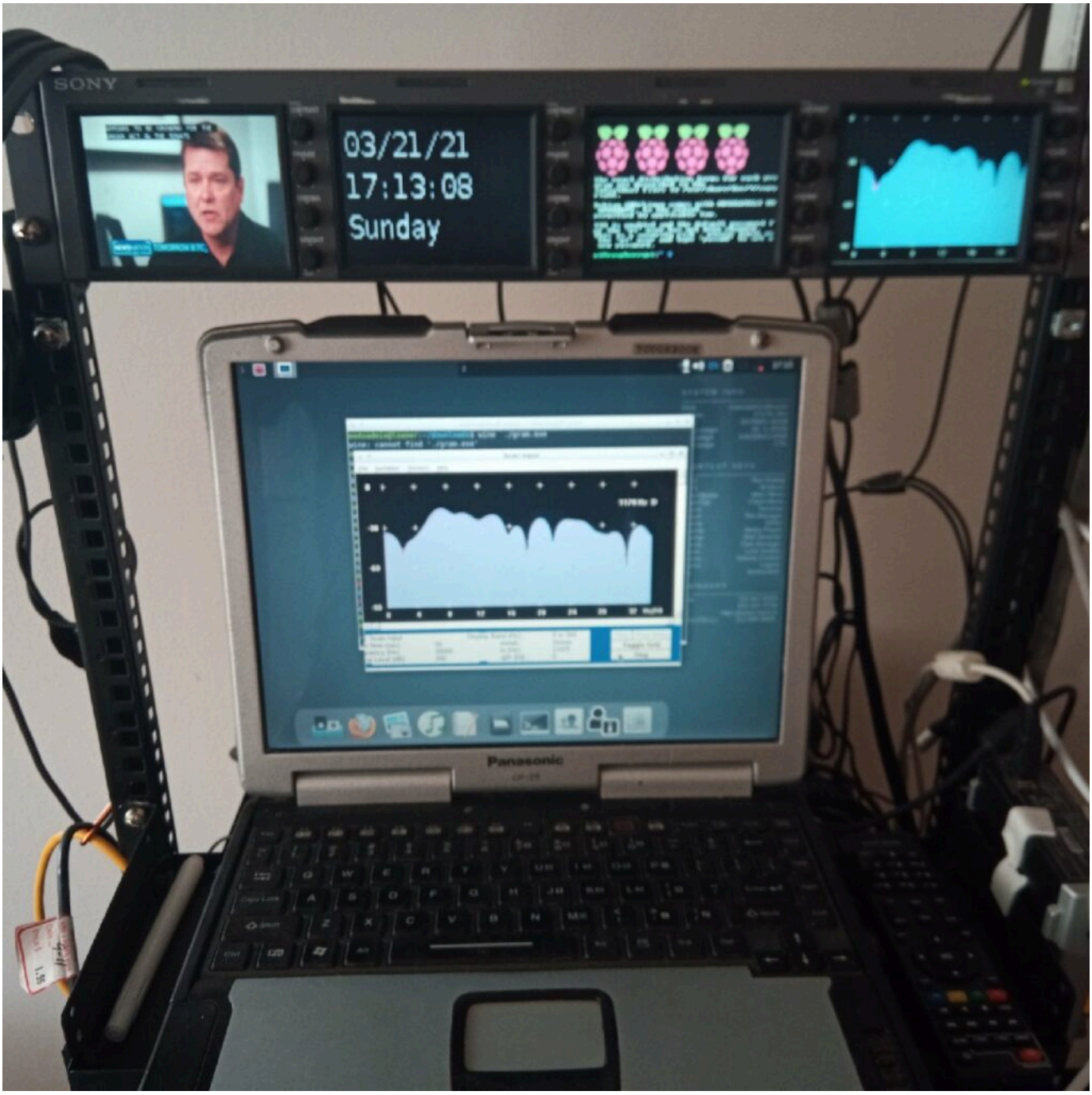
TV Research Troubleshoot: -30dB bias via USB and [grounding?] issue via analogue audio…

Currently moved from USB connection as function generator producing SIN wave signal at 0dB comes up on the spectrum plotter as -30dB. Because of this bias and the need for accuracy for the study I am currently trouble shooting what I suspect is a grounding issue with the analogue connection from the sound board. Computer used to plot in real time has grounding. So I suspect I need to find best way to ground the mixer if grounding is the issue.

With ATSC on:

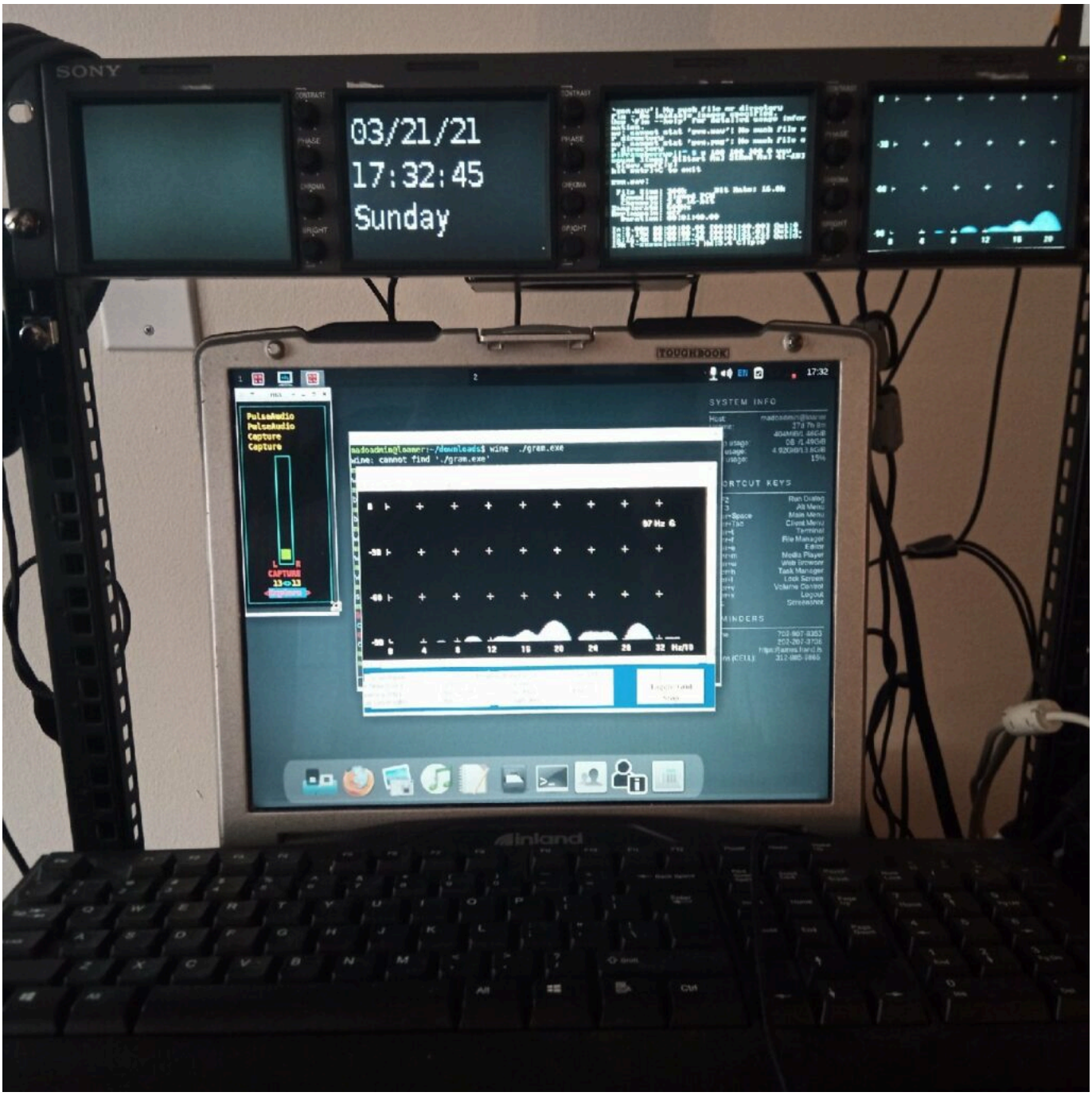


With ATSC off:

This demonstrates that there is significant noise to signal using analogue audio connection from mixer. Mixer is an Behringer 302 with USB.

I did turn down the input level from laptop from 100% down to 13% volume which demonstrates a -60dB bias according to

comparing with tone generator shown below:



0dB 100hz function generator at 13% volume level input.

Function generator output 3rd screen from left charts a consistent SIN wave tone at 100hz, 0 dB

While possible issue was that I am using a USB sound card from Pi computer for function generator the issue still persists with an analogue connection.

Here is the current mixer setup where peak audio is set just below peak/clip (Switch box used to go from ATSC to Function Generator):