Disable Windows Sounds

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

Sound
Playback Recording Sounds Communications
A sound theme is a set of sounds applied to events in Windows and programs. You can select an existing scheme or save one you have modified.
Sound Scheme:
No Sounds ▼ Sa <u>v</u> e As <u>D</u> elete
To change sounds, click a program event in the following list and then select a sound to apply. You can save the changes as a new sound scheme. Program Events:
Windows
Asterisk
Close Program
Critical Battery Alarm
Critical Stop
✓ Play Windows Startup sound
Sounds:
(None) ▼ ► <u>T</u> est <u>B</u> rowse
OK Cancel Apply

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. <u>If you have</u> <u>problems installing the Icom USB drivers and MicroHam router is installed, it may be necessary to</u> <u>remove the USB cable from the MicroHam device or un-install the MicroHam Router driver prior</u> <u>to installing the Icom USB drivers.</u> 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.

Advanced Settings for COM8							x
Use FIFO buffers (requestion) Select lower settings to Select higher settings for	ires 16550 c correct con or faster perf	ompatible UART) nection problems ormance.					OK Cancel
Receive Buffer: Low (1)	1	1	1	Ģ	High (14)	(14)	<u>D</u> efaults
<u>T</u> ransmit Buffer: Low (1)	1	ı	I	Q	High (16)	(16)	
COM <u>P</u> ort Number: 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.

S	ilicon Labs CP210x USB to UART Bridge (COM8) Properties
	General Port Settings Driver Details Power Management
	Silicon Labs CP210x USB to UART Bridge (COM8)
	Allow the computer to turn off this device to save power Allow this device to wake the computer
	OK Cancel

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 <u>rear of the radio</u>. 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.

M Com8			×				
Speed	Parity	DataBits	Stop Bits				
19200 ~	Ν	~ 8 ~	1 ~				
DTR (pin 4)	RTS (pin 7)	Icom Code (he	x) Radio Nr				
Always Off 🗸 🗸	Always Off	~ 7A	1 ~				
PTT Delay (msec) Enable Both Hardware & Software PTT 0 PTT via Radio Command SSB Mode PTT via Radio Command CW Mode Allow ext interrupts PTT via Radio Command Digital Mode							
	None	~					
Radio Polling Rate							
Normal 🗸							
Suggested Icom Sett 9600 - 19200, N, 8, Help	ings: 1, Always Of	f, Always Off, Ico	m Hex Code 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 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 <u>rear of the radio</u>. 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.

M Com8			×				
Speed	Parity	DataBits	Stop Bits				
115200 🗸	N ~	8 ~	1 ~				
DTR (pin 4)	RTS (pin 7)	Icom Code (he)	() Radio Nr				
cw ~	Always Off 🛛 🗸	94	1 ~				
PTT Delay (msec) Enable Both Hardware & Software PTT 0 PTT via Radio Command SSB Mode PTT via Radio Command CW Mode Allow ext interrupts PTT via Radio Command Digital Mode							
None 🗸	None	~					
Radio Polling Rate							
Normal 🗸							
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. Help OK							

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.

🔜 Audio Setup & Monitor	_	\times
Monitor Playback Message Recording		
SO1V / SO2V: Single Soundcard 🗸		
Radio 1		
Speakers (2- USB Audio CODEC) 🛛 🗸		
Internal Radio Codec		
		~
		~

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.



M Config	gurer								×
Hardware	Function Keys	Digital Modes	Other	Winkey	Mode Control	Antennas	Score Reporting	Broadcast Data	
Mode © L C L C L C L	recorded in log Jse radio mode (i follow band plan Jse contest mode Jse contest or ra Always: RTT	default) e or bandplan dio mode Y	Mode Mod RTT PSK	sent to ra e Ra Y to Al	Idio	Radio 2 / V AFSK AFSK-R	FOB		
		ок		Cancel			Help		

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.

M DigitalSatuaMindau				~
				^
General / MMTTY Setup MMVARI Setup Message Setup General Settings RX Windows add to Grab window Display Radio Freq and not Exact Freq in DI Caption Add Calsign to Bandmap on Alt-G Send Space on Calsign Mouse Click (MMTTY)Send HamDefault on Run to S&P Change (MMTTY - MMVARI)Tum AFC On/Off on Run Change Do Not add Dupes to Grab Window Send Space on Using Grab If QSY Wipes call is checked Clear Grab Window QSY will clear Grab Window QSY will clear Grab Window	Callsign Validity and Highlight Routines Ise Genetic Routines Use Genetic Routines Use these resources: Indplicit any Call Hatory Teinet Calls Logged Calls Use Search Routine to find master scop calls in Garbage Text Highlight Foreground Text Highlight Foreground Text	ult RTTY Interfa	ce	
Only Grab Master.scp Calls and Prev. Worked Calls in Current Contest When using Deuling CQ's (Ctrl-B) in Digital ESC turns off Dueling CQ On Top Settings MINTTY Always on Top MINTY Always on Top FLDIGI Always on Top FLDIGI Always on Top Window Scroll Window Scroll NonScrolling ∨ Highlight insertion line in Light Gray Note: When using multiple windows in the PSK Engine, Scrolling Text will be used.	MMTTY MMVARI FLDIGI 1445 RTTY 1500 * RTTY 1500 Other 1500 Other 1500 MMTY MMTTY,FLDIGI = Mark Freq MMVARI = MMT MMTY Certer Freq * Add 85 to place Mark Freq on desired frequency. Ex. On 2000 enter 2085 MMT	INTTY V alt PSK Interface (MVARI V TY Window Layo formal V Save Setting	e out	

Setup Ver1.68A	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	X
Setup Ver1.68A Demodulator AFC/ATC/PL Discriminator Type © IIR resonator © FIR BPF © PLL © FFT Mark 1445 • Hz Shift 170 • Hz BW 60 • Hz	L Decode TX Font/Wind Limit Amp. AGC Over Sampling Gain 200 • Smooth LPF • FIR av. • IIR	Iow Misc SoundCard Pre-Filter Show BPF LMS/Notch □ ON Tap 56
BW 60 Hz Show □ Reverse ▼ Dual Peak Filter f	Freq 70 • Hz f HAM Default 1445 170 Fixe	FW 100 • FW AFC Connection es 45.45 baud
HAM Set Default	(Demodulator)	? OK Cancel

MMTTY Window Option, Setup, Demodulator tab

MMTY Window Option, Setup, Misc tab

Setup Ver1.68A		
Demodulator AFC/ATC/PLL Dec	ode TX Font	/Window Misc SoundCard
Sound Card		
FIFO		
Priority	Sound loopback	Tx Port
© Normal © Highest	• OFF	Sound
• Higher • Critical	⊂ Int.	🔿 Sound + COM-TxD (FSK)
Device Identifiers	C Ext.(SAT)	C COM-TxD(FSK)
RX 0		
TX 0	System Font	
,	Window T	imes New Roman Set 0 🗸
Mono C Right		
○ Left	Fixed pitch	ourier New Set 0 •
Clock	Jap	English
11025 - Hz Adj		
0 00 Hz		
Tx offset		
HAMSet Default(Democ	dulator)	? OK Cancel

MMTY Window Option, Setup, SoundCard Tab

Setup Ver1.68A	
Demodulator AFC/ATC/PLL Decode TX	Font/Window Misc SoundCard
Reception Microphone (USB Audio CODEC) c <t< th=""><th>Transmission © Speakers (USB Audio CODEC) © Realtek Digital Output(Optical) © Realtek Digital Output (Realtek © © © © © © © © © © © © ©</th></t<>	Transmission © Speakers (USB Audio CODEC) © Realtek Digital Output(Optical) © Realtek Digital Output (Realtek © © © © © © © © © © © © ©
HAM Set Default(Demodulator)	? OK Cancel

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.

谢 Sound							×
Playback	Recording	Sounds	Commu	inications	5		
Select a r	ecording d	evice bel	low to m	odify its	settings:		
	Microp 2- USB Default	hone Audio C t Device	ODEC				^
	DAX Au FlexRad Not plu	i dio RX 1 dio Syste ugged in	ms DAX	Audio			
	DAX Au FlexRad Not plu	i dio RX 2 dio Syste ugged in	ms DAX	Audio			
	DAX Au FlexRad Not plu	i dio RX 3 dio Syste Jgged in	ms DAX	Audio			
	DAX Au FlexRad Not plu	i dio RX 4 dio Syste ugged in	ms DAX	Audio			,
Config	ure			Set De	fault 🔽	Propert	ies
			OK		Cancel	Ap	oply

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

Hicrophone Properties						
General Listen Levels Advanced						
Microphone +10.3 dB						
OK Cancel Apply						

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.

Sound							\times		
Playback	Recording	Sounds	Commu	inications					
Select a playback device below to modify its settings:									
	Speake 2- USB Default	rs Audio C(t Device	ODEC				^		
~	P DAX RE FlexRa Ready	SERVED dio Syste	AUDIO I ms DAX	RX 1 Audio					
	P DAX RE FlexRa Ready	SERVED dio Syste	AUDIO I ms DAX	RX 2 Audio					
	P DAX RE FlexRa Ready	SERVED dio Syste	AUDIO I ms DAX	RX 3 Audio					
*	P AX RE FlexRa Ready	SERVED dio System	AUDIO I ms DAX	RX 4 Audio			~		
Config	gure			Set Def	fault 🔽	Properti	es		
			ОК		Cancel	App	oly		

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

Speakers Properties							
General Le	vels Enhance	ments Advanced					
Speakers		-53.2 dł	B ()) Balance				
		ОК	Cancel Appl	y			

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.