

## Part 15.247, ANSI C63.4 , RSS 210

This is a list of all test equipment used.

## Test Equipment list for Honeywell OATS &amp; Conducted Line:

Equipment	Mfg	Model	Cal Date	Cal Due
Spectrum Analyzer	HP	8563E	10/18/11	10/18/12
Spectrum Analyzer	Rohde & Schwarz	FSEA20	10/19/11	10/19/12
Antenna ('Biconilog')	ETS (EMCO)Lindgren	3149	08/22/11	08/22/12
Antenna (HORN)	ElectroMetrics	RGA60	04/20/11	04/20/12
Surge Suppressor	Agilent (HP)	HP11947A	05/12/11	05/12/12
LISN	Com-Power	LI-115	10/20/11	10/20/12
Power Meter	Gigatronics	8541	10/20/11	10/20/12
Peak Power Sensor(to 26 GHz)	Gigatronics	80353A	10/20/11	10/20/12
LNA 1 to 26 GHz	MITEQ	AFS42-00102650	-----VERIFY BEFORE USE-----	
1.5 to 12 GHz HPF'S	MICROLAB	HIGH PASS FILTERS	-----VERIFY BEFORE USE-----	

PLEASE SEE PAGE 2-7 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)

# Certificate of Calibration

Issue Date: 10/19/2011



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

Certificate #: MR-19809  
Work Order #: MR504  
Customer #: 001464

## Performed By:

GENERAL CALIBRATION, INC.

## Location of Calibration:

HONEYWELL SECURITY (001464)

2 MARS COURT  
BOONTON, NJ 07005

2 CORPORATE CENTER DRIVE  
MELVILLE, NY 11747

## Equipment Information:

Job No.: 018674  
Manufacturer: R&S  
Description: SPECTRUM ANALYZER  
Department: ALARMNET  
Temp./RH: 22 C / 45 %  
Cal. Interval: 12 MONTHS  
Cal Date: 10/19/2011

## Purchase Order: 5247582

Asset Tag No.: 10503  
Model Number: FSEA20  
Serial Number: DE31589  
Inspected By: MR1  
Job Title: METROLOGIST  
Calibration Result: PASSED  
Cal. Due Date: 10/19/2012

## Calibration Notes:

Condition: Found In Tolerance and Left In Tolerance

Procedures #GCP: RS FSEA20


Standards Used To Calibrate Equipment

Company	I.D.	Description	Cal. Due Date
GENERAL CALIBRATION	1001	ATTENUATOR	10/26/2011
GENERAL CALIBRATION	332	FREQUENCY COUNTER	04/20/2012
GENERAL CALIBRATION	446	SYNTHESIZED SWEEPER	01/05/2012
GENERAL CALIBRATION	690	POWER METER	04/26/2012
GENERAL CALIBRATION	774	POWER SENSOR	07/08/2012
GENERAL CALIBRATION	967	FUNCTION GENERATOR	10/05/2012

This is to certify that General Calibration, Inc. is A2LA accredited and that its calibration system is in compliance with ISO/IEC 17025-2005, ANSI NCSL Z540-1, ANSI NCSL Z540-3, and ISO 9001:2008. The test limits stated in the report correspond to the published specifications of the equipment, at the points tested. Calibration of standards, reference standards and Intermediate standards in this calibration have been certified traceable to the SI Units of measurement. Any accredited calibration under our A2LA scope of accreditation is denoted with A2LA accredited symbol on the calibration certificate. If the certificate includes any unaccredited items calibrated, they are clearly marked as unaccredited calibration.

Best Uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ . The results documented in this certificate relate only to the item(s) calibrated or tested.

Approved By

  
General Calibration, Inc. - Q. A. Manager

# Certificate of Calibration

Issue Date: 10/18/2011



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

Certificate #: MR-19794  
Work Order #: MR504  
Customer #: 001464

## Performed By:

GENERAL CALIBRATION, INC.

## Location of Calibration:

HONEYWELL SECURITY (001464)

2 MARS COURT  
BOONTON, NJ 07005

2 CORPORATE CENTER DRIVE  
MELVILLE, NY 11747

## Equipment Information:

Job No.: 061017  
Manufacturer: HP  
Description: SPECTRUM ANALYZER  
Department:  
Temp/RH: 22 C / 38 %  
Cal. Interval: 12 MONTHS  
Cal Date: 10/18/2011

## Purchase Order: 5247582

Asset Tag No.: 2981  
Model Number: 8563E  
Serial Number: 3246A00232  
Inspected By: MR1  
Job Title: METROLOGIST  
Calibration Result: PASSED  
Cal. Due Date: 10/18/2012

## Calibration Notes:

Condition: Found In Tolerance and Left In Tolerance

Procedures #GCP: HP 8563E

Standards Used To Calibrate Equipment

Company	I.D.	Description	Cal. Due Date
GENERAL CALIBRATION	1001	ATTENUATOR	10/26/2011
GENERAL CALIBRATION	332	FREQUENCY COUNTER	04/20/2012
GENERAL CALIBRATION	418	DIGITAL MULTIMETER	01/03/2012
GENERAL CALIBRATION	434	POWER SPLITTER	09/23/2012
GENERAL CALIBRATION	446	SYNTHESIZED SWEEPER	01/05/2012
GENERAL CALIBRATION	650	POWER SPLITTER	12/10/2011
GENERAL CALIBRATION	774	POWER SENSOR	07/08/2012
GENERAL CALIBRATION	813	SENSOR MODULE	03/14/2012
GENERAL CALIBRATION	967	FUNCTION GENERATOR	10/05/2012

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Best Uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k=2. The results documented in this certificate relate only to the item(s) calibrated or tested.

Approved By

General Calibration, Inc. - Q. A. Manager





# ETS-LINDGREN™

An ESCO Technologies Company

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

Cert I.D.: 86798

## 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>	ETS-Lindgren	<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>	00045682	<b>Date Code:</b>	
<b>Tracking Number:</b>	S 000023192	<b>Alternate ID:</b>	11242
<b>Date Completed:</b>	22-Aug-11	<b>Customer:</b>	HONEYWELL (NY)
<b>Test Type:</b>	3 meter, Horizontal and Vertical		
<b>Calibration Uncertainty:</b>	01m	26 - 1000 MHz, +/-0.9 dB; 1000 - 2000 MHz, +/-0.8 dB; 2000 - 6000 MHz, +/-1.2 dB	
k=2, (95% Confidence Level)	03m	26 - 1000 MHz, +/-0.9 dB; 1000 - 2000 MHz, +/-0.8 dB; 2000 - 6000 MHz, +/-1.3 dB	
	10m	26 - 1000 MHz, +/-1.0 dB; 1000 - 2000 MHz, +/-1.4 dB; 2000 - 6000 MHz, +/-2.3 dB	

**Test Remarks:** Calibrated down to 26 MHz. per customer request.

Calibration Traceability: All Measuring and Test Equipment (M/TE) identified below are traceable to the SI units through the National Institute for Standards and Technology (NIST). Calibration Laboratory and Quality System controls are compliant with ISO/IEC 17025-2005 and ANSI/NCSL Z540-1-1994.

### Standards and Equipment Used:

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

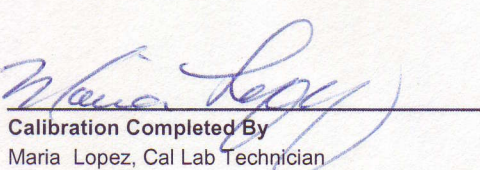
Anritsu	MS4623A	Network Analyzer	992201	18-Mar-12
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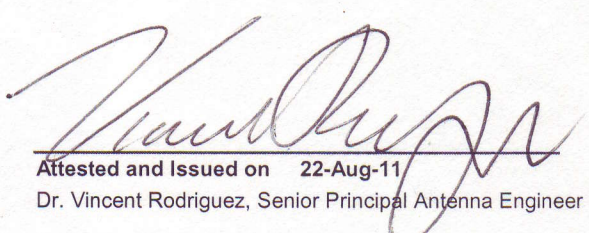
#### Condition of Instrument Upon Receipt:

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 22-Aug-11  
Dr. Vincent Rodriguez, Senior Principal Antenna Engineer