Part 15.231, ANSI C63.4 , RSS 210

This is a list of all test equipment used.

Test Equipment list for Honeywell OATS & Conducted Line:

| Equipment | Mfg | Model | Cal Date | Cal Due |
|---|---|---|---|---|
| Spectrum Analyzer | Rohde & Schwarz | FSEA20 | 10/19/10 | 10/19/11 |
| Antenna ('Biconilog') | ETS (EMCO)Lindgren | 3149 | 08/22/11 | 08/22/12 |

PLEASE SEE PAGE 2-3 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

# Certificate of Calibration

Issue Date: 10/19/2010

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

**Certificate #: 17245MR**
**Purchase Order: 5172133**
**Work Order #: MR396**
**Customer #: 001464**

**Performed By:**

GENERAL CALIBRATION, INC.
2 MARS COURT

BOONTON, NJ 07005

**Location of Calibration:**

HONEYWELL SECURITY (001464)
2 CORPORATE CENTER DRIVE

MELVILLE, NY 11747

**Equipment Information**

| | | | |
|---|---|---|---|
| Job No.: | 018675 | Asset Tag No.: | 10506 |
| Manufacturer: | R&S | Model Number: | FSEA20 |
| Description: | SPECTRUM ANALYZER | Serial Number: | DE23427 |
| Department: | ALARMNET | Inspected By: | MR1 |
| Temp./RH: | 22 C / 45 % | Job Title: | METROLOGIST |
| Cal. Interval: | 12 MONTHS | Calibration Result: | PASSED |
| Cal Date: | 10/19/2010 | Cal. Due Date: | 10/19/2011 |

**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 | 434 | POWER SPLITTER | 09/20/2011 |
| GENERAL CALIBRATION | 522 | ATTENUATOR | 11/25/2010 |
| GENERAL CALIBRATION | 588 | ATTENUATOR | 06/09/2011 |
| GENERAL CALIBRATION | 645 | MEASURING RECEIVER | 04/01/2011 |
| GENERAL CALIBRATION | 666 | SENSOR MODULE | 06/04/2011 |
| GENERAL CALIBRATION | 783 | WAVEFORM GENERATOR | 10/20/2010 |
| GENERAL CALIBRATION | 906 | SYNTHESIZED SWEEPER | 09/27/2011 |

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 9001-2008, ISO 10012-2003, and MIL-STD 45662A.

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

ACCREDITED
Calibration Laboratory
Certificate 1207.01

Cert I.D.: 86798

# Certificate of Calibration Conformance



**The instrument identifed 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:** | ETS-Lindgren | **Operating Range:** | 80 MHz - 6 GHz |
| **Model Number:** | 3149. | **Instrument Type:** | Biconilog (Type 5) |
| **Serial Number/ ID:** | *00045682* | **Date Code:** | |
| **Tracking Number:** | **S 000023192** | **Alternate ID:** | 11242 |
| **Date Completed:** | 22-Aug-11 | **Customer:** | HONEYWELL (NY) |
| **Test Type:** | 3 meter, Horizontal and Vertical | | |

| | | |
|---|---|---|
| **Calibration Uncertainty:** k=2, (95% Confidence Level) | 01m | 26 - 1000 MHz, +/-0.9 dB; 1000 - 2000 MHz, +/-0.8 dB; 2000 - 6000 MHz, +/-1.2 dB |
| | 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 |

**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