

## 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 (EMCO)Lindgren	3149	07/10/09	07/10/10

PLEASE SEE PAGE 2-3 FOR TEST EQUIPMENT TRACEABILITY

If you need any additional information from Honeywell please contact:

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(Acting for Ken Eskildsen)

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Lab ID:1207.01-Calibration



ETS-LINDGREN  
An ESCO Technologies Company  
Track# S000016846 Ltd Cal   
By SL Date 10-Jul-09  
Next Cal Due \_\_\_\_\_  
www.ets-lindgren.com

Cert I.D.: 74136

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.

Manufacturer:	EMCO	Operating Range:	80 MHz - 6 GHz
Model Number:	3149	Instrument Type:	Biconilog (Type 5)
Serial Number/ ID:	00045682	Date Code:	
Tracking Number:	S000016846	Alternate ID:	11242
Date Completed:	10-Jul-09	Customer:	HONEYWELL (NY)
Test Type:	3 meter, Horizontal and Vertical		
Calibration Uncertainty: k=2, (95% Confidence Level)	01m 03m 10m	80 - 1000 MHz, +/-0.9 dB; 1000 - 2000 MHz, +/-0.8 dB; 2000 - 6000 MHz, +/-1.2 dB 80 - 1000 MHz, +/-0.9 dB; 1000 - 2000 MHz, +/-0.8 dB; 2000 - 6000 MHz, +/-1.3 dB 80 - 1000 MHz, +/-1.0 dB; 1000 - 2000 MHz, +/-1.4 dB; 2000 - 6000 MHz, +/-2.3 dB	

Test Remarks: Unit was calibrated down to 26 MHz.

Calibration Traceability: All Measuring and Test Equipment (M/TE) 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

Hewlett Packard	8753C	Network Analyzer	3029A01587	11-Feb-10	Condition of Instrument Upon Receipt:
Hewlett Packard	85047A	S-parameter Test Set	3033A02186	11-Feb-10	In Tolerance to Internal Quality Standards
Rohde & Schwarz	ZVK	Vector Network Analyzer	1127.8651.60	26-Feb-10	On Release:
					In Tolerance to Internal Quality Standards

Calibration Completed By  
Slav Ligai, Calibration Technician

Attested and Issued on 10-Jul-09  
Justin Tarr, Calibration Supervisor

Issue Date: 10/14/2008

**GEN-CAL**

**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	Instrument I.D.:	10506
Manufacturer:	R&S	Model Number:	FSEA20
Description:	SPECTRUM ANALYZER	Serial Number:	DE23427
Current Location:	ALARMINET	Inspected By:	MR1
Temp./RH:	22 C / 40 %	Job Title:	METROLOGIST
Cal. Interval:	12 MONTHS	Calibration Result:	PASS
Cal Date:	10/14/2008	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 Barry A. Wyzga  
General Calibration, Inc. - Q. A. Manager