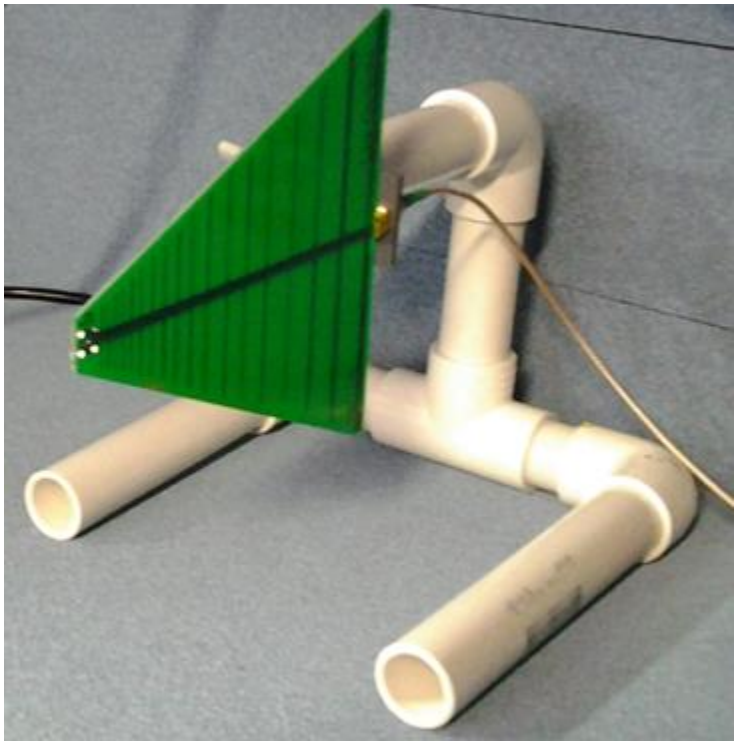
octoScope

octoBox Isolation Measurement

October 2014



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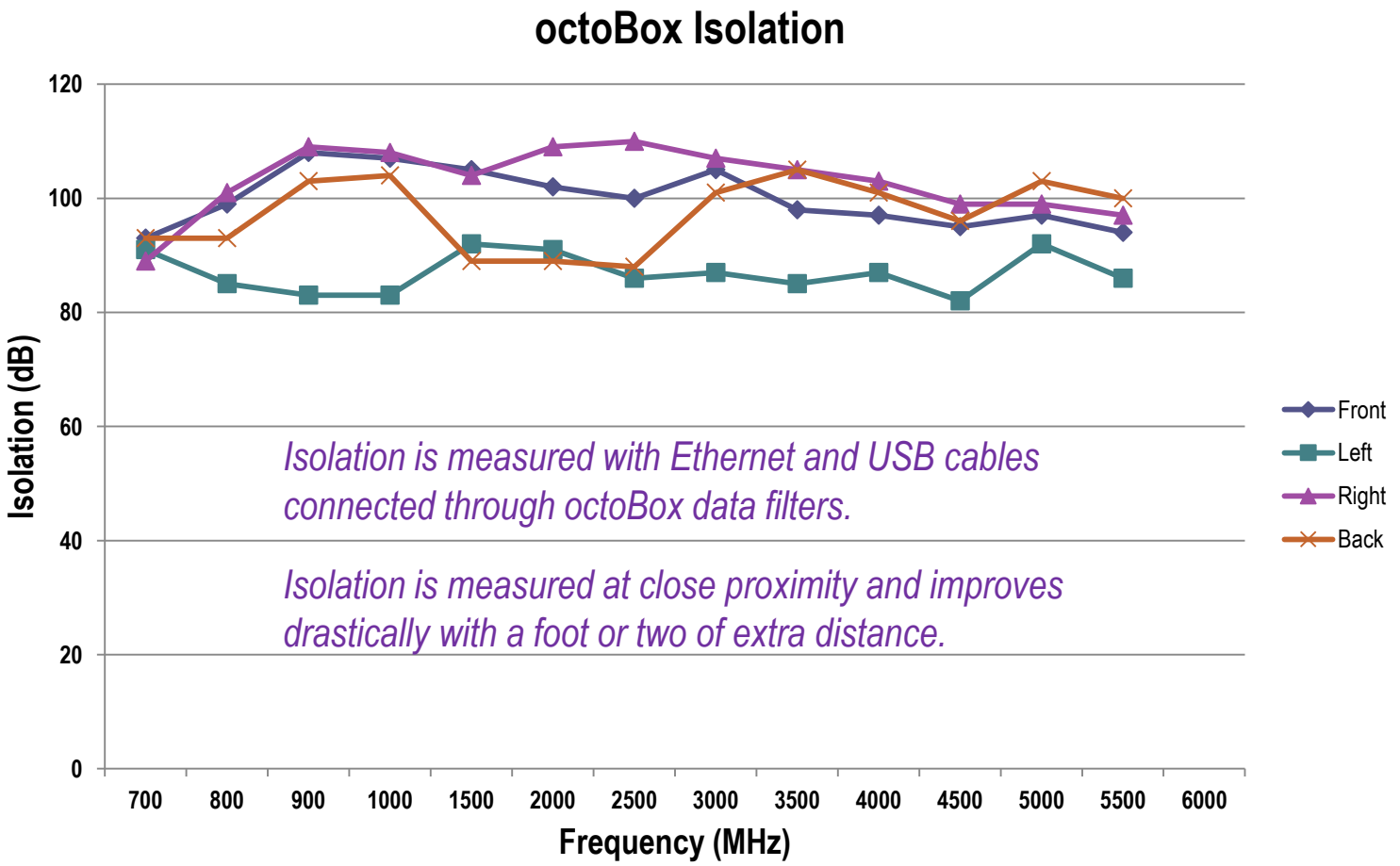
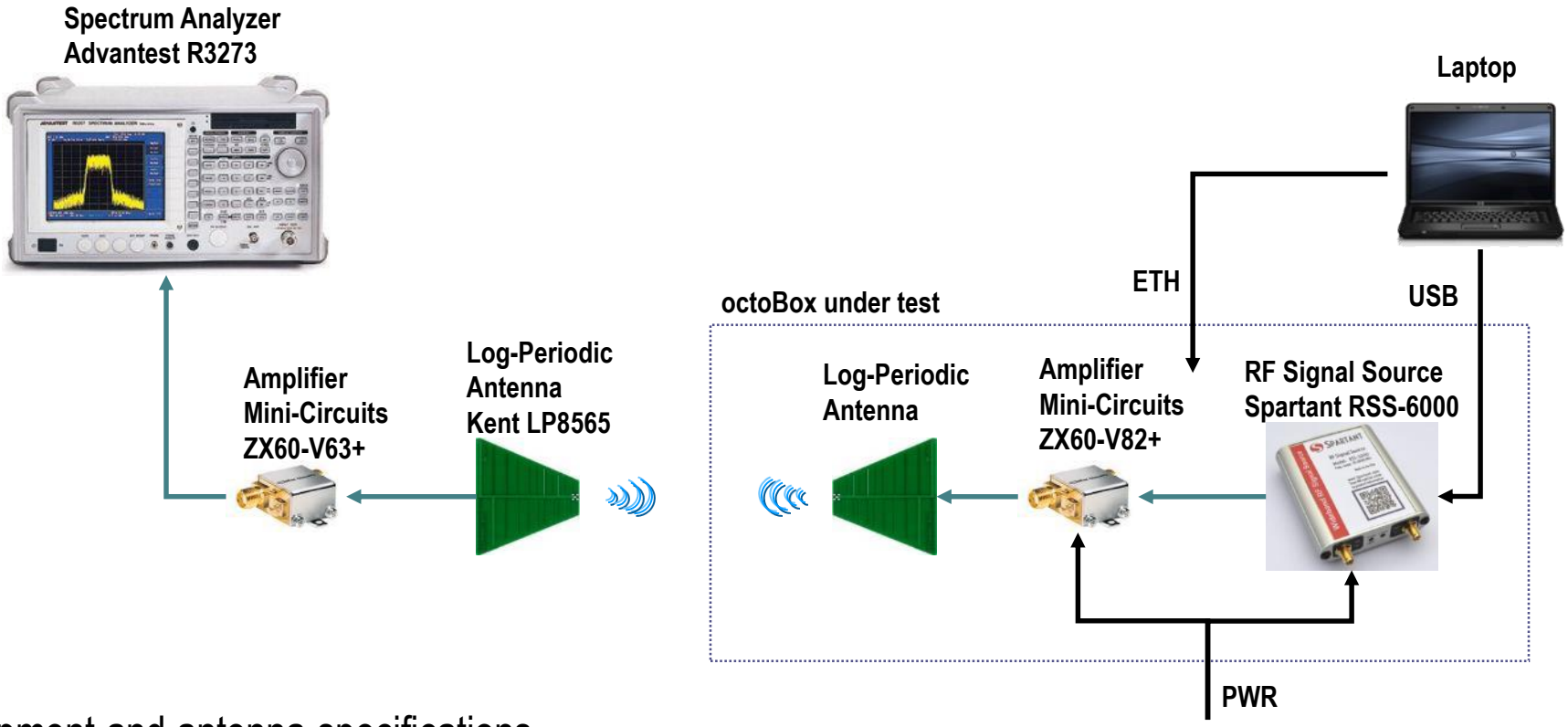
octoBox Isolation Measurements



Worst case isolation is at the left side honeycomb vent ('Left' curve)

Isolation Test Setup

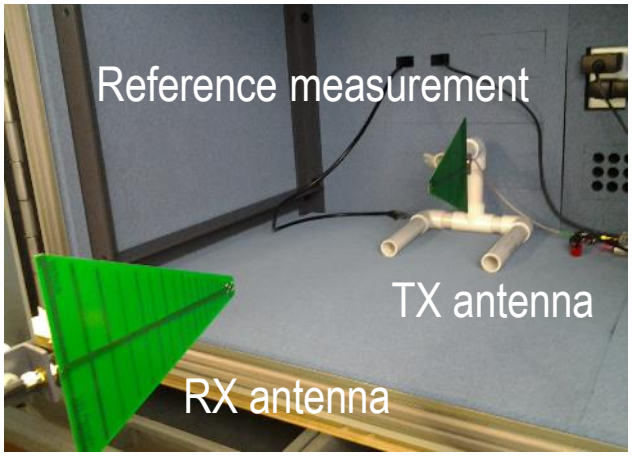


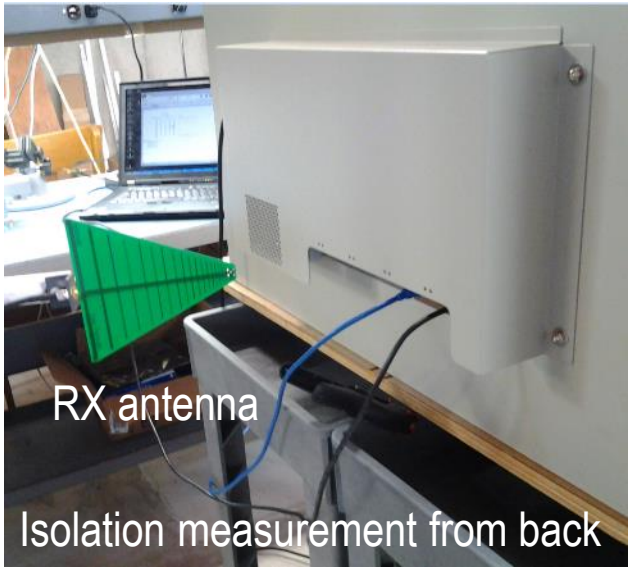
Equipment and antenna specifications

http://www.octoscope.com/English/Products/octoBox_Stackable/octoBox_Stackable.html
http://www.testequipmentconnection.com/specs/ADVANTEST_R3273.PDF
http://www.spartant.com/download/spartant-rss-6000.pdf
http://www.minicircuits.com/pdfs/ZX60-V63+.pdf
http://www.minicircuits.com/pdfs/ZX60-V82+.pdf
http://www.wa5vjb.com/pcb-pdfs/LP8565.pdf

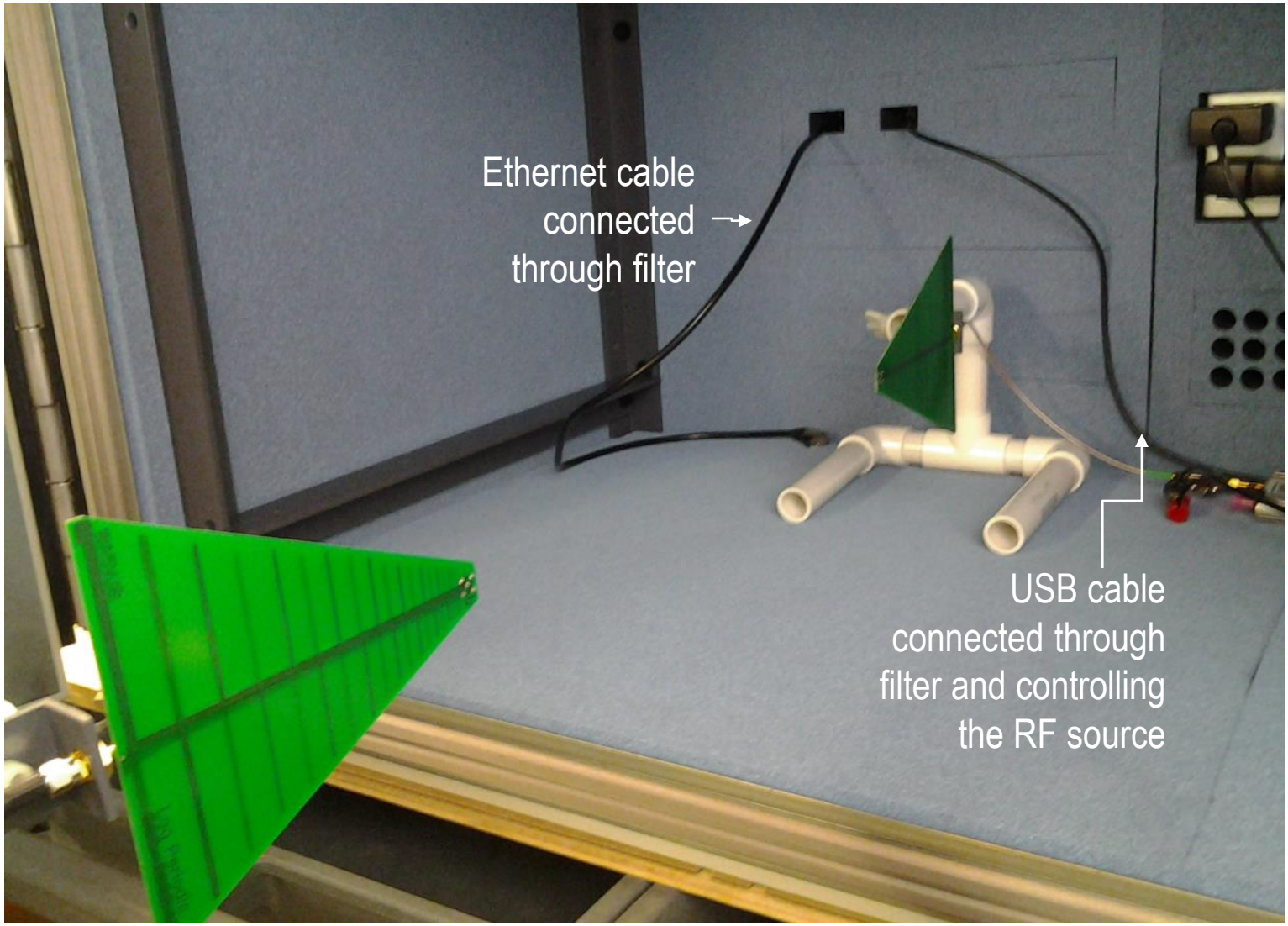
Test Procedure

1. Take a reference measurement with the octoBox door open and with TX and RX antennas in close proximity
2. Close the octoBox door and perform measurements at different orientations of octoBox with respect to RX antenna, which is connected to the Spectrum Analyzer
3. Record and plot the measurements for each orientation

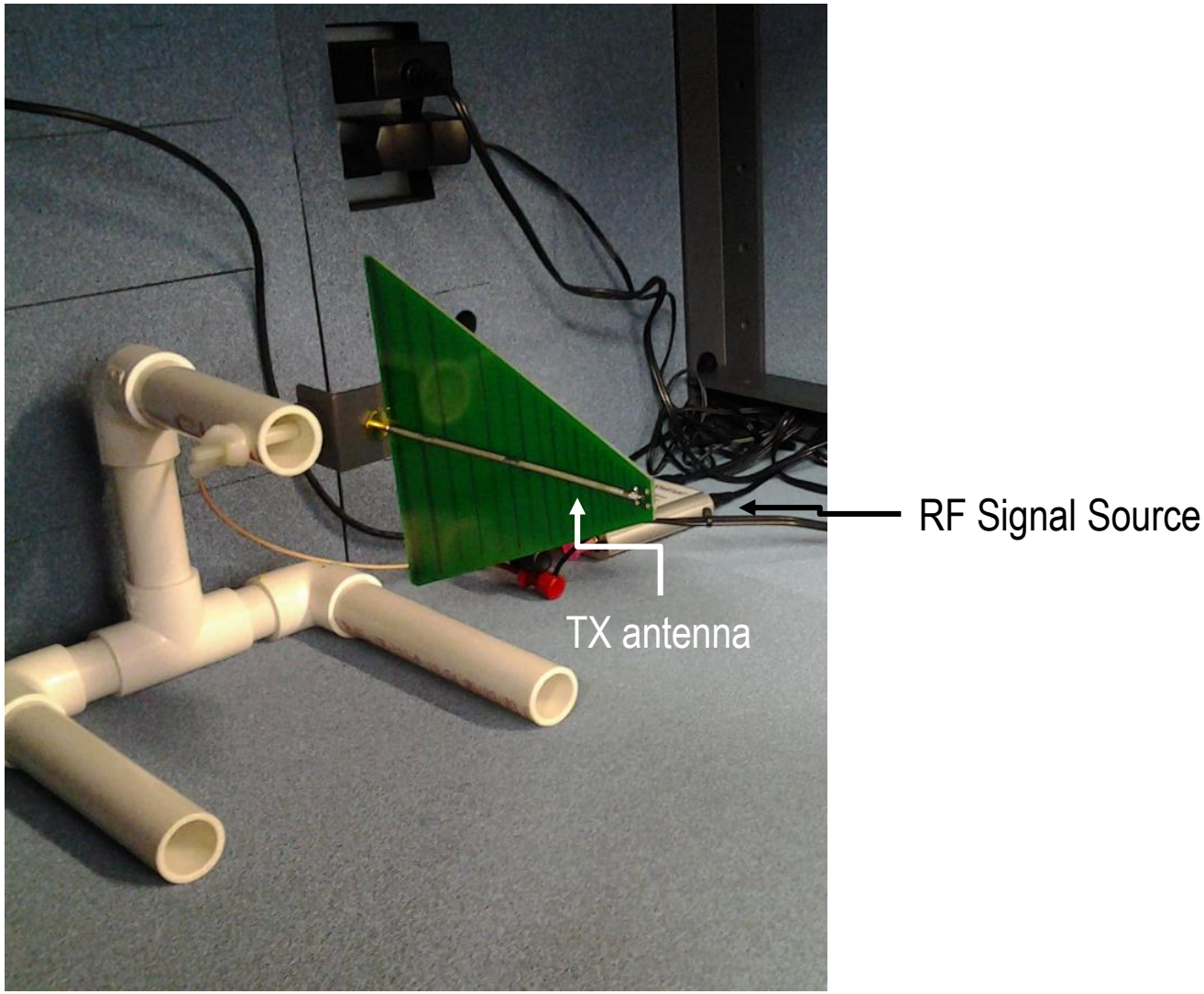




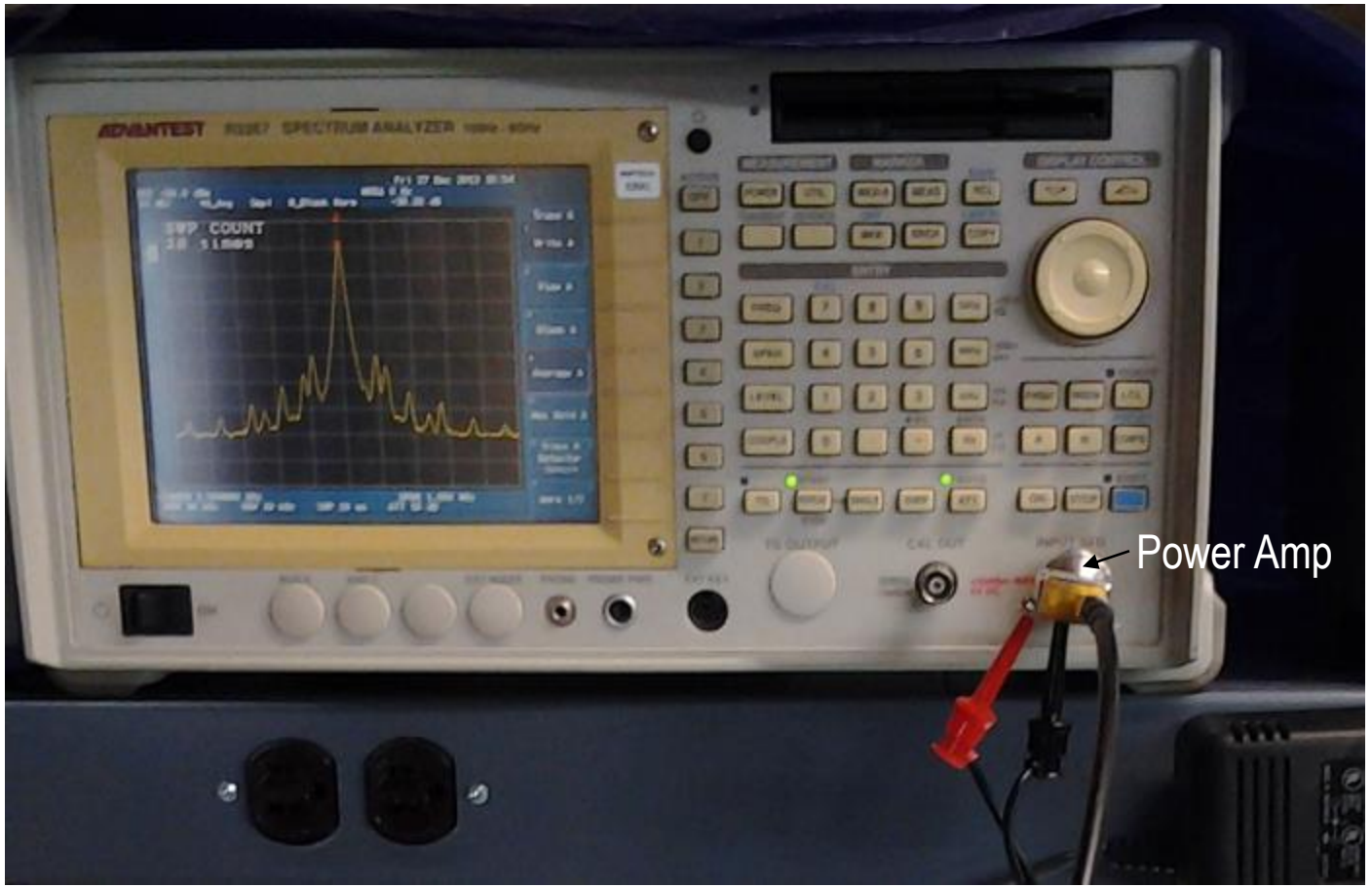
Reference Level Measurement



Internal Antenna and Signal Generator

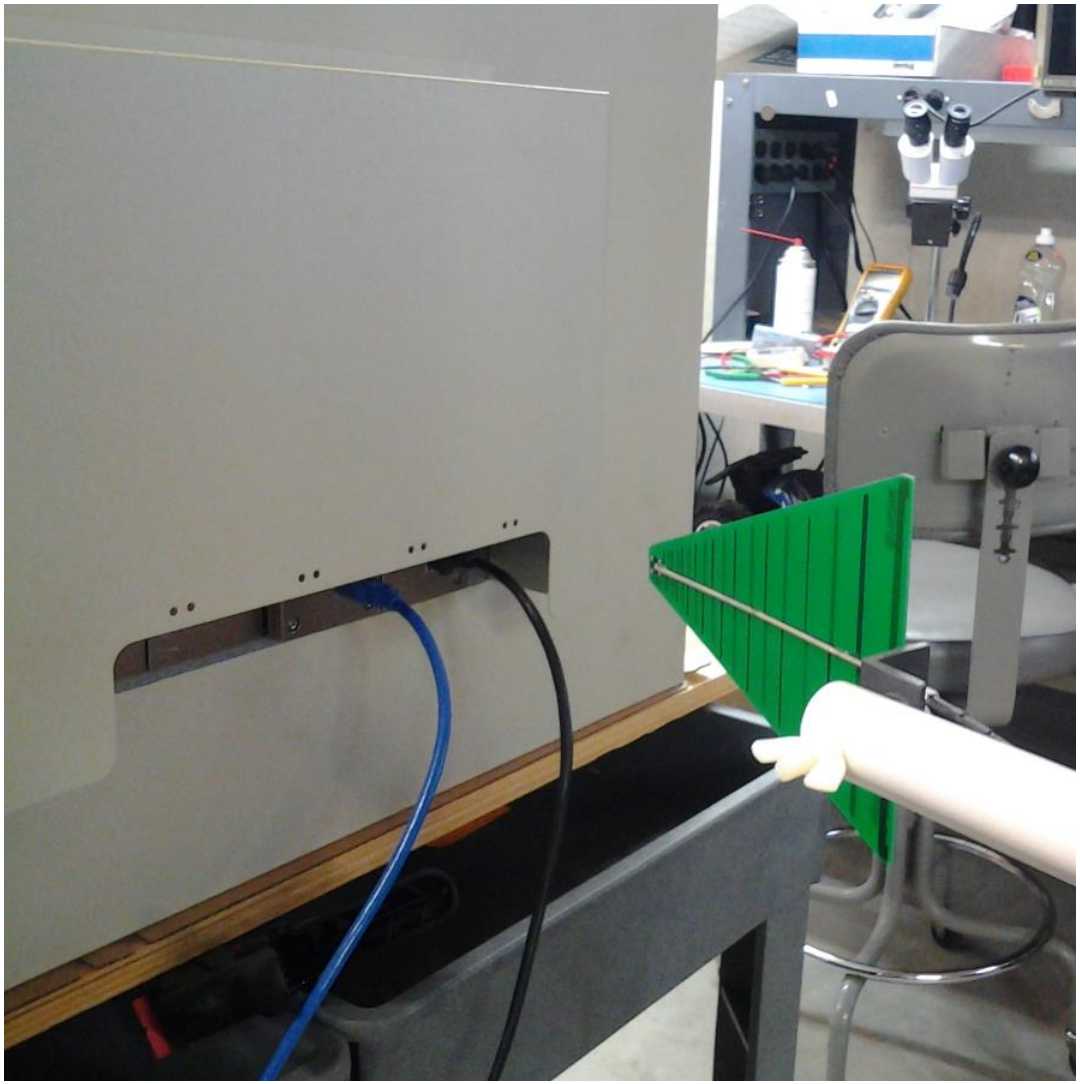


Spectrum Analyzer Measurement

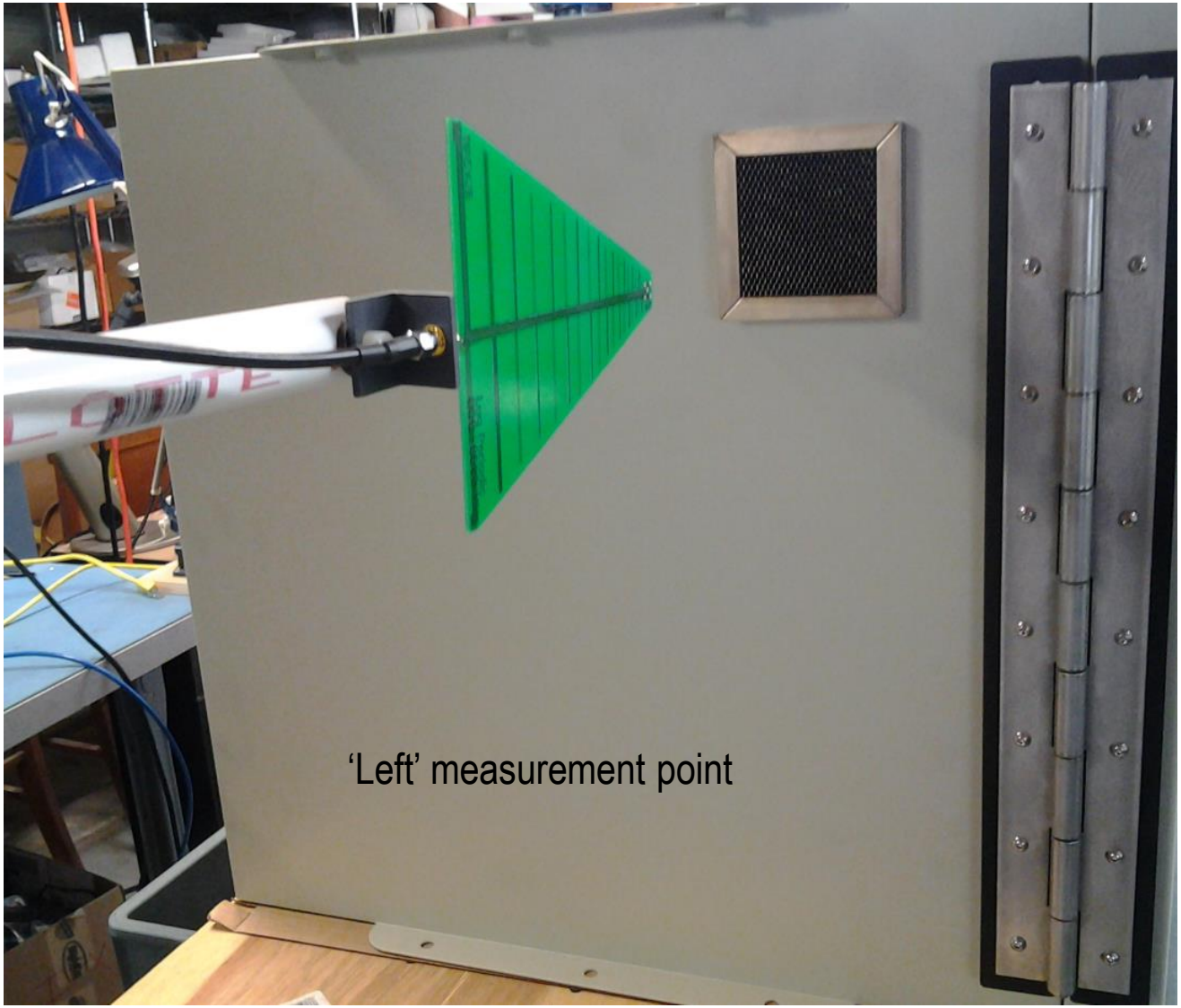


Isolation Measurement at Filter Inputs

Isolation Measurement at Filter Inputs (close-up)



Isolation Measurement at Vent (Worst Point)



Summary

- Isolation of octoBox has been measured at close proximity. Interference is undetectable in real-life environments when the source of interference is further away than in the measurements shown here.
- octoBox interference is measured with data cables connected through filters, which shows real-life performance of octoBox.
- octoBox typical isolation is about 100 dB and worst case isolation is better than 80 dB at close proximity.

- View octoBox information
  - http://www.octoscope.com/English/Products/octoBox_MPE/octoBox_MPE.html
- View our publications, including articles, white papers, test reports and online tutorials
  - http://www.octoscope.com/English/Resources/Articles.html
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Thank you!