TEST EQUIPMENT USED FOR 5824

Part 15.231, ANSI C63.4, RSS 210

This is a list of all test equipment used.
Note: Calibration Certificates are on following 2 pages.

Test Equipment list for Honeywell OATS & Conducted Line

EQUIPMENT:	MANUFACTURER:	MODEL:	CAL DATE:	CAL DUE DATE:
Spectrum Analyzer	Rohde & Schwarz	FSU	05/09/2013	05/09/2014
Antenna ('Biconilog')	ETS (EMCO)Lindgrei	3149	07/08/2013	07/08/2014

If you need any additional information from Honeywell, please contact:

Andrew Roussin, Engineer
(Acting for Mark Schmidt)
Phone (Direct): 516-577-5935
Email: andrew.roussin@honeywell.com

Certificate of Calibration

Issue Date: 10/12/2009

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

Certificate #: 15395MR
Purchase Order: 5105648
Work Order #: MR309
Customer #: 001464

Performed By:
GENERAL CALIBRATION, INC.
2 MARS COURT

MONTVILLE, NJ 07045

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:	PASS
Cal Date:	10/12/2009	Cal. Due Date:	10/12/2010

Calibration Notes

Condition: Found In Tolerance and Left In Tolerance

Procedure #GCP: R&S FSEA20

Standards Used To Calibrate Equipment

Company	I.D.	Description	Cal. Due Date
GENERAL CALIBRATION	1031	SYNTHESIZED SWEEPER	02/02/2010
GENERAL CALIBRATION	434	POWER SPLITTER	09/18/2010
GENERAL CALIBRATION	650	POWER SPLITTER	12/08/2009
GENERAL CALIBRATION	774	POWER SENSOR	07/13/2010
GENERAL CALIBRATION	967	FUNCTION GENERATOR	09/15/2010

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 Robert D. McGee

General Calibration, Inc. - Q. A. Manager

This certificate is not a contract. We are not responsible for any damages resulting from the use of these standards by the customer.
This certificate shall not be reproduced, except in full, without the written notification of General Calibration, Inc.

ACCREDITED
Lab ID:1207.01-Calibration

ETS·LINDGREN™
An ESCO Technologies Company
1301 Arrow Point Drive
Cedar Park, Texas 78613
(512) 531-6498

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

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:	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	80 - 1000 MHz, +/-0.9 dB; 1000 - 2000 MHz, +/-0.8 dB; 2000 - 6000 MHz, +/-1.2 dB
	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: 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
Hewlett Packard	85047A	S-parameter Test Set	3033A02186	11-Feb-10
Rohde & Schwarz	ZVK	Vector Network Analyzer	1127.8651.60	26-Feb-10

Condition of Instrument Upon Receipt:
In Tolerance to Internal Quality Standards

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

This document provides traceability of measurements to recognized national standards using controlled processes at the ETS-Lindgren Calibration Laboratory. Uncertainties listed are derived from the methods described by NIST Tech Note 1297. This certificate and report may not be reproduced, except in full, without the written approval of ETS-Lindgren Calibration Laboratory in accordance with ISO/IEC 17025-2005. QAF 1127 (06/07)

TEST EQUIPMENT USED FOR TSSRF115011U

Part 15.231, ANSI C63.4, RSS 210

This is a list of all test equipment used.
Note: Calibration Certificates are on following 2 pages.

Test Equipment list for Honeywell OATS & Conducted Line

EQUIPMENT:	MANUFACTURER:	MODEL:	CAL DATE:	CAL DUE DATE:
Spectrum Analyzer	Rohde & Schwarz	FSEA20	10/12/09	10/12/10
Antenna ('Biconilog')	ETS (EMCO)Lindgrei	3149	07/10/09	07/10/10

If you need any additional information from Honeywell, please contact:

Andrew Roussin, Engineer
(Acting for Mark Schmidt)
Phone (Direct): 516-577-5935
Email: andrew.roussin@honeywell.com

Certificate of Calibration

Issue Date: 5/13/2013

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

Certificate #: 1034725
Work Order #: RH509
Customer #: 001464

Performed By:	**Location of Calibration:**
GENERAL CALIBRATION, INC. 2 MARS COURT BOONTON, NJ 07005	HONEYWELL SECURITY (001464) 2 CORPORATE CENTER DRIVE MELVILLE, NY 11747

Equipment Information:		**Purchase Order:**	**583920**
Job No.:	066617	Asset Tag No.:	11496
Manufacturer:	R&S	Model Number:	FSU26
Description:	SPECTRUM ANALYZER	Serial Number:	100303
Department:		Inspected By:	RH1
Temp./RH:	22.0 C / 53.0 %	Job Title:	METROLOGIST
Cal. Interval:	12 MONTHS	Calibration Result:	PASSED
Cal Date:	05/09/2013	Cal. Due Date:	05/09/2014

Procedure #GCP: RS FSU26

Calibration Notes:

Condition: Found In Tolerance and Left In Tolerance

Standards Used To Calibrate Equipment

Company	I.D.	Description	Serial Number	Cal. Due Date
GENERAL CALIBRATION	335	SYNTHESIZED SWEEPER, 50GHZ	3614A00157	08/02/2014
GENERAL CALIBRATION	676	LEVEL GENERATOR	2516A04043	05/21/2013
GENERAL CALIBRATION	856	FREQUENCY COUNTER	51002-5	06/28/2013
GENERAL CALIBRATION	874	POWER SENSOR	3318A15971	10/18/2013
GENERAL CALIBRATION	974	POWER METER	2709A29063	06/04/2013

This is to certify that General Calibration, Inc. is A2LA accredited and that its calibration system is in compliance with ISO/IEC17025-2005, ANSI NCSL Z540-1, ANSI NCSL Z540-3, and ISO 9001:2008. The test limits stated in the report correspond to the Manufacturer calibration and published specifications of the equipment, at the points tested. Calibration of standards; reference standards and intermediate standards in this calibration have been checked and calibrated against the above working standard(s) which are traceable to the National Institute of Standards and Technology. 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 Robert D. Mears
General Calibration, Inc. - Q. A. Manager

This certificate is not a contract. We are not responsible for any damages resulting from the use of these standards by the customer. This certificate shall not be reproduced, except in full, without the written notification of General Calibration, Inc.

ETS-LINDGREN™
An ESCO Technologies Company
1301 Arrow Point Drive
Cedar Park, Texas 78613
(512) 531-6400

ACCREDITED
Calibration Laboratory
Certificate 1297.01

Cert I.D.: 97937

Certificate of Calibration Conformance

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:	ETS-Lindgren	**Operating Range:**	80 MHz - 6 GHz
Model Number:	3149.	**Instrument Type:**	Biconilog (Type 5)
Serial Number/ ID:	*00029390*	**Date Code:**	
Tracking Number:	**S 000028197**	**Alternate ID:**	11243
Date Completed:	08-Jul-13	**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: Extended Calibration: from 26 MHz to 6 GHz

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) or other recognized National Metrology Institute 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				
Agilent	N5230C	PNA-L Net/Wrk Analyzer	MY49002145	13-Jul-13

Condition of Instrument Upon Receipt:
In Tolerance to Internal Quality Standards

On Release:
In Tolerance to Internal Quality Standards

Calibration Completed By
James Hansell, Calibration Technician

Attested and Issued on 08-Jul-13
Doug Kramer, EMC/Wireless Lab Manager

This document provides traceability of measurements to recognized national standards using controlled processes at the ETS-Lindgren Calibration Laboratory. Uncertainties listed are derived from the methods described by NIST Tech Note 1297. This certificate and report may not be reproduced, except in full, without the written approval of ETS-Lindgren Calibration Laboratory in accordance with ISO/IEC 17025-2005 and ANSI/NCSL Z540-1-1994. QAF 1127 (03/11)