Win4K3Suite

A **novice/new** user's view with a slant toward the KX3/KXPA100
Bob Leichner WO6W
17June2021

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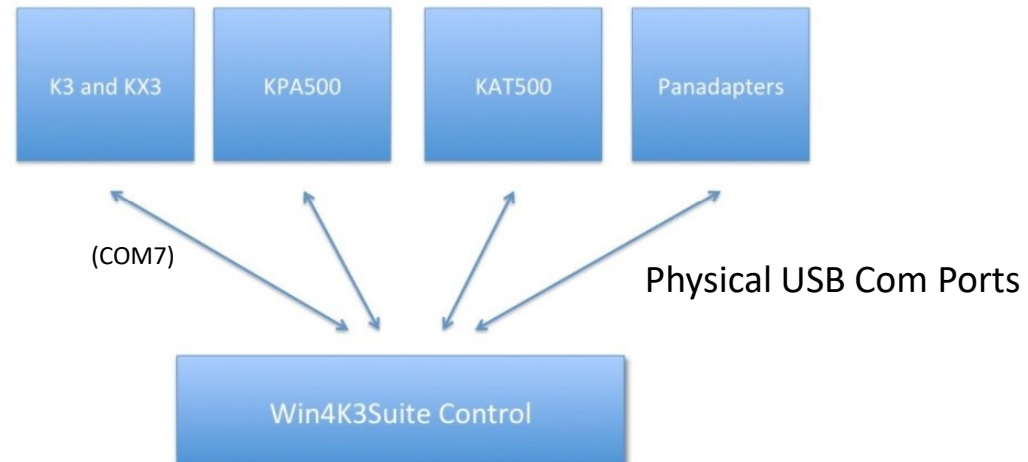https://va2fsq.com/tutorials/

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
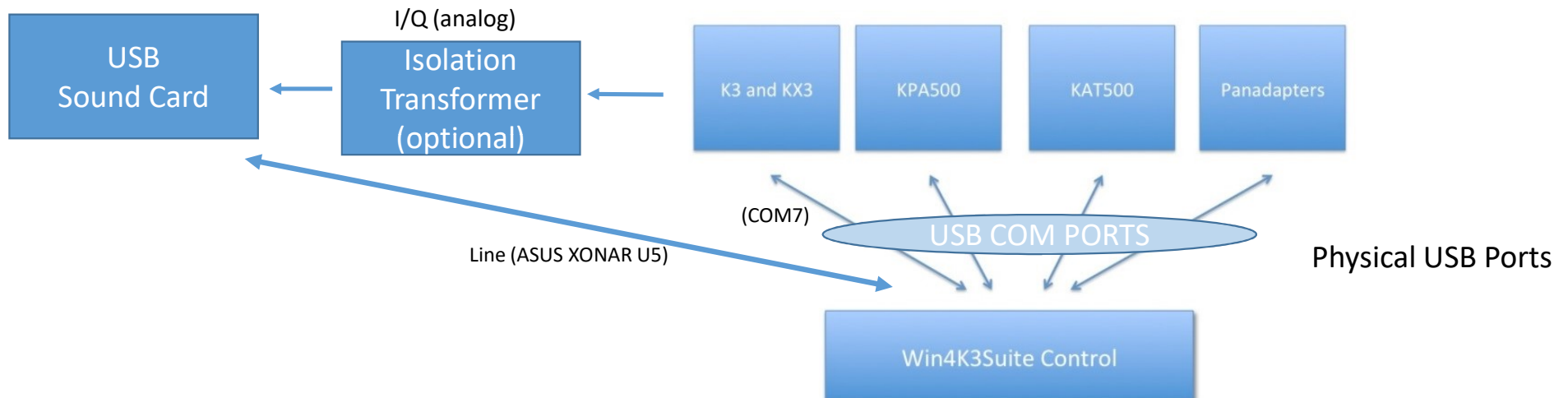
Basic Hardware Connections – USB Ports
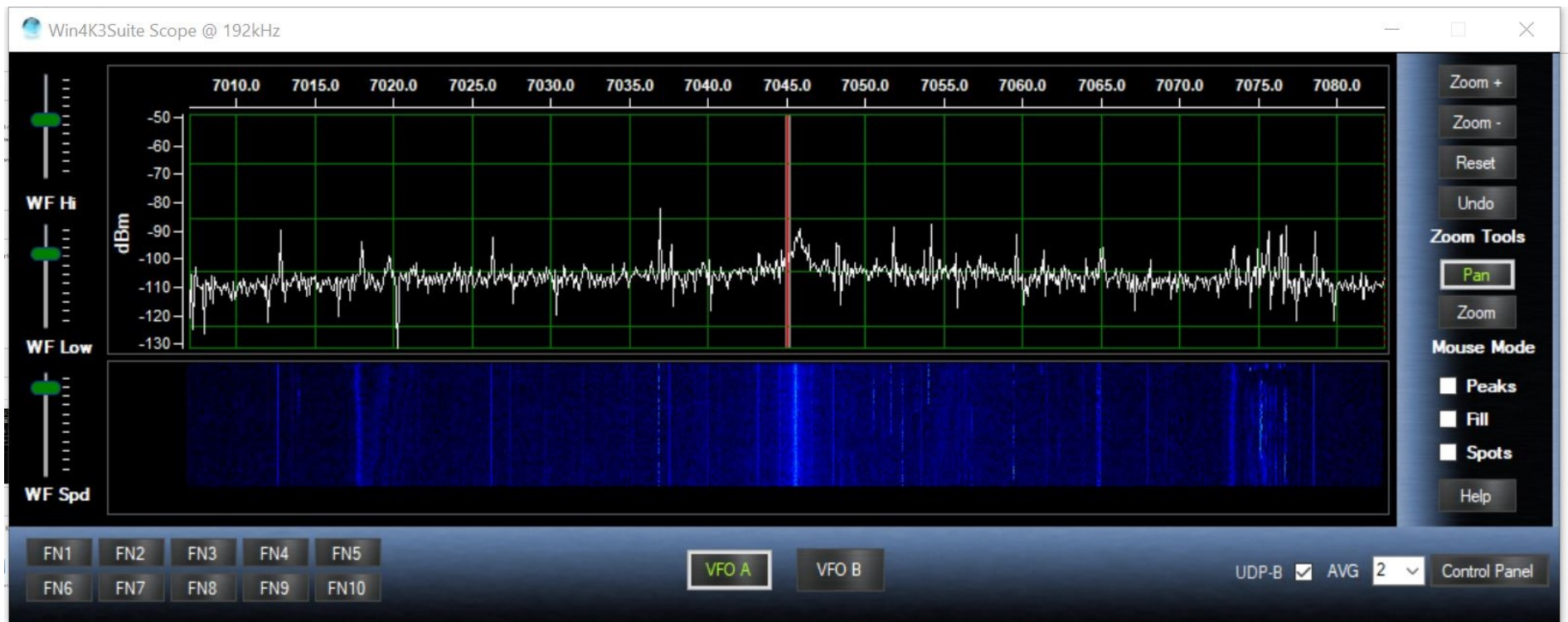
Live Demo Win4K3Suite main window

Adding an external sound card for KX3 spectrum display

USB
Sound Card

I/Q (analog)

Isolation
Transformer
(optional)

K3 and KX3

KPA500

KAT500

Panadapters

(COM7)

USB COM PORTS

Physical USB Ports

Line (ASUS XONAR U5)

Win4K3Suite Control

Live Demo Spectrum Window

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

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

Connections as a program hub

USB Sound Card

I/Q (analog)

Isolation Transformer (optional)

K3 and KX3   KPA500   KAT500   Panadapters

(COM7)

Line (ASUS XONAR U5)

USB COM PORTS

Physical USB Ports

Win4K3Suite Control

Spectrum UDP Broadcast

Win4K3Suite Control

Memory Based Radio Status

CH 1   CH2   CH3   CH4

Connected Programs

Logging
HRD, DXLabs, DX4Win etc

Digital Modes
WinWarbler, MMTTY etc

Contest SW
N1MM etc

Hardware
Antenna Controllers, Rotators

Function as a communications hub

Spectrum UDP Broadcast

Win4K3Suite Control

Memory Based Radio Status

CH 1   CH2   CH3   CH4

Com 18
Com0com
Com 11

N1MM+

WinKeyer USB

"N1MM spectrum window: Permanently delete this window"

Com 19
Com0com
Com 20

OMNIrig

"Install: Run as admin"

Log4OM

CATSync

Mute may shift freq by a decade!

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

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

Adjust I/Q Balance using sound card input

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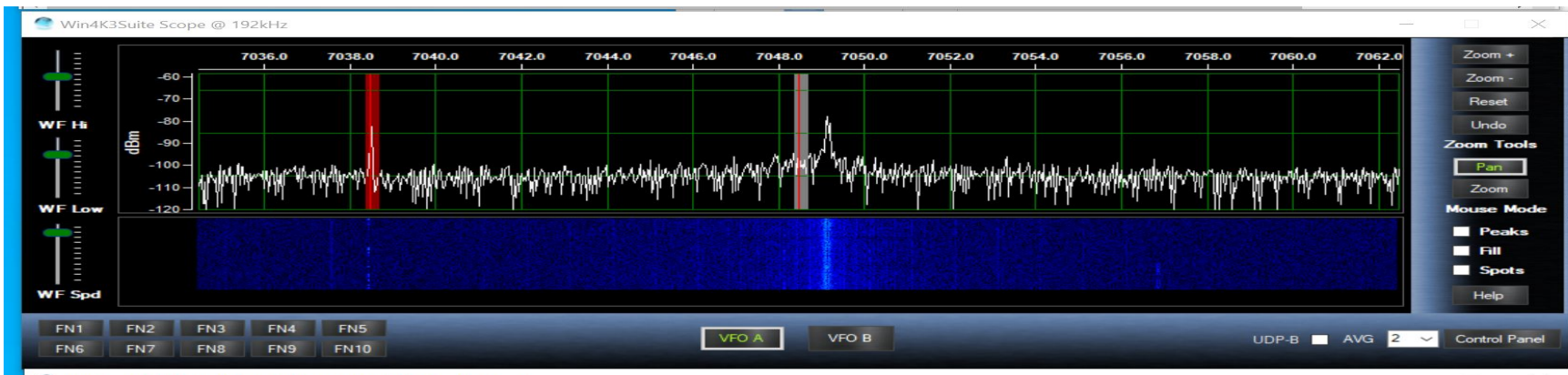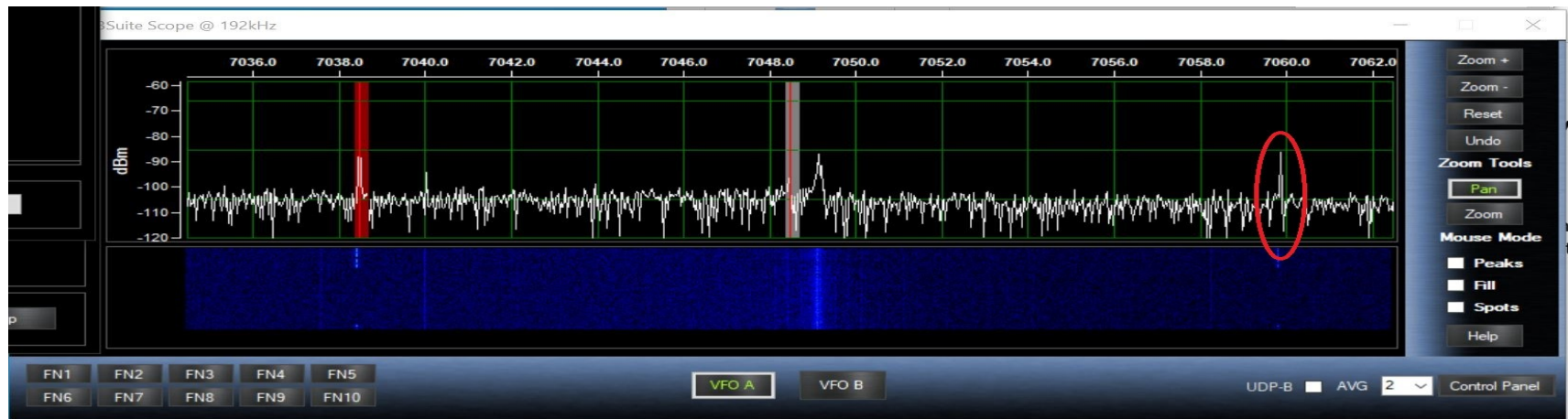
Signal Source for I/Q Adjustment

- Find a strong and relatively stable signal on the band in question. ($0)

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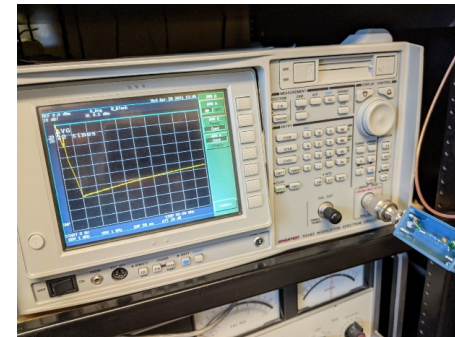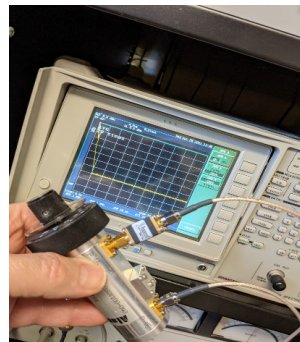 - Elecraft PX3 ($0 -or- $$$) has this test function built in for I/Q tuning of the KX3 image. Some disassembly required!
  - Elecraft sells the XG3 RF Signal Source ($$).
  - Most any benchtop sine generator covering the bands in use will do the job with the addition of an attenuator and DC block. (¢..$$)

  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.)
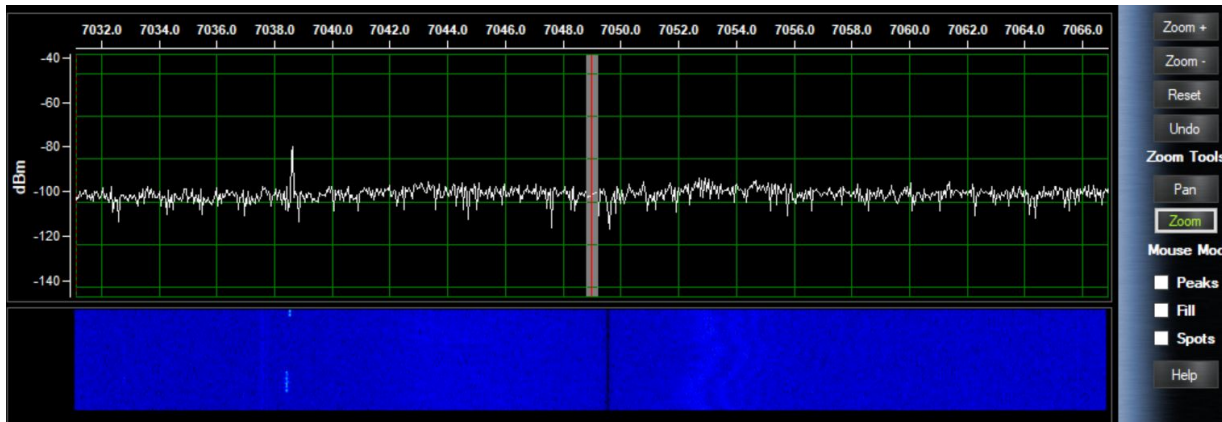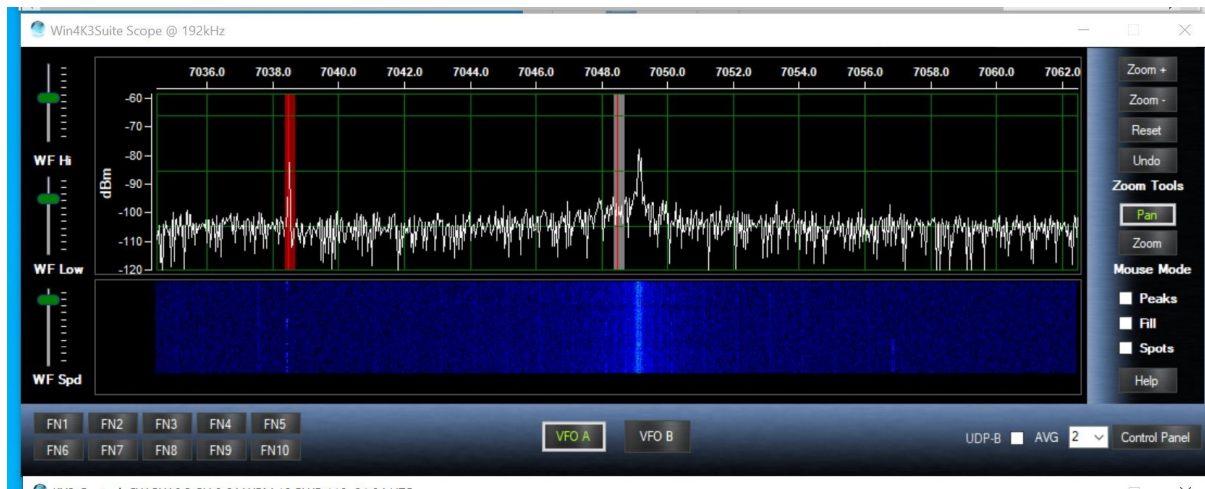
Mpow Ground Loop Noise Isolator for Car Audio/Home Stereo System with 3.5mm Audio Cable (Black)
Visit the Mpow Store
★★★★☆ ∨   5,586 ratings | 196 answered questions

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.