



ACMETESTING
WORLDWIDE EMC & PRODUCT SAFETY SERVICES

17 November 2005

Mike Cyr
Daniels Electronic Ltd.
43 Erie Street,
Victoria, British Columbia
Canada V8V 1P8

Dear Mr. Cyr,

Enclosed is the 47 CFR Part 2 Subpart J Section 2.1053 (Radiated Spurious Emissions) Test Report for VHF Transmitter, Model VT-4E150, and the CD-ROM containing this Test Report in PDF Format. Please check it thoroughly for discrepancies and please contact us immediately if you have any questions or if you identify any problems.

This is an official copy of your Test Report, complete with the original Acme Testing Co. staff signatures. You should retain this Test Report as the official record of testing, as proof of compliance in the future. Please be aware that our internal controls require us to retain a historical copy of your Test Report on file for a three-year period, after which our copy of your Test Report will be destroyed.

Please note that the FCC Certification Procedure Rules require that this Test Report (and all other Exhibits that form the FCC Filing Package on your VHF Transmitters) must be retained by the Responsible Party for two years after the manufacturing of the product has been permanently discontinued [cf., 47 CFR Part 2 Section 2.938(c)].

Please note that Acme Testing Co. is accredited by the American Association for Laboratory Accreditation (A2LA). Further, Acme Testing Co.'s Open Area Test Site [OATS] # 1 is registered with the FCC.

Thank you for your business! We look forward to being of service to you in the future.

Yours sincerely,

Harry H. Hodes
Principal EMC Engineer
President & CEO

:sg
Enclosure



A2LA ACCREDITED LAB:
CERTIFICATE # 0829-01 (ACME, WA)
CERTIFICATE # 0829-02 (PLUMMER, ID)



QUALITY SYSTEM REGISTERED TO
ISO 9001:2000(E) BY QMI
CERTIFICATE # CC1828-010083 (ACME, WA)
CERTIFICATE # CC1828-014276 (PLUMMER, ID)

A VALIDATED CONFORMITY ASSESSMENT BODY

TEST REPORT
47 CFR Part 2 Subpart J Section 2.1053
Measurements of Field Strength of Spurious Radiation
From:
Power Amplifier Family

DEVICE: VHF TRANSMITTER
MODEL: VT-4E150
MANUFACTURER: DANIELS ELECTRONICS LTD.
ADDRESS: 43 ERIE STREET,
VICTORIA, BRITISH COLUMBIA
CANADA V8V 1P8

WORK ORDER: 05-EMC-1003-0219

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1. General

1.1 Document History

REVISION	DATE	COMMENTS
-	17 November 2005	Initial Release, Harry H. Hodes

Note: Acme Testing Co. hereby makes the following statements:

- The Units described in this Test Report were received at Acme Testing Co.'s facilities on 25 October 2005. Testing was performed on the Units described in this Test Report on 27 and 28 October 2005.
- The Test Results reported herein apply only to the Units actually tested, and to substantially identical Units.
- This Test Report must not be used to claim product endorsement by A2LA or any agency of the U.S. Government, or any other foreign government.

This document is the property of Acme Testing, Co., and shall not be reproduced, except in full, without prior written approval of Acme Testing Co. However, all ownership rights are hereby returned unconditionally to Daniels Electronics Ltd., and approval is hereby granted to Daniels Electronics Ltd. and its employees and agents to reproduce all or part of this Test Report for any legitimate business purpose without further reference to Acme Testing Co.

1.2 Purpose

Per Client Request, the purposes of this Test Report are:

- to document the results of Radiated Spurious Emissions measurements made on VHF Transmitter, Model VT-4E150 in accordance with 47CFR Part 2 Subpart J Section 2.1053 (i.e., the FCC Rules governing Radiated Spurious Emissions measurements).
- to document the compliance of the three VHF Transmitter (i.e., Daniels Electronics Ltd. Models VT-4E150) to the -20 dBm Limit applicable to Radiated Spurious Emissions for VHF Transmitters used in conjunction with VHF Transmitter Systems and VHF Repeater Systems operating under 47 CFR Parts 22, 80, and 90.

This Test Report references the applicable Electromagnetic Emissions requirements.

THE DATA CONTAINED IN THIS TEST REPORT WAS COLLECTED AND COMPILED BY:



REUBEN BROWN
ASSOCIATE EMC ENGINEER

1.3 Manufacturer

Company Name: Daniels Electronics Ltd.
Contact: Mike Cyr
Street Address: 43 Erie Street,
City/Province/Postal Code: Victoria, British Columbia, V8V 1P8
Country: Canada
Telephone: 1-250-382-8268
Fax: 1-250-382-6139
E-mail: Mike_Cyr@danelec.com

1.4 Test Location

Laboratory: Test Site # 1
Street Address: 2002 Valley Highway,
Mailing Address: P.O. Box 3,
City/State/Zip: Acme, WA 98220-0003 USA
Telephone: 1-360-595-2785
Fax: 1-360-595-2722
E-mail: acmetest@acmetesting.com
Web: www.acmetesting.com

1.5 Accreditations and Listings

Acme Testing Co.'s Quality Management System is registered to ISO 9001:2000(E) by QMI under Certificate Numbers: CC1828-010083 (Acme, WA.) and CC1828-014276 (Plummer, ID.).

Acme Testing Co.'s test facilities are accredited by A2LA to ISO 17025:1999(E) for a specific Scope of Accreditation which includes the tests detailed herein, under Certificate Numbers: 0829-01 (Acme, WA), and 0829-02 (Plummer, ID).

Acme Testing Co.'s test facilities that are used to perform Radiated and Conducted Emissions tests are currently registered with the Federal Communications Commission under Registration Numbers: 90420 (Acme, WA), and 96502 (Plummer, ID).

Acme Testing Co.'s test facilities that are used to perform Radiated and Conducted Emissions tests are currently registered with Industry Canada under Registration Numbers: IC3251 (Acme, WA), and IC3618 (Plummer, ID).

2. Test Results Summary

**47 CFR Part 2 Subpart J Section 2.1053 Radiated Spurious Emissions Test Results
for Daniels Electronics Ltd. VHF Transmitter
(Model VT-4E150)
used in conjunction with VHF Transmitter Systems and/or VHF Repeater Systems
operating under 47 CFR Parts 22, 80, & 90**

Summary of Test Results - Emissions

EUT	Test Description	Limit	Result and Worst-Case Margin (dB)
VT-4E150	47 CFR Section 2.1053 Radiated Spurious Emissions	-20 dBm	Pass Margin = -14.4 dB

The signed original of this report, supplied to the client, represents the only “official” copy. Retention of any additional copies (electronic or non-electronic media) is at Acme Testing Co.’s discretion to meet internal requirements only. The client has made the determination that SUT Condition, Characterization, and Mode of Operation are representative of production units, and meet the requirements of the specifications referenced herein.

Consistent with Industry practice, the effects of measurement and test equipment not directly involved in obtaining measurement results but having an impact on measurements (such as cable loss, antenna factors, etc.) are factored into the “Correction Factor” documented in certain test results. Instrumentation employed for testing meets tolerances consistent with known Industry Standards and Regulations.

The measurements contained in this report were made in accordance with the referenced standards. Acme Testing Co. assumes responsibility only for the accuracy and completeness of this data as it pertains to the sample tested.

REVIEWED AND APPROVED BY:



Harry H. Hodes
Principal EMC Engineer
President & CEO

17 NOVEMBER 2005

Date of Issuance

3. Description of Equipment and Peripherals

3.1 Equipment Under Test (EUT)

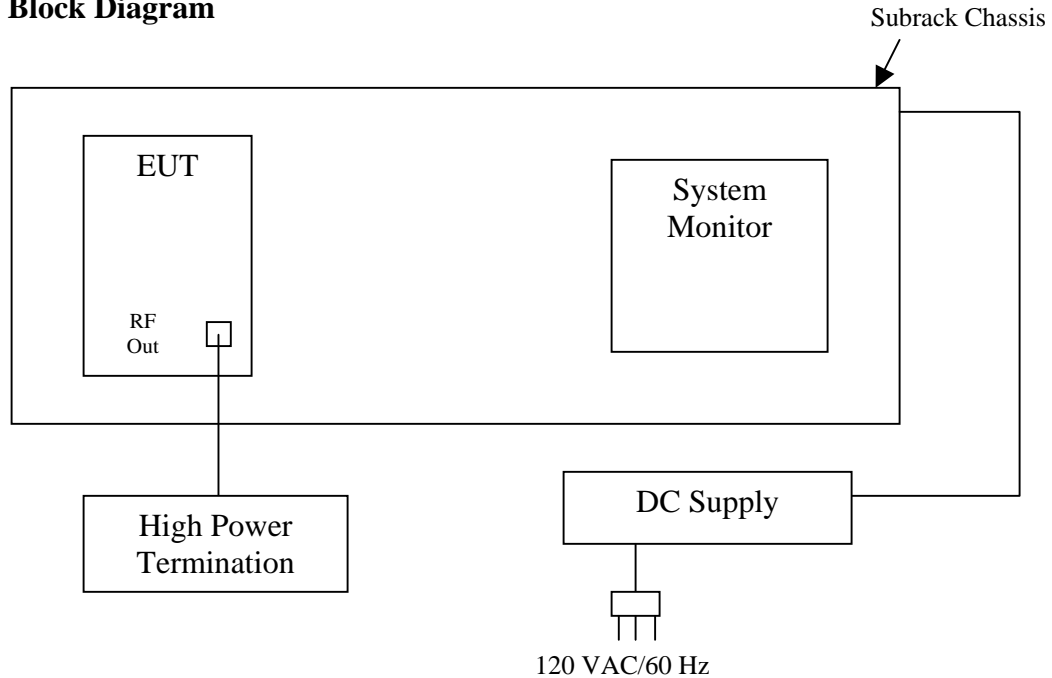
Device: VHF Transmitter
 Model Number: VT-4E150
 Serial Number: D&D 10001
 FCC ID: H4JVT-4E150
 Input Power: +13.8 VDC
 Grounding: *via* the Subrack Chassis [Note: The DC Return was tied (internally to the Subrack) to the Subrack Chassis Ground. The Power Supply DC Return was floated].
 Size of Device: 19 cm x 7 cm x 12.5 cm

3.2 Support Equipment Used During Emissions Testing

Device	Manufacturer	Model Number	Serial Number
Power Supply	GW	GPR-6030D	8661470
High Power Termination	Bird	8166	5941
Subrack Chassis	Daniels Electronics	43-920112*	12402
System Monitor	Daniels Electronics	SM-3	18684

*Note: Model Number of Backplane Circuit Board. No other markings found on the Subrack Chassis.

3.3 Test Setup Block Diagram



3.4 Description of Interface Cables Used During Emissions Testing

EUT / High Power Termination (RG-223 with “N” Connector)

Shielded	Unshielded	Flat	Round	Length	Ferrite
Yes	No	No	Yes	0.33 m	No

Subrack Chassis / DC Supply (3 Conducted)

Shielded	Unshielded	Flat	Round	Length	Ferrite
Yes	No	No	Yes	2.75 m	No

DC Power Supply [AC Input Port] / AC Mains Input Power (120 VAC/60 Hz)

Shielded	Unshielded	Flat	Round	Length	Ferrite
No	Yes	No	Yes	1.8 m	No

ARRANGEMENT OF INTERFACE CABLES: All interface cables were positioned for worst-case maximum emissions within the manner assumed to be a typical operation condition (please reference photographs).

3.5 Mode of Operation During Emissions Testing

The EUT was mounted into the Subrack Chassis with its RF Output terminated. The transmitter was turned on.

3.6 Modifications Required for Compliance

None.

4. Radiated Spurious Emissions Tests

Test Requirement: FCC Rules: 47CFR Part 2 Subpart J Section 2.1053

Test Procedure: EIA/TIA 603-1993 Section 2.2.12

Date of Test: 27 – 28 October 2005

Laboratory: Test Site #2 (Acme, WA)

4.1 Test Equipment

- ⇒ Spectrum Analyzer (yellow): Hewlett-Packard HP8566B, Serial Number: 2410A00139, Calibrated: 21 March 2005, Calibration Due Date: 21 March 2006
- ⇒ RF Preselector (yellow): Hewlett-Packard HP85685A, Serial Number: 2648A00392, Calibrated: 21 March 2005, Calibration Due Date: 21 March 2006
- ⇒ Quasi Peak Adapter (yellow): Hewlett-Packard HP85650A, Serial Number: 2521A00689, Calibrated: 21 March 2005, Calibration Due Date: 21 March 2006
- ⇒ Preamplifier (10 kHz – 1 GHz): Amplifier Research LN1000A, Serial Number: 21541, Calibrated: 21 September 2005, Calibration Due Date: 21 September 2006
- ⇒ Preamplifier (1 GHz to 26.5 GHz): Hewlett Packard 8449B, Serial Number: 3008A00982, Calibrated: 15 September 2005, Calibration Due Date: 15 September 2006
- ⇒ Synthesized RF Signal Generator: Gigatronics 6062A, Serial Number: 5140235, Calibrated: 11 December 2003, Calibration Due Date: 11 December 2005
- ⇒ Biconical Antenna (black): EMCO 3110B, Serial Number 9707-2961, Calibrated: 12 September 2005, Calibration Due Date: 12 September 2006
- ⇒ Log Periodic Antenna (yellow) (200 MHz to 1000 MHz): Electro-Metrics LPA-25, Serial Number: 1189, Calibrated: 20 December 2004, Calibration Due Date: 20 December 2005
- ⇒ Double Ridge Guide Horn Antenna (blue) (1 GHz to 18 GHz): EMCO 3115, Serial Number: 9807-5534, Calibrated: 30 March 2005, Calibration Due Date: 30 March 2006
- ⇒ Double Ridge Guide Horn Antenna (red) (1 GHz to 18 GHz): EMCO 3115, Serial Number: 2551, Calibrated: 15 August 2005, Calibration Due Date: 15 August 2007. [Note: Substitution Source Antenna].

(Continue on the Next Page)

(Test Equipment – Continued from the Previous Page)

- ⇒ Roberts Dipole: Set Dipole 2 (65 MHz – 185 MHz): Compliance Design, Serial Number 17267, Calibrated 13 February 2003, 13 February 2006. [Note: Substitution Source Antenna].
- ⇒ Roberts Dipole: Set Dipole 3 (180 MHz – 400 MHz): Compliance Design, Serial Number 17267, Calibrated 13 February 2003, 13 February 2006. [Note: Substitution Source Antenna].
- ⇒ Roberts Dipole: Set Dipole 4 (400 MHz – 1000 MHz): Compliance Design, Serial Number 17267, Calibrated 13 February 2003, 13 February 2006. [Note: Substitution Source Antenna].
- ⇒ Attenuator, 6 dB: Omni-Spectra, Asset Tag # 000906.
- ⇒ Attenuator, 6 dB: Pasternak 7004-06, Asset Tag # 000907.
- ⇒ Attenuator, 10 dB: Pasternak 7004-10, Asset Tag # 000905.
- ⇒ Attenuator, 1 dB: Weinschel Model AS-18/1, Asset Tag # 000403.
- ⇒ Attenuator, 1 dB: Weinschel Model AS-18/6, Asset Tag # 000406.
- ⇒ Tripod, EMCO Model TR-1, No Calibration Required
- ⇒ Plastic Stand Assembly: Acme Testing Co., No Calibration Required
- ⇒ Antenna Mast and Controller: Acme Testing Co., No Calibration Required
- ⇒ Turntable: Acme Testing Co., Custom, No Calibration Required
- ⇒ Open Area Test Site: Acme Testing Co., Test Site Number 1, Normalized Site Attenuation [NSA] Calibrated: 28 June 2005, Calibration Due Date 28 June 2006

4.2 Purpose

The purposes of this Test were:

- to measure the Radiated Spurious Emissions resulting from the operation of the VHF Transmitter (i.e., Daniels Electronics Ltd. Model VT-4E150) in accordance with 47CFR Part 2 Subpart J Section 2.1053 (i.e., the FCC Rules governing Radiated Spurious Emissions measurements), and,
- to determine the compliance of each of the VFH Transmitter (i.e., Daniels Electronics Ltd. Model VT-4E150) to the –20 dBm Limit applicable to Radiated Spurious Emissions for VHF Transmitters used in conjunction with VHF Transmitter Systems and VHF Repeater Systems operating under 47 CFR Parts 22, 80, and 90.

4.3 Test Procedure

4.3.1 General Procedure

The VHF Transmitter System containing the EUT (i.e., the Model VT-4E150 VHF Transmitter) was placed on a 1.5 metre high plastic stand assembly consisting of two plastic saw-horses and two plastic shelving units. The plastic stand assembly was placed directly onto the flush-mounted turntable (on the Open Area Test Site).

The VHF Transmitter System containing the EUT was set-up to operate in the “worst-case” (i.e. highest RF Output Power) mode, whilst set to transmit at $f_0 = 159$ MHz. Emissions from the GHz VHF Transmitter System containing the EUT were maximized by manipulating the cables, by adjusting the height of the receive antenna (from 1 metre to 4 metres), and by rotating the turntable. Measurements were made at both Horizontal and Vertical Polarization, noting in each case the “maximized” antenna height and azimuth, and the received signal level.

The VHF Transmitter System containing the EUT was then removed from the Turntable. A calibrated RF Signal Generator, calibrated Coaxial Cables, calibrated Precision Attenuators, and (dielectric tripod-mounted) calibrated Substitution Antennas were then used to make Substitution Measurements to determine the Effective Radiated Power of the Spurious Emissions over the frequency range from 159 MHz to 1,590 MHz. The resulting measurements were then compared to the -20 dBm Limit applicable to Radiated Spurious Emissions for VHF Transmitters used in conjunction with VHF Transmitter Systems and VHF Repeater Systems operating under 47 CFR Parts 22, 80, and 90.

4.3.2 Radiated Spurious Emissions Test Characteristics

Test Characteristics	Test Criteria
Frequency range	159 MHz – 1590 MHz
Test distance	3 m
Test instrumentation resolution/video bandwidths	30 kHz/30 kHz
Receive antenna scan height	1 m - 4 m
Receive antenna polarization	Vertical/Horizontal

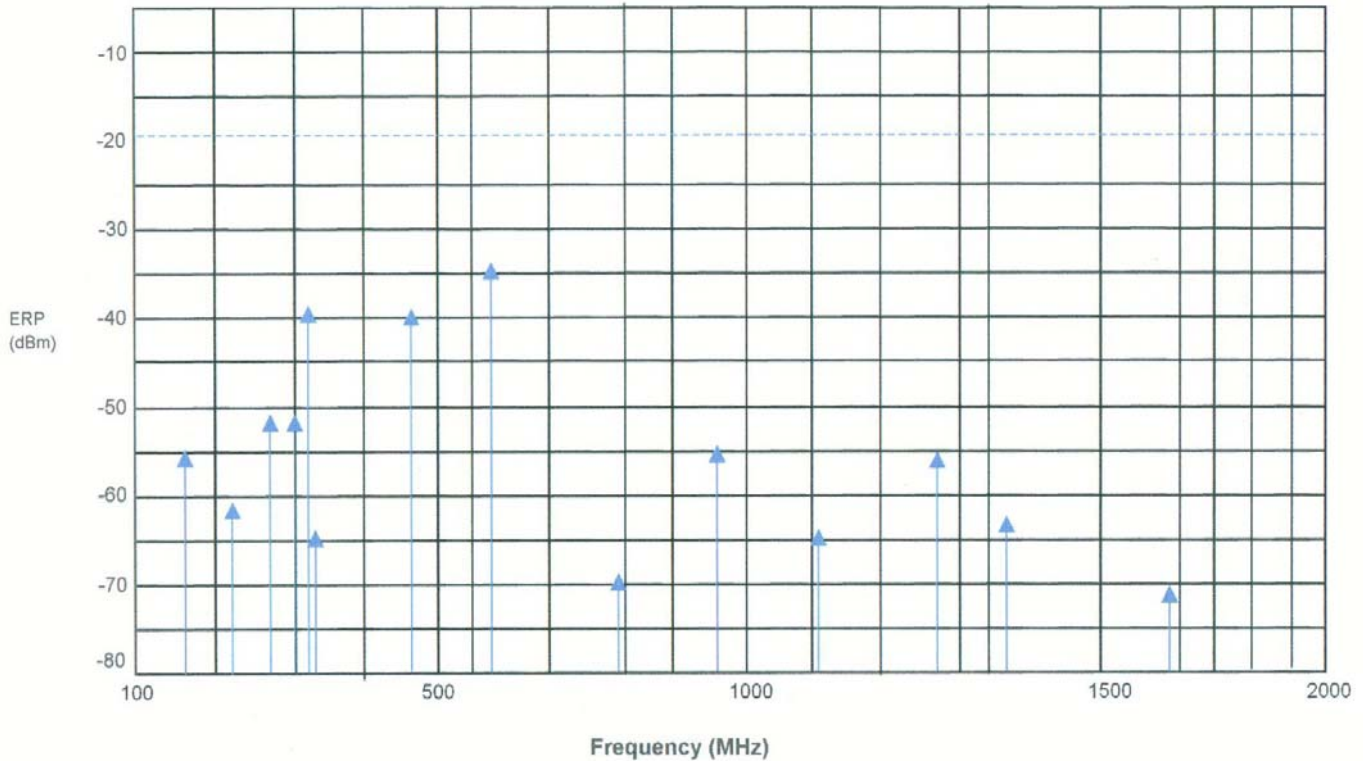
4.4 Test Results

Daniels VT-4E150 @ 159 MHz
 Temp: 14 degrees C
 Humidity: 68 %
 Pressure: 984 mBar
 10/27/05, and 10/28/05

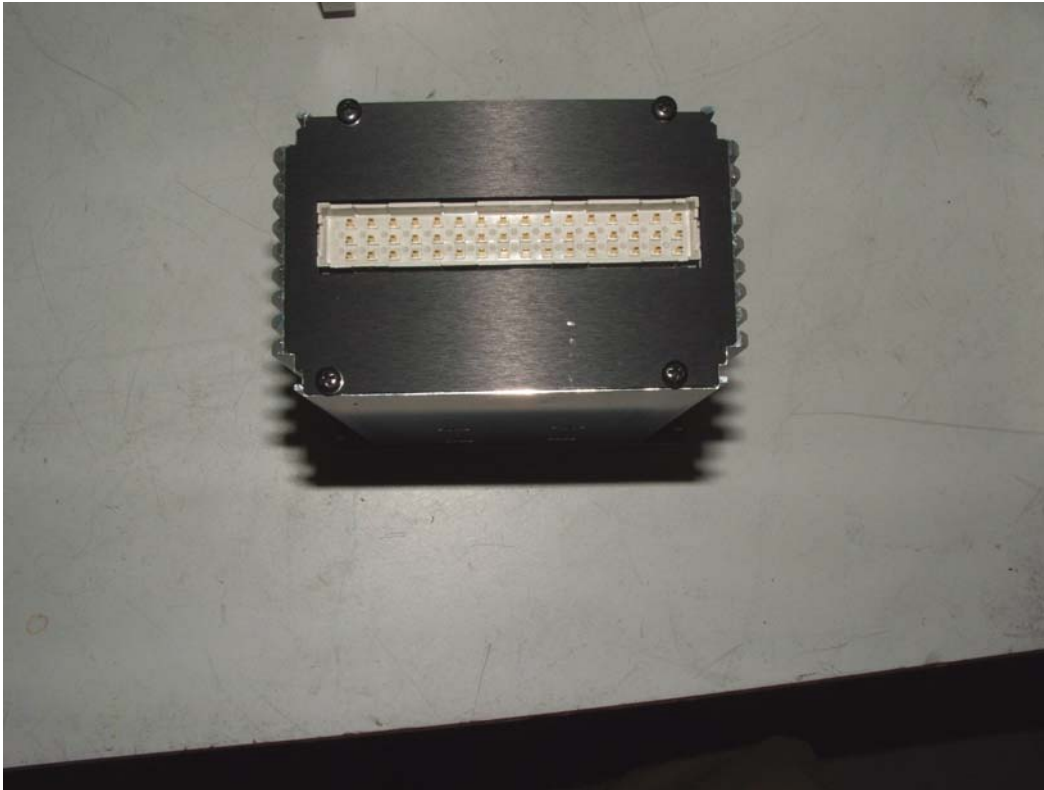
Limit -20 dBm

Frequency	Polarization	Height	Azimuth	Signal Generator	Cable Loss	Antenna Gain	EIRP	Margin
158.998	H	1.50	273	-40.6	16.5	2.1	-55.0	-35.0
227.998	V	1.70	360	-46.3	17.2	1.2	-62.3	-42.3
276.000	H	3.40	70	-34.8	17.9	1.4	-51.3	-31.3
300.000	V	1.30	254	-34.4	18.2	1.3	-51.3	-31.3
318.000	V	1.30	254	-21.4	18.4	1.4	-38.4	-18.4
347.999	H	1.47	62	-47.0	18.7	1.5	-64.2	-44.2
477.000	H	1.75	270	-18.8	20	1.2	-37.6	-17.6
635.998	V	2.04	150	-14.0	21.6	1.2	-34.4	-14.4
795.000	V	1.20	307	-45.0	22.9	0.6	-67.3	-47.3
954.000	H	1.32	348	-31.0	24.3	0.5	-54.8	-34.8
1113.000	H	1.00	0	-42.0	29.1	6.4	-64.7	-44.7
1272.997	H	1.50	325	-32.0	30.2	7.1	-55.1	-35.1
1431.001	H	2.00	360	-46.0	25.5	8.11	-63.4	-43.4
1589.996	V	2.00	360	-46.0	32.6	8.12	-70.5	-50.5

Radiated Spurious Emissions (ERP)
 Model VT-4E150
 TX Frequency = 159 MHz



4.5 Test Setup Photographs





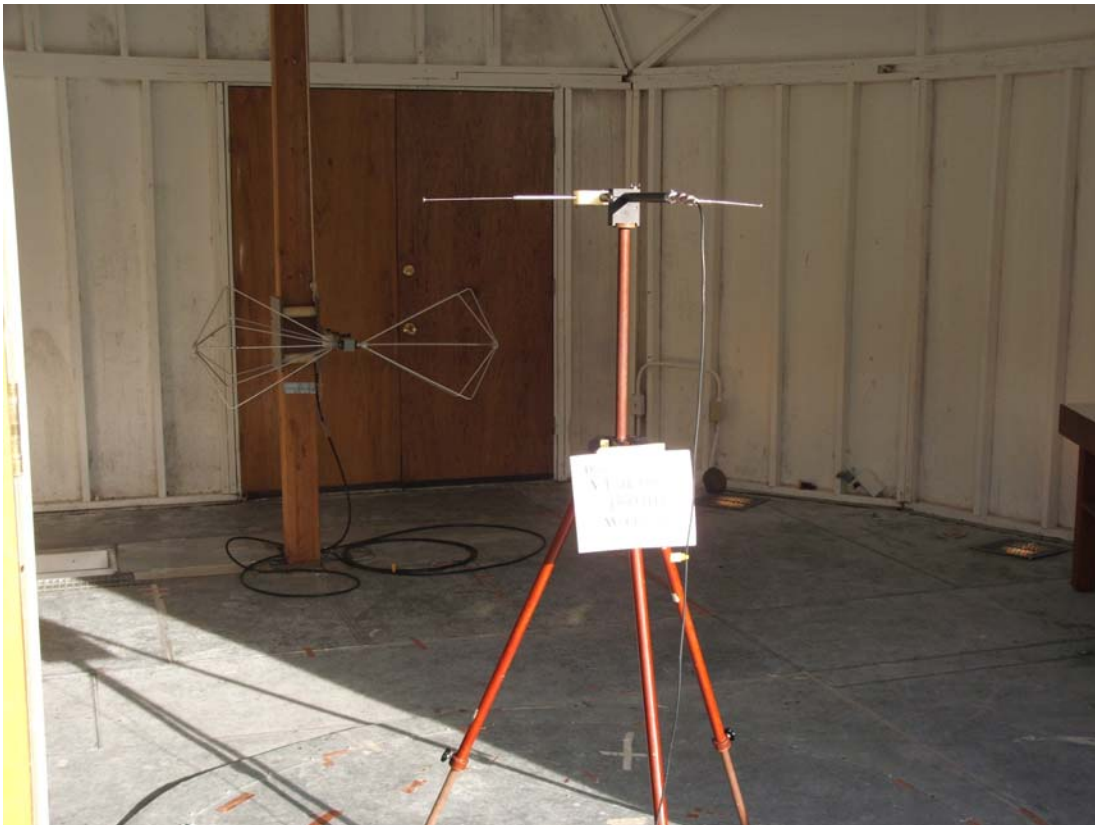














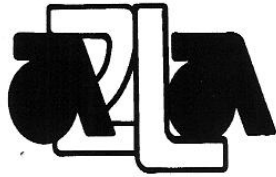




5. Miscellaneous Comments and Notes

None.

6. Annex A: Non-Normative Information



**THE AMERICAN
ASSOCIATION
FOR LABORATORY
ACCREDITATION**

ACCREDITED LABORATORY

A2LA has accredited

ACME TESTING CO.
Acme, WA


for technical competence in the field of

Electrical Testing

The accreditation covers the specific tests and types of tests listed on the agreed scope of accreditation. This laboratory meets the requirements of ISO/IEC 17025 - 1999 "General Requirements for the Competence of Testing and Calibration Laboratories" and any additional program requirements in the identified field of testing.

Presented this 13th day of April 2004.





President
For the Accreditation Council
Certificate Number 829-01
Valid to November 30, 2005

For tests or types of tests to which this accreditation applies,
please refer to the laboratory's Electrical Scope of Accreditation.



American Association for Laboratory Accreditation

SCOPE OF ACCREDITATION TO ISO/IEC 17025-1999

ACME TESTING CO.
 Site # 1 and Site # 2
 P.O. Box 3,
 2002 Valley Highway
 Acme, WA 98220-0003
 Harry H. Hodes Phone: 1-360-595-2785

ELECTRICAL (EMC)

Valid to: November 30, 2005

Certificate Number: 0829.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following Electromagnetic Compatibility (EMC) tests:

<u>Test Technology</u>	<u>Test Method(s)</u>
<i>Basic Test Method Standards (Emissions):</i>	
Conducted & Radiated:	ANSI C63.4-1992, ANSI C63.4-2001 & ANSI C63.4-2003; EIA/TIA-603:1993 & TIA/EIA-603:2001; FCC OST MP-5:1986; CISPR 11:1990 & EN 55011:1991; CISPR 11:1997 + A1:1999 + A2:2002; CISPR 11:1998; CISPR 11:2003 (excluding measurements above 1 GHz); & EN 55011:1998 + A1:1999 + A2:2002 CISPR 13:1996 + A1:1998; CISPR 13:2001 & EN 55013:2001 + Corrigendum 1 & EN 55013:1990 + A12:1994 + A13:1996 + A14:1999 CISPR 14-1:1993 + A1:1996 + A2:1998 & EN 55014-1:1993 + A1:1997 + A2:1999; CISPR 14-1:2000 + A1:2000; EN 55014-1:2000 + A1:2001; CISPR 22:1993 + A1:1995 + A2:1996 & EN 55022:1994 + A1:1995 + A2:1997; CISPR 22:1997 + A1:2000 + A2:2002 & EN 55022:1998 + A1:2000 ; + A2:2003
Harmonic Current:	IEC 61000-3-2:1995+A1:1997+A2:1998; IEC 61000-3-2:2000; IEC 61000-3-2:2001 & EN 61000-3-2:1995+A1,A2:1998+A14:2000; IEC 61000-3-2:2000 & EN 61000-3-2:2000
Voltage Fluctuations & Flicker	IEC 61000-3-3:1994+ A1:2001 & EN 61000-3-3:1995+A1:2001
<i>Basic Test Method Standards (Immunity):</i>	
Audio Frequency Common Mode	IEC 61000-2-1:1990; IEC 61000-2-2:2002
Electrostatic Discharge (ESD):	IEC 801-2:1991; IEC 1000-4-2:1995; IEC 61000-4-2:1995 + A1:1998 + A2:2001; EN 61000-4-2:1995 + A1:1998 + A2:2001;
Radiated RF Fields:	IEC 801-3:1984; ENV 50140:1994; IEC 1000-4-3:1995; IEC 61000-4-3:1995; IEC 61000-4-3:2002; EN 61000-4-3:1996 + A1:1998; EN 61000-4-3:2002; & ENV 50204:1995;

(A2LA Cert. No. 829.01) 08/16/05

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5301 Buckeystown Pike, Suite 350 • Frederick, MD 21704-8373 • Phone: 301-644 3248 • Fax: 301-662 2974



<u>Test Technology</u>	<u>Test Method(s)</u>
Electrical Fast Transient/Burst:	IEC 801-4:1998; IEC 1000-4-4:1995; IEC 61000-4-4:1995; EN 61000-4-4:1995 + A1:2000 + A2:2001;
Surge:	IEC 801-5(D):1992 (excluding 10/700 surge testing); ENV 50142:1994 (excluding 10/700 surge testing); IEC 1000-4-5:1995 (excluding 10/700 surge testing); IEC 61000-4-5:1995 (excluding 10/700 surge testing); EN 61000-4-5:1995 + A1:2001 (excluding 10/700 surge testing); IEC 61000-4-5:2001 (excluding 10/700 surge testing);
RF Common Mode (Conducted):	ENV 50141:1994; IEC 1000-4-6:1996; IEC 61000-4-6:1996; IEC 61000-4-6:2003; & EN 61000-4-6:1996;
Power Frequency Magnetic Fields:	IEC 1000-4-8:1993; IEC 61000-4-8:1993; EN 61000-4-8:1993; IEC 61000-4-8:1993 + A1:2000; EN 61000-4-8:1993 + A1:2001;
Voltage Dips, Short Interruptions, & Variations:	IEC 1000-4-11:1994; IEC 61000-4-11:1994 + A1:2000, EN 61000-4-11:1994 + A1:2001;

Generic & Product Family Standards:

47 U.S. Code of Federal Regulations (47 CFR) FCC Methods, as follows:
 Part 15 (using ANSI C63.4-1992; & ANSI C63.4-2001); &
 Part 18 (using FCC OST MP-5:1986);

ICES-003 Issue 2 Revision 1;

CNS 13438:1997; CNS 13439:1994;

Bellcore [Telcordia] GR-1089-CORE Issue 2 Revision 1:1999
 (Sections 2, 3, 4.5.9, 4.5.10, 9.10.5, & 9.10.6 Only);

Telcordia [Bellcore] GR-1089-CORE Issue 3:2002
 (Sections 2, 3, 4.6.7[1st Level Surge Pulse 4 only], 4.6.8, 4.6.9, 4.7,
 9.12.5, & 9.12.6 Only);

AS/NZS 2064:1997; AS/NZS 3548:1995;
 AS/NZS 4251.1:1994; AS/NZS 4252.1:1994;
 AS/NZS 4268.2:1995

EN 12015:1998; EN 12016:1998

EN 50081-1:1992; EN 50081-2:1993; EN 50082-1:1997; EN 50082-2:1995;
 IEC 61000-6-1:1997 & EN 61000-6-1:2000 & EN 61000-6-1:2001
 IEC 61000-6-2:1999 & EN 61000-6-2:1999 & EN 61000-6-2:2001
 IEC 61000-6-3:1996 & EN 61000-6-3:2001
 IEC 61000-6-4:1997 & EN 61000-6-4:2001

EN 50083-2:1995 + A1:1997; EN 50083-2:2001; EN 50091-2:1995;
 EN 50130-4:1995 + A1:1998, EN 50199:1995; EN 50270:1999;
 EN 50293:2000;

CISPR 11:1990 & EN 55011:1991;
 CISPR 11:1997 + A1:1998 + A2:2002 & EN 55011:1998 + A1:1999
 + A2:2002;
 CISPR 11:2003 (excluding measurements above 1GHz)

(A2LA Cert. No. 829.01) 08/16/05

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<u>Test Technology</u>	<u>Test Method(s)</u>
<i>Generic & Product Family Standards:</i>	
	CISPR 13:1996 + A1:1998 & EN 55013:1990 + A12:1994 + A13:1996 + A14:1999 CISPR 13:2001 & EN 55013:2001 + Corrigendum 1; CISPR 14-1:1993 + A1:1996 + A2:1998 & EN 55014-1:1993 + A1:1997 + A2:1999; CISPR 14-1:2000 + A1:2001 & EN 55014-1:2000 + A1:2001; & EN 55014-2:1997 + A1:2001 CISPR 14-2:1997 + A11:1998 CISPR 22:1993 + A1:1995 + A2:1996 & EN 55022:1994 + A1:1995 + A2:1997; CISPR 22:1997 + A1:2000 + A2:2002 & EN 55022:1998 + A1:2000 + A2:2003; CISPR 24: 1997 + A1:2001 & EN 55024:1998 + A1:2001 EN 55103-1:1996; EN 55103-2:1996; IEC 60521:1988 & EN 60521:1995; IEC 60555-2:1991 & EN 60555-2:1993; IEC 60555-3:1990 & EN 60555-3:1991; EN 60601-1-2:1984 (<i>EMC Requirements Only</i>); IEC 60601-1-2:2001 (2 nd Edition) (<i>EMC Requirements Only</i>) & EN 60601-1-2:2001 (2 nd Edition) (<i>EMC Requirements Only</i>) IEC 60687:1992 & IEC 60687:1992; IEC 60870-2-1:1995 & EN 60870-2-1:1996 IEC 945:1996 (<i>Clauses 9, 10, 11.2, 12.2, & 12.3 Only</i>), & EN 60945:1997 (<i>Clauses 9, 10, 11.2, 12.2, & 12.3 Only</i>); IEC 60945:2002 (<i>Clauses 9, 10, 11.2, 12.2, & 12.3 Only</i>), IEC 61000-3-2:1995+A1:1997+A2:1998; IEC 61000-3-2:2000; IEC 61000-3-2:2001; & EN 61000-3-2:1995+A1,A2:1998+A14:2000; IEC 61000-3-2:2000 & EN 61000-3-2:2000; IEC 61000-3-3:1994 + A1:2001 & EN 61000-3-3:1995 + A1:2001; IEC 61036:1996 + A1:2000 & EN 61036:1996 + A1:2000; IEC 61131-2:1992 & EN 61131-2:1994 + A11:1996 + A12:2000; IEC 61204-3:2000 & IEC 61204-3:2000; IEC 61268:1995 & EN 61268:1996; IEC 61326:1997 + A1:1998 + A2:2000 & EN 61326:1997 + A1:1998 + A2:2000; IEC 61800-3:1996 & EN 61800-3:1996 + A11:2000;
	EN 300 339:1998 EN 300 386 V1.3.1(09-2001), EN 301 489-01 (09-2001) ETS/EN 300 386:1997 EN 301 489-03 (11-2001) EN 300 385:1999 EN 301 489-04 (07-2000) EN 300 279:1999 EN 301 489-05 (07-2000) EN 301 489-09 (09-2000) ETS 300 684:1997 EN 301 489-15 (09-2000) EN 301 489-22 (11-2000)

(A2LA Cert. No. 829.01) 08/16/05

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Radio Test Standards:

47 U.S. Code of Federal Regulations (47 CFR) FCC Methods, as follows:
Part 15 (using ANSI C63.4-1992 & ANSI C63.4-2001)
Part 90 (using ANSI C63.4-1992 & ANSI C63.4-2001, & TIA/EIA-603);

Industry Canada, as follows:
RSS-119 Issue 6: March 2000;
RSS-125 Issue 2: August 1996;
RSS-210 Issue 4: December 2000;

European Union [EU] & European Economic Area [EEA], as follows:
EN 300 086-1 V.1.2.1 (2001-03) & EN 300 086-2 V.1.2.1 (2001-02);
EN 300 113-1 V1.3.1 (2001-03) & EN 300 113-2 V1.3.1 (2001-03);
EN 300 219-1 V1.2.1 (2001-03) & EN 300 219-2 V1.2.1 (2001-03);
EN 300 220-1 V1.3.1 (2000-09) & EN 300 220-2 V1.3.1 (2000-09)
& EN 300 220-3 V1.1.1 (2000-03);
EN 300 296-1 V1.1.1 (2001-03) & EN 300 296-2 V1.1.1 (2001-02);
EN 300 328 V1.4.1 (2003)
EN 300 330-1 V1.3.1 (2001-06) & EN 300 330-2 V1.1.1 (2001-06);
EN 300 422-1 V1.2.1 (2000-08) & EN 300 422-2 V1.1.1 (2000-08);
EN 300 440-1 V1.3.1 (2001-09) & EN 300 440-2 V1.1.1 (2001-09);
EN 301 751 V1.2.1 (2000-12);
EN 301 753 V1.1.1 (2001-03);
EN 301 783-1 V1.1.1 (2000-09) & EN 301 783-2 V1.1.1 (2000-07)

On the following materials and products:

Electrical and electronic equipment for: information technology; industrial, scientific, and medical applications; residential service; receivers; licensed and unlicensed transmitters/transceivers; UPS systems; alarm/security systems; heavy industrial equipment; marine equipment; professional audio/video equipment; arc welders; PLC controllers; and scientific and laboratory apparatus.



FEDERAL COMMUNICATIONS COMMISSION

Laboratory Division
7435 Oakland Mills Road
Columbia, MD 21046

July 12, 2005

Registration Number: 90420

Acme Testing Co.
P.O. Box 3
2002 Valley Highway
Acme, WA 98220-0003

Attention: Harry Hodes

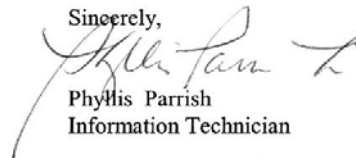
Re: Measurement facility located at Acme
Sites 1 & 2 (3, 10 & 30 meters)
Date of Renewal: July 12, 2005

Dear Sir or Madam:

Your request for renewal of the registration of the subject measurement facility has been received. The information submitted has been placed in your file and the registration has been renewed. The name of your organization will remain on the list of facilities whose measurement data will be accepted in conjunction with applications for Certification under Parts 15 or 18 of the Commission's Rules. Please note that the file must be updated for any changes made to the facility and the registration must be renewed at least every three years.

Measurement facilities that have indicated that they are available to the public to perform measurement services on a fee basis may be found on the FCC website www.fcc.gov under E-Filing, OET Equipment Authorization Electronic Filing, Test Firms.

Sincerely,



Phyllis Parrish
Information Technician

Certificate of Registration



CERT-0003744: 010083 014276
 SIC Number / NACE Code: 8734 / K74.3
 Date of Original Registration: January 26, 2000
 Date of Current Registration: November 18, 2002
 Registration Expiry Date: November 18, 2005

ACME Testing Co.

2002 Valley Highway
 Acme, Washington
 98220-0003 USA

Highway 5 & Little Plummer Creek
 Plummer, Idaho
 83851-0157 USA

which has demonstrated that its Quality Management System is in compliance with:

ISO 9001:2000

The following scope of registration applies:

Provider of Electromagnetic Compatibility (EMC) Testing and Product Safety Testing services for manufacturers of electronic equipment [per Authorized Scope(s) of Accreditation and Facility/Site Registrations], and, Conformity Assessment Body (CAB) Third-Party Product Certification Services for manufacturers of electronic equipment [per Validation Letters].



Wendy J. Tilford
President

