

Using VA to measure LTA/TT improvements.

I downloaded Visual Analyser Beta 2020, i think its updated since then so go for the latest I just opened it, I didn't adjust anything else yet.

I found the "On" switch, top left, switched it on and found that immediately the PC microphone was giving input that showed on the screens.

I then plugged the output of the pre-amp into the Behringer 222 and the USB output from that into the computer and got signals shown on the screens again. It seems to just react to the input, i did not set the input.

Later i found where you can display one channel or both in settings

So to this point it was pretty much plug and play.

Here below was the early advice i had to get a set up to look at.

Start the VA and click on the "ON" button. Now you see the scope in the upper half and the analyzer in the bottom half.

Connect the outputs and the inputs of the Behringer with two RCA cables. Click on the "Wave" button in the upper task bar. This brings up the waveform generator. Click on the "On" button and adjust the level so you have a sinus that fills out the scope. There is a green bar in the left side under the Ch A (L) that should be filled almost. There is a figure under this green bar that should be as close to 0 dB as possible , but never over. That will cause clipping. If the vol needs to be very low to accomplish this, you must adjust the microphone input level in Windows settings. Play around with these settings so the vol setting in the "wave" is about 80- 90 and to get $\sim -0,5$ dB.

Now you should have a nice sinus in the scope and a single signal over the "grass" in the analyzer. Click on the "settings" in the top task bar and choose "main". Choose " A and B" in the "channels" and another red signal appears in the scope and spectrum window. Now you see both channels at once. Go back to the "A" in the "channels" again so only one channel is shown. Now you only see the green signal. In the scope left side under Ch A there is a ms/d value (this is the time base for the scope millisec per division) you can change and watch the result in the scope.

In the Waveform window you can change the waveform for channel A to square and see the result. Change it back to sinus again. And, as you can see, you can also change the frequency.

Now let's look at the analyzer (spectrum). To be able to see all the details here , it is better to have a bigger window for the spectrum. Click on the "floating" in the upper task bar. The scope and spectrum disappear, but you probably have the "wave" and "settings" windows along with the task bar. In the task bar choose "Spectrum" and maximize that window. Here you see a single signal @ 1Khz and some "grass" at the bottom. Click on the "settings" and

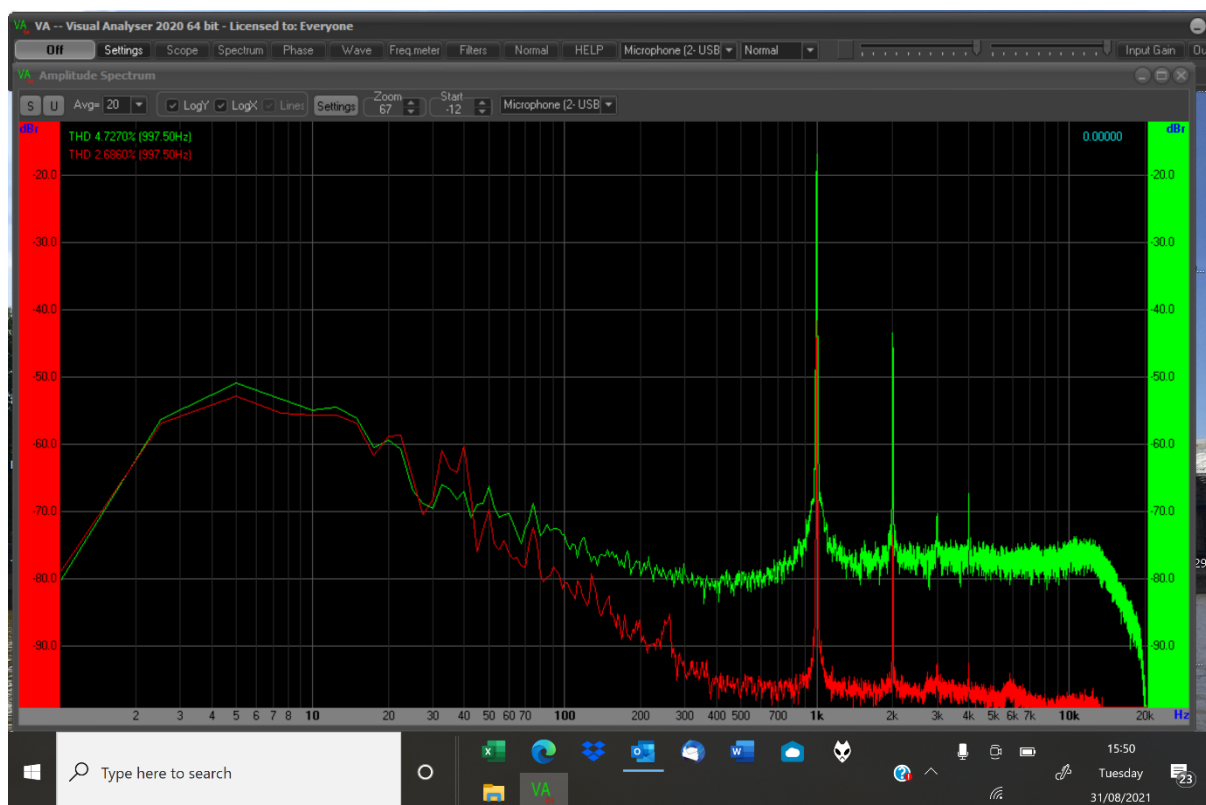
adjust the DbZoom so the bottom is @-120 dB. The “grass” is the residual noise but we can improve the resolution .

In the settings window choose “spectrum” and set the average to 20 instead of 1 and watch the result. Now the “grass” is lowered because of the averaging and you can now see some extra signals (especially @ 2 KHz).

To further reduce the “grass” choose “main” in settings and choose 16384 in the “FFT size”. Now you can see the harmonics @ 2 kHz and 4 kHz clearly. Choose “spectrum” in the settings and check in the THD in the lower left of the window. Now a figure turns up in the left corner of the spectrum window. This is the total distortion figure of the loopback of the Behringer.

Now I think you have a general idea of how you use the instrument. If you now remove the cables from the Behringer and connect the output from your RIAA to the Behringer input, and bring up the scope again and put on a test record, you can adjust the input gain in the task bar, so the signal again fills the screen and look at the result here. After that, bring up the “spectrum” again and look at the result. Not as pretty as it was before I guess!! 😊

From here on I always play the 1000Hz test tone on the test record and take a look at the results with settings either Fill screen, below



Or x2 and centred on 1000 using the scroll bar at the bottom.

