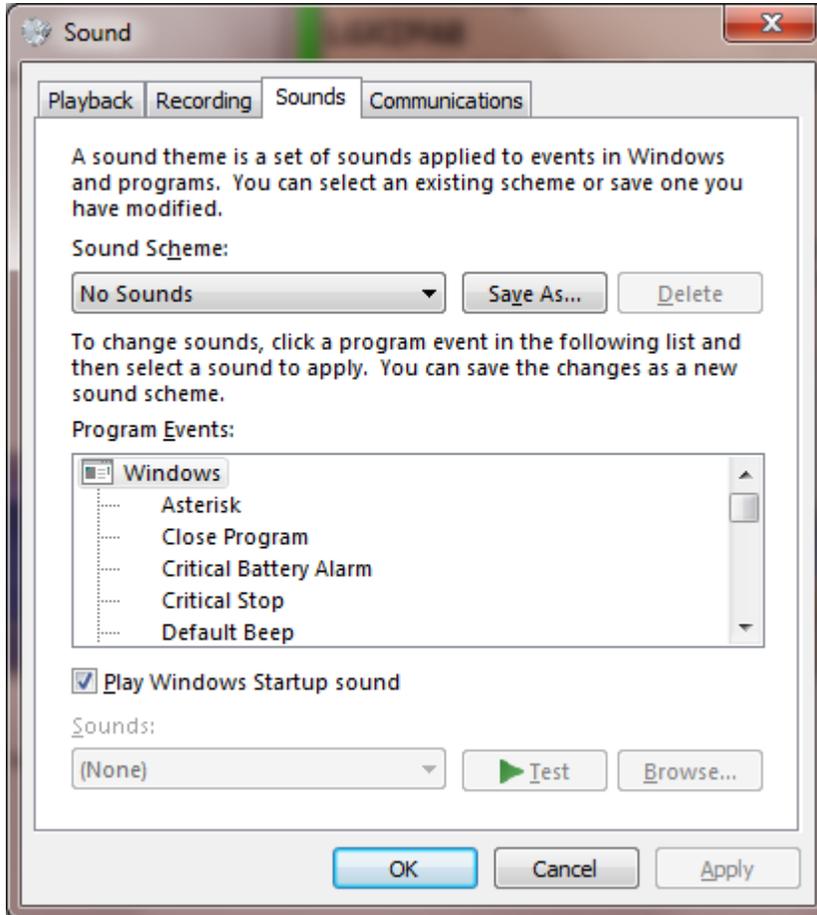


Disable Windows Sounds

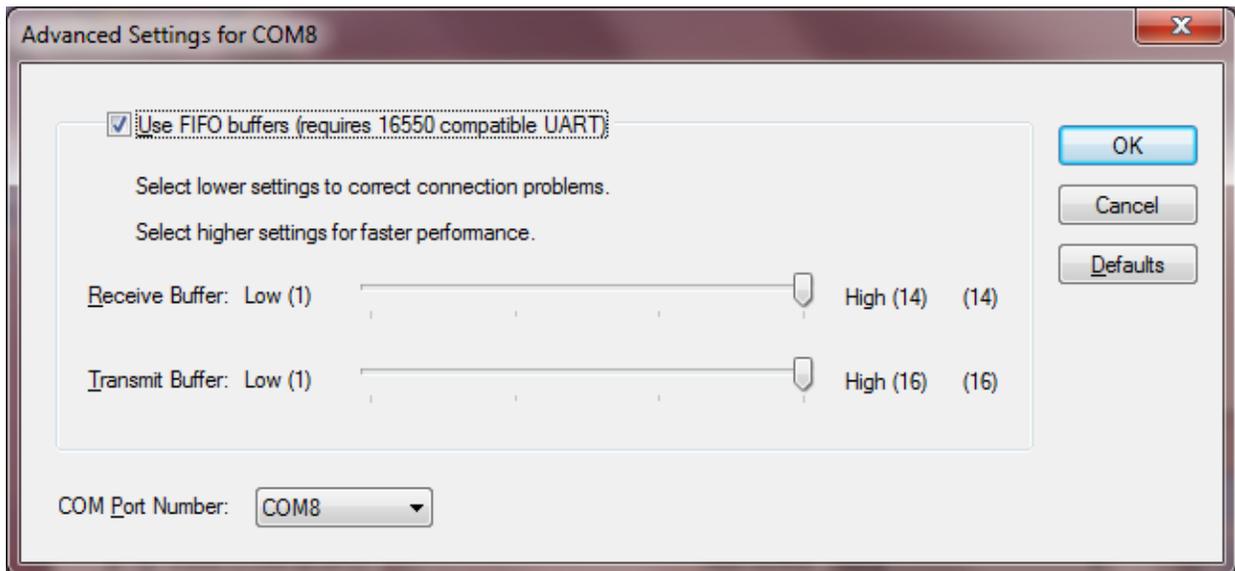
Users may want to disable the Windows Sounds so none of the Windows OS sounds are transmitted on the radio.



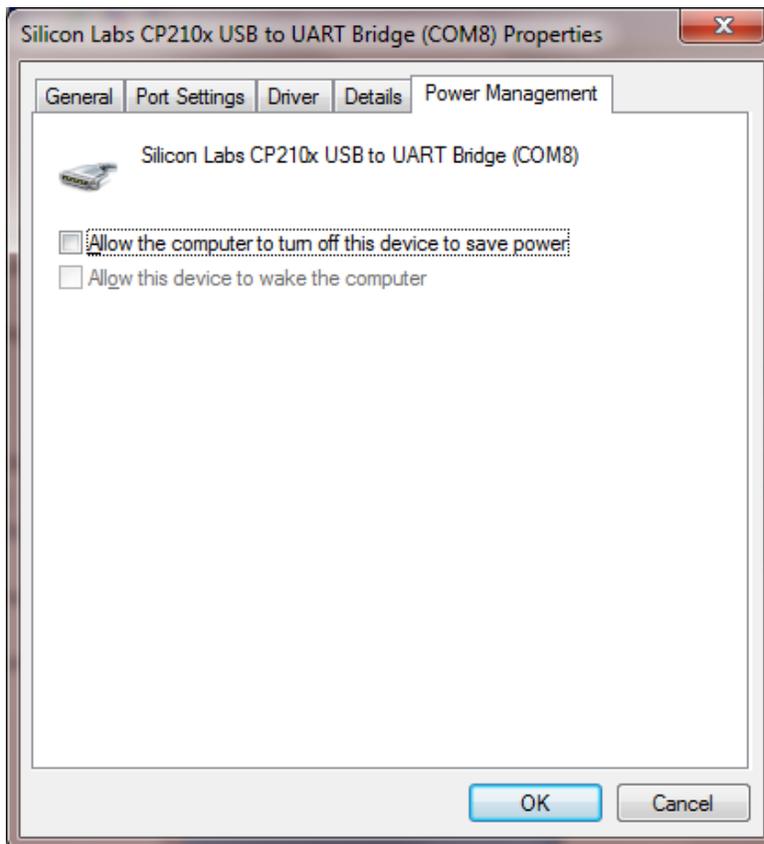
Install the Icom Drivers, Select COM port, Disable Power Option

Install the Icom COM port and Audio Drivers available from the Icom or Silicon Labs website. Icom provides installation instructions to install the COM port and audio drivers. If you have problems installing the Icom USB drivers and MicroHam router is installed, it may be necessary to remove the USB cable from the MicroHam device or un-install the MicroHam Router driver prior to installing the Icom USB drivers. Some Microham USB interfaces are powered from the USB port so removing the USB cable may be important.

With the radio turned **ON**, open the Windows Device Manager. In Ports(COM & LPT) right-click on "Silicon Labs CP210c USB to UART Bridge and select Properties. Select the Port Settings tab, click on Advanced and select a COM port number that you want to assign to the radio. I selected COM8 for my default. Do not select a port number above COM8.



Click on OK then select the Power Management tab and "uncheck" the option that allows Windows to turn **off** the device to save power.



Configuring the Icom Radio for Computer USB Radio Control

See the next section if you want to configure the IC-7300 radio control for use with the Spectrum Window.

In the Icom radio SET menu (not the N1MM Logger menu) select the following options:

CI-V Baud Rate = 19200

CI-V Address = (confirm that the factory default for your radio model is selected)

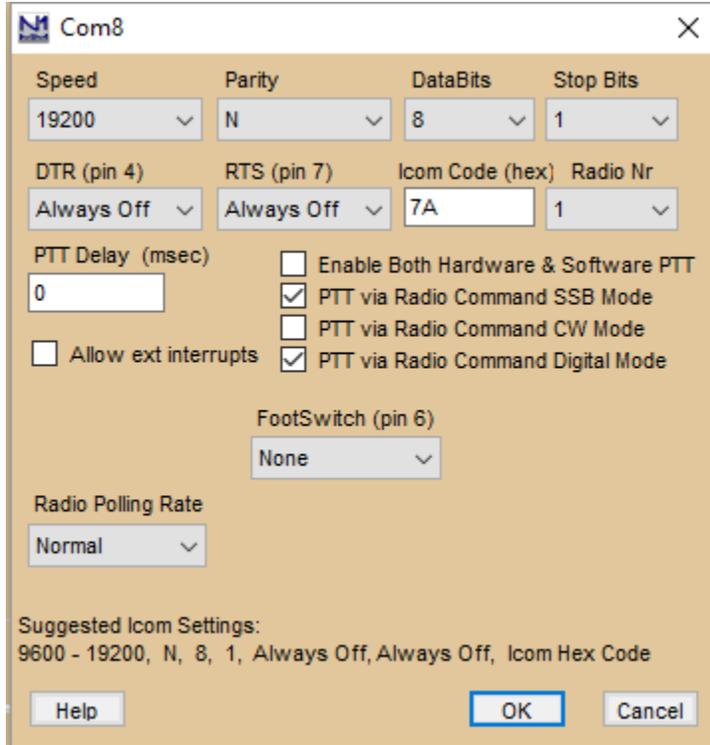
CI-V Transceive = OFF

USB Serial Function = CI-V

Decode Baud Rate = 19200

If the Icom radio is connected to the computer with the older serial CI-V interface, unplug the CI-V cable from the rear of the radio. Some users have reported that it prevents communications via the USB interface.

In Logger+, open Configurer select the COM port and set the radio communications for 19200, N, 8, 1, Always Off, Always Off. Set the Icom Code to your radio default. For SO1V/SO2V mode, set the Radio Nr box to 1.



The PTT options are already set to use the radio codec for digital and SSB modes. Unchecked the two PTT options if you are not using these features.

Click on OK and confirm that the radio communications functions correctly.

For all Icom radios except the IC-7300, the virtual radio COM port only exists when the radio is connected and turned On. Always exit Logger+ before turning the radio OFF.

Configuring the Icom Radio for Computer USB Radio Control and Spectrum Window

In the Icom radio SET menu (not the N1MM Logger menu) select the following options:

- Menu, Set, Connectors, CI-V Menu
 - CI-V Address = (confirm that the factory default for your radio model is selected)
 - CI-V Transceive = OFF
 - CI-V USB Port = Unlink from [Remote]
 - CI-V USB Baud Rate = 115200
 - CI-USB Echo Back = set to ON if you use DX4Win

- Menu, Set, Connectors menu
 - ACC/USB Output Select = AF
 - USB Serial Function = CI-V

If the Icom radio is connected to the computer with the older serial CI-V interface, unplug the CI-V cable from the rear of the radio. Some users have reported that it prevents communications via the USB interface.

In Logger+, open Configurer select the COM port and set the radio communications for:
115200, N, 8, 1, Always Off, Always Off.

If you want to send CW with the DTR pin set the radio communications to:
115200, N, 8, 1, CW, Always Off. In the radio SET menu change:
USB Keying (CW) = DTR.

The Icom Code needs to be set to the Icom code for your radio. 94 is the Icom code for the IC-7300. For SO1V/SO2V mode, set the Radio Nr box to 1.

The screenshot shows the 'Com8' configuration dialog box. The settings are as follows:

Speed	Parity	DataBits	Stop Bits
115200	N	8	1

DTR (pin 4)	RTS (pin 7)	Icom Code (hex)	Radio Nr
CW	Always Off	94	1

PTT Delay (msec): 0

Allow ext interrupts

Enable Both Hardware & Software PTT

PTT via Radio Command SSB Mode

PTT via Radio Command CW Mode

PTT via Radio Command Digital Mode

Two Radio Protocol: None

FootSwitch (pin 6): None

Radio Polling Rate: Normal

Suggested Icom Settings:
9600 - 19200, N, 8, 1, Always Off, Always Off, Icom Hex Code
DTR RTS should be Always On with a COM port powered interface.
Set the radio to the same speed or auto-baud.
Set the radio CI-V Transceive option to OFF.

Buttons: Help, OK, Cancel

The PTT options are already set to use the radio codec for digital and SSB modes. Unchecked the two PTT options if you are not using these features.

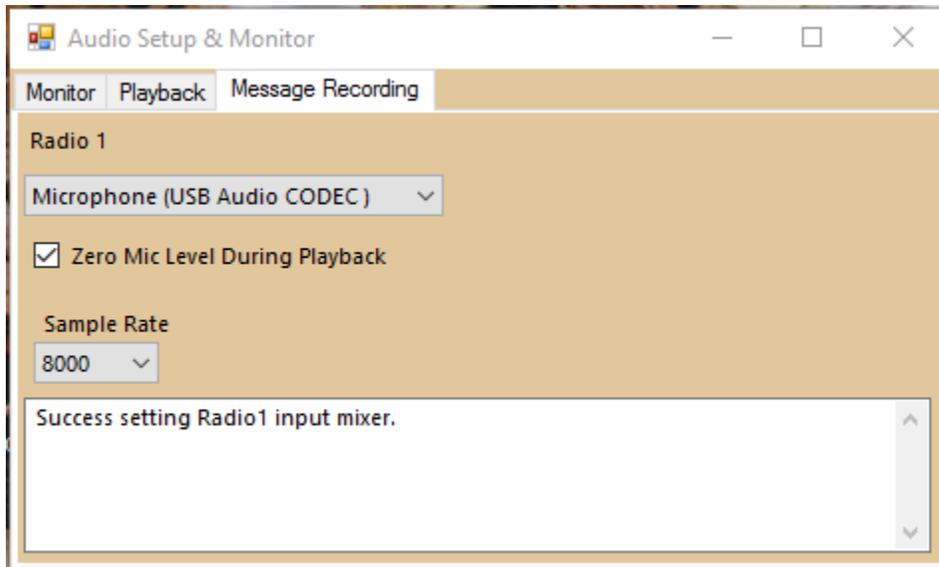
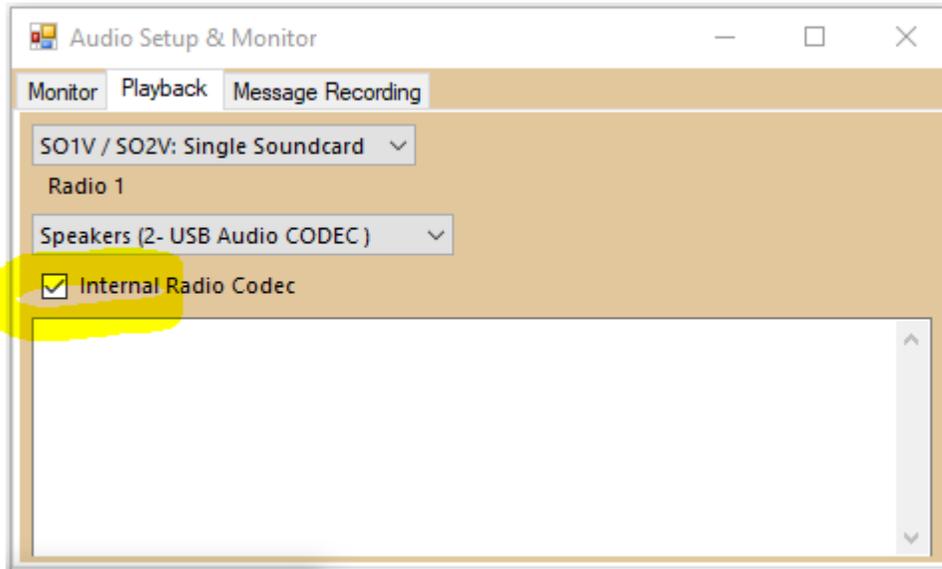
Click on OK and confirm that the radio communications functions correctly.

For all Icom radios except the IC-7300, the virtual radio COM port only exists when the radio is connected and turned On. Always exit Logger+ before turning the radio OFF.

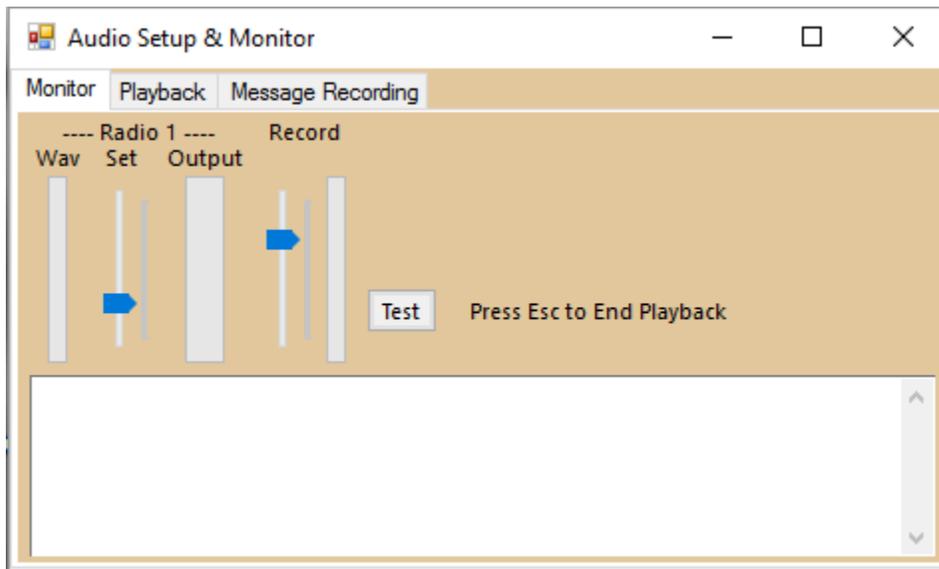
Configuring the Icom Radio for Audio Codec Operation

To configure the program for operation with the radio codec, click Config and check User Logger+ Audio. This requires Windows 7 or newer. If the option is already checked, click Config, Logger+ Audio Setup.

Select the Playback and Message Recording tabs and duplicate this configuration.



The Monitor tab playback and recording sliders can be used to adjust the playback and record levels. When recording the voice peaks should not clip and the average should be 50% or greater.



The radio monitor needs to be enabled (ON) to record on the fly. If your radio does not have a Monitor function then you can not record on the fly. This is a radio limitation, not a program limitation.

To start a recording of the F4 message, turn on VOX, press Ctrl+Shift+F4 as you start to talk. Press Esc just before you end. If you start or end the recording too late, receiver noise will be included in the recording.

The radio monitor level changes the MIC audio level. If you turn the radio monitor level above 75%, it will be difficult to record a voice message with levels that do not clip.

If you are using the Icom radio in SO2R or a pair of Icom USB codec radios in SO2R, select the proper option on the Playback tab.

It is not necessary to open the Audio Setup panel during every use.

It is possible to use the radio codec for QSO recording. Some Icom radios will allow the recording of sent CW, other will not. This is a radio limitation in the older radios. The IC-7300, IC-7610, and IC-7850/51 will allow the recording of the CW sidetone. To record the sent CW set this option in the radio SET menu:

ACC/USB AF Beep/Speech... Output = ON

NOTE: The radio CW sidetone level changes the level of the sidetone in the recording. If the sidetone is set to 0, nothing will be heard in the recording. For the IC-7300, the side tone level is set in the Keyer menu, Edit/Set, CW-KEY SET, Side Tone Level menu.

The Log window allows the playback of the recorded QSO's. To do so, the playback audio device needs to be set to the computer sound card. To do this, open the Windows Sounds and Audio Devices window. Select the Audio tab, note the current selection of the Sound Playback device and change it to the computer sound card then click Apply.

For users that record SSB voice files with an external program, use:

8 KHz sample rate, 16 bits of resolution, "PCM audio" single channel (mono).

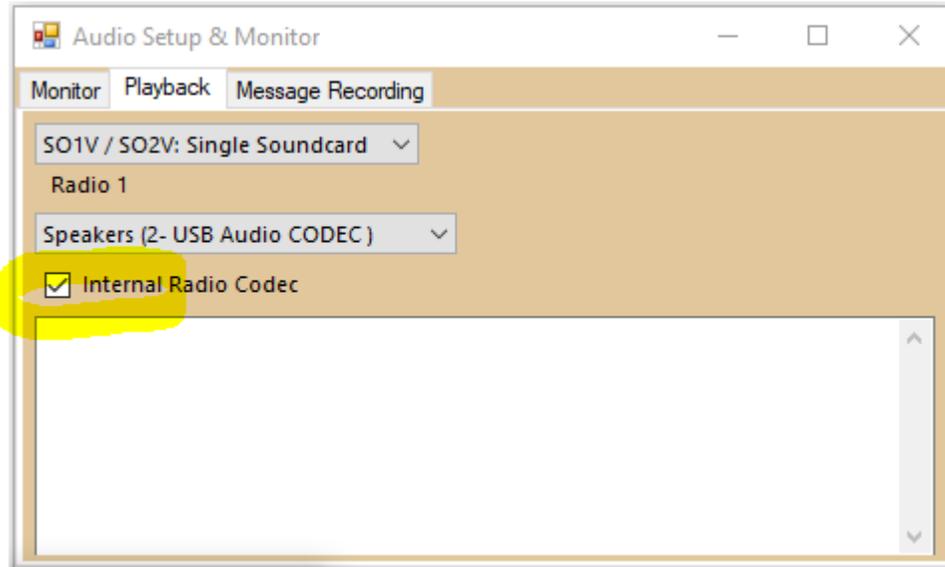
To eliminate the Windows sound effects from transmitted on the radio, open the Windows Sounds and Audio Devices window and select the "No Sounds" scheme on the Sounds tab.

Configuring for AFSK RTTY and PSK using the Icom Radio Codec

MMTTY Version 1.68A or newer must be installed to be able to select the USB Codec device.

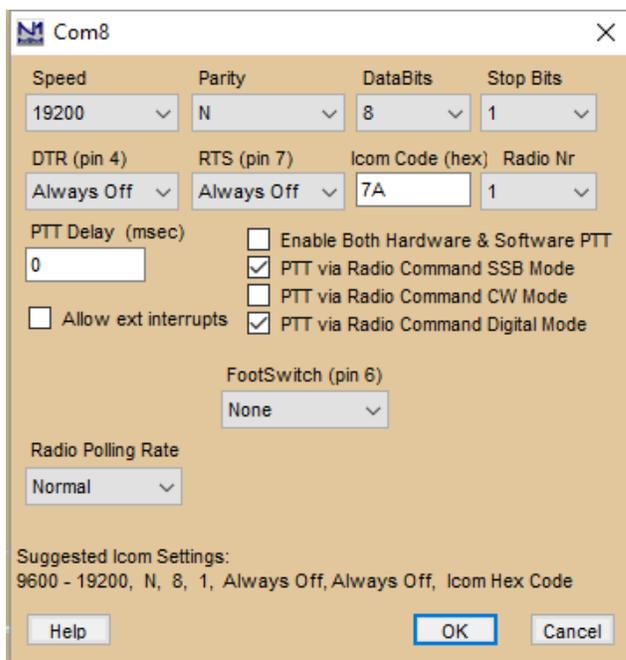
When using Win7 or newer, it is necessary to install MMTTY and Fldigi outside of the \Program Files directory structure.

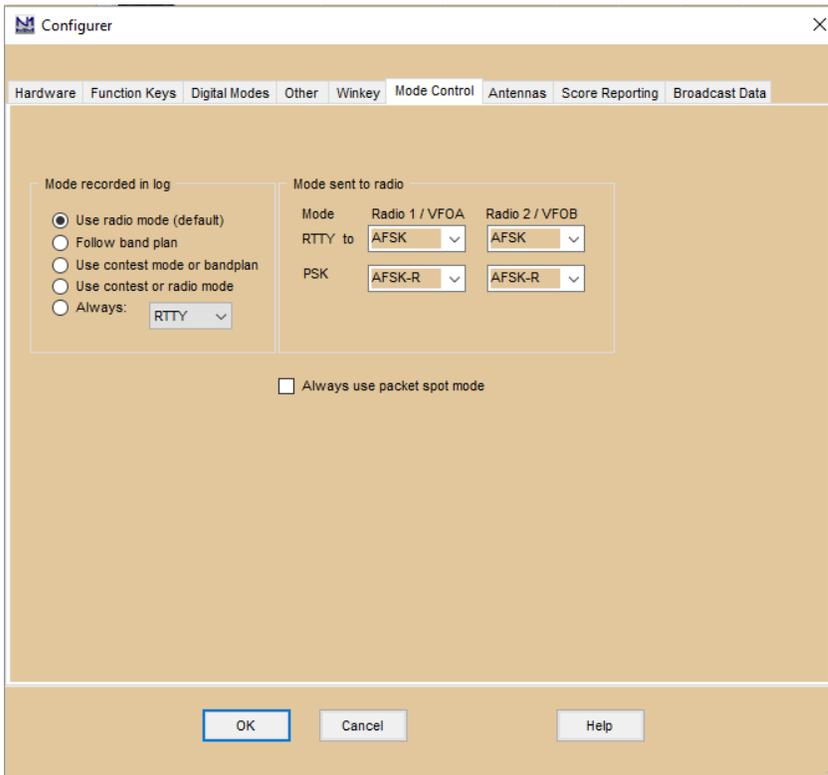
Configure the N1MM Logger Audio tab snapshots above. It is important that the “Use Radio Codec” box is checked in the Logger+ Audio setup window snapshot. If it isn’t, the radio codec will not be used for digital modes.



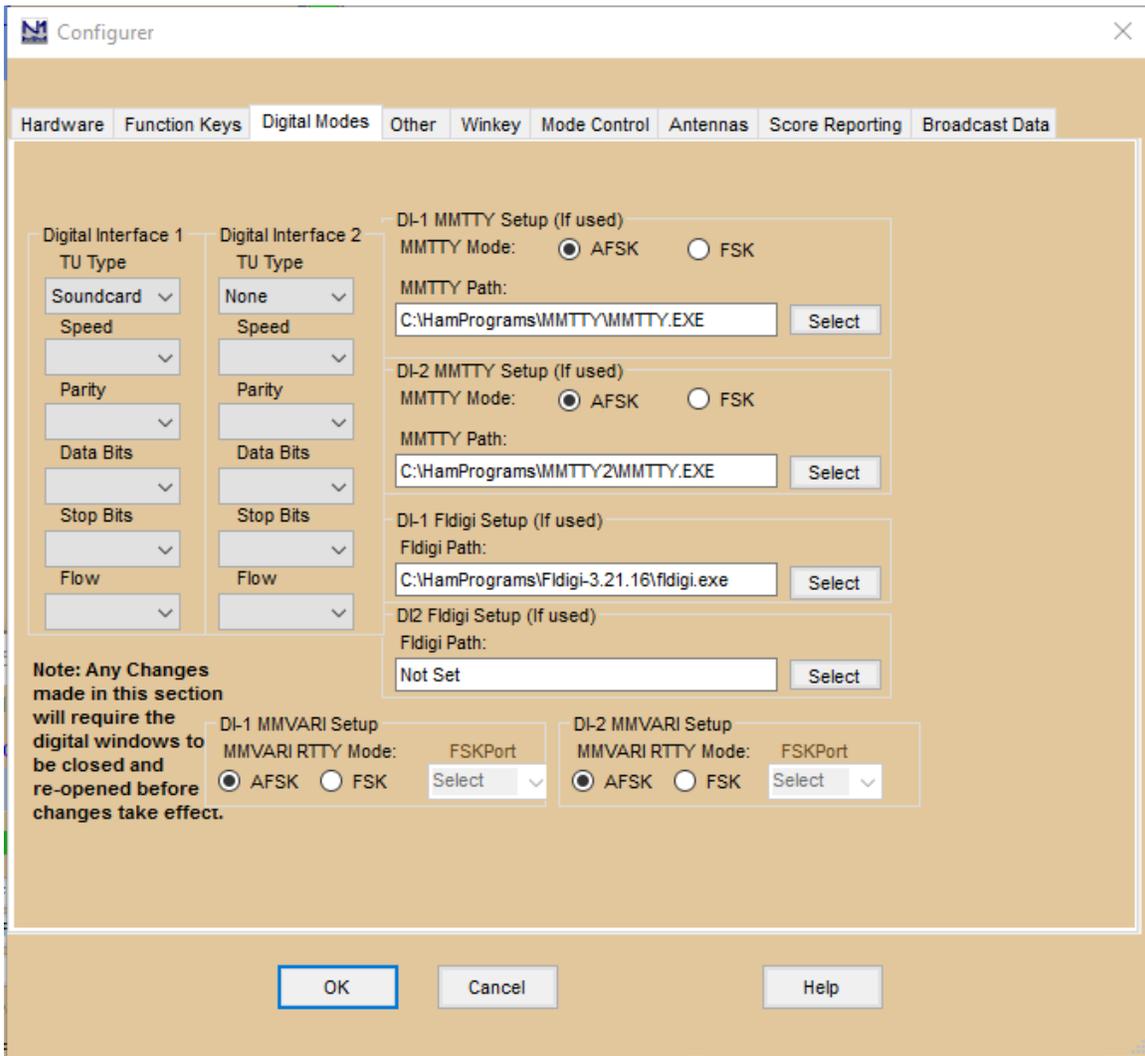
Use the screen snapshots below to configure N1MM Logger and MMTTY.

The radio COM port window needs the PTT via Radio Command Digital Mode checked. The radio code shown in the snapshot is for the IC-7600. If you are using a different Icom radio, use the default radio Icom Code for the radio. Ignore the baud rate and DTR/RTS settings in the snapshot below. These were set earlier in this document based on your configuration.

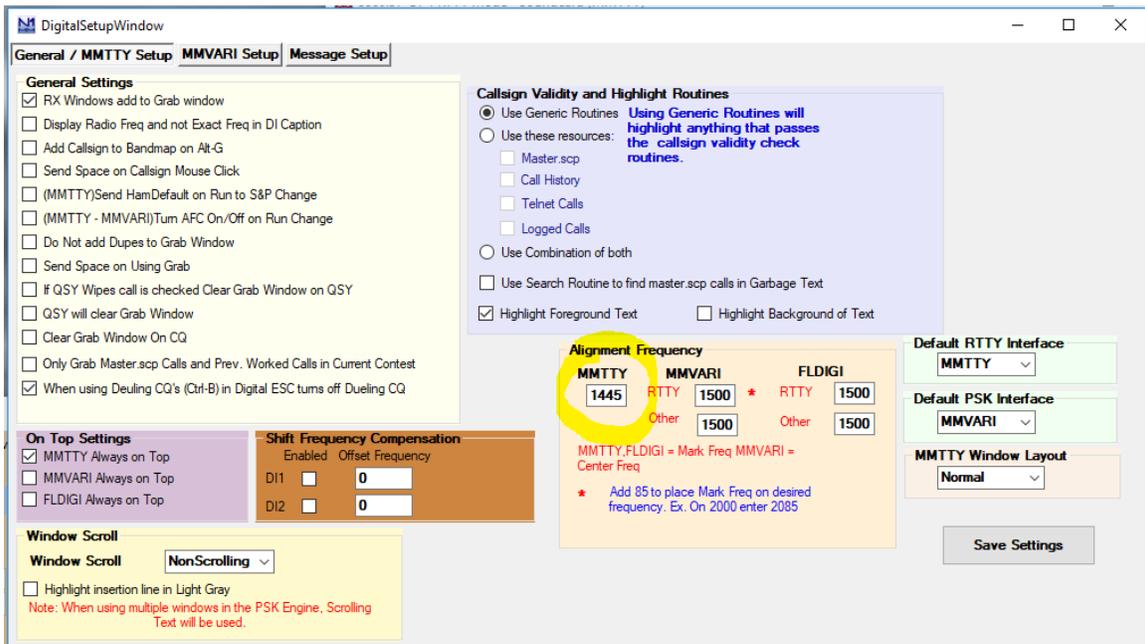




If you do not set the right hand side of the window above correctly, the radio will not change to the correct mode when RTTY or PSK31 is started.



Open the Digital Interface Setup window.
Set the MMTTY Alignment frequency to 1445 Hz as shown below.



MMTTY Window Option, Setup, Demodulator tab

Setup Ver1.68A

Demodulator | AFC/ATC/PLL | Decode | TX | Font/Window | Misc | SoundCard

Discriminator

Type

- IIR resonator
- FIR BPF
- PLL
- FFT

Mark Hz

Shift Hz

BW Hz

Show

Limit Amp.

- AGC
- Over Sampling

Gain

Smooth LPF

- FIR av.
- IIR

Freq Hz

f

Pre-Filter

Show

BPF

- ON

Tap

FW

- AFC Connection

Reverse

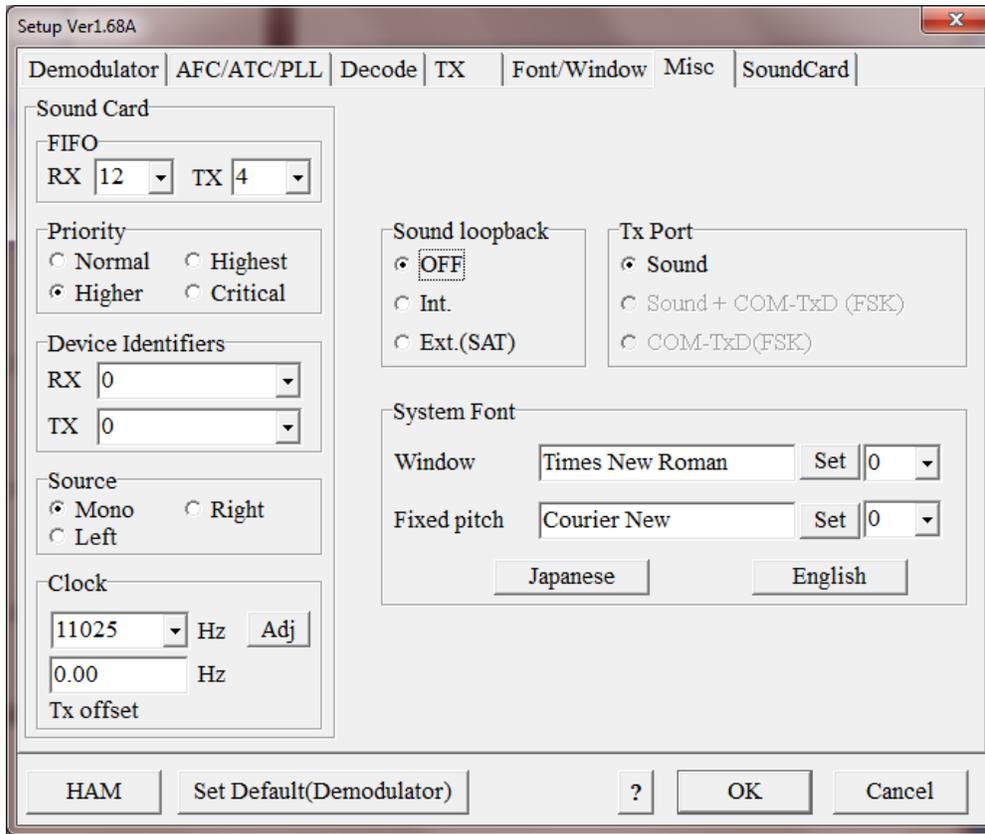
Dual Peak Filter f

HAM Default

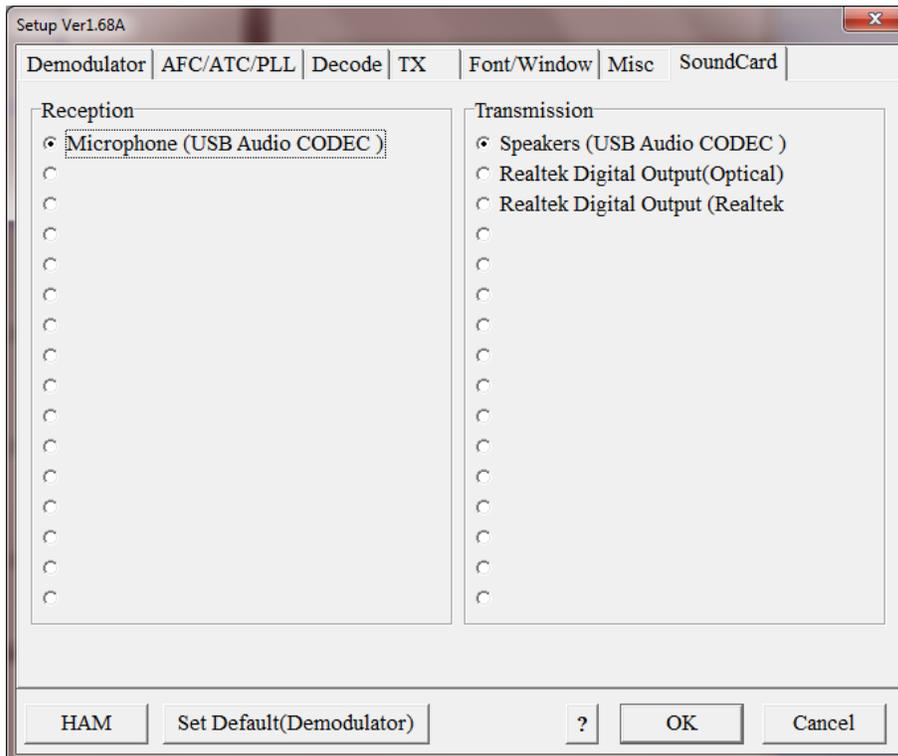
Fixes 45.45 baud

HAM Set Default(Demodulator) ? OK Cancel

MMTY Window Option, Setup, Misc tab



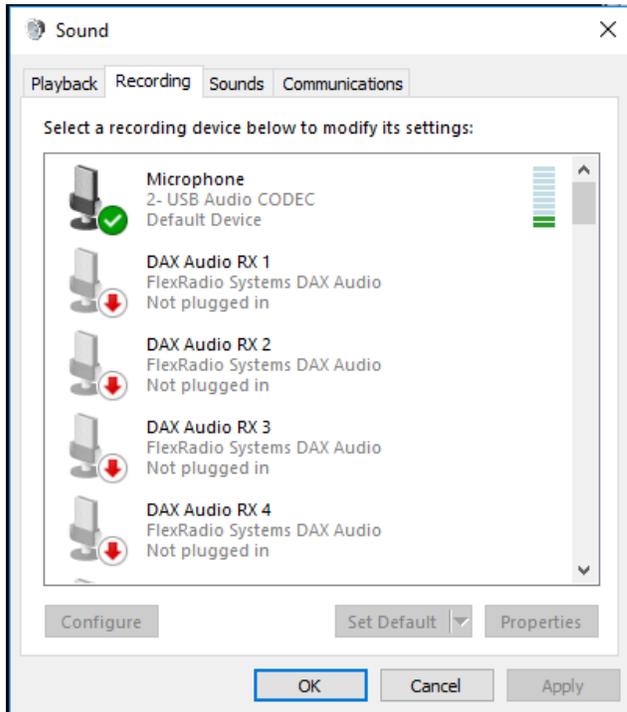
MMTY Window Option, Setup, SoundCard Tab



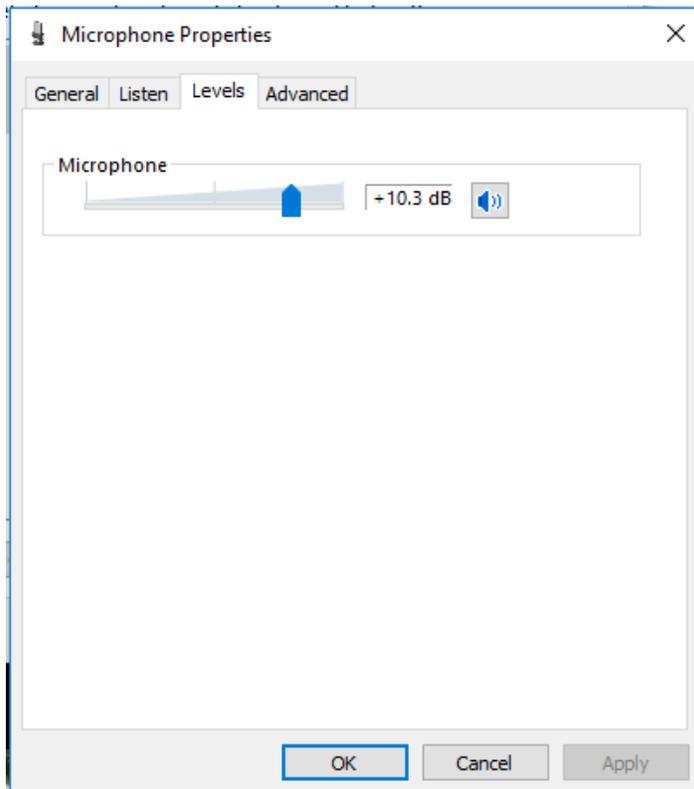
After everything is set, click on the HAM button in the MMTTY window.

In the N1MM Digital Interface Setup menu place a checkmark on the "Turn AutoTRX Update On". This will place the radio on the correct frequency when Bandmap spots are selected.

To adjust the RTTY RX level open the Windows Sound panel, select the recording tab.

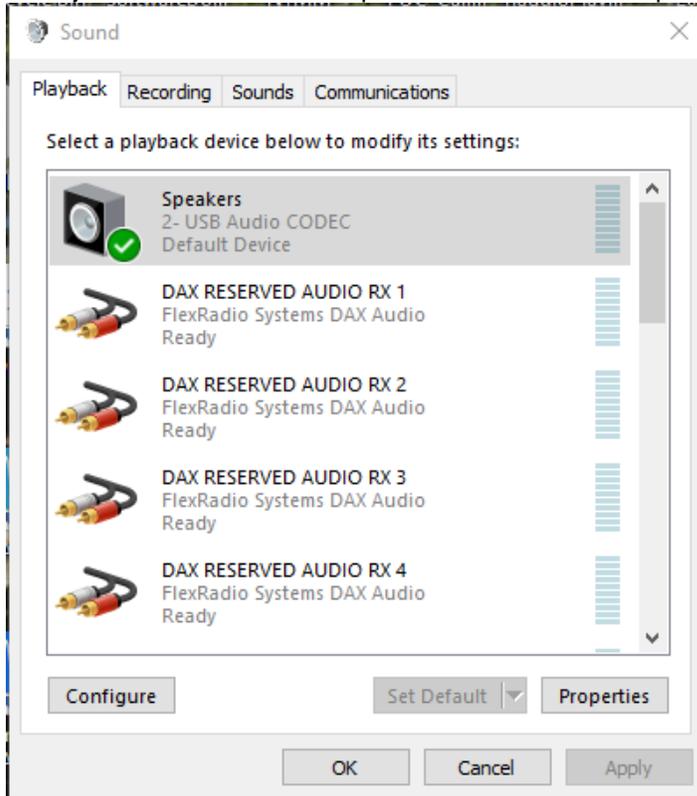


Right click on the USB Audio CODEC and select Properties. Select the Levels tab.

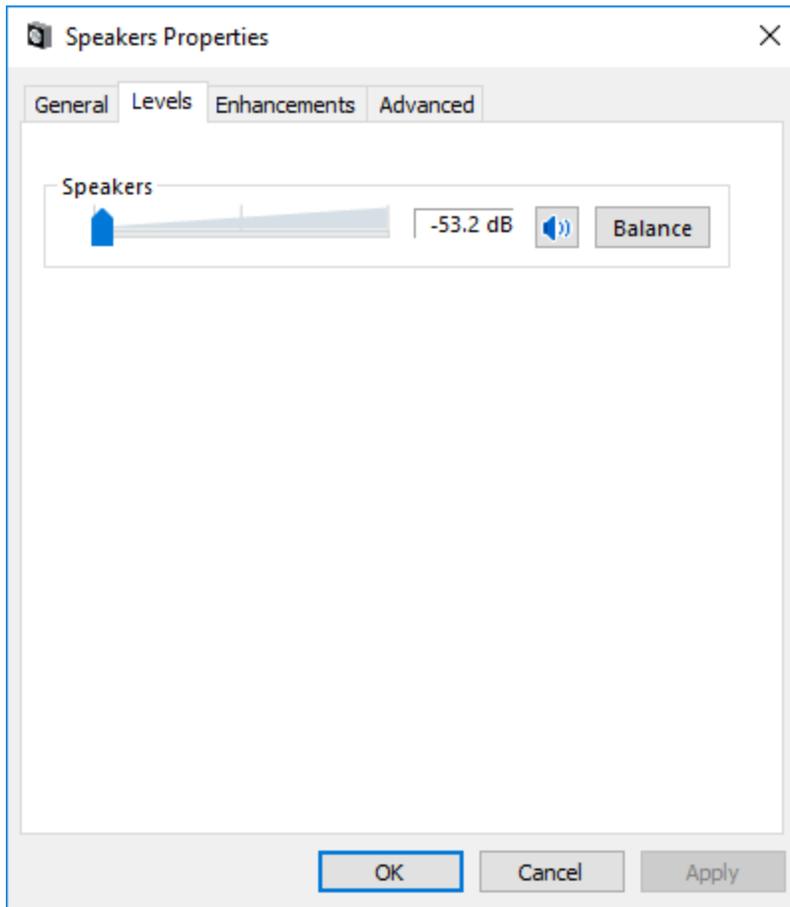


Adjust the Microphone slider as high as possible without any indication of “OverLoad” in the MMTTY window.

To adjust the RTTY TX level open the Windows Sound panel, select the Playback tab.



Right click on the USB Audio CODEC and select Properties. Select the Levels tab.



Adjust the Speakers slider so the radio ALC meter displays almost no ALC movement (almost zero). Do not adjust for maximum ALC meter movement like you would for voice mode.