

RFI Test - TR Electronic LLB500 Laser

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1 Equipment list

Equipment:

- TR Electronic LLB500-00600
- Serial Number: 04140014

Spectrum Analyzer:

- Agilent E4445A Spectrum Analyzer, 601 channels, pre-amp on.

ETS Model 7405 probes[1]:

- Magnetic field, No. 902, Res. Freq. $1.5GHz$, H/E Rejection 29dB.
- Electric field, No. 904, Res. Freq. $> 1GHz$, H/E Rejection 30dB.

2 Procedure and Frequency Ranges

Figure 1 shows the TR Electronic LLB500-00600 laser ranging system. We used a DC Power Supply regulated to 24VDC, and a laptop computer was taking power readings of the laser while the RFI test was running. Blue circles show RFI hot-spots.



Figure 1: TR Electronic LLB500-00600.

The LLB500 was tested in the frequency ranges of Table 1. All the spans were fixed to 250MHz (416kHz channel bandwidth - BW) for this test.

3 Results

Please, check the results in these files:

- Probe No. 902:
20110615_laser_902.pdf
- Probe No. 904:
20110615_laser_904.pdf

Table 1: Frequency Ranges, CF=Center Freq.

Band No.	CF (GHz)	BW (GHz)
18	0.1250	0.2500
19	0.3750	0.2500
20	0.6250	0.2500
21	0.8750	0.2500
22	1.1250	0.2500
23	1.3750	0.2500
24	1.6250	0.2500
25	1.8750	0.2500
26	2.1250	0.2500
27	2.3750	0.2500

Figure 2 shows the results obtained with the previous model of the LLB500 (RFI test of 23 Apr 2010) and the LLB500. Figure 3 show the results of electric field only for the LLB500.

4 Conclusions

- Make sure that your coax cable is ok before the test!!
- RFI everywhere, take care with this equipment, it can produce cancer...

References

- [1] ETS LINDGREN, *ETS Near-Field Probe Set Model 7405*.

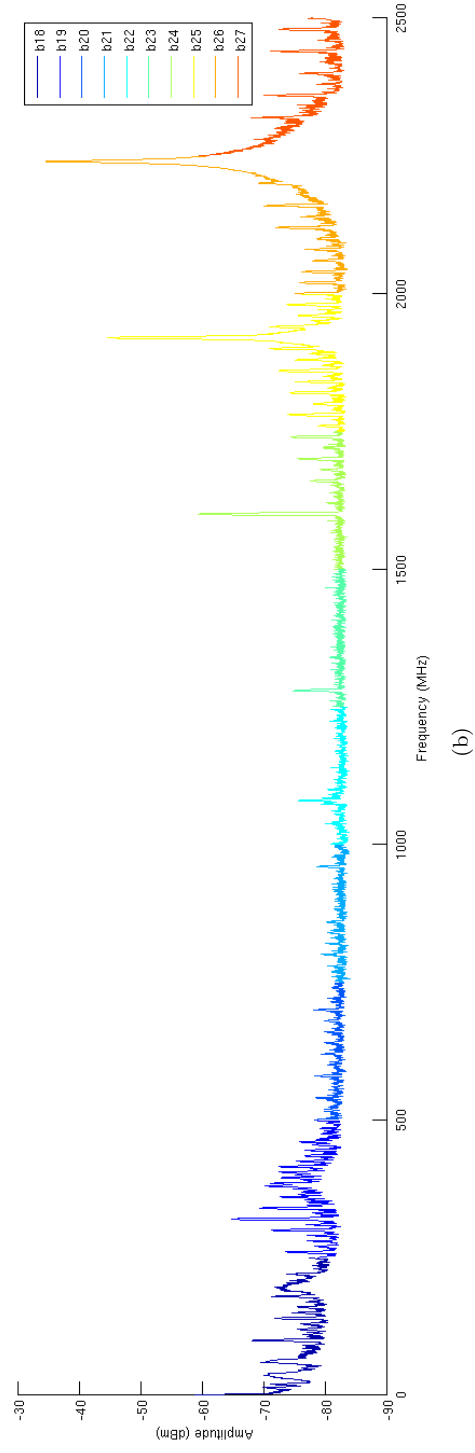
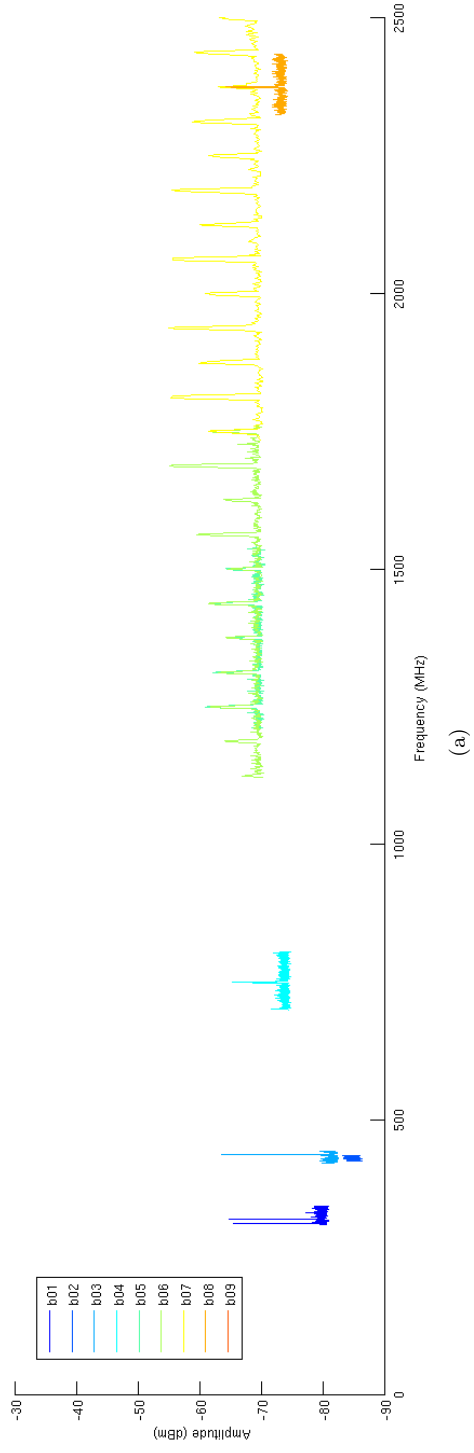


Figure 2: Magnetic Field, (a) Previous model, (b) LLB500.

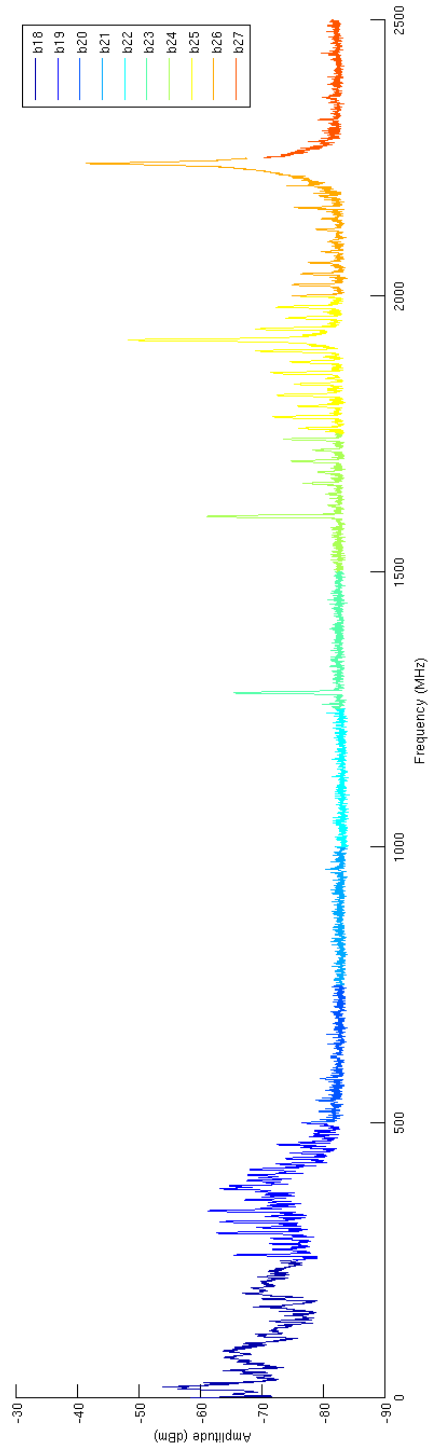


Figure 3: Electric Field of LLB500