This instruction document assumes that you have at least basic knowledge about Amateur Contact Log, WSJT-X, JTAlert and Windows 10. I have also assumed that you have correctly configured your computer sound card to use the WSJT-X microphone and speaker codecs correctly. The description of that process is significantly beyond the scope of this document.

Most of this document will be valuable to you whether you use a one-cable or two-cable method to control your Icom 7100.

This is a detailed description of how to use two separate cables to run your rig: one separate cable for CI-V rig interface control and another for communicating data to and from your IC-7100.

While the 7100 can be controlled completely with the USB A/B that ships with it, some like to split the rig interface control off separately to meet their CI-V needs. When using the two-cable method *I use two separate USB ports on my computer*. I cannot confirm that connecting the two cables to a USB hub will work correctly.

The USB A/B cable attaches from one computer USB port to the 7100's USB port and is used for transferring digital data.

Attach the computer USB port for CI-V rig interface control to the radio using an RT-Systems interface/programming cable available for \$29 at:

https://www.dxengineering.com/parts/rtp-usb-rts01

This interface cable connects to the 7100's Remote Control jack via a 3.5 mm plug. When viewed from the 7100's rear the Remote Control jack is immediately to the right of the 7100's USB port.

Amateur Contact Log: Rig Interface Setup

Make sure the hex digits "64" in the commands to read frequency and mode are replaced with the code for the Icom 7100: "88"

Rig Interface Setup 2.8 (Ctrl R)					
Select Rig: Com Port	Baud Pate:		Description:		
None COM5 ClientAPI COM3 Elecraft FlexAPI FlexAPI FlexRadio	0 1.2 0 2.4 0 4.8 0 9.6 0 11.5	○ 14.4	To use the Rig Control interface, select the appropriate parameters		
	Parity: Odd None O Even	Data Bits: Stop Bits: ○ 7 ● 8 ● 1 ○ 2	for your radio and click test. Be sure to select the RTS or DTR		
Icom2 Icom 735 Kenwood	Connection Power: ● None ○ RTS ○ DTR ○ Both	Radio Polling Rate: O 100 ms O 500 ms @ 2 sec O 10 sec	connection power option if your interface requires it. Many interfaces require RTS.		
Kenwood2 N3FJP API Ten Tec Argonaut VI Ten Tec Eaple Ten Tec Ent PnI Ten Tec Omni VI Ten Tec Omni VI Ten Tec Omni VI Ten Tec Pegasus Yaesu - Older Yaesu 10D Yaesu 757 CX II Yaesu 891 Yaesu 891 Yaesu 890 Yaesu 890	Mode Determined By: O Rig O Frequency O Don't Use Mode by Frequency: Return All Mapped Modes	Use Frequency on Main Form Return LSB / USB Show Frequency Change Form on Startup Dont Send CW Mode Change if on CW (so CW filters wont reset)	Icom users, after selecting Icom, don't forget to enter your rig ID into the command strings, which you will find in your rig's manual under CAT control.		
	Command to Read Frequency: FE FE 88 E0 03 FD Frequency:	Don't Send Mode Change with Freq (useful when operating digital) I have a function of the setting of the set of th			
Save Settings Load Settings	Test For more information on r	End Test	View Rig Interface Help		
Unprocessed data returned: Converted from hex:			Copy Data to Clipboard		
Multi Radio Configuration: (Main Form Ctrl + X Rig 1: Br Rig 2: Br Help Test Swap	wwse wwse	To test the change and click Send. The depending on the first clicking on the mod Frequency: 2 Done CW USB LSE	puency command, enter a frequency in MHz node should change to SSB or CW as well, uency you enter. Test changing modes by utions: 446 Send AM FM RTTY TX RX		

Amaterur Contact Log: Application Program Interface (API) Setup

Please see the yellow-highlighted text in the figure below. Check the box, this setting is essential!

Server APT - Allow any property coded proj	gram to connect	
API Server Functionality - Use this section to enable including other N3FJP Software programs, to connect	other programs, ct to this one.	1
I often receive requests from folks who would like to digital or logging programs with my logging software those requests, I have added easily implemented App Interface (API) functionality, to enable any other prog	interface their . To accommodate plication Program gram to do just that!	
If you have a program that you would like to see inter software, please contact the developer(s) and refer	rfaced with my them to this page:	
http://www.n3fjp.com/help/api.html		,
Please click here for the detailed API s	pecifications.	
TCP API Enabled (Server) Port	1100	
Server Running = True Port = 1100		
Client - Only use this to connect to another	N3FJP program	
connect to another N3FJP Software program (usually Log) to see if the entity you are working is confirmed	y Amateur Contact j.	Í
Before enabling this feature, from the host program's (usually Amateur Contact Log) click Settings > API an	s menu options id check the	
	1100	
Host LAPTOP-		

WSJT-X: radio setup at File > Settings... > Radio

Settings				? ×			
General Radio Audio Tx Macros	Reporting	Frequencies	Colors	Advanced			
Rig: Icom IC-7100 Audio interface setting	s		✓ Poll Inter	val: 2 s 🚔			
CAT Control	PTT Me	thod					
Serial Port: COM3 ~	\bigcirc vo	x	◯ <u>d</u> tr				
Serial Port Parameters	○ CA						
Baud Rate: 19200 V	Port:	COM3		~			
Data Bits O D <u>e</u> fault O Se <u>v</u> en	- Transm	it Audio Source ar∕Data	Eront/M	ſic			
Stop Bits	Mode						
◯ Default ◉ On <u>e</u> ◯ T <u>w</u> o	⊖ Nor	ne 🔿 US	<u>B</u>	Data/P <u>k</u> t			
Handshake Default None XON/XOFF Hardware 	Split Op	eration ne) O	Fake It			
Force Control Lines DTR: V RTS: V	Tes	t CAT	Т	est PTT			
			ОК	Cancel			

JTAlert: setup from Settings > Manage Settings... > Logging > ACLog

🎵 JTAlert 2.16.4 Settings - N7LL - [Lo	gging Enabled - N3FJP Amateur Contact Log]	- 🗆 🗙
JTAlert 2.16.4 Settings - N7LL - [Lc	Imaging Enabled - N3FJP Amateur Contact Log] Imaging Enable ACLog Logging Imaging Enable sending of new DX Call when first detect Imaging Clear ACLog fields prior to logging ACLog Install Location Imaging Local PC Imaging Configuration These values are automatically determined by read during JTAlert startup. C:\Users\Imaging My Documents\\LogData.mdb Log File	cted cted ding the ACLog configuration file 1100 TCP Port
Logging Last QSO API Log B4 Database Standard ADIF File DXLab DXKeeper HRD V5/V6 Log4OM V1 Log4OM V2 AcLog Log "Other" fields Window	Remote PC Configuration PC IPv4 Address Log File Log Type Amateur Contact Log (Ver 6.3 or later)	Select

JTAlert: setup from Settings > Manage Settings... > Sound Card

If you want to receive audio alerts on your computer, *carefully follow the warning in red shown below*. Otherwise you will be sending *.wav sound files on the air as digital data!

JTAlert 2.16.4 Settings - N7LL - [Loggin	ig Enabled -	N3FJP A	Amateur C	ontact Lo	g]				—	
Miscellaneous Alerts Alerts Priority Worked B4 LoTW / eQSL(AG) Flags Filters Logging Last QSO API Log B4 Database Standard ADIF File DXLab DXKeeper HRD V5/V6 Log4OM V1 Log4OM V1 Log4OM V2 ACLog Log "Other" fields Window Miscellaneous Web Services TCP/IP Network Ports Online Logbooks Online Logbooks Online XML Callbooks		[2] Speakers (Realtek(R) Audio) ✓ **** DO NOT use the same Sound Card as WSJT-X *** Sound Play Limit Period No Limit Individual audio alerts will play once per time period. Sound Schedule (UTC Hour) Apply to "Out Of Shack" audio alerts When the JTAlert title-bar Sound menu is toggled to "Sound UTC", audio alerts will only be played during these enabled UTC hours. Untick the hours that sound is not to be played. Ø 00 Ø 01 Ø 02 Ø 03 Ø 4 05 Ø 6 Ø 7 Ø 08 Ø 9 10 11 12 13 14 15							will not to		
Scan Log and Rebuild <mark>Sound Card</mark> Station Callsign Program Updates Software Usage License	•	- Test Sou	nd Carc	l		1 1 1 1	62%		Test Play	1	
JTAlert by VK3AMA		Help				[ОК		Cancel		Save

Icom 7100: setup in the Connectors menu

These are the settings that have allowed me to a) prevent splatter when transmitting and to b) use the Power slider in WSJT-X to fine tune my output power setting. These percentage values are estimates only...experiment to find the ones that work for you. The rest of the settings must be entered as shown.

ACC/USB Output Select: AF ACC/USB AF Level: 14% DATA MOD level: 25% USB MOD level: 20% DATA OFF MOD: MIC,ACC DATA MOD: USB CI-V: CI-V Baud Rate: 19200 CI-V Address: 88h

CI-V Transceive: ON CI-V Output (for ANT): OFF

For additional information, read the fine manuals for Amateur Contact Log, WSJT-X, JTAlert, Windows 10, and a superb article by Alan W. Dye, W6AWD.

Alan's article is particularly useful for Mac users. He is the one who helped me understand the critical importance of having very minimal engagement of the ALC control in order to prevent transmitting splatter in such a narrow bandwidth environment.

His article, entitled WSJT-X WITH THE IC-7100, 7200, 7300, AND 7410 can be found at:

http://w6awd.us/blog/wsjt-x.html

73, David Oglesby N7LL

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