TEST EQUIPMENT USED

Part 15.231, ANSI C63.4, RSS 210

This is a list of all test equipment used for non-radiated testing. Equipment used for radiated emissions testing is given in EXHIBIT 5-3.

Note: Calibration Certificates are on following pages.

Test Equipment list for Honeywell OATS

EQUIPMENT:	MANUFACTURER:	MODEL:	CAL DATE:	CAL DUE DATE:
Spectrum Analyzer	Agilent	E4440A	6/24/2014	07/24/2016
Spectrum Analyzer	Rohde & Schwarz	FSU3	5/19/2015	5/19/2016
Spectrum Analyzer	Rohde & Schwarz	FSU26	5/19/2015	5/19/2016
Antenna (“Biconilog”)	ETS (EMCO) Lindgren	3149	12/09/2014	12/09/2015

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

TRS RenTelco
1830 West Airfield Drive
DFW Airport, Texas 75261

Calibration Certificate Traceability Statement

Asset Number:	1073183
MFG/Model Number:	AT/E4440A;AL
Serial Number:	MY46186351
Description:	26.5 GHZ SPEC AN
Customer:	HONEYWELL INC.
Address:	2 CORPORATE CENTER RD MELVILLE NY 11747
Customer P.O. No:	682758
Rental Agreement Number:	1631975-0
Certificate Number:	16319750107318314624

This certificate applies to the instrument identified above and shall not be reproduced, except in full, without written approval of TRS-RenTelco.

This certifies that the above instrument was calibrated to manufacturer's specifications using approved procedures and traceable measurement standards.

This calibration was performed by an approved vendor.

The Quality System of TRS-RenTelco is registered by UL DQS Certificate Number 10000112 to the Quality Management System Standard ISO 9001:2008. TRS-RenTelco's Laboratory is in compliance with MIL-STD-45662A, ANSI/NCSL Z540-1-1994, ISO/IEC 17025:2005 and ISO 10012-2003.

Measurement standards are calibrated at planned intervals. Traceability is to the International System of Units (SI) through the National Institute of Standards and Technology (NIST) or other recognized National Metrology Institute (NMI), natural physical constants, consensus standards, or by ratio type measurements using self calibrating techniques. Supporting documentation relative to traceability is available for review by appointment.

This instrument is initially being sent to the above customer calibrated and fully functional. Before being placed in service, the instrument was properly stored after being calibrated. Calibration interval time is started when the instrument is initially placed in service.

Although the calibration laboratory is in compliance with ANSI/NCSL Z540-1-1994 and MIL-STD-45662A this calibration certificate is issued only as a Traceability Statement and does not carry the requirement of recalibration at the end of rental and customer notification of Out of Tolerance conditions.

TRS-RenTelco's calibration interval for this instrument is 24 months.

Processed By: GARY PEAVEY

Calibration Date:	Jun 24, 2014
In Service Date:	Jul 23, 2014
Calibration Due Date:	Jul 23, 2016

Quality Assurance: Allen F Todd

Peel Off Sticker Here --->

TRS-RenTelco 800-621-6354
ID: 1073183 Cal: 06/24/14
AV Due: 07/23/16
In Service Date: 07/23/14

Certificate Print Date: July 20, 2015

Certificate of Calibration

Issue Date: 5/19/2015

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

Certificate #: GC48-14957
Work Order #: 48GC249
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:**	**660327**
Job No.:	066615	Asset Tag No.:	11493
Manufacturer:	R&S	Model Number:	FSU3
Description:	SPECTRUM ANALYZER	Serial Number:	100029
Department:		Inspected By:	JTR
Temp./RH:	25.0 C / 50.0 %	Job Title:	METROLOGIST
Cal. Interval:	12 MONTHS	Calibration Result:	PASSED
Cal Date:	05/19/2015	Cal. Due Date:	05/19/2016
Owner:		Owner's Email:	

Procedure #GCP: RS FSU3

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	1001	ATTENUATOR	1204A28252	07/31/2015
GENERAL CALIBRATION	113	FREQUENCY COUNTER	2426A01584	08/22/2015
GENERAL CALIBRATION	1153	POWER METER	3125U20840	09/22/2015
GENERAL CALIBRATION	403	ATTENUATOR	219-05771	08/18/2015
GENERAL CALIBRATION	485	POWER SENSOR	US37291734	06/30/2015
GENERAL CALIBRATION	591	LEVEL GENERATOR	2516A04213	04/14/2016
GENERAL CALIBRATION	636	SYNTHESIZED SWEEPER, 26GHZ	2520A01164	06/25/2015
GENERAL CALIBRATION	649	POWER SPLITTER	51051	01/31/2016

This is to certify that General Calibration, Inc. is accredited by A2LA 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's calibration and published specifications of the equipment, at the points tested. To the best of Gen-Cal's knowledge, the data obtained and as reported was accurate at the time of calibration. Many factors beyond the control of Gen-Cal may affect the performance of equipment after the calibration (verification) on the equipment. 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 SI units of measurement through National Institute of Standards and Technology or other National Measurement Institutes under CIPM MRA. Any accredited calibration under our A2LA scope of accreditation is denoted with A2LA accredited symbol on the calibration certificate. If the Accredited 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: 5/19/2015

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

Certificate #: GC48-14947
Work Order #: 48GC249
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:**	**660327**
Job No.:	066617	Asset Tag No.:	11496
Manufacturer:	R&S	Model Number:	FSU26
Description:	SPECTRUM ANALYZER	Serial Number:	100303
Department:		Inspected By:	JTR
Temp./RH:	25.0 C / 50.0 %	Job Title:	METROLOGIST
Cal. Interval:	12 MONTHS	Calibration Result:	PASSED
Cal Date:	05/19/2015	Cal. Due Date:	05/19/2016
Owner:		Owner's Email:	

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	1001	ATTENUATOR	1204A28252	07/31/2015
GENERAL CALIBRATION	113	FREQUENCY COUNTER	2426A01584	08/22/2015
GENERAL CALIBRATION	1153	POWER METER	3125U20840	09/22/2015
GENERAL CALIBRATION	403	ATTENUATOR	219-05771	08/18/2015
GENERAL CALIBRATION	553	POWER SENSOR	3318A14976	02/02/2016
GENERAL CALIBRATION	636	SYNTHESIZED SWEEPER, 26GHZ	2520A01164	06/25/2015
GENERAL CALIBRATION	688	LEVEL GENERATOR	1640A01730	08/18/2015
GENERAL CALIBRATION	809	POWER SPLITTER	53143	06/06/2015

This is to certify that General Calibration, Inc. is accredited by A2LA 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's calibration and published specifications of the equipment, at the points tested. To the best of Gen-Cal's knowledge, the data obtained and as reported was accurate at the time of calibration. Many factors beyond the control of Gen-Cal may affect the performance of equipment after the calibration (verification) on the equipment. 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 SI units of measurement through National Institute of Standards and Technology or other National Measurement Institutes under CIPM MRA. Any accredited calibration under our A2LA scope of accreditation is denoted with A2LA accredited symbol on the calibration certificate. If the Accredited 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

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

ilac-MRA ACCREDITED Calibration Laboratory Certificate 1207.01

ETS·LINDGREN An ESCO Technologies Company
Tracks# S000031729 Ltd Cal ☐
By DDG Date 09-Dec-14
Next Cal Due 09-Dec-15
www.ets-lindgren.com

ASSET #11242

Cert I.D.: 106027

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:	*00045682*	**Date Code:**	
Tracking Number:	**S 000031729**	**Alternate ID:**	
Date Completed:	09-Dec-14	**Customer:**	HONEYWELL (NY) 2 Corporate Center Drive, Melville NY 11747
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: Unit ran down to 26MHz 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) 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	N5232A-216	PNA-L Network Analyzer	MY52221044	03-Jun-15

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

On Release:
In Tolerance to Internal Quality Standards

Calibration Completed By
Damein D Griffin, Calibration Technician

Attested and Issued on 09-Dec-14
Doug Kramer, Manager, Calibration/EMC/Wireless Lab