

## 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	01/13/10	01/13/11
Antenna ('Biconilog')	ETS (EMCO)Lindgren	3149	04/28/10	04/28/11

PLEASE SEE PAGE 2-4 FOR TEST EQUIPMENT TRACEABILITY

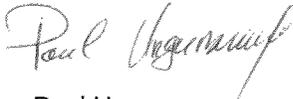
If you need any additional information from Honeywell please contact:

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(Acting for Ken Eskildsen)  
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**Calibration Certificate**

<b>Item</b>	SPECTRUM ANALYZER 9KHZ-3.5GHZ -140 TO +30 DBM 10HZ TO 10MHZ 9.5" LC DISPLAY	<p>This calibration certificate documents the named item has been tested and measured against defined specifications. Calibration is performed with test equipment and standards traceable to national/international standards, which realize the physical units of measurement according to the International System of Units (SI). Measurement results are located in the corresponding uncertainty with a probability of approximately 95% (coverage factor k=2).</p> <p>For results in the measurement uncertainty guard band (UGB), it is not possible to state compliance with specification based on the stated level of confidence. However, a within-specification result indicates compliance is more probable than non-compliance and an out-of-specification result indicates non-compliance is more probable than compliance.</p> <p>Policies and procedures for Standard Calibrations are based on ISO/IEC 17025:2005 and ANSI/NCSL Z540.1-1994 (R2002). The ISO 9001 Calibration is based on the manufacturer's procedure. The quality management system is certified to ISO 9001: 2008.</p> <p>This laboratory maintains A2LA accreditation to ISO/IEC 17025 for the specific tests/calibrations listed in A2LA Certificate #2354.01. The tests/calibration results included in this report/calibration, however, are not covered by this accreditation.</p> <p>The calibration certificate may not be reproduced other than in full. Calibration certificates without signatures are not valid. Serial numbers with xxxxxx/xxx format are shown with a leading zero after the slash: xxxxxx/0xxx. Depending on installed options, test report page numbers may not be consecutive. The user is obliged to have the item recalibrated at appropriate intervals.</p>
<b>Manufacturer</b>	R&S	
<b>Type</b>	FSEA	
<b>Material No.</b>	1065.6000.20	
<b>Serial No.</b>	849313/0004	
<b>Customer</b>	HONEYWELL SECURITY 2 CORPORATE CENTER DRIVE, STE 100 MELVILLE, NY 11747, USA	
<b>Order No.</b>	467969	
<b>Place and date of calibration</b>	RSA Columbia, 2010-01-13	
<b>Type of calibration</b>	Standard Calibration	
<b>Performance on receipt</b>	Defective	
<b>Result of calibration</b>	Measurement results within specifications	
<b>Extent of the certificate</b>	2 pages, 8 pages of outgoing test data	

<b>Date of issue</b> (YYYY-MM-DD) 2010-01-13	<b>Head of laboratory</b>  Phillip A. Winn	<b>Person responsible</b>  Paul Ungureanu
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Type FSEA Serial No. 849313/0004  
 Item SPECTRUM ANALYZER Material No. 1065.6000.20  
 9KHZ-3.5GHZ -140 TO +30 Cal. Date 2010-01-13  
 DBM, 10HZ TO 10MHZ  
 9.5" LC DISPLAY



**ROHDE & SCHWARZ**

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Calibration Certificate

Number 5000-42347/2009

Calibration instruction FSEA 20 VER. 03.17

Date of receipt 2009-12-23

Ambient temperature (°C) 22.1

Relative humidity (%) 28

Working Standards used				
Item	Type	Serial No.	Certificate No.	Cal. due
ARB. WVFM. GENERATOR	ADS	839158/0018	5000-35158/2009	2010-02-03
DMM	KEI=2000	0669066	5000-40385/2009	2010-09-23
DC POWER SUPPLY	NGSM3210	0000869	5000-42150/2009	2010-12-14
SIGNAL GENERATOR	SMP04	825494/0004	5000-39153/2009	2010-07-23
POWER METER; DUAL	NRVD	844351/0023	5000-36539/2009 (A2LA)	2010-03-31
ATTENUATOR; RF STEP	RSG	844384/0003	0013-DKD-K-16101-2009-07	2010-07-01
DC POWER SUPPLY	NGSM3210	0000870	5000-42352/2009	2010-12-14
RUBIDIUM OSCILLATOR	FLU=910R	SM927827	16215/2006	2013-12-21
POWER SENSOR; 6 GHZ	NRV-Z5	842972/0030	5000-39442/2009 (A2LA)	2010-10-04
VECTOR NETWORK ANALYZER	ZVK	834958/0017	0255-DKD-K-16101-2009-07	2010-07-27
MODULATION ANALY	FMB	100007	0012-DKD-K-16101-2009-07	2010-05-15
THERMAL POWER SE	NRV-Z55	825083/0004	0071-DKD-K-16101-2009-01	2010-01-28
SIGNAL GENERATOR	SMHU58	838496/0002	5000-38802/2009	2010-07-13
POWER METER; DUAL	NRVD	844351/0022	5000-36538/2009 (A2LA)	2010-03-31
SIGNAL GENERATOR	SMP04	825494/0006	5000-34559/2008	2010-01-13
AUTOM.CAL.SYSTEM	ACS100+	E126735	5000-42236/2009	2010-01-17
SPLITTER	ANR=K241C	019125	0164-DKD-K-16101-2009-03	2010-03-18
SIGNAL GENERATOR	SMHU58	830207/0015	5000-41336/2009	2010-11-01
CALIBRATION KIT; N50	ZV-Z21	100755	0007-DKD-K-16101-2009-02	2010-02-02

**Incoming & Outgoing Remarks**

Incoming Remarks: Operational failure. Incoming data was not obtainable. Please refer to customer service report for further information.

Outgoing Remarks: Unit is operating in compliance with specifications.



**ROHDE & SCHWARZ**



An ESCO Technologies Company

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Cedar Park, Texas 78613  
(512) 531-6498



Cert I.D.: 78446

### 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>	00029390	<b>Date Code:</b>	
<b>Tracking Number:</b>	S000019193	<b>Alternate ID:</b>	11243
<b>Date Completed:</b>	28-Apr-10	<b>Customer:</b>	HONEYWELL (NY)
<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	
k=2, (95% Confidence Level)	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:** Calibrated down to 26 MHz to 6 GHz.

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**

Anritsu MS4623A Network Analyzer 992201 02-Mar-11

**Condition of Instrument**

**Upon Receipt:**

In Tolerance to Internal Quality Standards

**On Release:**

In Tolerance to Internal Quality Standards

Calibration Completed By  
Owen Pleasants, Calibration Technician

Attested and Issued on 28-Apr-10  
Richard Goodlow, Lead Technician