

## Section 15.231 and ANSI C63.4

This is a list of all test equipment used.

Test Equipment list for Honeywell OATS:

Equipment	Mfg	Model	Cal Date	Cal Due
Spectrum Analyzer	Rohde & Schwarz	FSEA20	10/14/08	10/14/09
Antenna ('Biconilog')	ETS Lindgren	3149	04/02/08	04/02/09
Spectrum Analyzer	Advantest	R3131	05/08/08	05/08/09

PLEASE SEE PAGE 2 FOR TEST EQUIPMENT TRACEABILITY

If you need any additional information from Honeywell please contact:

Greg Barbato RF Engineer  
(Acting for Ken Eskildsen)  
Phone (Direct): (516) 577-5863  
Email: [greg.barbato@honeywell.com](mailto:greg.barbato@honeywell.com)



Cert I.D.: 66512  
Lab Code 115844/1207.01

1301 Arrow Point Drive  
Cedar Park, Texas 78613  
(512) 531-6498

**Certificate of Calibration Conformance**

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The instrument identified below has been individually calibrated in compliance with the following standard(s):

SAE, ARP-958 - 2003, Electromagnetic Interference Measurement Antennas; Standard Calibration Method, Society of Automotive Engineers, Aerospace Recommended Practice. Fixed height, three antenna rotation, 1 meter separation. 3 meter separation performed per Annex C. Vertical calibration performed per above listed methodology.

Environment: Laboratory MTE is maintained in a temperature controlled environment with ambient conditions from 18 to 28 C, relative humidity less than 90%. The instrument under test has been calibrated on an open air test site (OATS) with environment temperature conditions ranging from 0 to 40 C which has no known influences on measurement quality.

<b>Manufacturer:</b>	EMCO	<b>Operating Range:</b>	80 MHz - 6 GHz
<b>Model Number:</b>	3149	<b>Instrument Type:</b>	Biconilog (Type 5)
<b>Serial Number/ ID:</b>	00029390	<b>Date Code:</b>	
<b>Tracking Number:</b>	S000012880	<b>Alternate ID:</b>	11243
<b>Date Completed:</b>	02-Apr-08	<b>Customer:</b>	Honeywell
<b>Test Type:</b>	3 meter, Horizontal and Vertical		
<b>Calibration Uncertainty:</b>	01m	80 - 1000 MHz, +/-0.9 dB; 1000 - 2000 MHz, +/-0.8 dB; 2000 - 6000 MHz, +/-1.2 dB	
<small>k=2, (95% Confidence Level)</small>	03m	80 - 1000 MHz, +/-0.9 dB; 1000 - 2000 MHz, +/-0.8 dB; 2000 - 6000 MHz, +/-1.3 dB	
	10m	80 - 1000 MHz, +/-1.0 dB; 1000 - 2000 MHz, +/-1.4 dB; 2000 - 6000 MHz, +/-2.3 dB	

**Test Remarks:** Provided data on disk.

Calibration Traceability: All Measuring and Test Equipment (MTE) identified below are traceable to the National Institute for Standards and Technology (NIST). Calibration Laboratory and Quality System controls are compliant with ISO/IEC 17025-2005.

**Standards and Equipment Used:**

**Make / Model / Name / S/N / Recall Date**

Anritsu MS4623A Network Analyzer 992201 03-Aug-08

**Condition of Instrument**

**Upon Receipt:**

In Tolerance to Internal Quality Standards

**On Release:**

In Tolerance to Internal Quality Standards

Calibration Completed By  
Maria Lopez, Cal Lab Technician

Attested and issued on 02-Apr-08  
Ronald W. Bethel, Calibration Manager

Issue Date: 10/14/2008



### General Calibration, Inc.

2 Mars Court, Boonton, New Jersey 07005  
Phone (973) 299-2950 Fax (973) 299-0595

Certificate #: 12962MR  
Purchase Order: 4965832  
Work Order #: MR219  
Customer #: 001464

GENERAL CALIBRATION, INC.  
2 MARS COURT  
MONTVILLE, NJ 07045

HONEYWELL SECURITY (1464)  
2 CORPORATE CENTER DRIVE  
MELVILLE, NY 11747

BarCode: 018675  
Manufacturer: R&S  
Description: SPECTRUM ANALYZER  
Current Location: ALARMNET  
Temp./RH: 22 C / 40 %  
Cal. Interval: 12 MONTHS  
Cal Date: 10/14/2008

Instrument I.D.: 10506  
Model Number: FSEA20  
Serial Number: DE23427  
Inspected By: MR1  
Job Title: METROLOGIST  
Calibration Result: PASS  
Cal. Due Date: 10/14/2009

Condition: Found In Tolerance and Left In Tolerance

GENERAL CALIBRATION	434	POWER SPLITTER	N/A	09/12/2009
GENERAL CALIBRATION	531	MEASURING RECEIVER	N/A	09/22/2009
GENERAL CALIBRATION	636	SYNTHESIZED SWEEPER	N/A	09/03/2009
GENERAL CALIBRATION	666	SENSOR MODULE	N/A	04/25/2009

The above instrument has been checked and calibrated against the above working standard(s) which are traceable to the NIST. The test limits stated in the report correspond to the published specifications of the equipment, at the points tested. Also, the collective uncertainties of measurement standards do not exceed 25% of the tolerance of the characteristics being calibrated, where possible. The metrology procedures utilized conform to and satisfy the requirements set forth in ANSI/NCSL Z540-1-1994, 10 CFR part 21, ISO 9001-2000, ISO 10012-2003, and MIL-STD 45662A.

Approved By *[Signature]*  
General Calibration, Inc. - Q. A. Manager

Issue Date: 05/08/2008



# General Calibration, Inc.

2 Mars Court, Boonton, New Jersey 07005  
Phone (973) 299-2950 Fax (973) 299-0595

Certificate #: 6781RH  
Purchase Order: 4965832  
Work Order #: RH201  
Customer #: 001464

GENERAL CALIBRATION, INC.  
2 MARS COURT

HONEYWELL SECURITY (1464)  
2 CORPORATE CENTER DRIVE

MONTVILLE, NJ 07045

MELVILLE, NY 11747

BarCode: 022076  
Manufacturer: ADVANTEST  
Description: SPECTRUM ANALYZER  
Current Location:  
Temp./RH: 22 C / 33 %  
Cal. Interval: 12 MONTHS  
Cal Date: 05/08/2008

Instrument I.D.: 10513  
Model Number: R3131  
Serial Number: 91780932  
Inspected By: RH1  
Job Title: METROLOGIST  
Calibration Result: PASS  
Cal. Due Date: 5/8/2009

Condition: Found In Tolerance and Left In Tolerance

GENERAL CALIBRATION	261	SIGNAL GENERATOR	08/27/2008
GENERAL CALIBRATION	485	POWER SENSOR	08/21/2008
GENERAL CALIBRATION	490	SYNTHESIZED SWEEPER	10/19/2008
GENERAL CALIBRATION	716	POWER METER	08/03/2008
GENERAL CALIBRATION	856	FREQUENCY COUNTER	05/20/2008

The above instrument has been checked and calibrated against the above working standard(s) which are traceable to the NIST. The test limits stated in the report correspond to the published specifications of the equipment, at the points tested. Also, the collective uncertainties of measurement standards do not exceed 25% of the tolerance of the characteristics being calibrated, where possible. The metrology procedures utilized conform to and satisfy the requirements set forth in ANSI/NCSL Z540-1-1994, 10 CFR part 21, ISO 9001-2000, ISO 10012-2003, and MIL-STD 45662A.

Approved By *Richard A. McE...*  
General Calibration, Inc. - Q. A. Manager