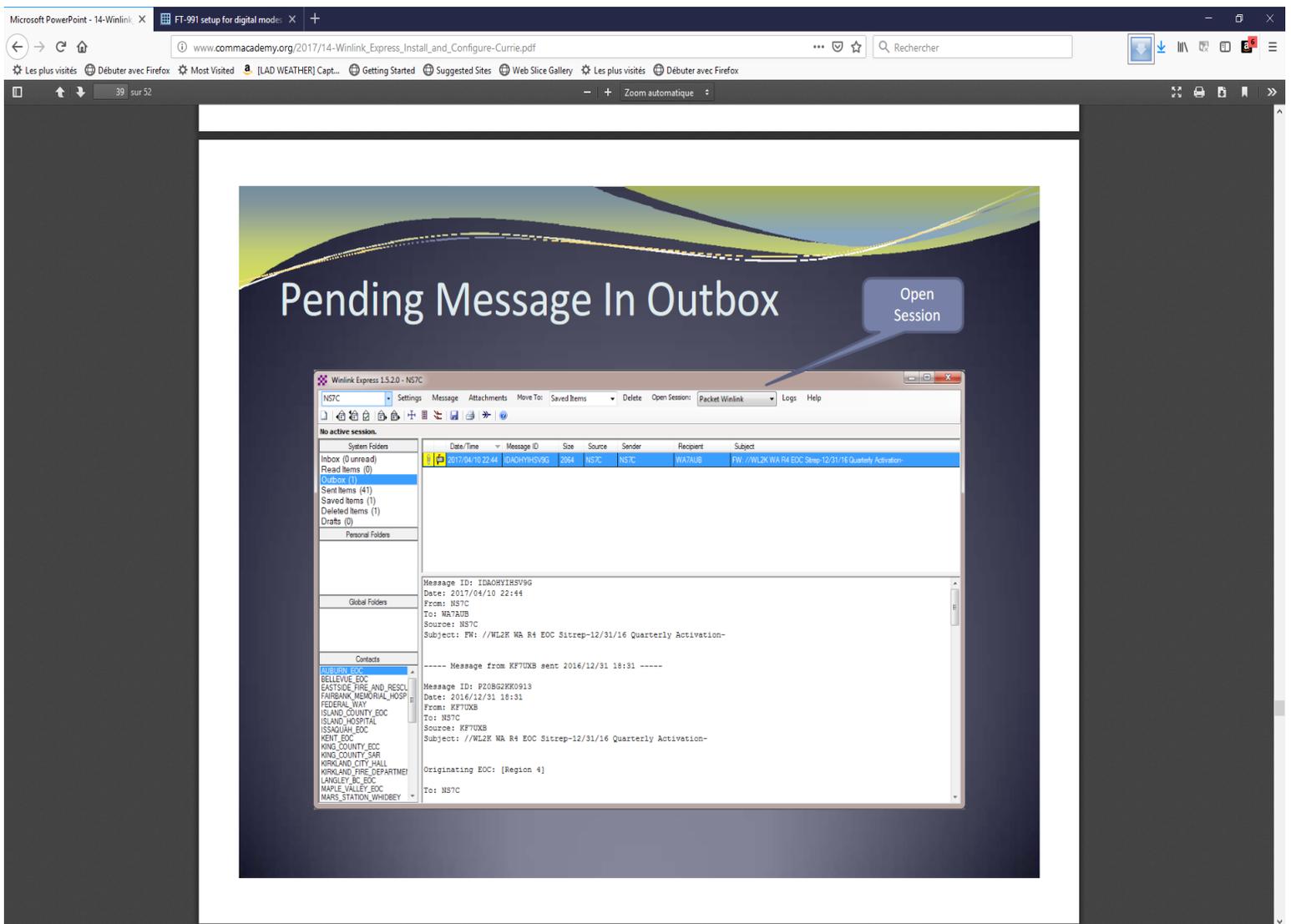
DT Gain: 6 *** IMPORTANT ***

The DT Gain defaults to 50! This will overdrive the rigs modulator which will cause unwanted audio harmonics. Not good. Turn the DT Gain setting down to about 4, and start working your way back up, watching for ALC on the meter as well as the power out that you want. As you move the DT Gain setting back up (higher), you will see your power level increase as well as ALC levels. Find the happy medium of NO ALC showing on the meter. Excessive ALC indication is a sign that the audio drive is too high and distortion is most likely happening.

Winlink Setup



When you open Winlink you get to this page (or via settings from this page)



There you fill in your personal info as shown. You can enter a second call sign if necessary but you have to enter a valid Internet email address so that Winlink can reach you directly. After this you close the page and open a Telnet session (via the menu) You will receive a confirmation message from Winlink.org with your Winlink address (call sign@winlink.org). Winlink will ask you to enter a registration key but you can use it without, however it's better to donate an register. It's only a one time amount of \$ 30 and you will help Winlink.

Once you have got your address you can start sending and receiving messages via Telnet i.e. Internet. But what is interesting is to use Winmor which allows you to receive and send mails via HF. I do not (yet) use packet. It's less exciting to use a local 2meter repeater than to send a mail to a station 2000 miles away !

Winmor setup

Open a Winmor session via the main menu : open session > Winmor

Go to the speaker icon in the task bar and right click on it.

Click on the audio menu. A window will open. Go to sounds > playback and activate (set default) the USB codec speakers; then go to recording and activate the Microphone USB Codec.

Go back to playback and highlight the Codec speaker. Then click on properties > level. Make sure to set the max level. Same thing for the Microphone Codec level.

Back to Winmor. In settings > rig control you'll have to choose your radio FT-991A. Mode USB

Serial port to use : your enhanced COM port, baud rate (9600). Enable RTS, enable DTR

PTT Port : FT-991A

Please check that the bauds rates are set the same for the port and the radio.

The screenshot shows a Windows desktop with several overlapping windows. In the background is an OpenOffice Writer window titled 'FT-991A-Setup.odt'. Overlaid on it are three Winmor-related windows:

- WINMOR Sound Card TNC Ver:1.5.13.0 Port:8500**: Shows connection status as 'DISCONNECTED', 'TCP' and 'Capture OK' buttons, and a 'Waterfall 2KHz' display.
- Winmor Winlink Session - FSMWA**: Shows session controls like 'Exit', 'Settings', 'Start', 'Stop', and 'Abort'.
- Winmor Winlink Settings**: A configuration dialog with the following settings:
 - Radio Selection: Select Radio Model: Yaesu FT-991/A, Antenna Selection: Internal 1
 - Icom Address: 80
 - USB: USB, USB Digital, FM, Use Internal Tuner
 - Radio Control Port: Serial Port to Use: COM20, Baud: 9600, Enable RTS: , Enable DTR: , TTL:
 - PTT Port (Optional): Serial Port to Use: FT-991/A, Baud: 9600, Enable RTS: , Enable DTR:

The OpenOffice Writer document contains the following text:

Go to the speaker icon in the task bar and right click on it. Click on the audio menu. A window will open. Go to sounds > USB codec speakers; then go to recording and activate the Microphone USB Codec. Click again on the speaker icon in the taskbar and this time go to recording. Check that the Winmor volume setting is present

In settings > rig control you'll have to choose your radio FT-991A. You do not need to enter anything else except for the baud rate

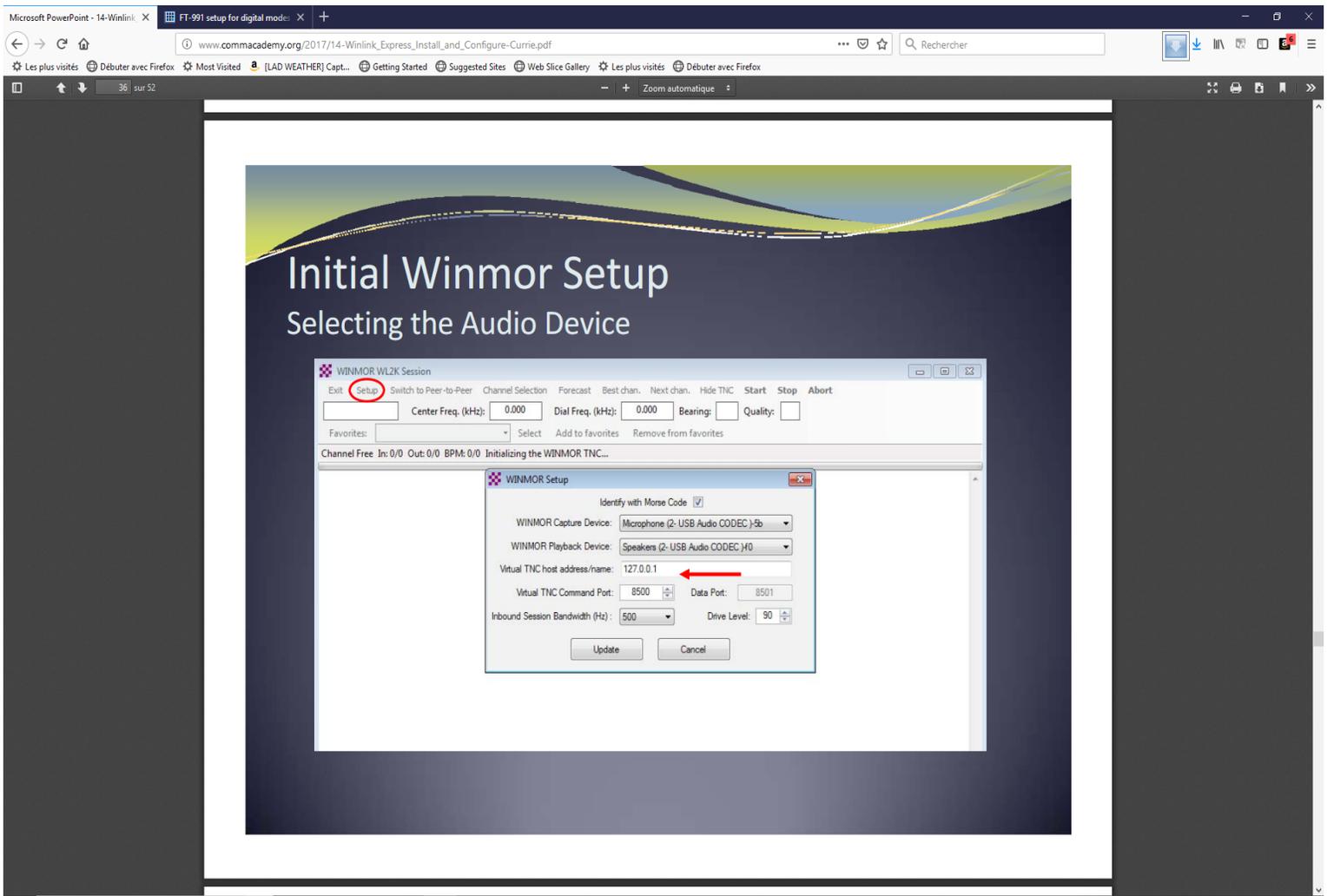
Please check that the bauds rates are set the same for the port and the radio.

Select the audio devices in settings>Winmor TNC setup
Capture device is the Microphone USB Codec
Playback device is the Speakers USB Codec

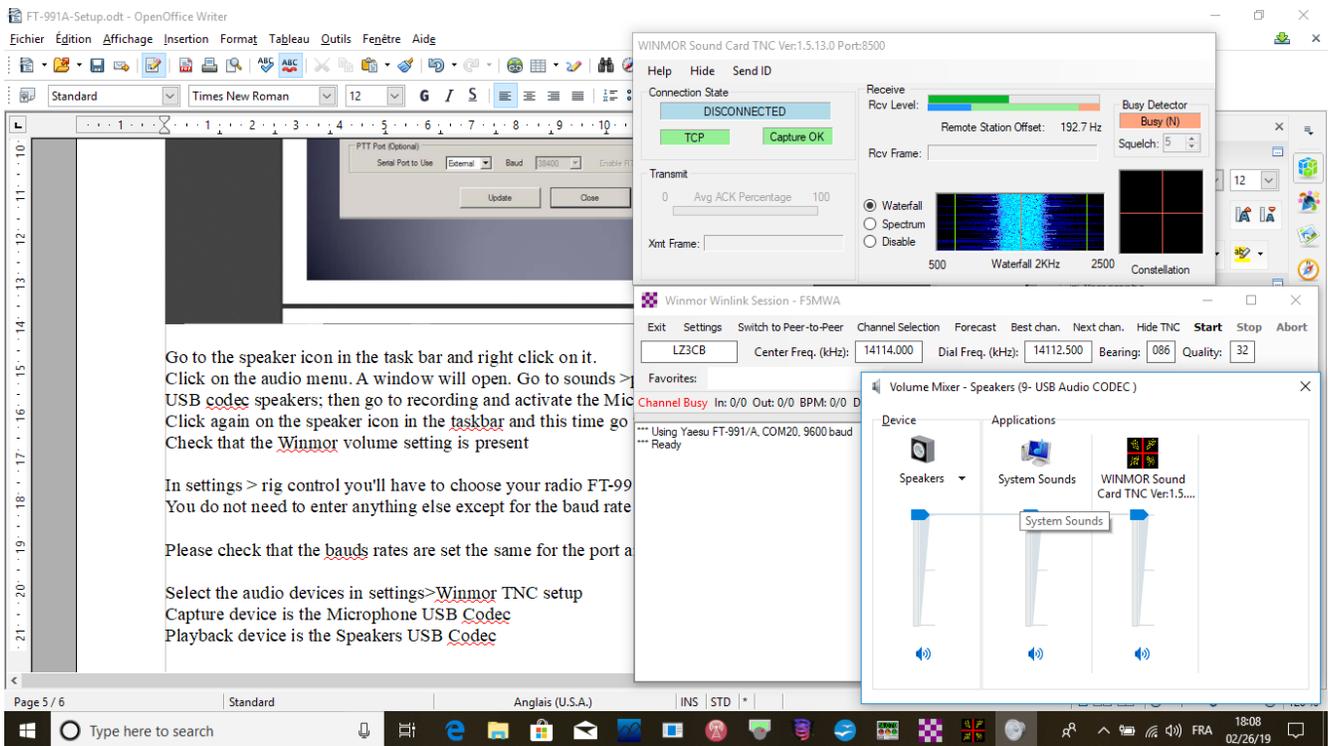
Select the audio devices in settings>Winmor TNC setup

Capture device is the Microphone USB Codec

Playback device is the Speakers USB Codec



Click again on the speaker icon in the taskbar and this time go to : Open volume mixer
Check that the Winmor volume setting slider is present



Still in settings make a test if your PTT works and if your 991A starts sending out a test signal

settings > transmit level test

Look at the receive bar in Winmor and try to keep it in the green zone with the sound levels.

Check the ALC of your transceiver during the test. Do not overload the audio.

Enclosed is a pdf file on Winlink 2000

I hope this helps