

# Win4K3Suite

A novice/new user's view with a slant toward the KX3/KXPA100

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<https://va2fsq.com/win4k3suite-overview/>  
<https://va2fsq.com/tutorials/>



# Topics:

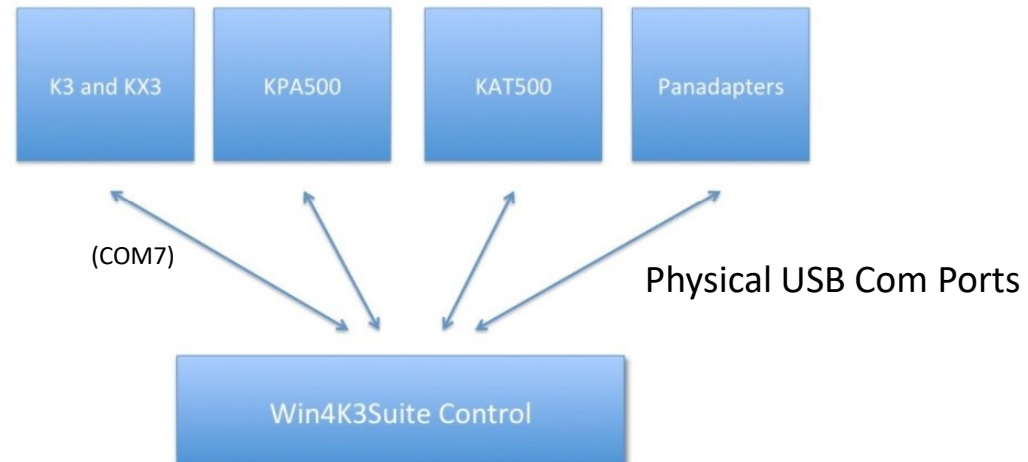
- Win4K3Suite Features (partial list)
- The Main Window – live demo
- The Spectrum Window – live demo
- Operation as a control hub with N1MM+ and CATsync – live demo
- Time permitting, adjusting spectrum display I/Q balance

# Win4K3Suite Features

Windows program control of the Elecraft KX3, K3, and K-Line radios including:

- Control radio and internal options – antenna tuner, filters, amplifier modules, ...
- Provides utilities for “tables” – frequency memories, macros, ...
- Controls for KXPA amplifier, KPA500/KAT500 amplifier and tuner
- RF Spectrum and waterfall display (KX3 required a dedicated audio interface)
- Audio spectrum and oscilloscope (KX3 audio captured using a PC sound port)
- Integration with network based resources such as spotting
- Integration “hub” for additional programs
- And MUCH more

# Basic Hardware Connections – USB Ports

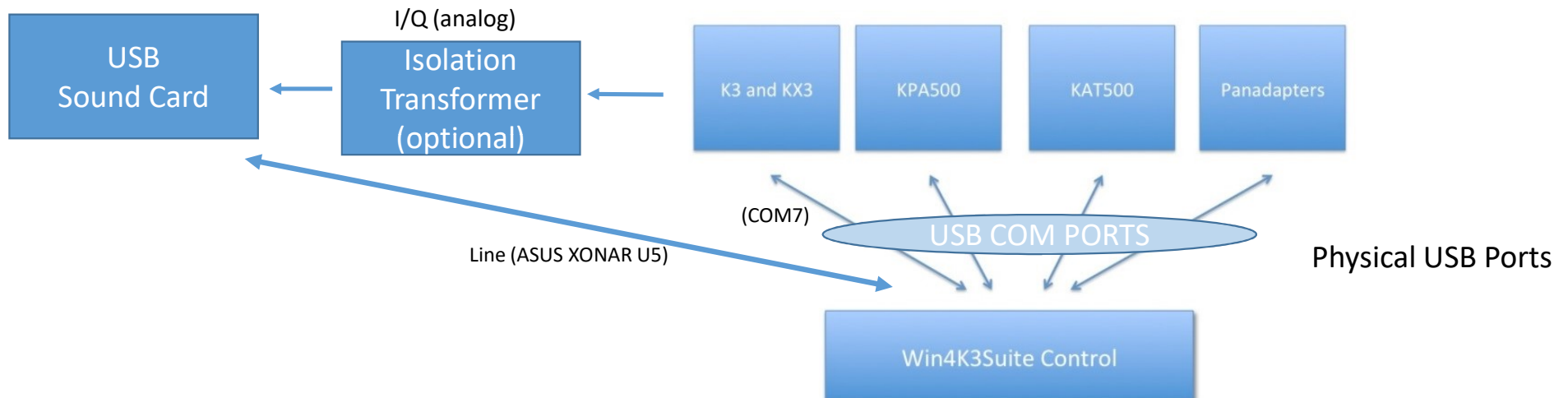


# Live Demo Win4K3Suite main window

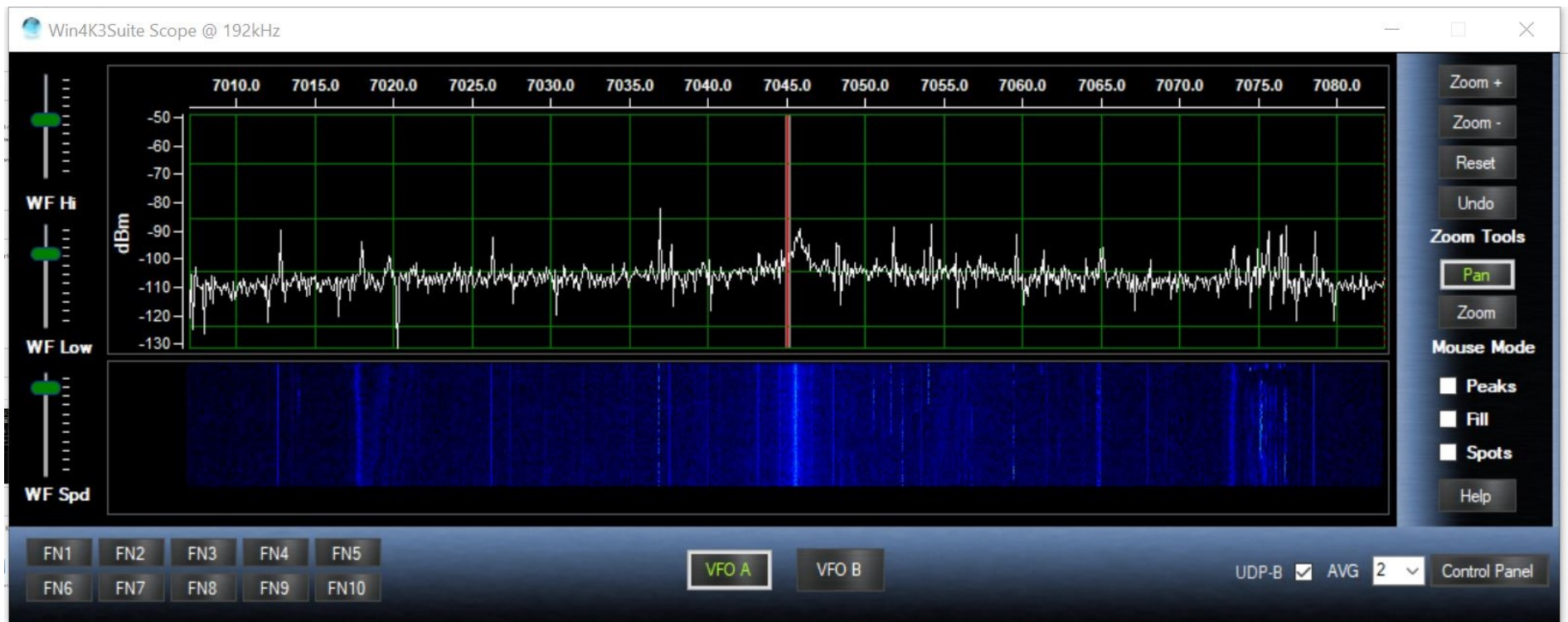
The screenshot displays the Win4K3Suite main window with the following sections:

- Header:** KX3 Control: CW BW:0.3 SH:0.64 NR WPM:20 PWR:110 22:50 UTC
- Menu:** File Tools Window Help
- Band Selection:** 160m, 80m, 60m, 40m (selected), 30m, 20m, 17m, 15m, 12m, 10m, 6m, 2m, Xvtr 2, Xvtr 3, Xvtr 4, Band
- Antennas:** Ant1, Ant2, Ant3, PWR, Auto, KAT500
- Temperature/Power/SWR:** 80.2F, 0W, 1.0, Temperature, Power, SWR, OPER, STBY, KXPA100
- Mode:** USB, LSB, CW (selected), CW-R, AM, FM, DATA A, PSK D, Reverse, FSK D, AFSK A, Mode
- Filters:** NB 3, NR 5, NTCH, RF In / KXAT100
- VFO:** 7.036.210, 7.112.368, SWR=1.0:1, VFO, Fine, Med, Coarse, A/B, A>B, Split
- Msg:** +60, +40, +20, 9, 7, 5, 3, S1, M1, M2, M3, Msg
- PBT:** FL1, FL2, FL3 (selected), NORM, Shift 0.64, 0.30 Width, Dn, LoCut, Up, Dn, HiCut, Up, PBT
- Receiver:** AF Gain, RF Gain, 50, 100, 200, 400, 800, 1600, 2400, 3200, +16, 0, -16, AGC-F, AGC-S, DualW, RXEqualizer, PSet1, PSet2, PSet3, Reset, Receiver
- CW/Data:** A-SPOT, APF/DPB (selected), TXTDEC, Speed, CW/Data
- Transmit:** RF PWR, Mic, Comp, Mon, PTT (selected), Transmit, Transmit
- Inc Tuning:** RIT, XIT, -0.000, CLR, Inc Tuning

# Adding an external sound card for KX3 spectrum display



# Live Demo Spectrum Window



# Control Hub Live Demo -- My setup for a CWT or SST event

The screenshot displays a computer desktop with several windows open, illustrating a radio contest control setup. The top-left window is a contest log titled '4/28/2021 19:20:22Z CWops Mini-CWT Contest - wo6w\_CWT.s3db'. It contains a table with columns for time, call sign, frequency, mode, name, exchange, multiplier, and points.

MM-DD HH:MM	Call	Freq	M...	Name	Exch	M1	Pts
04-28 19:08	KSPI	14031.37	CW	ROB	2124	✓	1
04-28 19:13	N2UT	14046.79	CW	BOB	NM	✓	1
04-28 19:16	NGWIN	14032.11	CW	TIM	1942	✓	1

The bottom-left window is 'WindK3Suite Spectrum (Radio 1)', showing a waterfall spectrum plot with peaks labeled KSP1, NGWIN, and N2UT. The frequency is 14029.74 kHz.

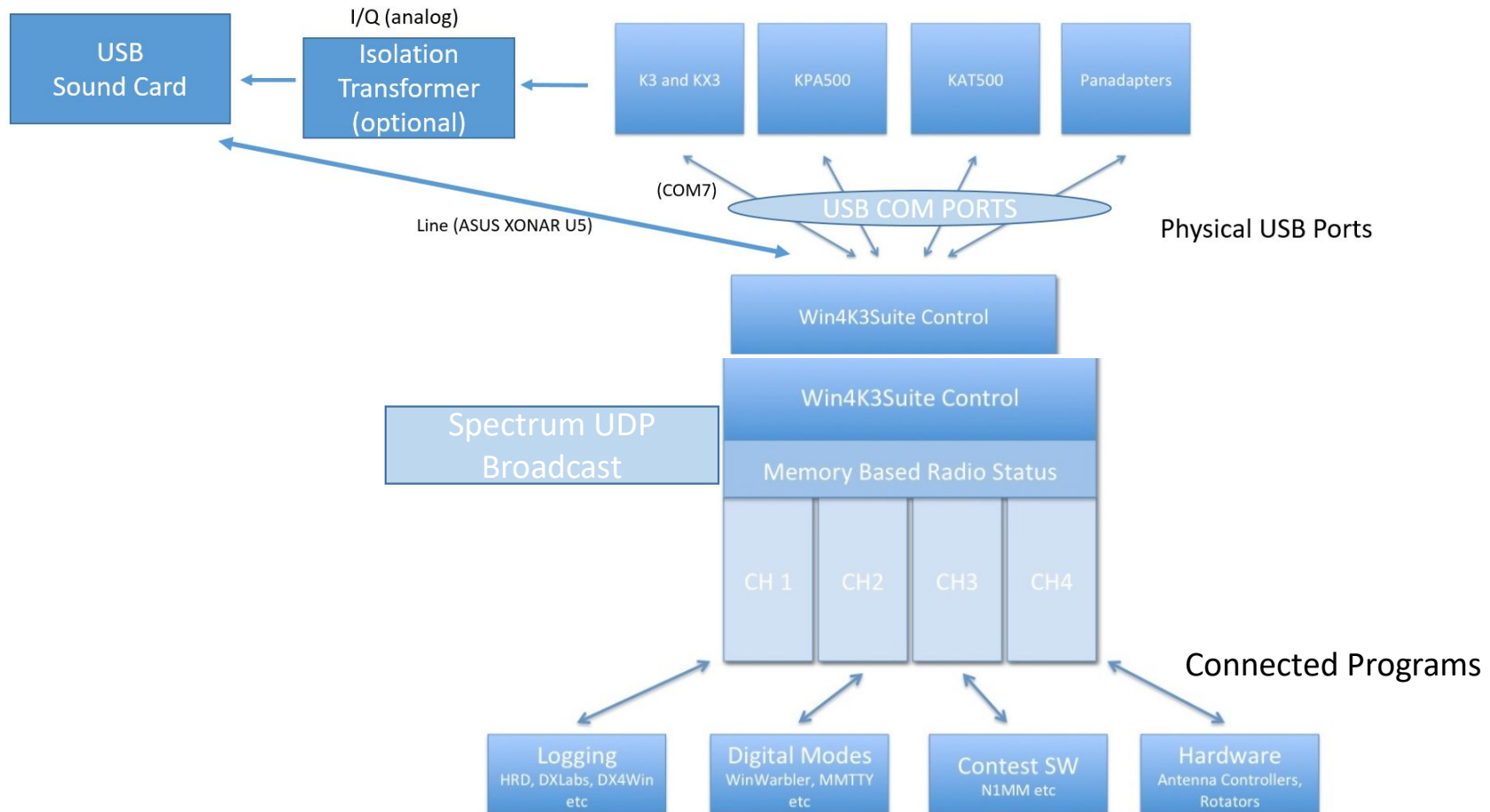
The top-right window is 'CATSync Web SDR Control V1.22 by DJ0MY', featuring controls for RX VFO, TX VFO, and CAT, along with a URL field and various options.

The bottom-right window is 'IO3 Control: CW BW.0.3 SH.0.64 WPM:19 PWR:110 19:20 UTC', which is a comprehensive radio control interface. It includes a large frequency display (14.029.744 kHz), a VFO display (14.052.000 kHz), and numerous sliders and buttons for receiver and transmitter settings.

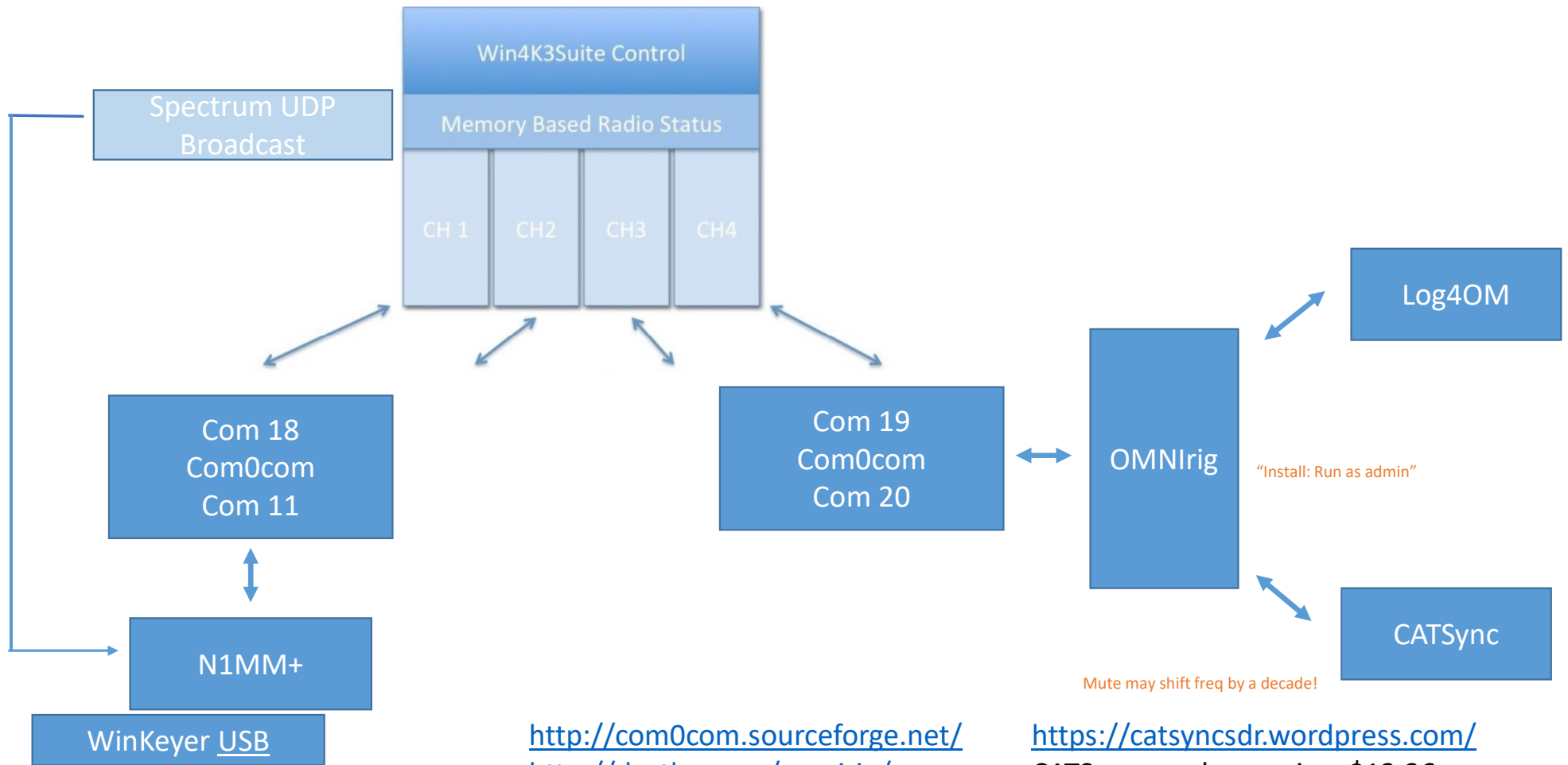
Other events? Consult applicable contest rules and such for allowable use of remote receivers.



# Connections as a program hub



# Function as a communications hub



<http://com0com.sourceforge.net/>  
<http://dxatlas.com/omnirig/>

<https://catsyncsdr.wordpress.com/>  
CATSync purchase price: \$12.36

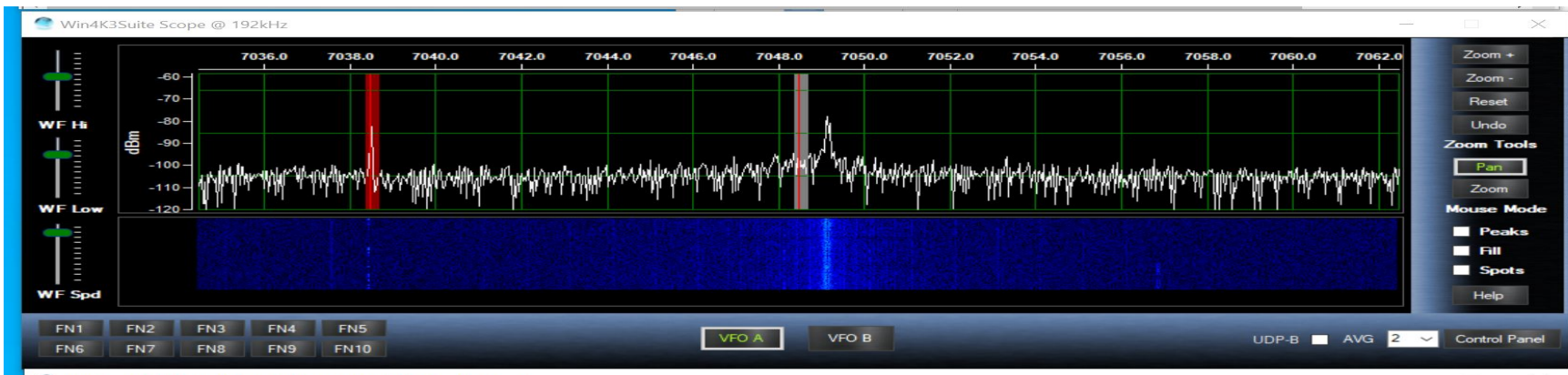
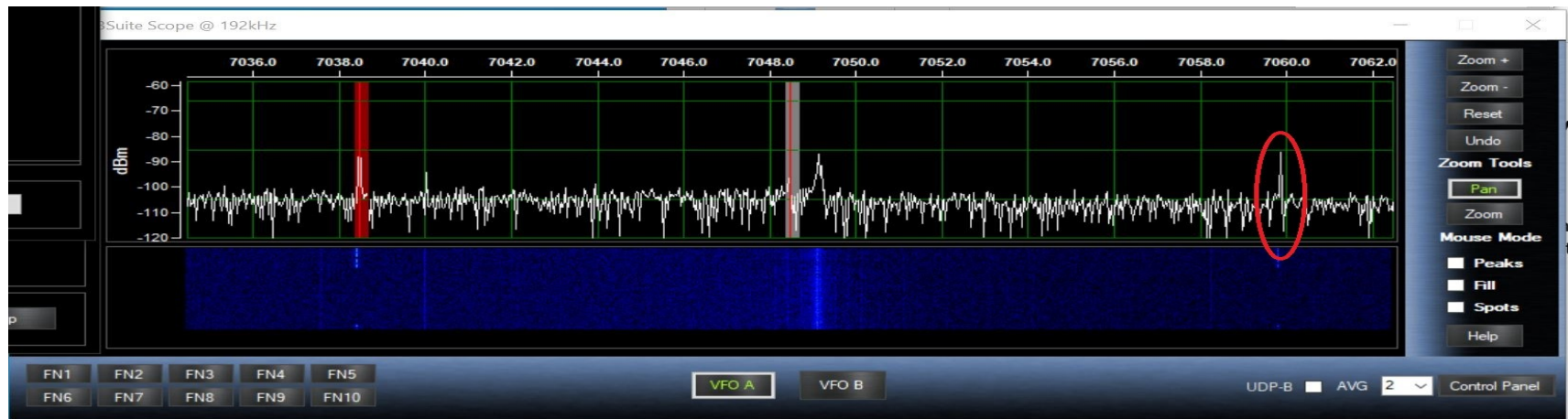
Mute may shift freq by a decade!

"Install: Run as admin"

"N1MM spectrum window: Permanently delete this window"

# Adjust I/Q Balance using sound card input

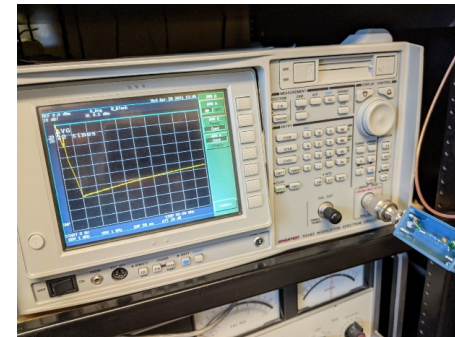
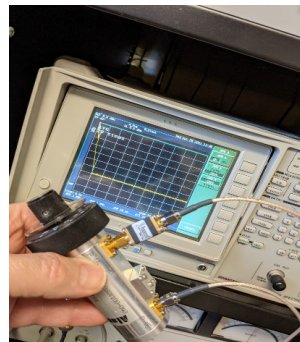
Adjusting I/Q Gain and Phase to suppress strong signal images reflected about tuned frequency.



# Signal Source for I/Q Adjustment

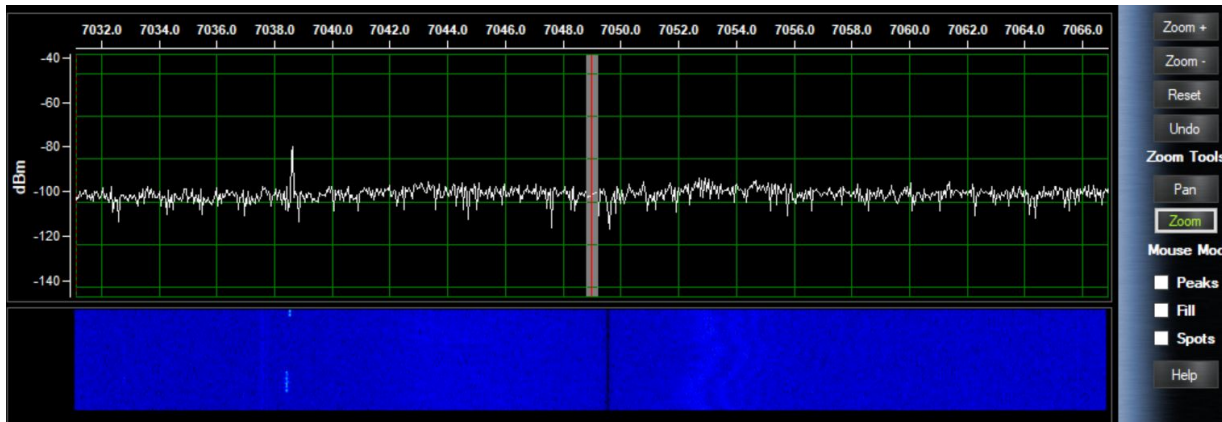
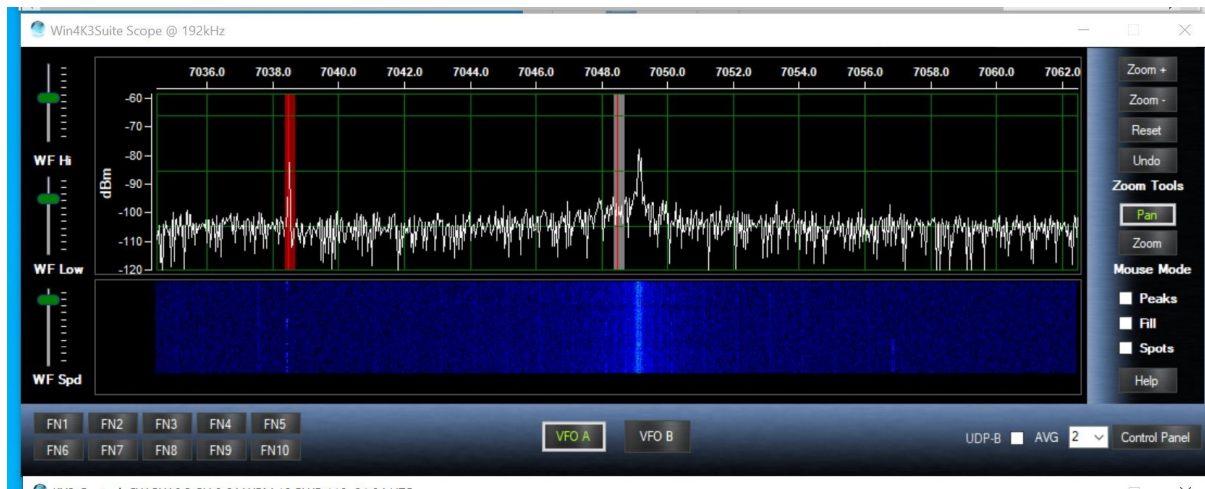
- Find a strong and relatively stable signal on the band in question. (\$0)
- Use an external signal source inserted at KX3 antenna connector.
  - Elecraft PX3 (\$0 -or- \$\$\$) has this test function built in for I/Q tuning of the KX3 image. Some disassembly required!
  - Elecraft sells the XG3 RF Signal Source (\$\$).
  - Most any benchtop sine generator covering the bands in use will do the job with the addition of an attenuator and DC block. (¢..\$\$)

KNOW YOU'RE SIGNAL SOURCE! Don't risk the radio front end...



# Isolation transformer to suppress 0 Hz hump

(Results may vary depending on the isolation transformer frequency response.)



Mpow Ground Loop Noise Isolator for Car Audio/Home Stereo System with 3.5mm Audio Cable (Black)

Visit the Mpow Store

★★★★★ 5,586 ratings | 196 answered questions

**Currently unavailable.**

We don't know when or if this item will be back in stock.

- **ELIMINATING BUZZING NOISE** : Eliminating the buzzing noise, caused by ground loops which happens when the audio source and the speaker use the same power source in some car speakers / home stereo systems when using the Bluetooth receiver.
- **WORKING PRINCIPLE** : The working principle of this noise isolator is to achieve a clear speech/music by eliminating the current noise in some car speakers / home stereo systems.
- **COMPATIBLE MODELS** : Works with any portable device that has 3.5mm audio jacks, for your Car Audio System/Home Stereo, when grounding issues persist. Also used with a Bluetooth Receiver/Bluetooth Hands-free Car Kit in your Car Audio System/Home Stereo.
- **COMPACT AND PORTABLE** : Being so mini and light-weight (2.01\*0.59\*0.59 IN, 0.99 OZ), this little gadget does not take much space and can be easily taken away.
- **NOTE**: The Ground Loop Isolator connect to the AUX Jack in car to eliminate noise. You will enjoy good quality sound when use it with Ground Loop Noise isolator.