

# RFI Test - 12m Antenna Camera

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## 1 Introduction

The shielding was improved for the waterproof aluminum housing of the GANZ CLH-401 security camera (12m antenna). The front window was RFI shielded with a metallic mesh (see Fig. 3). The camera was tested with the enclosure closed, and the data is compared with the emissions of the camera only. This test was requested by Victor Negron.

## 2 Equipment

Camera and Enclosure:

- Camera GANZ CLH-401
- Power Supply used during the test: Lascar PSU 130 @ 12.4VDC.

Agilent E4445A Spectrum Analyzer:

- Trace 1: Clear Write, Average ON, 20 spec.
- Trace 2: Max Hold.
- Trace 3: Min Hold.
- 8192 points per spec.
- Internal Amplifier ON.
- 6dB Attenuation.
- CSV data files.

ETS Model 7405[1] probe No.902:

- Magnetic field.
- Res. Freq. 1.5GHz.
- H/E Rejection 29dB.
- Performance: Fig. 1.
- + 15ft coax cable

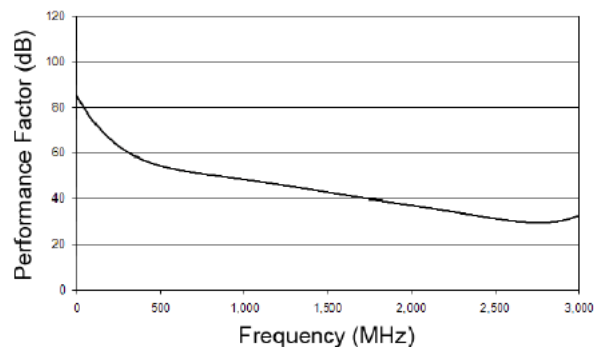


Figure 1: Probe No. 902 Performance.



Figure 2: 12m Camera, open enclosure.

## 3 Test

Figure 2 shows GANZ camera in the enclosure. You can see that the sealing rubber ring was replaced (see Feb 14, 2012 RFI test report).

Figure 3 shows the front window of the enclosure.



Figure 3: 12m Camera, closed enclosure.

These are some details of the test procedure:

- Screen/shielded room front door closed.
- Turn off everything (A/C, eth. switch, 10MHz buffer), except spectrum analyzer, camera power supply, and camera.
- Disconnect 10MHz coax to the buffer (in some way this is causing interference at 10MHz).
- Video cable disconnected, only power supply for the camera.
- Thirty (30) 100MHz bandwidth scans (12.207kHz per channel), from 0 to 3000MHz. Enclosure open and closed.
- Trace results recorded in the spectrum analyzer. CSV format, all traces. Data accessed via FTP.

## References

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

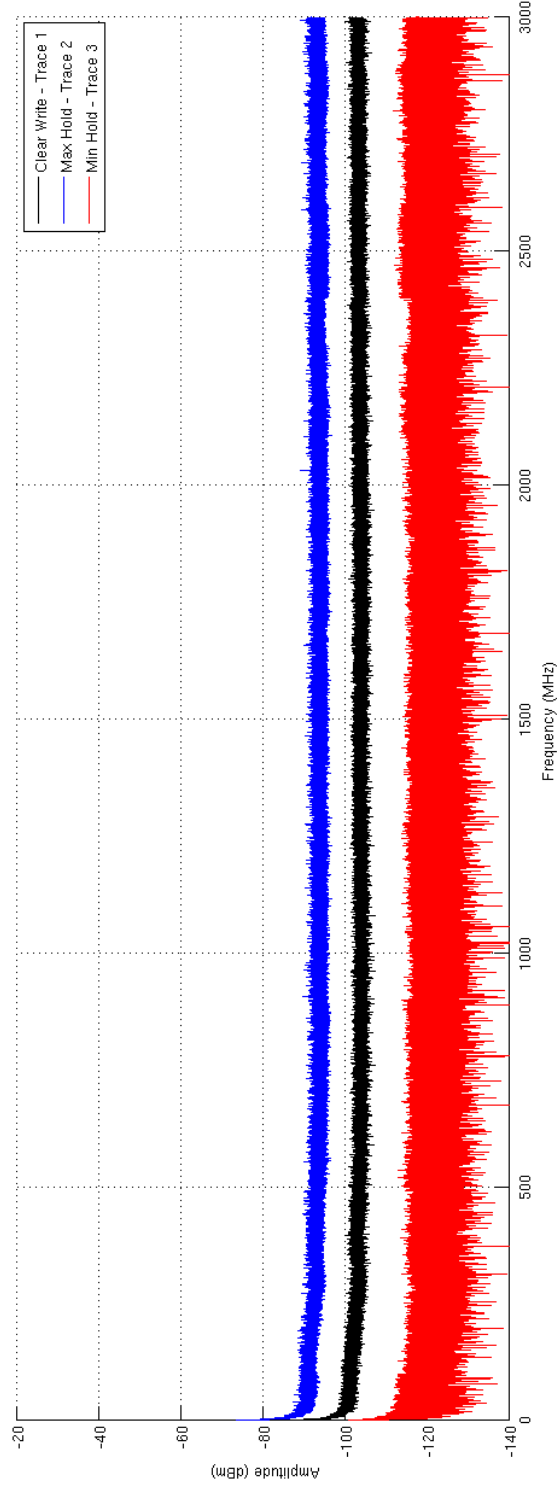
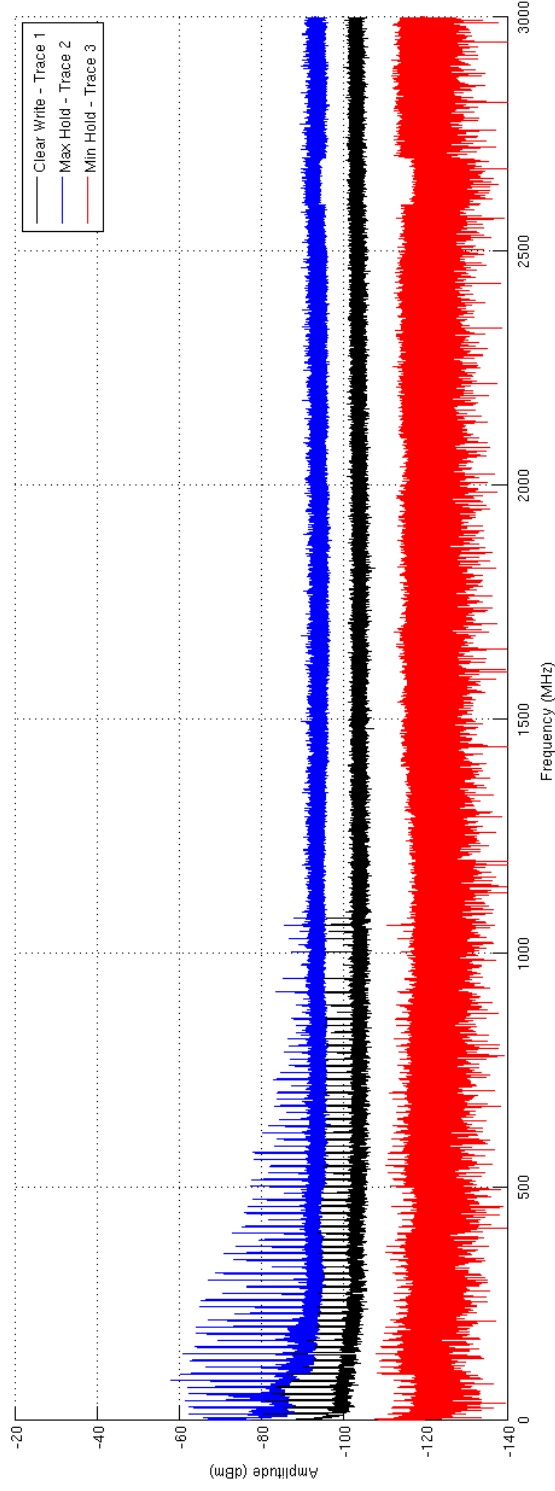


Figure 4: Test Results. Top: opened; Bottom: closed.