

Martec Access Products

Emissions Testing
Performed
on the
Periodic Transmitter
Model: 02-3048
FCC Class B

Date of Test: July 23, 1999

WO#J99018386A
KPS/Rbt
MAR8386A.KPS
July 27, 1999
DOT: July 23, 1999
Contact: Ms. Cathie Chesonis

Total No. of Pages Contained in this Report: 21

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INTERTEK TESTING SERVICES NA INC.

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This report is designed to show compliance with the FCC Part 15, Subpart B Rules for an unintentional radiator. The test procedures, as described in American National Standards Institute C63.4-1992, were employed. A description of the product and operating configuration, the various provisions of the rules, the methods for determining compliance, and a detailed summary of the results are included within this test report.

1.0 Introduction and Conclusions

On July 23, 1999, we tested the Periodic Transmitter, Model: 02-3048, to determine if it was in compliance with the FCC Class B emissions limits. We found that the unit met the FCC Class B requirements when tested as received.

Table 1 shows the unit's radiated emissions results. Note that no radiated emissions were measured above the measuring equipment noise floor which is at least 6 dB below the applicable limits.

Note that no line-conducted emissions measurements were performed as the unit is battery powered.

In summary, this report verifies that the Periodic Transmitter, Model: 02-3048, is compliant with the FCC Class B requirements when production units conform to the initial sample. Please address all questions and comments concerning this report to Andrew J. Bellezza, Staff Engineer/Emissions.

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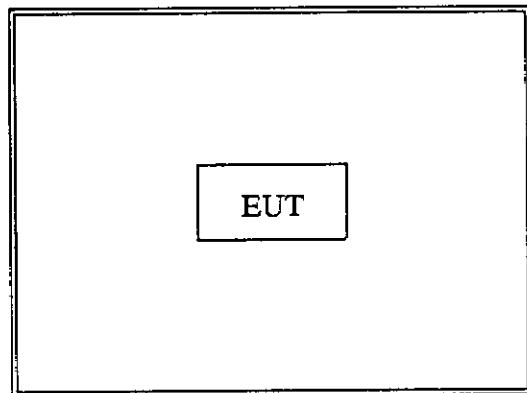
2.0 Description of the Product

2.1 Brief Description and Received Condition

The Equipment Under Test (EUT) is a periodic transmitter. A prototype version of the sample was received on July 22, 1999 in good condition.

2.2 System Block Diagram

The diagram shown below details the placement of the equipment under test on the turntable.



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2.3 System Test Configuration

Equipment Under Test: Periodic Transmitter
Model: 02-3048
Serial No.: Not Labelled
FCC Identifier: Not Labelled
Support Equipment: Standalone

Battery Powered

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2.4 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.4 (1992).

For maximizing emissions, the system was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. This step by step procedure for maximizing emissions led to the data reported in Exhibit 3.0.

The unit was operated standalone and placed in the center of the turntable.

2.5 Description of how EUT was exercised during test

For test purposes, the switch is started for continuous transmission of the transmitter. To activate the transmitter, remove the paper at the battery terminal.

2.6 Modifications Required for Compliance

No modifications were implemented by Intertek Testing Services NA Inc.

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3.0 Radiated Emissions

3.1 Radiated Emission Limits

The following radiated emission limits apply to unintentional radiators:

Radiated Emissions Limits ($\mu\text{V}/\text{m}$)

Frequency (MHZ)	Section 15.109(b) Class A at 10m	Section 15.109(a) Class B at 3m
30-88	90	100
88-216	150	150
216-960	210	200
Above 960	300	500

*Note: Three sets of units are commonly used for EMI measurement, decibels below one milliwatt (-dBm), decibels above a microvolt (dB μV), and microvolts (μV). To convert between them, use the following formulas:
 $20 \log_{10}(\mu\text{V}) = \text{dB}\mu\text{V}$, $\text{dBm} = \text{dB}\mu\text{V}-107$.*

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3.2 Site Description

Site 2C (Middle Site) is a 3m and 10m sheltered EMI measurement range located in a light commercial environment in Boxborough, Massachusetts. It meets the technical requirements of ANSI C63.4-1992 and CISPR 22:1997/EN 55022:1994 for radiated and conducted emission measurements. The shelter structure is entirely fiberglass and plastic, with outside dimensions of 33 ft x 57 ft. The structure resembles a quonset hut with a center ceiling height of 16.5 ft.

The testing floor is covered by a galvanized sheet metal groundplane that is earth-grounded via copper rods around the perimeter of the site. The joints between individual metal sheets are bridged with a 2 inch wide metal strips to provide low RF impedance contact throughout. The sheets of metal are screwed in place with stainless steel, round-head screws every three inches. Site illumination and HVAC are provided from beneath the ground reference plane through flush entry ports, the port covers are electrically bonded to the ground plane.

A flush metal turntable with 12 ft. diameter and 5000 lb. load capacity is provided for floor-standing equipment. A wooden table 80 cm high is used for table-top equipment. The turntable is electrically connected to the ground plane with three copper straps. The straps are connected to the turntable at the center of it with ground braid. It is copper strap is directly connected to the groundplane at the edges of the turntable. The turntable is located on the south end of the structure and the antennas are mounted 3 and 10 meters away to the north. The antenna mast is a non-conductive with remote control of antenna height and polarization. The antenna height is adjustable from 1 to 4 meters.

All final radiated emission measurements are performed with the testing personnel and measurement equipment located below the ground reference plane. The site has a full basement underneath the turntable where support equipment may be remotely located. Operation of the antenna, turntable and equipment under test is controlled by remote controls that manipulate the antenna height and polarization and with a turntable control. Test personnel are located below the ellipse when measurements are performed, however the site maintains the ability of having personnel manipulate cables while monitoring test equipment. Ambient radiated emissions are 6 dB or more below the relevant FCC emission limits.

AC mains power is brought to the equipment under test through a power line filter, to remove ambient conducted noise. 50 Hz (240 VAC single phase), 60 Hz power (120 VAC single phase, 208 VAC three phase), and 60 Hz (480 VAC three phase) are available. Conducted emission measurements are performed with a Line Impedance Stabilization Network (LISN) or Artificial Mains Network (AMN) bonded to the ground reference plane. A removable vertical groundplane (2 meter X 2 meter area) is used for line-conducted measurements for table top equipment. The vertical groundplane is electrically connected to the reference groundplane.

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3.3 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF - AG$$

where FS = Field Strength in $\text{dB}\mu\text{V}/\text{m}$

RA = Receiver Amplitude (including preamplifier) in $\text{dB}\mu\text{V}$

CF = Cable Attenuation Factor in dB

AF = Antenna Factor in dB

AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows:

$$FS = RR + LF$$

where FS = Field Strength in $\text{dB}\mu\text{V}/\text{m}$

RR = $RA - AG$ in $\text{dB}\mu\text{V}$

LF = $CF + AF$ in dB

Assume a receiver reading of 52.0 $\text{dB}\mu\text{V}$ is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 $\text{dB}\mu\text{V}/\text{m}$. This value in $\text{dB}\mu\text{V}/\text{m}$ was converted to its corresponding level in $\mu\text{V}/\text{m}$.

$$RA = 52.0 \text{ dB}\mu\text{V}/\text{m}$$

$$AF = 7.4 \text{ dB}$$

$$RR = 23.0 \text{ dB}\mu\text{V}$$

$$CF = 1.6 \text{ dB}$$

$$LF = 9.0 \text{ dB}$$

$$AG = 29.0 \text{ dB}$$

$$FS = RR + LF$$

$$FS = 23 + 9 = 32 \text{ dB}\mu\text{V}/\text{m}$$

$$\text{Level in } \mu\text{V}/\text{m} = \text{Common Antilogarithm } [(32 \text{ dB}\mu\text{V}/\text{m})/20] = 39.8 \mu\text{V}/\text{m}$$

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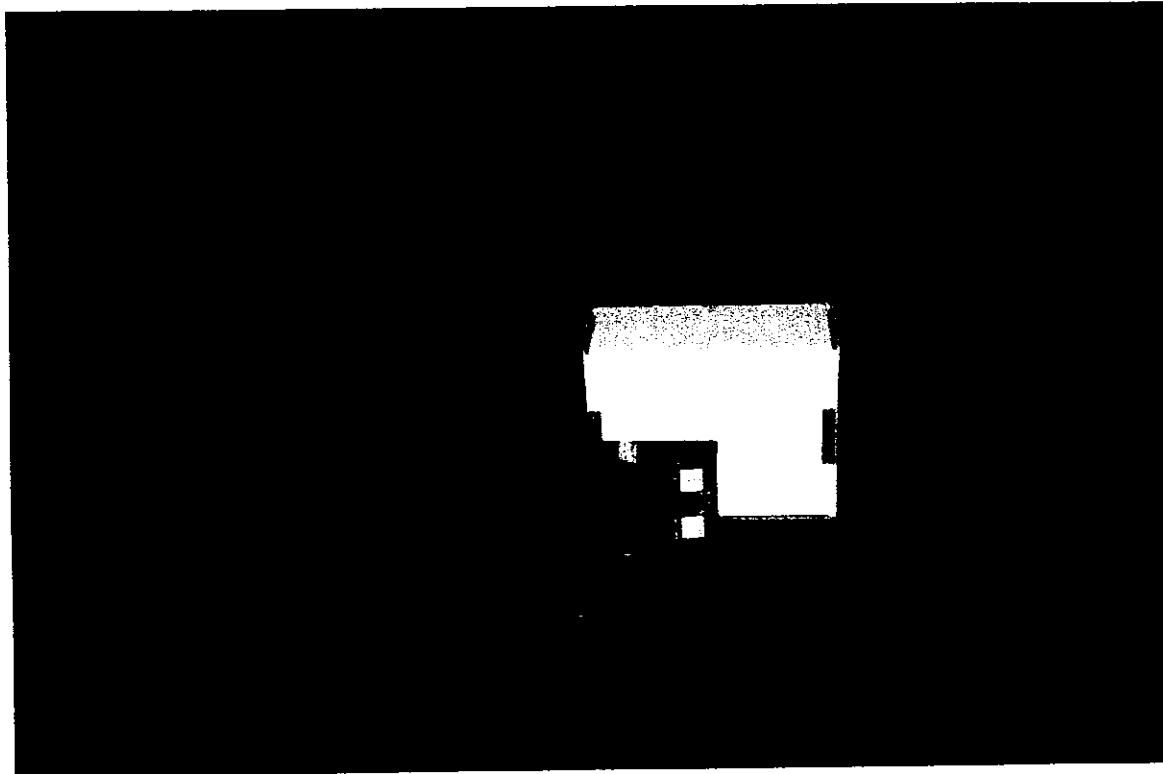
3.4 Configuration Photographs

Worst-Case Radiated Emission

Intertek Testing Services NA, Inc.
Boxborough, MA

Company:	Martec Access Products	Model:	02-3048
Test Date:	July 23, 1999	Engineer:	Kouma Sinn
Notes:			

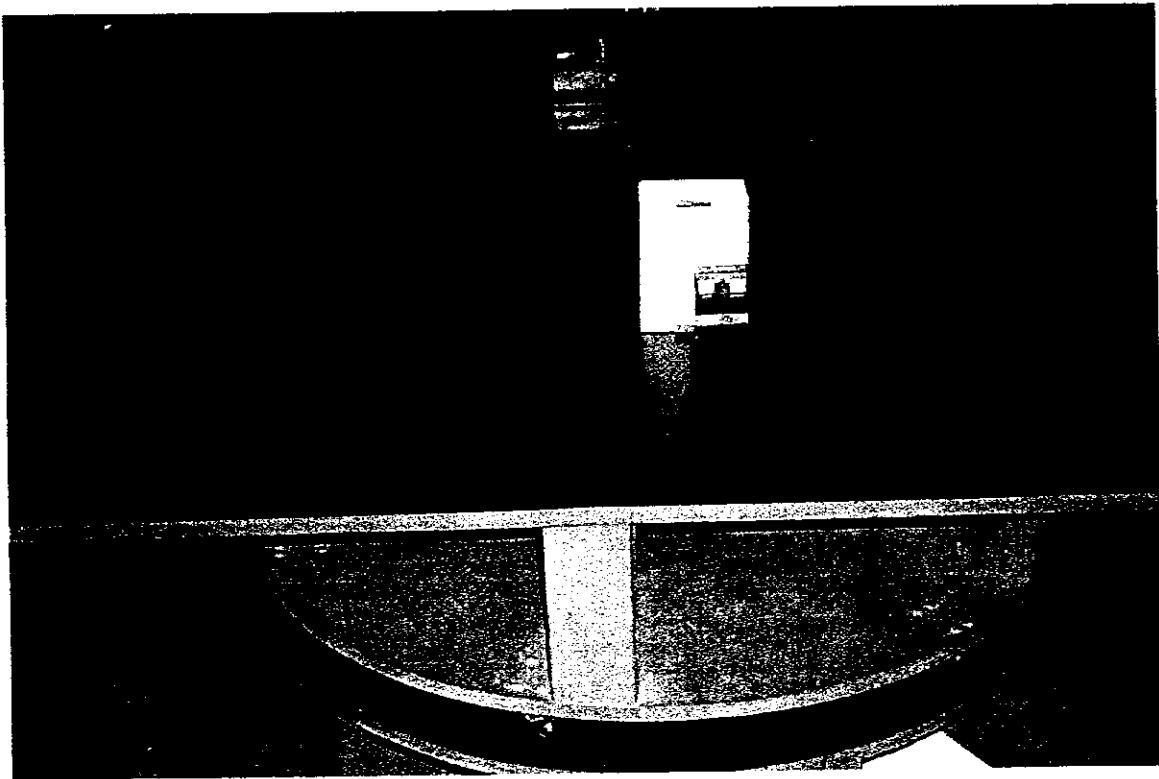
Worst-Case Radiated Emission Configuration



Intertek Testing Services NA, Inc.
Boxborough, MA

Company:	Martec Access Products	Model:	02-3048
Test Date:	July 23, 1999	Engineer:	Kouma Sinn
Notes:			

Worst-Case Radiated Emission Configuration



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3.5 Test Data

The results on the following page(s) were obtained when the device was tested in the condition described in Exhibit 2.

Intertek Testing Services

Radiated Emissions / Interference

Table: 1

Company: Martec Access Products
Model: 02 3048
Job No.: J99018386
Date: 07/23/99
Standard: FCC 15
Class: B
Notes:

Group: None

Tested by: Kouma Sinn
Location: Site 2
Detector: HP 8542E
Antenna: EMCO BICON 1225
PreAmp: NONE
Cable(s): 1 None
Distance: 3

Signature:

Ant.	Frequency (MHz)	Reading (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Pre-amp Factor (dB)	Distance Factor (dB)	Net dBuV/m	Limit dBuV/m	Margin (dB)
Pol. (v h)									
No radiated emissions were detected.									

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4.0 AC Mains Line-Conducted Emissions

4.1 Line Conducted Emission Limits

Conducted Emissions Limits (μ V)

Frequency (MHZ)	Section 15.107(b) Class A	Section 15.107(a) Class B
0.45 - 1.705	1000	250
1.705 to 30.000	3000	250

Note: Three sets of units are commonly used for EMI measurement, decibels below one milliwatt (-dBm), decibels above a microvolt (dB μ V), and microvolts (μ V). To convert between them, use the following formulas: $20 \log_{10}(\mu V) = dB\mu V$, $dBm = dB\mu V - 107$.

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4.2 Site Description

The test sites for performing AC mains line-conducted measurements are the same as those used for radiated emission measurements. For AC mains line-conducted emission measurements, a 2 meter x 2 meter vertical conducting surface has been provided. The mating surface between the vertical plane and the ground plane is free from slots in excess of 10 inches. The galvanized sheet for the vertical plane is folded over at the bottom edge of the plane, and the spring of the sheet provides constant pressure and contact to the ground plane. Two LISNs are provided for performing AC mains line-conducted emissions.

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5.0 Miscellaneous Information

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5.1 Test Procedure Reference

For radiated emissions testing:

ITS Standard Operating Procedure, Addendum 1, Sections 5.1.2, 5.2 and 5.3

For line-conducted emissions testing

ITS Standard Operating Procedure, Addendum 1, Section 5.1.1, 5.2 and 5.3

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5.2 Labelling - USA

Class B Labelling and Instruction Manual Requirements

Devices subject to Certification must be labelled with an FCC Identifier. Devices subject to Verification or Certification must be labelled with the following compliance statement:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

In addition, for a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio TV technician for help.

If shielded cables or other specialized accessories are necessary for the unit to achieve compliance, a statement similar to the following should be added:

Shielded cables must be used with this unit to ensure compliance with the Class B FCC limits.

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5.3 Labelling - Canada

Canadian Emissions Requirements

The Canadian Government has announced an amendment of the radio act which will require computing equipment to comply with EMI Specifications in Canada. The effective date for products imported into Canada is January 31, 1989.

The intent of the amendment is to establish Canadian Regulations which are harmonized with the existing FCC Regulations. As such, no retesting is required and devices which have been tested and comply with the FCC Specifications (Class A or B) also comply with the Canadian Specification (Class A or B).

A record of the measurements and results shall be retained by the manufacturer or importer for a period of at least five years and made available for examination on the request of the Canadian Government.

A written notice indicating compliance must accompany each unit of digital apparatus to the end user. The notice shall be in the form of a label that is affixed to the apparatus. Where because of insufficient space or other restrictions, it is not feasible to affix a label to the apparatus, the notice may be in the form of a statement included in the user's manual.

This Class [] digital apparatus complies with Canadian ICES-003.*

Cet appareil numérique de la classe [] est conforme à la norme NMB-003 du Canada.*

[] Insert either "A" or "B" but not both as appropriate for the equipment requirements.*

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5.4 Test Report Certification

Company Name: Martec Access Products
240 Sheffield Street
Mountainside, NJ 07092

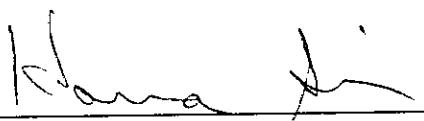
Attention: Ms. Cathie Chesonis

Model No.: 02-3048

Report Date: July 23, 1999

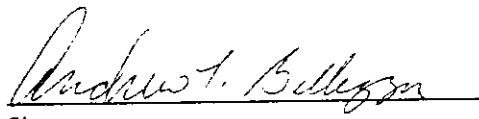
Test Site Location: INTERTEK TESTING SERVICES NA INC.
70 Codman Hill Road
Boxborough, Massachusetts 01719

We attest to the accuracy of this report:


Signature

Kouma P. Sinn
Testing Performed By

Sr. Project Engineer
Title


Signature

ANDREW J. BELLEZZA
Reviewer

SR. PROJECT ENGINEER, EMISSIONS
Title/Date 7/28/99

INTERTEK TESTING SERVICES NA INC.
70 Codman Hill Road
Boxborough, MA 01719

**EMISSIONS
VERIFICATION**

Martec Access Products
240 Sheffield Street
Mountainside, NJ 07092

July 23, 1999

NOT TRANSFERABLE

Verification is hereby issued to the named GRANTEE and is VALID ONLY for the equipment identified hereon for use under the rules and regulations listed below.

Name of Grantee: Wayne Dalton Corporation
Model Number: 02-3048
Applicable Regulation: FCC Part 15, Subpart B, and
Industry Canada Notice ICES-003, Issue 2
Equipment Class: Class B
Note(s): (1) See Report dated July 23, 1999 for details and/or conditions of this Verification.
(2) Test methods employed conform to the Standard Operating Procedures of Intertek Testing Services NA Inc.

Accredited by the National Institute of Standards and Technology
for Emissions and Telecommunications Testing
Approved by Industry Canada for Telecom Testing

In correspondence concerning this Verification,
please refer to the date, Grantee Name and Model No.

INTERTEK TESTING SERVICES NA INC.

5.5 Equipment List

The following equipment was used to make measurements for emissions testing (the equipment abbreviation corresponds to a measuring device on the following calibration list):

PRE8

LOG4

REC2

HORN2

SCOPE1

HP3

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EQUIPMENT LIST TABLE 1					
Abbr	Equipment	Manufacturer	Model	Serial	Cal Due
ANT1	BROADBAND ANTENNA	COMPLIANCE DESIGN	B1000	1649, 1650, 1651	16Jun99
ANT4	BROADBAND ANTENNA	COMPLIANCE DESIGN	B1000	3317, 3245, 3352	16Jun99
ANT5	BROADBAND ANTENNA	COMPLIANCE DESIGN	B1000	1670, 1671, 1672	16Jun99
CLMP1	ABSORBING CLAMP	FISCHER CUSTOM	F-201	122	13Jun99
CLMP2	ABSORBING CLAMP	FISCHER CUSTOM	F-201	297	23Mar00
DIP1	TUNED DIPOLE SET	COMPLIANCE DESIGN	A100	402	Out of Service
DIP2	TUNED DIPOLE SET	COMPLIANCE DESIGN	A100	506	16Jun99
DIP3	TUNED DIPOLE SET	COMPLIANCE DESIGN	A100	3947	22Mar00
HORN1	HORN ANTENNA	EMCO	3115	4632	03Oct99
HORN2	HORN ANTENNA	EMCO	3115	4675	03Oct99
HORN3	HORN ANTENNA	EMCO	3116	2090	05Mar00
HP1	SPECTRUM ANALYZER	HEWLETT PACKARD	8591	3308A01445	19Apr00
HP2	SPECTRUM ANALYZER	HEWLETT PACKARD	8591	3346A02319	09Jul99
HP3	SPECTRUM ANALYZER	HEWLETT PACKARD	8593A	3009A00659	25Jun00
LISN1	LISN	SOLAR ELECTRONICS	8012-50-R-24-BNC	871083	11Mar00
LISN10	LISN	SOLAR ELECTRONICS	9252-50-R-24-BNC	941712	16Jun00
LISN11	LISN	SOLAR ELECTRONICS	9252-50-R-24-BNC	941713	15June00
LISN12	LISN	SOLAR ELECTRONICS	9252-50-R-24-BNC	941714	15Jun00
LISN13	LISN	SOLAR ELECTRONICS	9252-50-R-24-BNC	955107	01Apr00
LISN14	LISN	SOLAR ELECTRONICS	6338-5-TS-50-N	871131	26Feb00
LISN15	LISN	SOLAR ELECTRONICS	8012-50-R-24-BNC	865575	01Apr00
LISN2	LISN	SOLAR ELECTRONICS	6338-5-TS-50-N	871132	26Feb00
LISN3	LISN	SOLAR ELECTRONICS	8012-50-R-24-BNC	8379	11Mar00
LISN4	LISN	SOLAR ELECTRONICS	8012-50-R-24-BNC	837929	11Mar00
LISN5	LISN	SOLAR ELECTRONICS	8012-50-R-24-BNC	934610	16Jun99
LISN6	LISN	SOLAR ELECTRONICS	8012-50-R-24-BNC	934611	03Jun00
LISN7	LISN	SOLAR ELECTRONICS	8012-50-R-24-BNC	934612	03Jun00
LISN8	LISN	SOLAR ELECTRONICS	8028-50-TS-24-BNC	871047	07Oct99
LISN8	LISN	SOLAR ELECTRONICS	8028-50-TS-24-BNC	871055	07Oct99

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EQUIPMENT LIST TABLE 2

Abbr	Equipment	Manufacturer	Model	Serial	Cal Due
LISN8	LISN	SOLAR ELECTRONICS	8028-50-TS-24-BNC	883147	07Oct99
LISN8	LISN	SOLAR ELECTRONICS	8028-50-TS-24-BNC	883151	07Oct99
LISN9	LISN	SOLAR ELECTRONICS	8028-50-TS-24-BNC	953947	11Mar00
LISN9	LISN	SOLAR ELECTRONICS	8028-50-TS-24-BNC	953948	11Mar00
LISN9	LISN	SOLAR ELECTRONICS	8028-50-TS-24-BNC	953949	11Mar00
LISN9	LISN	SOLAR ELECTRONICS	8028-50-TS-24-BNC	953950	11Mar00
LOG1	BICONOLOG ANTENNA	EMCO	3142	9701-1116	02Jul00
LOG2	BICONOLOG ANTENNA	EMCO	3142	1223	03Oct99
LOG3	BICONOLOG ANTENNA	EMCO	3142	1224	19Dec99
LOG4	BICONOLOG ANTENNA	EMCO	3142	1225	21Dec99
LOOP1	LOOP ANTENNA	EMPIRE DEVICES	LG105	61	15Apr00
LOOP2	LOOP ANTENNA	EMPIRE DEVICES	LP105	905	18Mar00
LOOP3	LOOP ANTENNA	EMCO	6509	9612-1403	24Jun99
PRB1	LINE PROBE	SOLAR ELECTRONICS	8614-1	932725	15Jun99
PRB2	LINE PROBE	SOLAR ELECTRONICS	8614-1	932731	10Aug99
PRE1	PREAMPLIFIER	COMPLIANCE DESIGN	P950	1648	22Jan00
PRE2	PREAMPLIFIER	COMPLIANCE DESIGN	P950	5107	18May99
PRE3	PREAMPLIFIER	COMPLIANCE DESIGN	P950	1828	18May99
PRE4	PREAMPLIFIER	COMPLIANCE DESIGN	P950	1844	22Jan00
PRE5	PREAMPLIFIER	COMPLIANCE DESIGN	P950	PROTO1	22Jan00
PRE6	PREAMPLIFIER	HEWLETT PACKARD	8447D	1937A03354	02Feb00
PRE7	PREAMPLIFIER	HEWLETT PACKARD	8447D	2944A08718	18May99
PRE8	PREAMPLIFIER	MITEQ	NSP4000-NF	507145	11Oct99
REC1	RECEIVER	HEWLETT PACKARD	8542	3520A00125	11Jan00
REC1	RF FILTER	HEWLETT PACKARD	85420	3427A00126	11Jan00
REC2	RECEIVER	HEWLETT PACKARD	85422	3625A00188	19Jan00
REC2	RF FILTER	HEWLETT PACKARD	8542	3427A00177	19Jan00
REC3	RECEIVER	HEWLETT PACKARD	8546A	3325A00160	12Jan00
REC3	RECEIVER	HEWLETT PACKARD	8546A	3330A00158	12Jan00
SCOPE1	OSCILLOSCOPE	TEKTRONIX	TDS380	B011379	01Oct99
SIG1	SIGNAL GENERATOR	HEWLETT PACKARD	8648B	3537A01040	27Apr00
TEK1	SPECTRUM ANALYZER	TEKTRONIX	2784	B010153	03Feb00

AWC = Awaiting Calibration

INTERTEK TESTING SERVICES NA INC.

5.6 Terms and Conditions

INTERTEK TESTING SERVICES NA INC.

Article 1 - Services. LABORATORY will:

- 1.1 Act for CLIENT in a professional manner, using the degree of care and skill ordinarily exercised by and consistent with the standards of the profession.
- 1.2 Provide only those services that lie within the technical and professional areas of expertise of LABORATORY and which LABORATORY is adequately staffed and equipped to perform.
- 1.3 Perform all technical services in substantial accordance with the generally accepted laboratory testing principles and practices.
- 1.4 Promptly submit formal reports of technical services performed indicating, where applicable, compliance with specification or other contract documents. Such reports shall be complete and factual, citing where appropriate the technical services performed, methods employed, and values obtained.
- 1.5 Employ instrumentation which has been calibrated within a period not exceeding twelve (12) months from the time of use by devices of accuracy traceable to the National Institute of Standards and Technology of the United States Department of Commerce.
- 1.6 Consider all reports to be the confidential property of client, and distribute reports only to those persons, organizations or agencies designated by CLIENT or his authorized representative.
- 1.7 Retain all pertinent records relating to the services performed for a period of three (3) years following submission of the report or the suspension of manufacturing of product subject to follow-up services, whichever is later, during which period the records will be made available to CLIENT upon reasonable request.

Article 2 - Client's Responsibilities, CLIENT or his authorized representative will:

- 2.1 Provide LABORATORY with all plans, schematics, specifications, addenda, change orders, drawings and other information for the proper performance of technical services.
- 2.2 Designate a person to act as CLIENT's representative with respect to LABORATORY's services to be performed under this Agreement; such person or firm to have complete authority to transmit instructions, receive information and data, interpret and define CLIENT's policies and decisions with respect to the project and to order, at CLIENT's expense, such technical services as may be required.
- 2.3 Designate a person who is authorized to receive copies of LABORATORY's test reports.
- 2.4 To undertake the following:
 - (a) Secure and deliver to LABORATORY, without cost to LABORATORY, preliminary representative samples of that equipment proposed to require technical analysis, together with any relevant data.
 - (b) Furnish such labor and equipment needed by LABORATORY to handle samples at the LABORATORY and to facilitate the specified technical analysis.

Article 3 - General Conditions

- 3.1 LABORATORY, by the performance of services covered hereunder, does not in any way assume any of those duties or responsibilities customarily vested in the CLIENT's employees, or any other party, agency or authority.
- 3.2 LABORATORY shall not be responsible for acts or omissions of any other party or parties involved in the design, manufacture or maintenance of the equipment or the failure of any employee, contractor or subcontractor to undertake any aspect of equipment's design, manufacture or maintenance.
- 3.3 LABORATORY is not authorized to revoke, alter, relax, enlarge or release any requirement of the equipment's design, manufacture or maintenance unless specifically authorized by CLIENT or his authorized representative.
- 3.4 This Agreement may be terminated by either party on ten (10) days written notice or by mutual agreement. If this Agreement is terminated by either party, LABORATORY shall be paid in full for all services performed through the termination date, and the CLIENT shall be provided with a complete report of the results of technical analysis conducted prior to termination.
- 3.5 Neither CLIENT nor LABORATORY may delegate, assign, sublet or transfer his duties or interest in this Agreement without the written consent of the other party.
- 3.6 *The only warranty made by LABORATORY in connection with its service performed hereunder is that it will use that degree of care and skill as set forth in Article 1.1 and 1.3 above. No other warranty, expressed or implied, is made or intended for services provided hereunder.*
- 3.7 Where the LABORATORY indicates that additional testing is advisable to obtain more valid or useful data, and where such testing has not been authorized in writing, CLIENT agrees to view such test reports as inconclusive and preliminary.
- 3.8 The LABORATORY shall supply technical service and prepare a report based solely on the sample submitted to the LABORATORY by the CLIENT. The CLIENT understands that application of the data to other devices is highly speculative and should be applied with extreme caution.

- 3.9 The LABORATORY agrees to exercise ordinary care in receiving, preserving and shipping (F.O.B. Boxborough, Mass.) any sample to be tested, but assumes no responsibility for damages, either direct or consequential, which arise or are alleged to arise from loss, damage or destruction of the samples due to the act of examination, modification or testing, or technical analysis, or circumstances beyond LABORATORY's control.
- 3.10 The LABORATORY will hold samples for thirty (30) days after tests are completed, or until the CLIENT's outstanding debts to the LABORATORY are satisfied, whichever is later.
- 3.11 The client recognizes that samples of products subject to LABORATORY's review and test procedures may be damaged or destroyed.
- 3.12 The CLIENT recognizes that generally accepted error variances apply and agrees to consider such error variances in its use of test data.
- 3.13 It is agreed between LABORATORY and CLIENT that no distribution of any test, reports or analysis shall be made to any third party without the prior written consent of both parties. The content of all reports, analysis and tests is strictly confidential and shall not be released to any third party without the written consent of the other party.
- 3.14 The CLIENT acknowledges that all employees of LABORATORY operate under employment contracts with the LABORATORY, and CLIENT agrees not to solicit employment of such employees, or solicit information related to other clients from said employees.

Article 4 - Follow-Up Services (for listed products only)

- 4.1 If the product is found to be in compliance with the review and test requirements, it is agreed that CLIENT will abide by the Follow-Up Service Procedure.
- 4.2 It is understood and agreed by the CLIENT that the LABORATORY name or listing mark will not be applied or utilized until authorized representatives of LABORATORY have concluded the procedure set forth in Article 4.1.
- 4.3 All costs associated with the Follow-Up Service Procedure will be the responsibility of CLIENT. CLIENT's failure to pay these charges will result in the revocation of authorization to use the LABORATORY listing mark.

Article 5 - Insurance

- 5.1 LABORATORY shall secure and maintain throughout the full period of this Agreement sufficient insurance to protect it adequately from claims under applicable Workmen's Compensation Acts and from claims for bodily injury, death or property damage as may arise from the performance of services under this Agreement.
- 5.2 The CLIENT hereby warrants that it has sufficient insurance to protect its employees adequately under applicable Workmen's Compensation Acts and for bodily injury, death or property damage as may arise from the acts of its employees pursuant to the Agreement.
- 5.3 No insurance, of whatever kind or type, which may be carried by LABORATORY is to be considered as in any way limiting any other party's responsibility for damages resulting from their operations or for furnishing work and materials related to the project.

Article 6 - Payment

- 6.1 CLIENT will pay LABORATORY for services and expenses. LABORATORY's invoices will be presented at the completion of its work or monthly and will be paid within thirty (30) days of receipt by CLIENT or his authorized representative.
- 6.2 LABORATORY shall be paid in full as described in Article 6.1 and, in addition, shall be paid in full for any services authorized orally or in writing by an employee or agent of the CLIENT pursuant to Article 2.2.

Article 7 - Extent of Agreement

The Agreement, including these Terms and Conditions and the Schedules attached hereto, represent the entire agreement between CLIENT and LABORATORY and supersedes all prior negotiations, representations or agreements, written or oral. The Agreement may be amended only in accordance with this Agreement or by written instrument signed by CLIENT and LABORATORY.

Article 8 - Collection

- 8.1 CLIENT shall pay LABORATORY interest in the amount of one and one half percent (1.5%) per month on amounts invoiced which are overdue. Invoices which are overdue are defined as those which remain unpaid more than thirty (30) days after presentation.
- 8.2 CLIENT agrees to pay LABORATORY all amounts incurred by LABORATORY in collecting on invoices which are overdue. Such amounts shall include, but shall not be limited to, reasonable attorneys' fees and court costs.