BitScope Preview

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February 1st 2014

Reviewed by NI0Z

BS10 With Dual Logic Differential Probes

BitScope

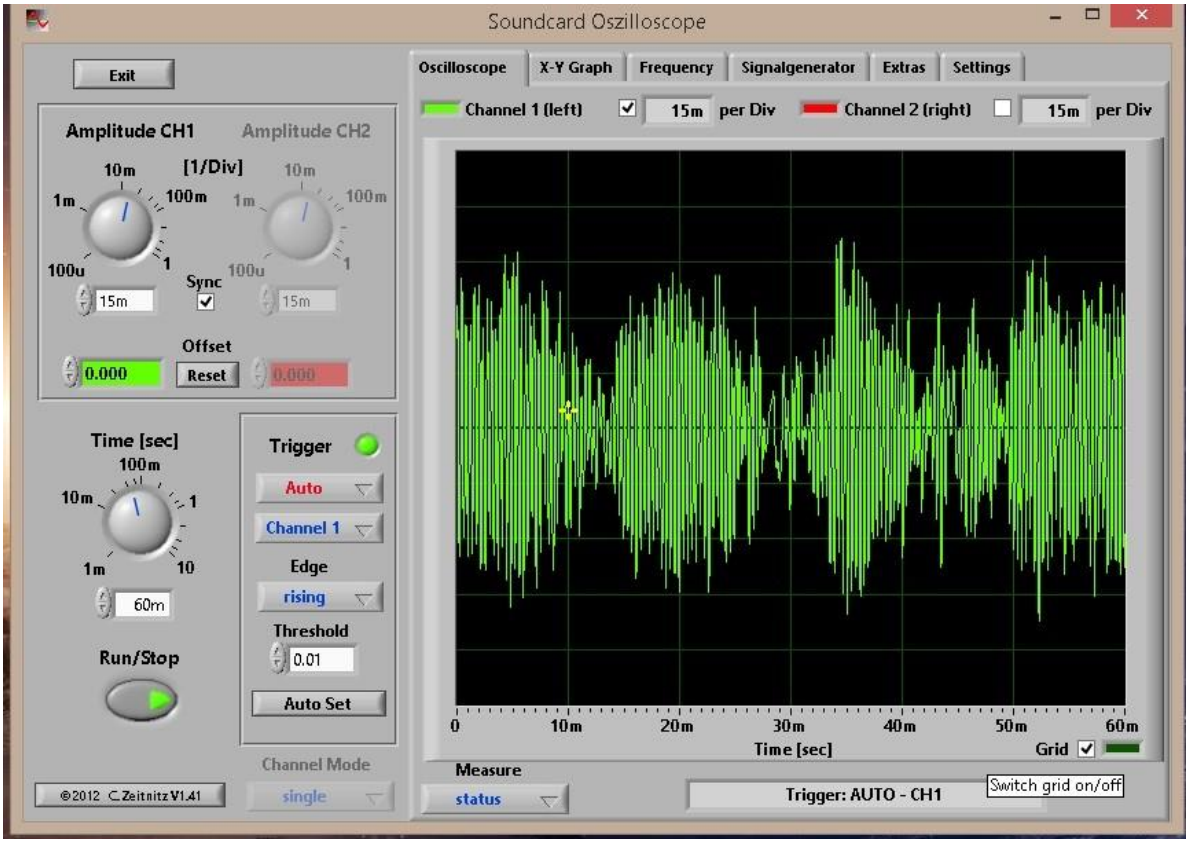
Retail Cost $300 US

Review Type = Light

Digital Occiloscope

I was intrigued by Tim here on the site to look into a Bitscope. I wanted a simple Oscilloscope to start experimenting with looking at wave forms on the audio channels of my radios.

Before I forget to make note of this, you can download some free software that, actually in comparison with the bitscope was rather favorable, will allow you to easily monitor sound car input or even VAC lines to accomplish the same simple task.



I thought though that the Bitscope would outperform it, however, as of this moment I am not there and only have started playing. Just a few more comments on this and I will move on. What is actually nice about the soundcard scope is that its really easy to monitor your SDR through the sound card. In my case I was able to take some Stereo to Mono and Mono to Stereo to take the audio out of two radios, feed them into the Mic jack on one of the sound cards on my PC and then monitor the two radios on Channel A and the other on Channel B. What you see above is the Anan on Channel A.

Let’s focus back on the Bitscope though. I ordered it, also got the Analogic Probes (not really needed right now (I’ll have to make some kind of adaptor or something to use it on my model of the bitscope. I also ordered the kit with the dual channel differential probes for later possible projects.

I ordered the Bitscope on Monday and had it Thursday. I received an order confirmation and then a shipping confirmation with tracking Fedex. All was seamless!

Here are the shipping pictures!

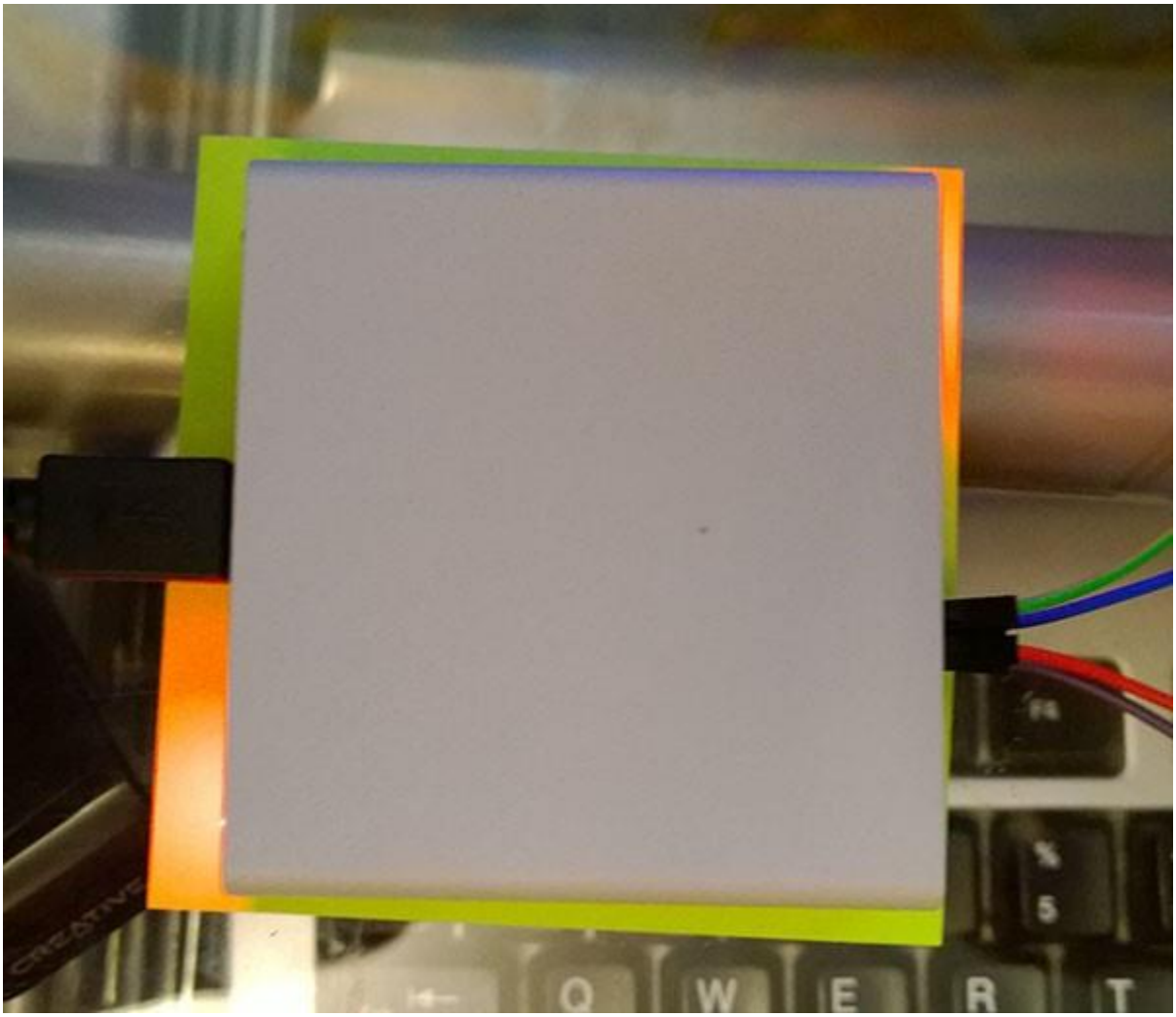
Standard Fedex Envelope, Box inside, smaller boxes inside box.

Bitscope Large Box and Smaller Boxes

Bitscope Box & Contents

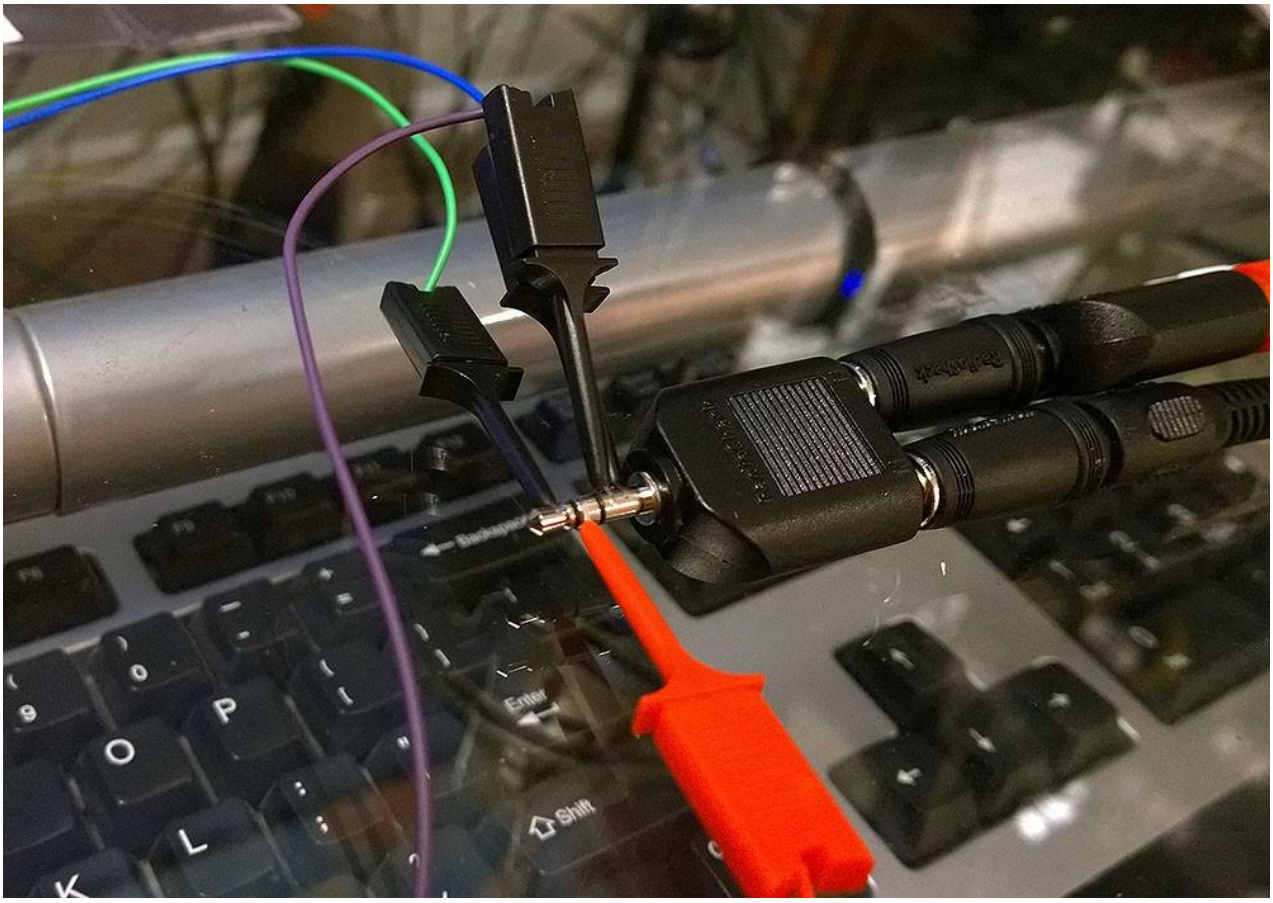
Dual Channel Differential Probe

The BitScope itself is even smaller than I imagined probably less than a standard 3M sticky pad wide square and maybe ¾ of an inch tall. See picture below of one sitting on StickyPad.

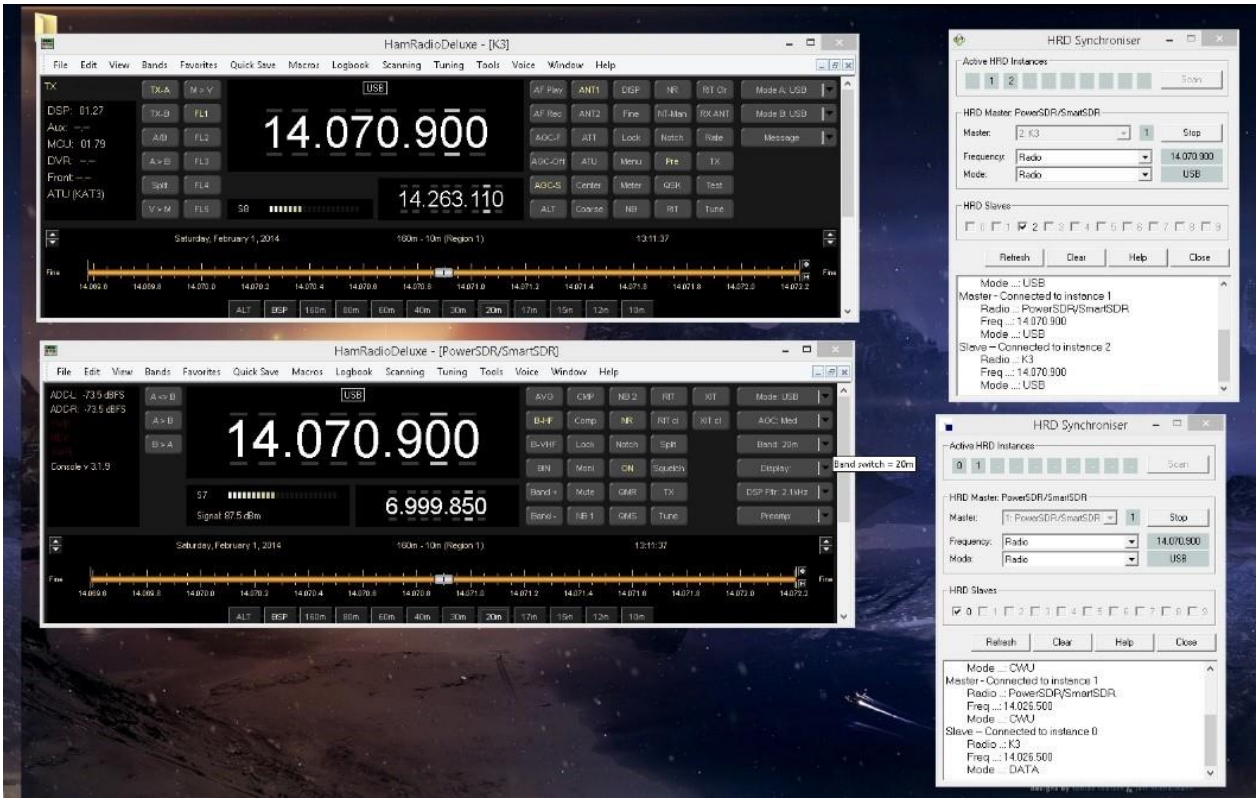


Instructions are pretty decent and I was able to get the Bitscope up and running on HamZilla in pretty short order.

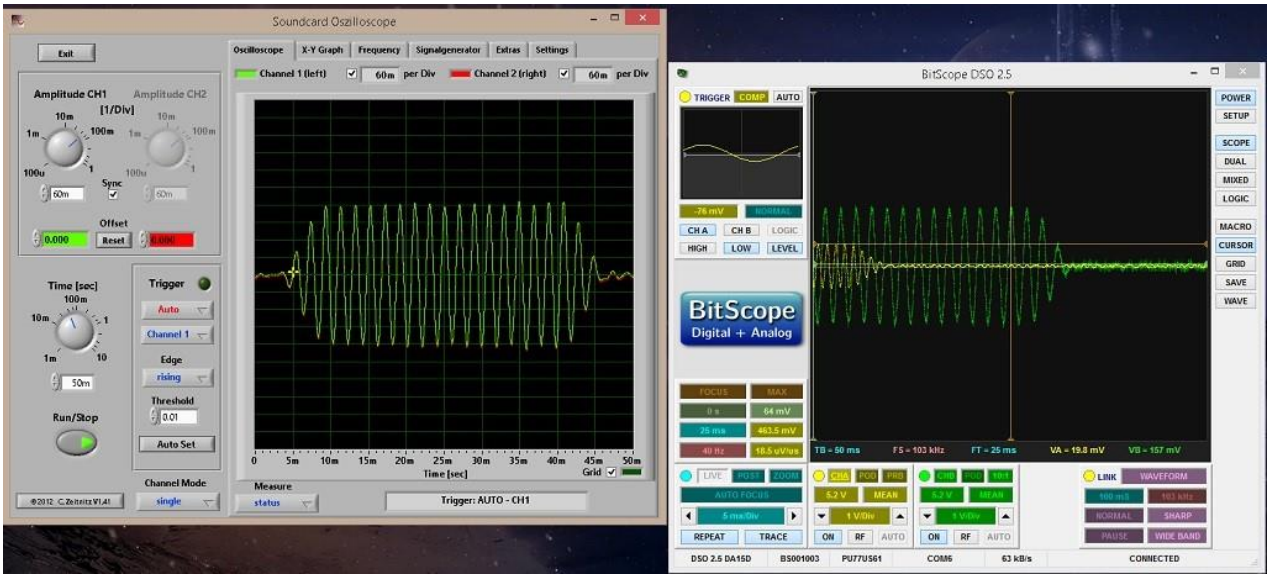
I connected the probes to Analog Channel one and two (Anan on A) (KX3 on B) as shown below.



Then I fired up two instances of HamRadio Deluxe and synced the VFOs together between PowerSDR and the KX3.

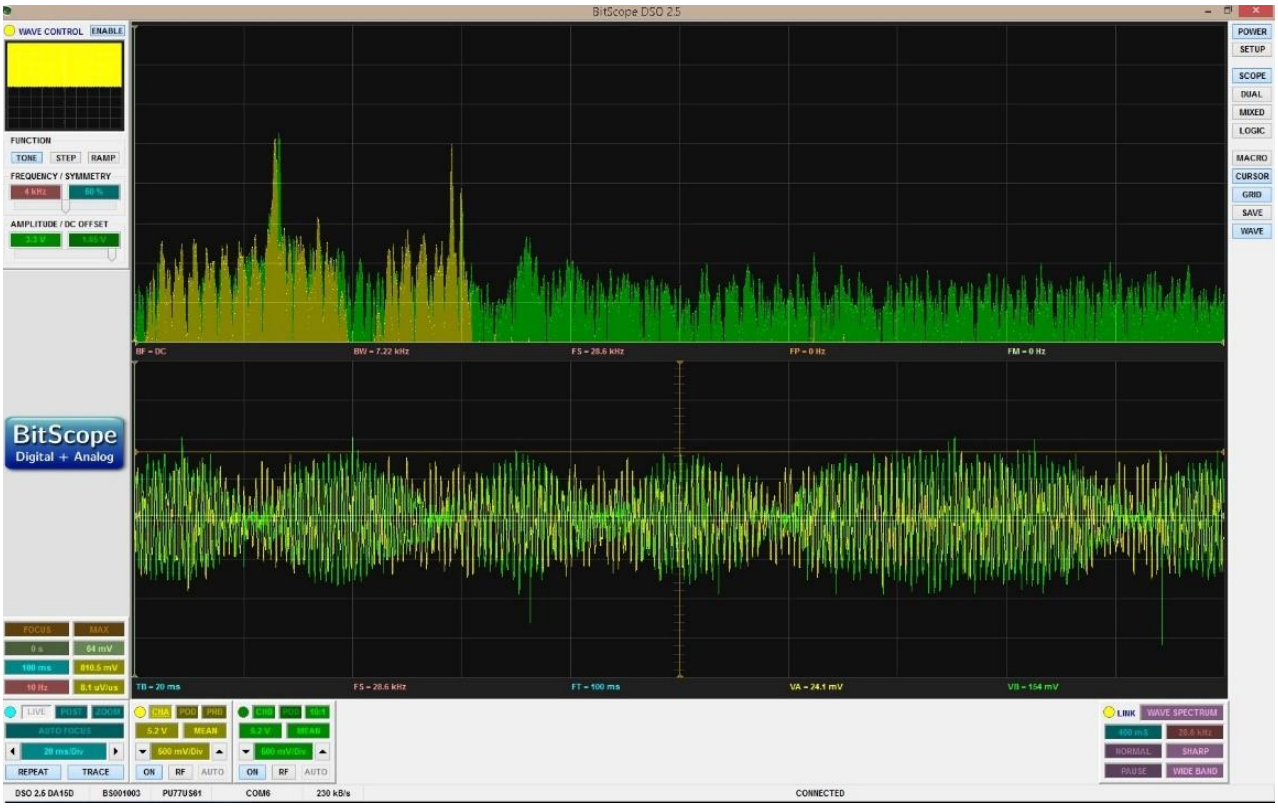


What you see next is a comparison of the PC Soundcard Oscilloscope and Bit Scope views. They are not apples to apples as the Soundcard is only displaying the Anan and the Bitscope has a dual view enabled as well as both radios.



Souncard Scope and BitScope Side by Side

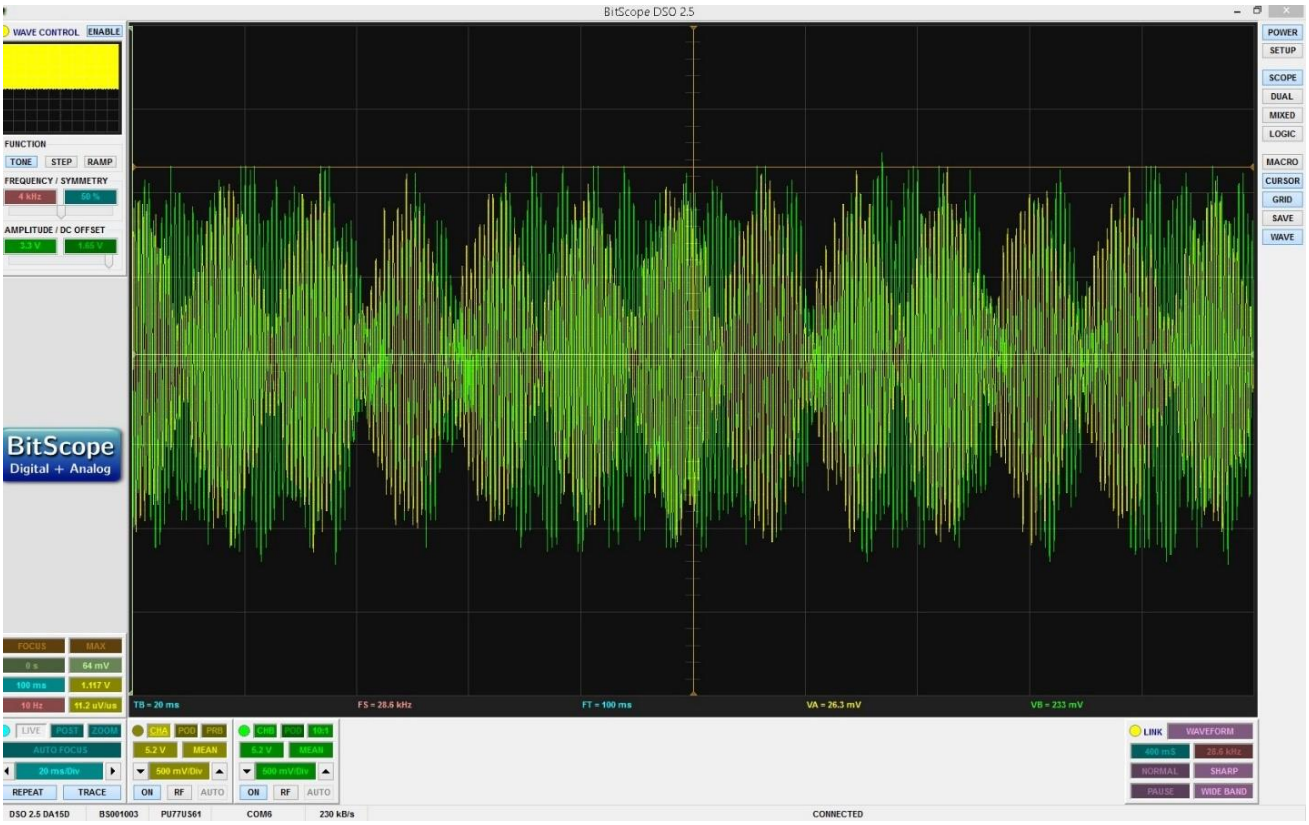
Setting the Sweep Time and Amplitude took a little getting used to with Bitscope as it does not use the dial paradigm like the Soundcard Scope.



Bitscope KX3 (yellow) Anan 100D (Green) PSK Receive

So a few things become evident when trying to compare two radios audio signals. The first is that they have different latency

You can see they are out of phase so to speak in this full scope view.



The other factor is the audio output varies as well so their amplitude can vary.

For fun, here is a view of SSB on 17M.

We'll call this a preview of the BitScope from me, and if I learn some more and how to better leverage its capabilities to this first simple task, I'll come back to you all with an update.

For now, I am just having fun!

73

NI0Z