Electromagnetic Compatibility Test Report

Prepared in accordance with

FCC Part 15 Subpart C

On

AAC Device

Logan LPT1

Prepared for:

ProxTalker.com, LLC

P.O. Box 190

Thomaston, CT 06787

Prepared by:

TUV Rheinland of North America, Inc.

Auftraggeber: *Client:*	ProxTalker.com, LLC P.O. Box 190 Thomaston, CT 06787	Dan Driscoll 860-283-0969 / 860-283-0970 Dan@Proxtalker.com	
Bezeichnung: *Identification:*	AAC Device	**Serien-Nr.:** *Serial No.*	TS001
Gegenstand der Prüfung: *Test item:*	Logan LPT1	**Prüfdatum:** *Date tested:*	1/07/09
Prüfort: *Testing location:*	TUV Rheinland of North America 336 Initiative Drive Rochester, NY 14624 U.S.A.		
Prüfgrundlage: *Test specification:*	Emissions: FCC 47 CFR Part 15 & RSS-210 Issue 7		
Prüfergebnis: *Test Result*	**Der vorstehend beschriebene Prüfgegenstand wurde geprüft und entspricht oben genannter Prüfgrundlage. The above product was found to be Compliant to the above test standard(s)**		
geprüft / *tested by:* Randall Masline			
Randall E Masline 1 April 2009 **Datum** *Date* / **Name** *Name* / **Unterschrift** *Signature*			
Sonstiges : *Other Aspects:*	**None**		
Abkürzungen: OK, Pass, Compliant, Complies = entspricht Prüfgrundlage Fail, Not Compliant, Does not Comply = entspricht nicht Prüfgrundlage N/A = nicht anwendbar		Abbreviations: OK, Pass, Compliant, Complies = passed Fail, Not Compliant, Does Not Comply = failed N/A = not applicable	

FC	NVLAP	**Industry Canada**	**BSMI**
US90575	**200313-0**	**3466C-1**	**SL2-IN-E-050R**

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1 General Information

1.1 Scope

This report is intended to document the status of conformance with the requirements of the FCC Part 15 Subpart C, based on the results of testing performed on 1/07/09 on the AAC Device, Model No. Logan LPT1, manufactured by ProxTalker.com, **LLC**. This report only applies to the specific samples tested under the stated test conditions. It is the responsibility of the manufacturer to assure that additional production units of this model are manufactured with identical or EMI equivalent electrical and mechanical components. This report is further intended to document changes and modifications to the EUT throughout its life cycle. All documentation will be included as a supplement.

1.2 Purpose

Testing was performed to evaluate the EMC performance of the EUT (Equipment Under Test) in accordance with the applicable requirements, procedures, and criteria defined in the application of regulations and application of standards listed in this report.

1.3 *Summary of Test Results*

Applicant	ProxTalker.com, LLC P.O. Box 190 Thomaston, CT 06787	**Tel**	860-283-0969	**Contact**	Dan Driscoll
		Fax	860-283-0970	**e-mail**	Dan@Proxtalker.com

Description	AAC Device	**Model Number**	Logan LPT1
Serial Number	TS001	**Test Voltage/Freq.**	6VDC Battery Operated
Test Date Completed:	1/07/09	**Test Engineer**	Randall Masline

Test Methods	Test	Test Parameters	Measurement	Test Result
FCC Part 15.209(a) FCC Part 15.205(a)	Radiated Emissions Restricted Bands	Class B, 30 - 1000 MHz	Limit	**Complies**
FCC Part 15.207	Conducted Emissions	Class B, 150kHz - 30MHz	6V DC Battery Operated Testing not required	**Complies**
FCC Part15.215(c) & RSS-210 A1.1.3	20 dB Bandwidth 99% Bandwidth	Containment of 20dB Bandwidth	Limit	**Complies**
FCC Part 15.225(b) & RSS-210 A1.1.2	Fundamental Frequency Field Strength	As per 15.225	73.78dBuV	**Complies**
FCC Part 15.205 & RSS-210 2.6	Spurious Emissions in Restricted Bands	Table FCC Part 15.205 Table 1 RSS-210	Limit	**Complies**
FCC Part 15.31(e) & RSS-210 A1.1.4	Frequency Stability & Input Power variations	85% and 115 % of nominal Voltage	Limit	**Complies**
FCC Part 15.203	Antenna Requirements	Permanently Integrated Antenna		**Complies**
FCC Part 2.1093	Maximum Permissible Exposure for Portable Devices	General Population/Uncontrolled Exposure	Limit	**Complies**

2 Laboratory Information

2.1 Accreditations & Endorsements

2.1.1 US Federal Communications Commission

TUV Rheinland of North America located at 336 Initiative Dr, Rochester NY is accredited by the commission for performing testing services for the general public on a fee basis. This laboratory test facilities have been fully described in reports submitted to and accepted by the FCC (Registration No US90575). The laboratory scope of accreditation includes: Title 47 CFR Part 15, and 18. The accreditation is updated every 3 years.

2.1.2 NIST / NVLAP

Program, which is administered under the auspices of the National Institute of Standards and Technology. The laboratory has been assessed and accredited in accordance with ISO Standard 17025:2005 (Lab code: 200313-0). The scope of laboratory accreditation includes emission and immunity testing. The accreditation is updated annually.

2.1.3 VCCI

VCCI Accredited test lab. Registration numbers R-1065, C-1120, C-1121

2.1.4 Industry Canada

Registration No.: 3466C-1. The OATS has been accepted by Industry Canada to perform testing to 3 and to 10m, based on the test procedures described in ANSI C63.4-2003.

2.1.5 BSMI

Registration No.: SL2-IN-E-050R. The BSMI accreditation was obtained by NIST MRA with the BSMI.

2.2 Measurement Uncertainty

General

☐	The estimated combined standard uncertainty for ESD immunity measurements is ± 0.43%.
☐	The estimated combined standard uncertainty for radiated immunity measurements is ± 2.0dB.
☐	The estimated combined standard uncertainty for EFT fast transient immunity measurements is ± 6.0%.
☐	The estimated combined standard uncertainty for surge immunity measurements is ± 5.0%.
☐	The estimated combined standard uncertainty for conducted immunity measurements is ± 2.0 dB.
☐	The estimated combined standard uncertainty for power frequency magnetic field immunity measurements is ± 2.57%.
☐	The estimated combined standard uncertainty for voltage variation and interruption measurements is ± 4.89%.
☒	The estimated combined standard uncertainty for radiated emissions measurements is ± 4.6 dB.
☐	The estimated combined standard uncertainty for conducted emissions measurements is ± 2.6 dB.
☐	The estimated combined standard uncertainty for harmonic current ± 7.27% and flicker measurements is ± 3.87%.

2.3 Calibration Traceability

All measurement instrumentation is traceable to the National Institute of Standards and Technology (NIST). Measurement method complies with ANSI/NCSL Z540-1-1994 and ISO Standard 17025:2005. Equipment calibration records are kept on file at the test facility.

2.4 Measurement Equipment Used

Equipment	Manufacturer	Model #	Ref./Serial #		Last Cal dd/mm/yy	Next Cal dd/mm/yy	Test
BiLog	Chase	CBL6112A		2125	N/A	N/A	RI
BiLog	Chase	CBL6111		1169	29-June-07	29-June-09	RE
BiLog	Chase	CBL6111		1170	29-June-07	29-June-09	RE
Horn	EMCO	3115	C025	9512-4630	14-Jun-07	14-Jun-09	RE
Horn	EMCO	3115	C031	9812-5635	7-Feb-08	7-Feb-10	RE
LISN	Schwarzbeck	8121-200	C102	200	15-Jan-08	15-Jan-10	CE
LISN	Schwarzbeck	8121-131	C111	131	20-Dec-07	20-Dec-09	CE
LISN	Schwarzbeck	8121-128	C114	128	24-Jul-08	24-Jul-10	CE
ESD Gun	Schaffner	NSG 435	C200	1495	22-Jul-08	22-Jul-09	ESD
Precision Power Source	California Instruments	MDL 225500L/5	C210		N/A	N/A	HAR, FLI, VDSI
Power Analyzer	Voltech	PM3000A	C211	8992	6-May-08	6-May-09	FLI
Wideband (.01-230)	IFI	M75	C212	A295-0497	N/A	N/A	CI
Signal Generator	Marconi	2024	C213	112223122	19-Dec-07	19-Dec-08	RI
Signal Generator	HP	8657A	C214	312A04354	19-Dec-07	19-Dec-08	CI
Power Meter	HP	437B	C215	3125010240	19-Dec-07	19-Dec-08	CI
Power Supply & Control Module	IFI	PS 5000/28/40	C219	049-4146	N/A	N/A	RI
Wideband Amp (.01-1000)	IFI	M5580	C220	0492-4146	N/A	N/A	RI
Coupling Decoupling 1 PH	FCC	FCC-801-M3-32	C221	106	07-Jan-08	07-Jan-09	CI
Attenuator 6dB (0-1000MHz) 100W	JFW		C223		N/A	N/A	CI
Directional Coupler		62630	C224	5326	N/A	N/A	CI
CDN Adapter Kit	FCC	801-150-50 CDN	C225	752/753	04-Jan-08	04-Jan-09	CI
Calibration Fixture	FCC	801-2031-CF	C226	135	03-Jan-08	03-Jan-09	CI
EM Injection Clamp	FCC	F-2031	C227	259	03-Jan-08	03-Jan-09	CI
PS/Control Module	IFI	5000/28/40	C228	2245-1296	N/A	N/A	RI
Wideband Amp	IFI	CMX5001	C229	2244-1296	N/A	N/A	RI
Leveling PreAmplifier	IFI	LPA-5B	C230	2265-1296	N/A	N/A	RI

Field Monitor	Amplifier Research	FM5004		308114	N/A	N/A	RI
RF 900MHz Pulse Modulator	Schaffner	CPM9830	C240	1026	N/A	N/A	RI
Induction Coil (2.0m x 2.6m)	Haefely		C241		N/A	N/A	MF
Magnetic Field Test System	Haefely	MAG 100.1	C243	080-136-03	N/A	N/A	MF
Triaxial Field Meter	F.W.BELL	4080	C244		25-Apr-07	25-Apr-09	MF
Directional Coupler 0.8-4.2GHz	Amplifier Research	DC7144A	C251	307343	N/A	N/A	RI
Digitizing Oscilloscope 1GHz	Tektronix	TDS 784C	C254	B010847	17 Dec-07	17 Dec-08	SI, EFT VDSI
Field sensor	Amplifier Research	FP6001	C255	305319	6 Jun 08	6 Jun 09	RI
Power Sensor (100KHz-4.2GHz)	Agilent	8482A	C256	MY41093835	18 Dec-07	18 Dec-08	CI
Power Meter	Gigatronics	8541B	C257	1828546	28-May-08	28-May-09	RI
Peak Power Sensor	Gigatronics	80350A	C258	1829770	16-May-08	16-May-09	RI
Coupling Decoupling 2 PH	FCC	FCC-801-M4 -32A	C260	07005	10-Jun-08	10-Jun-09	CI
Coupling Decoupling 1 PH	FCC	FCC-801-M3 -16A	C261	07021	10-Jun-08	10-Jun-09	CI
EMI Receiver	Rohde & Schwarz	ESVS 30	C310	826006/015	19-Dec-07	19-Dec-08	RE
Analyzer w RF Filter Section 85460A	HP	8546A	C311	3325A00127	23-Jul-08	23-Jul-09	RE, CE
Receiver (20Hz-40GHz)	Rohde & Schwarz	ESI 40	C320	839283/005	22-Jul-08	22-Jul-09	RE,CE
Receiver (20Hz-40GHz)	Rohde & Schwarz	ESIB 40	C321	100180	20-Jan-08	20-Jan-09	RE,CE
EMI Receiver	Rohde & Schwarz	ESHS 30	C323	831954/012	19-Dec-07	19-Dec-08	CE
Multimeter	Fluke	87	C405	49050672	5-May-08	5-May-09	All Tests
Clamp On Meter	Amprobe	RS-3	C410		17-Dec-07	17-Dec-08	MF
Absorbing Clamp	Rohde & Schwarz	MDS-21	C413	76549	10-Sep-07	10-Sep-08	RE
Temp./Humidity Chart Recorder	Honeywell		C418	637592	9-Jan-08	9-Jan-09	RE
Temp./Humidity Chart Recorder	Honeywell		C419	639971	8-Jan-08	8-Jan-09	Re
Passive HV Probe 100X	Fluke	80K-40	C434		24-Jul-08	24-Jul-09	ESD
Oscilloscope	Tektronics	2430	C435	8010532	23-Jul-08	23-Jul-09	EFT
Multimeter	Fluke	83	C437	48162892	24-Jul-08	24-Jul-09	RE
Amplifier (1-26.5 GHz.)	Agilent	8449B	C438	3008A01842	18-Dec-07	18-Dec-08	RE
Amplifier 1 - 18GHz	Rohde & Schwarz	TS-PR18	C439	122002/001	18-Jan-08	18-Jan-10	RE

Signal Generator (10M-40GHz)	Rohde & Schwarz	SMR40	C440	100195	19-Dec-07	19-Dec-08	RI
Amplifier (18-26.5GHz)	Rohde & Schwarz	TS-PR18	C443	100005	22-Jul-08	22-Jul-08	RE
Digital Pressure/Temp/RH	Davis	Perception II	C444	40917	08-Jan-08	08-Jan-09	All tests
Multimeter	Fluke	87	C445	59890224	18-Dec-07	18-Dec-08	All tests
Power Analyzer	Voltech	PM6000	C446	100006700195	13-Dec-07	13-Dec-08	HAR, FLI, VDSI
Analyzer w RF Filter Section 85460A	HP	8546A	D004	3625A00356	23-Jul-08	23-Jul-08	RE, CE
ESD Gun	Schaffner	NSG 435	D005	1891	12 Dec-07	12 Dec-08	ESD
Fast Transient / Burst Generator	Schaffner	NSG2025	D007	109	18-Sep-07	18-Sep-08	EFT
Surge Immunity Test System	Schaffner	NSG2050	D008	199930-007SC	29-Sep-08	29-Sep-09	SI
Pulse Coupling Network	Schaffner	CDN 133	D009	552	29-Sep-08	29-Sep-09	SI

Note: CE = Conducted Emissions, CI= Conducted Immunity, DP=Disturbance Power, EFT=Electrical Fast Transients, ESD = Electrostatic Discharge, FLI=Flicker, HAR=Harmonics, MF=Magnetic Field Immunity, RE=Radiated Emissions, RI=Radiated Immunity, SI=Surge Immunity, VDSI=Voltage Dips and Short Interruptions

3 Product Information

3.1 Product Description

The EUT Provides movable picture communication by reading RFID tags and providing audio output and recording ability.

3.2 Equipment Modifications

Modifications were not needed to bring product into compliance.

See Appendix A for list of EUT modifications.

3.3 Test Plan

The EUT product information, test configuration, mode of operation, test types, test procedures, test levels, pass/failure criteria, in this report were carried out per the product test plan located in appendix A of this report

Figure 1 – EUT

4 Emissions

4.1 Spurious Emissions FCC 15.209(a)

This test measures the electromagnetic levels of spurious signals generated by the EUT that radiated from the EUT and may affect the performance of other nearby electronic equipment.

4.1.1 Over View of Test

Results	**Complies** (as tested per this report)				**Date**	1/06/09	
Standard	FCC Part 15.209(a)						
Product Model	Logan LPT1			**Serial#**	TS001		
Configuration	See test plan for details						
Test Set-up	Tested on 10m O.A.T.S. placed on turn-table, see test plans for details						
EUT Powered By	6VDC Battery Operated	**Temp**	22ºC	**Humidity**	50%	**Pressure**	1011mbar
Frequency Range	30 - 1000 MHz @ 3m						
Criteria	Class B. (Below Limit)		**Perf. Verification**		Readings Under Limit		
Mod. to EUT	None		**Test Performed By**		Randall Masline		

4.1.2 Test Procedure

Radiated and FCC emissions tests were performed using the procedures of ANSI C63.4 including methods for signal maximizations and EUT configuration. The photos included with the report show the EUT in its maximized configuration.

The frequency range from 30 - 1000 MHz was investigated for radiated emissions.

Radiated emission testing was first performed at a distance of 3 meters in the semi-anechoic chamber in order to identify the specific frequencies for which these measurements will be made on the 10 m OATS at a distance of 10 meters.

4.1.3 Deviations

There were no deviations from the test methodology listed in the test plan for the radiated emission test.

4.1.4 Final Test

All final radiated emissions measurements were below (in compliance) the limits.

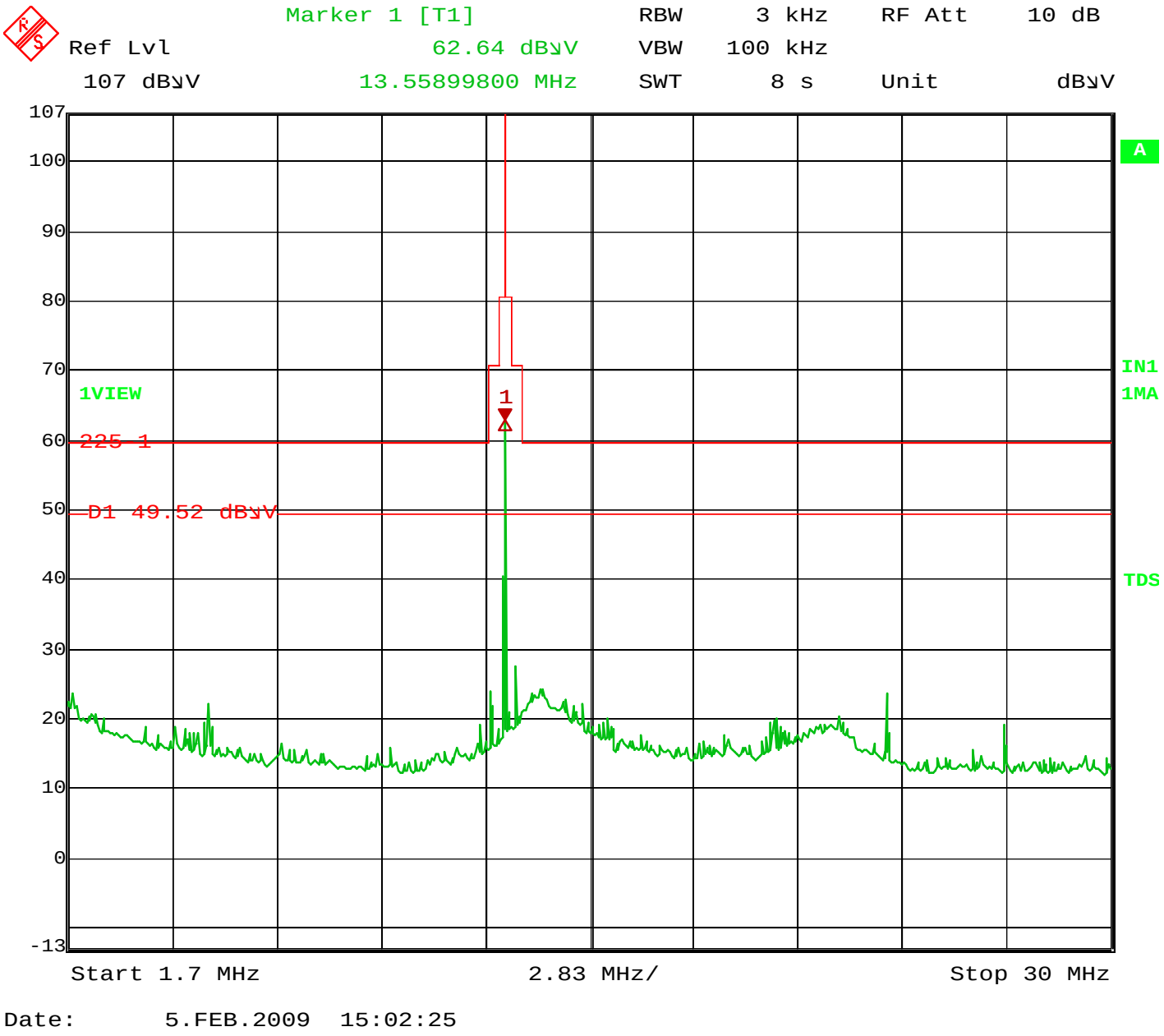

Figure 2 – Part 15.205 Restricted Bands

4.1.5 Final Tabulated Data

Radiated Emissions Measurements												
Standard:	47 CFR 15.209(a), Class B					***PRESCAN or FINAL:***		Final		***Date: 1/7/09***		
Device Tested:	Prox Talker Logan active mode						***Distance:***	3.0m		***File:***		
		Measured Level										
Meas #	Freq (MHz)	Peak	Quasi-Peak	Average	Quasi-Peak Limit	Quasi-Peak Δ	Antenna + Cable Correction Factor (included in measured levels)	Result	Polarization	Angle (degrees)	Antenna Height (meters)	Comment
1	83.2500	28.40	24.32	17.96	40.00	-15.68	7.70	**Complied**	Horizontal	90	1.40	
2	205.2375	16.91	12.53	6.54	43.50	-30.97	9.24	**Complied**	Horizontal	310	1.40	
3	216.1125	31.64	30.87	30.78	46.00	-15.13	9.13	**Complied**	Horizontal	0	1.40	
4	223.7750	19.18	16.53	14.54	46.00	-29.47	9.47	**Complied**	Vertical	0	1.00	
5	336.6375	33.58	32.45	31.12	46.00	-13.55	13.97	**Complied**	Horizontal	75	1.10	
6	625.7750	35.06	29.45	22.70	46.00	-16.55	18.82	**Complied**	Horizontal	90	1.10	
7	721.5375	41.10	39.65	37.88	46.00	-6.35	18.92	**Complied**	Horizontal	90	1.30	
8	769.3875	40.75	39.26	35.92	46.00	-6.74	20.01	**Complied**	Horizontal	100	1.30	
9	817.4375	43.81	42.52	40.01	46.00	-3.48	19.71	**Complied**	Horizontal	100	1.30	
10	841.5750	41.10	39.63	30.68	46.00	-6.37	20.13	**Complied**	Horizontal	100	1.30	
11	866.4250	37.28	30.78	24.45	46.00	-15.22	20.43	**Complied**	Horizontal	100	1.30	

Table 1 – Radiated Emissions

Frequency	QP (dBuV)	Limit	Result
27.117996	38.4	49.5dBuV	**Complies**

Table 2 – Spurious Emissions below 30 MHz

4.2 Bandwidth RSS-210 Section A1.1.3

For the purpose of Section A1.1, the 99% bandwidth shall be no wider than .25% of the center frequency.

Using the procedures of RSS-GEN section 4.6.1, the resolution bandwidth shall be set to as close to 1% of the span as possible without being below 1%. The Video bandwidth shall be set to at least 3 times the resolution bandwidth.

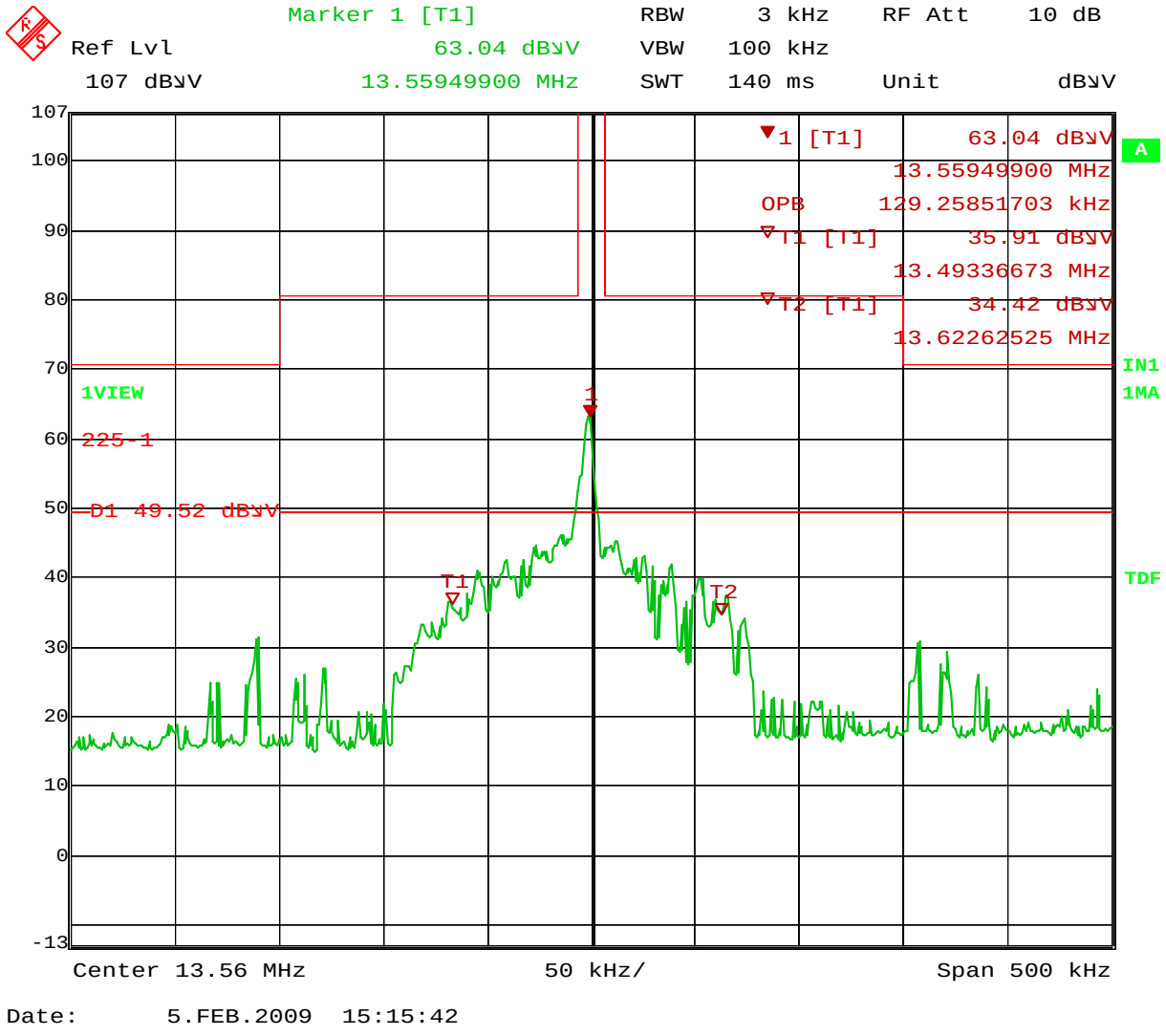

Figure 3 – 99% Bandwidth

The EUT is compliant to the requirements of RSS-210 A1.1.3 99% Bandwidth is 129.25kHz

4.3 Band Edge Compliance Part 15.215(c)

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

Bandwidth is 12.05 kHz

Lower Band edge at -20dBc is 13.55225 kHz

Upper Band edge at -20dBc is 13.5640 kHz

D1 Line is at the limit for spurious emissions at a distance of 3 meters

D2 Line is 20 dB down from the peak reading at a distance of 3 meters

Both the upper and lower -20dB frequencies are well within the inner 80% of the band. The EUT is compliant to the requirements of part 15.215(c).

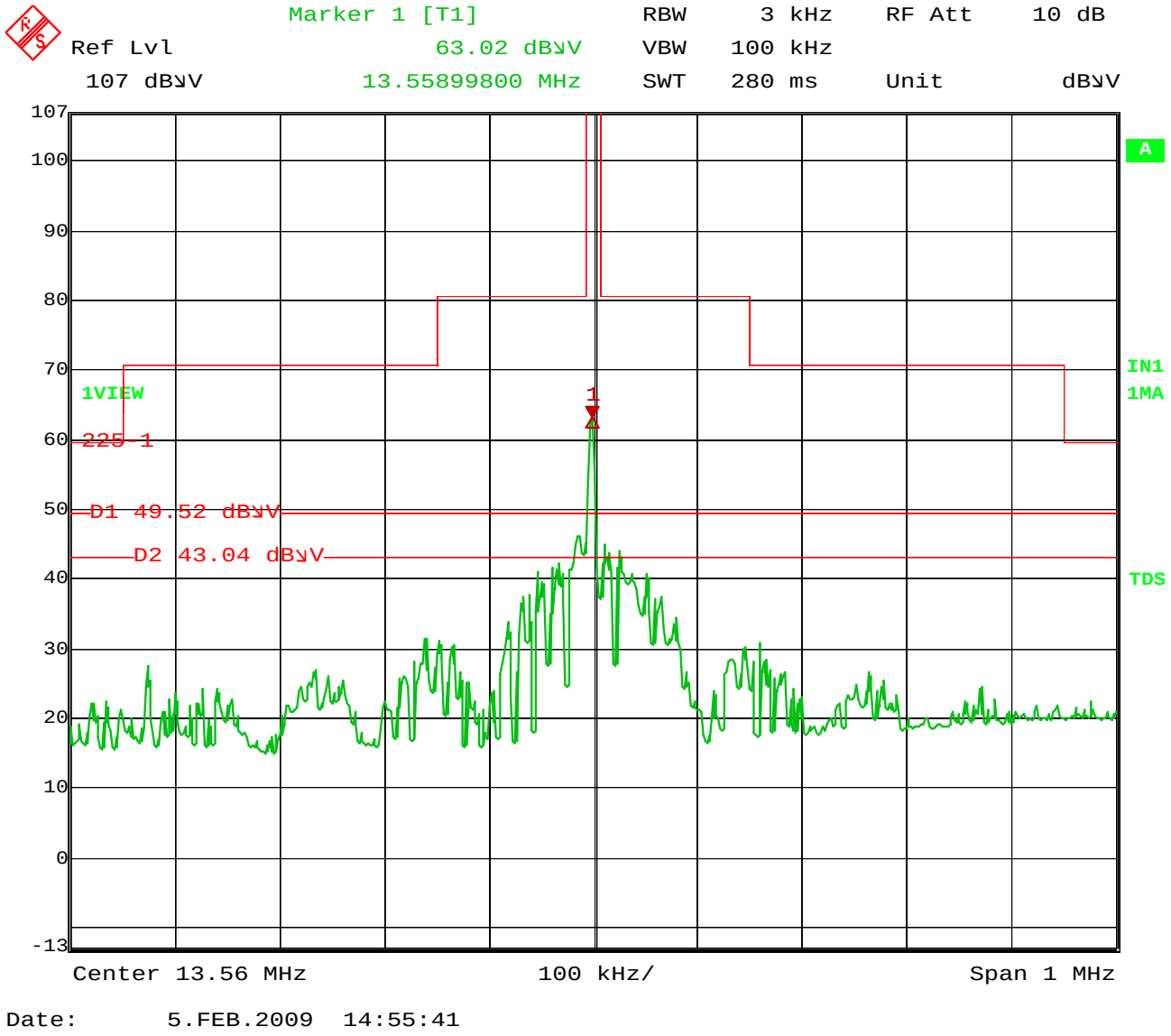

Figure 4 -20 dB Bandwidth

4.4 Fundamental Field Strength Part 15.225 (a)(b)(c)(d)

Testing was performed in accordance with FCC 47 CFR Part 15 and RSS-210 Issue 7. The limit is derived by linear interpolation of frequency as described in FCC Part 15.31 and table 3 of RSS-210.

In accordance with FCC 47 CFR Part 15.31(f) (2) Measurement Standards – At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulation.

The device was tested at 1 meter and the extrapolation factor used was the square of the inverse linear distance factor (40 dB/decade)

The calibrated loop antenna was positioned with its plane vertical at the specified distance from the EUT where the center of the loop shall be 1m above the ground.

4.4.1 Deviations

There were no deviations from this test methodology.

All three orthogonal positions were tested for highest field strength.

4.4.2 Final Test Results

All final radiated emissions measurements were below (in compliance) the limits.

73.78 dBµV at 13.5569 MHz. At a distance of 1 meter.

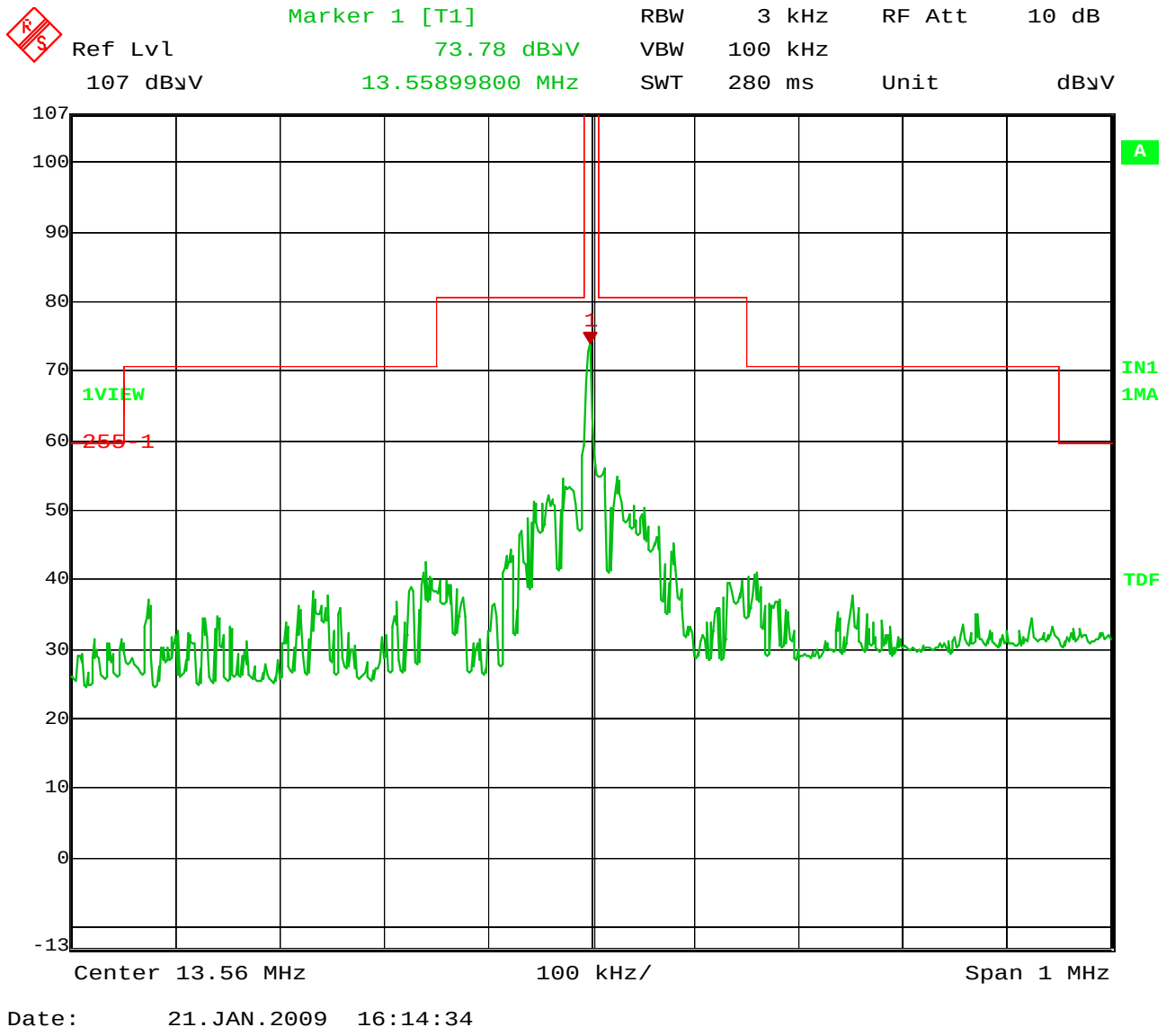

Figure 5 – Fundamental field strength of 73.78 dBµV at 13.5569 MHz.

At a distance of 1 meter

4.5 Temperature & Voltage Variations

In accordance with 47 CFR Part 15.31(e) For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. For battery operated equipment, the equipment tests shall be performed using a new battery.

The Device had new batteries installed for this test.

Temperature (Celsius)	Peak Reading In MHz	Permitted Band Edge In MHz	Result
-20° C	13.5588	13.110 – 14.101	**Complies**
20° C	13.567	13.110 – 14.101	**Complies**
+55° C	13.5593	13.110 – 14.101	**Complies**

Table 3 – Temperature Variations

Figure 6 – Temperature Stability Test

4.6 Antenna Requirements FCC Part 15.203

The 5 (five) identical transmitting antennae are integrated into the PC board and cannot be changed or altered. The design of the EUT is such that only one antenna at any one time can be activated or transmitting. This complies with the requirements under CFR 47 Part 15.203

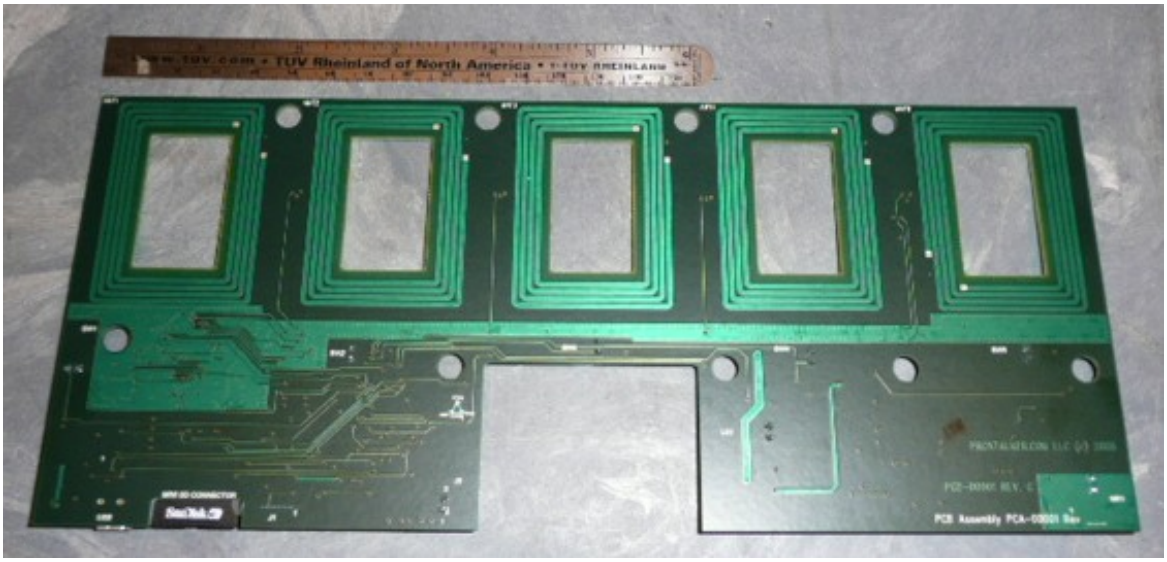

Figure 7 – Antenna (5) Rectangular loops

4.7 RF Exposure Measurement (Portable Device) Part 2.1093

4.7.1 Test Methodology

In this document, we try to prove the safety of radiation harmfulness to the human body for our product. The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The Gain of the antenna used in this product is measured in a Semi-Anechoic Chamber, and also the maximum total power input to the antenna is measured. Through the Friis transmission formula (see section 4.9.6) and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis transmission formula is a far field assumption, the calculated result of that is an over-prediction for near field power density. We will take that as the worst case to specify the safety range.

4.7.2 RF Exposure Limit

According to FCC 1.1310 table 1: The criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (minutes)
(A)Limits For Occupational / Control Exposures				
3.0-30	1842/f	4.89/f	(900/f\2\)	6
30-300	61.4	0.163	1.0	6
300-1500	…	…	F/300	6
1500-100,000	…	…	5	6
(B)Limits For General Population / Uncontrolled Exposure				
1.34-30	824/f	2.19/f	(180/f\2\)	30
30-300	27.5	0.073	0.2	30
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

4.7.3 EUT Operating condition

The software provided by Manufacturer enabled the EUT to transmit data at lowest, middle and highest channel individually.

4.7.4 Classification

The antenna of the product, under normal use condition, may be located within 20cm from the body of the user. So, this device is classified as a **Portable Device**.

4.7.5 Test Results

4.7.5.1 Antenna Gain

The antenna is integrated into the transmitter therefore; field strength measurements are used in lieu of antenna gain.

4.7.5.2 Calculation of Field Strength for Maximum Permissible Exposure Limits: Portable

Calculations for this report are based on highest field strength measurement.

Limit for MPE (from FCC part 1.1310 table 1) for (B) Limits for general Population/Uncontrolled Exposure

824/f where f = 13.560 MHz – 824/13.56 = 60.76V or 155.67dBµV

The field strength at 100% Duty Cycle is 78.73 dBuV and is therefore; 76.94dB below to the limit.

As originally tested, the EUT was found to be compliant to the requirements of the test standard(s).

4.7.6 Sample Calculation

The Friis transmission formula: $Pd = (Pout*G) / (4*\pi*R^2)$

Where;

Pd = power density in mW/cm_2
Pout = output power to antenna in mW
G = gain of antenna in linear scale
$\pi \approx 3.1416$
R = distance between observation point and center of the radiator in cm

If we know the maximum Gain of the antenna and the total power input to the antenna, through the calculation, we will know the MPE value at distance r.

Ref. : David K. Cheng, *Field and Wave Electromagnetics*, Second Edition, Page 640, Eq. (11-133).

Appendix A

5 Test Plan

This test report is intended to follow this test plan outlined here in unless other wise stated in this here report. The following test plan will give details on product information, standards to be used, test set ups and refer to TUV test procedures. The test procedures will give the steps to be taken when performing the stated test. The product information below came via client, product manual, product itself and or the internet.

5.1 General Information

Client	ProxTalker.com, LLC
Address	P.O. Box 190
Address	Thomaston, CT 06787
Contact Person	Dan Driscoll
Telephone	860-283-0969
Fax	860-283-0970
e-mail	Dan@Proxtalker.com

5.2 Model(s) Name

Logan LPT1

5.3 Type of Product

AAC Device

5.4 Equipment Under Test (EUT) Description

The EUT Provides movable picture communication by reading RFID tags and providing audio output with recording ability.

5.5 Modifications

No modifications were needed to the EUT to meet compliance.

5.6 EUT Modes of Operation

. Normal operation is when up to 5 placards with pictures are placed on the 5 Velcro buttons to form a sentence and the buttons are pressed sequentially to "speak" the sentence.

5.7 Monitoring of EUT during Testing

The EUT when activated has an audible alarm as well as a visual alarm in the form of red blinking lights on the antenna uprights. While in a chamber the EUT was monitored via remote camera.

5.8 EUT Configuration

Configuration	Description
1	Normal operation
2	
3	
4	
Notes	All configurations are the same except as noted above