



**INTERNATIONAL
TECHNOLOGIES**

(FCC Registration Number: 90701)

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FCC MEASUREMENT REPORT

For

Loudmouth Calls, Inc.

Electronic Animal Calling System

Model LOUDMOUTH1

Test and evaluation performed by
International Technologies

Report No.: APDM-030707-FCC

Agency Declaration/Disclaimer

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Document Title	FCC Measurement Report Loudmouth Calls, Inc. LOUDMOUTH1
Number	APDM-030707-FCC
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SUMMARY OF MEASUREMENT REPORT

PURPOSE

This measurement report describes the electromagnetic emissions tests performed and the results obtained on the Equipment Units Tested (EUT) described herein. It is based on the emission data measured by International Technologies personnel according to the ANSI C63.4-2001 procedure to determine whether the electromagnetic emissions from the EUT are within the Class B specification limits defined by FCC Part 15 Subpart B and C Rules and Regulations.

EUT: Loudmouth Calls, Inc.
Model: LOUDMOUTH1
Serial No.: Engineering Proto

Manufacture: Loudmouth Calls, Inc.
260 Blank Road
Narvon, PA 17555

Test Location: International Technologies
3 Adelpia Lane
Chester Springs, PA 19425

Test Date: June 28-29, 2003

RESULT

The measurement result, provided with this report, indicate that the electromagnetic emissions from the EUT are within the class B specification limits defined by FCC Part 15 Subpart B and C Rules and Regulations.

The measurement data and conclusions are a true and accurate representation of the electromagnetic emissions characteristics of the test sample described in this report.

Report prepared by Yong Park July 7, 2003
Yong Park, EMC Certified Engineer

1. GENERAL INFORMATION

1.1. Equipment Units Tested (EUT) Description

The LOUDMOUTH1 is an Electronic Animal Calling System that has a Main Unit with an optional remote control receiver to receive RF signal and a Transmitter to transmit RF signal. This system would typically be used to attract prey while hunting in the woods.

The Main Unit provides a local keypad and connectors to perform the following tasks:

1. Play pre-recorded sounds from a sound cartridge. Volume may be controlled up and down and the sound may be stopped from the local keypad.
2. Play from an optional external sound source such as a CD player. Volume may be controlled up and down and the sound may be stopped from the local keypad.
3. Play to an optional external speaker.
4. Record to the sound cartridge from an external sound source using the local keypad.
5. Operate an optional decoy from the local keypad. . The decoy typically would be a small DC motor with an off-center weight that would cause a “wobble” motion when the DC motor is turned on.
6. Charge a 6V Sealed Lead Acid battery.
7. Supply DC power from an external source.

Optional remote control would be accomplished by inserting a RF Receiver daughter board in sockets on the main board in the main unit. An antenna signal is connected to the main board on the main unit and passed to the RF Receiver board through the connection socket pins.

The photographs of main unit with optional remote control receiver are provided in Appendix C.

The Transmitter allows remote control of the main unit. Pressing the various buttons on the remote allows the user to communicate with the main unit to play selected animal sounds, control the sound volume, and control a small decoy while remaining hidden at a distance from the sounds and movement.

The photographs of Transmitter are provided in Appendix C.

1.2. Related Submittal(s) / Grant(s)

This submission is not related to any other grants or submissions.

1.3. Tested System Details

Following equipments are used as a host or/and exerciser in the compliance test. Details of cable description are in Section 3.5.

DESCRIPTION	MANUFACTURER	MODEL #	SERIAL #	CABLES/DESCRIPTION
Electronic Animal Calling System (EUT)	Loudmouth Calls, Inc.	Loudmouth1 (Transmitter)	Engineering Proto	No cable
Electronic Animal Calling System (EUT)	Loudmouth Calls, Inc.	Loudmouth1 (Receiver)	Engineering Proto	See below
AC Adaptor	Radio Shack	273-1680	2A8	6 VAC supply Cable, 1.8m length
Decoy motor	Unknown	Unknown	Unknown	0.9 m length cable
Speaker	Unknown	Unknown	Unknown	0.9 m length cable
Floating Charger	Unknown	FC-680	Unknown	1.8 m length cable
Disc Player	Lenox Sound	BP-103	030613	Audio cable, 1.8 m length

1.4. Applicable Standard

Radiated and conducted testing was performed according to the procedures in ANSI C63.4-2001. Radiated testing was performed at an antenna distance of 3 meters. The frequency range of the test was 30.0 MHz to 10 GHz for the radiated emission test and 450 KHz to 30 MHz for the conducted emission test.

1.5. Location of Test Site

The open area test site used to collect the radiated data is located at International Technologies (FCC Registration Number: 90701) in Pennsylvania. This site meets the requirements in Section 5 of ANSI C63.4-2001 and has been fully described in a report filed to the FCC.

2. EUT LABELING

2.1. FCC Label

The FCC Notice is in the Unit Operation manual and the FCC statement word is on the label. The following is a sample of the FCC ID label to be used on the EUT.

FCC ID: RCH-LM

Model No.: LOUDMOUTH1

This device is 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.

Complies with Part 15, FCC Rules.

2.2. Location of Label on EUT

The location of the FCC compliance label is at the bottom of EUT for receiver unit and at the rear of EUT for transmitter. The location of label is shown on EUT photograph in Appendix C.

3. SYSTEM TEST CONFIGURATION AND JUSTIFICATION

3.1. EUT Operation Mode and Test Justification

The main unit (Receiver) was tested in a configuration whereby all of the available input/output connectors are attached and functional. The main unit operates a 6V internal battery or external 6V dc power source. However, both internal and external power source was used for the radiated and conducted test in order to maximize emissions. The chosen operating mode fully exercises and duplicates all normal activity that may be expected by a user. This operation provides the worst case for EMC, in that all devices on EUT are active and working normally.

The transmitter was only performed radiated emission test. Because of the transmitter operates with a 9 volts portable battery. No conducted emission testing performed for the transmitter.

3.2. EUT Exercise Software

No software was used to exercise the test sample.

3.3. General and Special Conditions

No alternate test method or special accessories were used to achieve compliance.

3.4. EUT Modifications

No modification was required to achieve compliance.

3.5. Cable Configurations

Followings are cables used in the compliance test.

- a. AC Adaptor cable; Power to main unit, unshielded 2 conductor cable, one end fix to wall mount ac adaptor.
- b. Decoy motor cable; Power to motor, unshielded 2 conductor cable, one end fix to motor.
- c. Speaker cable; Unshielded 2 conductor cable, one end fix to speaker.
- d. Floating charger cable; Charge to internal battery, unshielded 2 conductor cable, one end fix to wall mount ac adaptor.
- e. Disc Player cable; Audio input cable, shielded cable, each end has an audio jack.

4. BLOCK DIAGRAM OF EUT

4.1. Block Diagram Description

The block diagram and schematics of EUT are not included in this test report. The block diagrams and schematics are downloaded to their respective exhibit types during the Form 731 Submission and will be treated as confidential information.

5. CONDUCTED MEASUREMENT PROCEDURES

5.1. Conducted Test Set-up

The HP 8546A EMI receiver was used as a measuring meter. The data was collected with the EMI receiver in the quasi-peak detect mode with the "Max Hold" feature activated. The LISN output was read by the EMI receiver. The unconnected output of LISN was terminated by a 50-ohm termination. The effective measurement bandwidth used for the conducted emissions test was 9 kHz.

The EUT was configured as a system with full capacity of I/O cables connected in according to the ANSI C63.4-2001. The EUT was setup as tabletop equipment as shown in the photographs of Appendix D.

The conducted test for the tabletop EUT was performed on a 1.0 by 1.5 meter non-metallic top with wooden post test bench, which is set up at the open area test site with a 2m by 2m, vertical conducting surface located 0.4 meter to the rear of the EUT. The test bench has its top surface 0.8-meter above the ground plane. The EUT was set up on the test bench. The EUT was powered through the LISN bonded to the ground plane. The LISNs power was filtered and the filter was bonded to the ground plane.

5.2. Preliminary Conducted Test

The test data was taken in manual mode to investigate the worst emission configuration. While scanning the frequencies in the ranges of 0.45 to 1.6 MHz, 1.6 to 5 MHz and 5 to 30 MHz, the conducted emissions from the EUT were investigated for maximizing operating mode as well as cable and peripheral placement. Once a predominant frequency, which is within 20 dB of the limit, was found, it was more closely examined with the EMI receiver span adjusted to 1 MHz.

5.3. Final Conducted Test

Based on the preliminary tests, the EUT configuration was set for the highest emission level and data was collected under manual control with EMI receiver. The EMI receiver collected the maximum quasi-peak readings over each spectrum. The six highest emission levels and corresponding frequencies are in Section 7. Also the full data of conducted emissions is provided in Appendix B.

6. RADIATED MEASUREMENT PROCEDURES

6.1. Radiated Test Set-up

The HP 8546A EMI receiver was used as a measuring meter. The EMI receiver was used in the quasi-peak detect mode with the "Max Hold" feature activated. In this mode, the EMI receiver records the highest measured reading over all the sweeps. The effective measurement bandwidth used for the radiated emissions test was 120 kHz.

Broadband biconical, log periodic and double ridged guide antennas were used as transducers during the measurement. The frequency spans were wide to 30 - 88 MHz, 88 - 216 MHz, 216 - 300 MHz, 300 - 1000 MHz and 1 to 10 GHz during preliminary investigations, however, the final data was taken with a frequency span of 1 MHz. Furthermore, the frequency span was reduced during the preliminary investigations as deemed necessary. The EUT was mounted on the 0.8 m high non-conductive table, which stand on the turntable. The turntable is remote controlled using a motor and supporting the EUT permits EUT rotation over 360 degrees to determine the highest emission levels. The antenna mast allowed height variation of the antenna at to maximize the emissions. The EUT was configured as a system with full capacity of I/O cables connected in according to the ANSI C63.4-2001. The EUT was setup as tabletop equipment as shown in the photographs of Appendix D.

6.2. Preliminary Radiated Test

Preliminary testing was done at a distance of 1 meter, to determine the predominant frequencies from the system and to investigate the EUT configuration that produced the maximum levels of emissions.

Broadband antennas were used to scan large frequency bands. If and when any frequency was found to be within 20 dB of the limits level, this frequency was recorded as a significant frequency. All significant frequencies were further examined carefully at a reduced frequency span on the EMI receiver, while optimizing EUT orientation.

6.3. Final Radiated Test

The open field test site was used for radiated emission testing. This test site is setup according to the ANSI C63.4-2001 and the site attenuation data has been filed with the FCC.

The EUT was tested at a 3-meter distance. The receiving antenna was mounted on the antenna mast, which has a motor allowing antenna height control and polarization. The antenna height was then varied from 1 to 4 meter to find the highest level of radiated emission at each frequency found during the preliminary test described above.

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal is detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide emission frequency from the EUT.

The EMI receiver was manually operated and the manual scan techniques were used to collect final data. The six highest emission readings and the corresponding frequencies are listed in Section 8. Also the full data of radiated emissions is provided in Appendix B.

7. CONDUCTED EMISSIONS DATA

7.1. Main Unit (Receiver) Conducted Data

The following data was collected using a HP 8546A EMI receiver with 9 kHz bandwidth. The six highest emissions are listed in the table. The full data sheet is provided in Appendix B.

Wire	Frequency	Reading	FCC Limit	Margin	Remarks
	MHz	dBuV	dBuV/m	dB	
Line 1	0.88	42.9	48	-5.1	Quasi-Peak
Line 1	12.16	32.9	48	-15.1	Quasi-Peak
Line 2	0.67	44.8	48	-3.2	Quasi-Peak
Line 2	9.8	29.5	48	-18.5	Quasi-Peak
Line 2	12.05	31.0	48	-17.0	Quasi-Peak
Line 2	13.61	27.9	48	-20.1	Quasi-Peak

8. RADIATED EMISSIONS DATA

8.1. Main unit (Receiver) and Transmitter Radiated Data

The following data was collected using a HP 8546A EMI receiver with 120 kHz bandwidth. The six highest emissions are listed in each table. The correction factor is included cable, antenna, and pre-amplifier corrections. The full data sheet is provided in Appendix B.

Receiver Radiated Emissions Data

Ant Pol.	Freq.	Raw Read	Corr. Factor	Net Read	FCC Limit	Margin	Azimuth	Antenna Height	Remarks
H/V	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Degree	Meter	
H	296.8	10.2	18.7	28.9	46.0	-17.1	50	1.3	Quasi-Peak
H	304.1	7.9	18.9	26.8	46.0	-19.2	45	1.0	Quasi-Peak
H	311.5	7.0	18.9	25.9	46.0	-19.2	40	1.4	Quasi-Peak
H	318.9	5.6	19.0	24.6	46.0	-21.4	45	1.8	Quasi-Peak
V	304.1	5.8	18.9	24.7	46.0	-21.3	280	1.3	Quasi-Peak
V	311.5	8.9	18.9	27.8	46.0	-18.2	270	1.2	Quasi-Peak

Transmitter Radiated Emissions Data

Ant Pol.	Freq.	Raw Read	Corr. Factor	Net Read	FCC Limit	Margin	Azimuth	Antenna Height	Remarks
H/V	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Degree	Meter	
H	916.5	47.8	30.9	78.7	82.0	-3.3	35	2.9	Fundamenta
H	1833.0	5.2	38.7	43.9	62.0	-18.1	265	1.5	2 nd harmonic
V	916.5	48.5	30.9	79.4	82.0	-2.6	40	1.8	Fundamenta
V	1833.0	3.0	38.7	41.7	62.0	-20.3	270	1.45	2 nd harmonic

8.2. Field Strength Calculation

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

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

Where:

FS = Field Strength
RA = Receiver Amplitude
AF = Antenna Factor
CF = Cable Attenuation Factor
AG = Amplifier Gain

Assume a receiver reading of 52.5 dBuV is obtained. The Antenna Factor of 7.4 and a Cable Factor of 1.1 is added. The Amplifier Gain of 29 dB is subtracted, giving a field strength of 32 dBuV/M. The 32 dBuV/m value was mathematically converted to its corresponding level in uV/m.

$$FS = 52.5 + 7.4 + 1.1 - 29 = 32 \text{ dBuV/m}$$

$$\text{Level in uV/m} = \text{Common Antilogarithm} \{(32 \text{ dBuV/m})/20\} = 39.8 \text{ uV/m}$$

This is done in the data tables by lumping the cable, antenna and pre-amp into one factor called "Corr" and adding it to the "raw" reading from the receiver.

8.3. Table of Correction Factors

Frequency in MHz	Cable CF in dB	Antenna CF in dB	Total CF in dB
30.00	1.2	14.4	15.6
35.00	1.3	12.6	13.9
40.00	1.4	12.0	13.4
45.00	1.5	12.4	13.9
50.00	1.6	12.1	13.7
60.00	1.6	10.5	12.1
70.00	1.8	8.0	9.8
80.00	1.9	7.5	9.4
90.00	2.0	9.6	11.6
100.00	2.1	12.3	14.4
120.00	2.2	14.7	16.9
140.00	2.4	13.0	15.4
160.00	2.6	15.1	17.7
180.00	2.7	16.7	19.4
200.00	2.9	17.2	20.1
200.00	2.9	12.5	15.4
225.00	2.9	12.1	15.0
250.00	3.0	13.2	16.2
275.00	3.3	14.1	17.4
300.00	3.5	15.4	18.9
350.00	3.7	15.4	19.1
400.00	4.0	16.9	20.9
450.00	4.3	17.9	22.2
500.00	4.5	18.9	23.4
550.00	5.1	19.4	24.5
600.00	5.2	19.8	25.0
650.00	5.4	20.7	26.1
700.00	5.6	22.0	27.6
750.00	5.9	22.0	27.9
800.00	5.9	22.2	28.1
850.00	6.2	23.7	29.9
900.00	6.6	24.1	30.7
950.00	6.8	24.6	31.4
990.00	6.8	25.4	32.2
1000.00	6.9	25.6	32.5
1100.00	7.4	25.2	32.6
1200.00	7.7	25.5	33.2
1300.00	8.1	25.8	33.9
1400.00	8.7	26.1	34.8
1500.00	8.9	26.5	35.4
1600.00	9.5	27.1	36.6
1700.00	9.7	27.7	37.4
1800.00	10.1	28.3	38.4
1900.00	10.3	28.9	39.2

9. LIST OF TEST EQUIPMENT

Equipment	Manufacture	Model	Serial No.	Last Cal. Date	Cal. Interval
EMI Receiver RF Section	Hewlett Packard	85462A	3325A00158	03/Mar/03	1 year
RF Filter Section	Hewlett Packard	85460A	3330A00163	03/Mar/03	1 year
LISN	Solar	8012-50-R-24- BNC	0905	08/31/02	1 year
LISN	Fisher	CUSTOM	0528	08/31/02	1 year
Antenna Biconical	EMCO	3104	3455	30/Jun/02	1 year
Antenna Log Periodic	EMCO	3146	1915	30/Jun/02	1 year
Antenna D/R guide	EMCO	3115	3935	28/Feb/03	1 Year
Antenna Mast	Pacific Arepco	DAPM4/6	N/A	N/A	N/A
Turntable	Pacific Arepco	TT1000	N/A	N/A	N/A

10. LABEL AND MANUAL INFORMATION

10.1. Labeling Requirement

In accordance with the Section 15.19 of FCC Rules, a permanently attached label shall be affixed to the every product in a conspicuous location with the following 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.”

(a) For a Class A 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:

“Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which cause the user will be required to correct the interference at his own expense.”

(b) 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:

“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.”

10.2. Information to User

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

11. LABORATORY ACCREDITATION

FEDERAL COMMUNICATIONS COMMISSION
Laboratory Division
7435 Oakland Mills Road
Columbia, MD. 21046

November 15, 2000

Registration Number: 90701

International Technologies
3 Adelpia Lane
Chester Springs, PA 19425

Attention: Yong Park

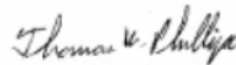
Re: Measurement facility located at Chester Springs
3 & 10 meter site
Date of Listing: November 15, 2000

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's 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 this filing must be updated for any changes made to the facility, and at least every three years from the date of listing the data on file must be certified as current.

If requested, the above mentioned facility has been added to our list of those who perform these measurement services for the public on a fee basis. An up-to-date list of such public test facilities is available on the Internet on the FCC Website at WWW.FCC.GOV, E-Filing, OET Equipment Authorization Electronic Filing.

Sincerely,



Thomas W Phillips
Electronics Engineer

Appendix A
FCC Declaration of Conformity

FCC Declaration of Conformity

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: Loudmouth Calls, Inc.

Name of Product: Electronic Animal Calling System

Model Number: LOUDMOUTH1

Applicable Regulation: FCC Part 15 Subpart B and C, Class B

Date of Declaration: July 3, 2003

*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*

Appendix B
Measurement Data Sheets

Transmitter Radiated Emissions Data

Date: 6/28/03
 Tested Site: International Technologies
 Measuring Apparatus: Biconical Antenna for 30 MHz to 200 MHz
 Log-Periodic Antenna for 200MHz to 1GHz
 Double Ridged Guide Antenna for 1 to 10 GHz
 EUT: Transmitter, model Loudmouth , Ser No.: Eng. Proto
 Config.: EUT Standalone
 Compliance Spec.: FCC Part 15, Class B at 3m

Subpart B
 30 to 88 MHz: 40 dBuV/m
 88 to 216 MHz: 43.5 dBuV/m
 216 to 960 MHz: 46 dBuV/m
 Above 960 MHz: 54 dBuV/m

Subpart C
 Fundamental (916.5 MHz): 82.0 dBuV
 Spurious (Above 470 MHz): 62.0 dBuV

Note: All values are in quasi-peak detection mode.

Test Site	Ant. V or H	Freq. MHz	Raw Read dBuV	CF dB	Net Read dBuV/m	Limit dBuV/m	Margin dB	Ant.-height /Azimuth	comment
-----------	-------------	-----------	---------------	-------	-----------------	--------------	-----------	----------------------	---------

Radiated Emissions Data for Subpart C

o	H	916.50	47.8	30.9	78.7	82.0	-3.3	2.9/35	Fundamental
o	H	1833.00	5.2	38.7	43.9	62.0	-18.1	1.5/265	2nd harmonic
o	H	2749.50	No detected						3rd harmonic
o	H	3666.00	No detected						4th harmonic
o	H	4582.50	No detected						5th harmonic
o	H	5499.00	No detected						6th harmonic
o	H	6415.50	No detected						7th harmonic
o	H	7332.00	No detected						8th harmonic
o	H	8248.50	No detected						9th harmonic
o	H	9165.00	No detected						10th harmonic
o	V	916.50	48.5	30.9	79.4	82.0	-2.6	1.8/40	Fundamental
o	V	1833.00	3.0	38.7	41.7	62.0	-20.3	1.45/270	2nd harmonic
o	V	2749.50	No detected						3rd harmonic
o	V	3666.00	No detected						4th harmonic
o	V	4582.50	No detected						5th harmonic
o	V	5499.00	No detected						6th harmonic
o	V	6415.50	No detected						7th harmonic
o	V	7332.00	No detected						8th harmonic
o	V	8248.50	No detected						9th harmonic
o	V	9165.00	No detected						10th harmonic

Radiated Emissions Data for Subpart B

Note: No emissions detected in the frequency range 30 to 2000 MHz for Subpart B.

Receiver Radiated Emissions Data

Date: 6/29/03

Tested Site: International Technologies

Measuring Apparatus: Biconical Antenna for 30 MHz to 200 MHz

Log-Periodic Antenna for 200MHz to 1GHz

EUT:Receiver (Main unit), model Loudmouth , Ser No.:Eng. Proto

Config.: EUT plus disc player, adaptor for power, adaptor for charge, decoy motor and external speaker

Compliance Spec.: FCC Part 15, Class B at 3m

Subpart B

30 to 88 MHz: 40 dBuV/m

88 to 216 MHz: 43.5 dBuV/m

216 to 960 MHz: 46 dBuV/m

Above 960 MHz: 54 dBuV/m

Note: All values are in quasi-peak detection mode.

Test Site	Ant. V or H	Freq. MHz	Raw Read dBuV	CF dB	Net Read dBuV/m	Limit dBuV/m	Margin dB	Ant.-height /Azimuth	comment
o	H	173.00	No detected						Detected at 1m
o	H	188.00	No detected						Detected at 1m
o	H	296.80	10.2	18.7	28.9	46.0	-17.1	1.3/50	
o	H	304.10	7.9	18.9	26.8	46.0	-19.2	1.0/45	
o	H	311.50	7.0	18.9	25.9	46.0	-20.1	1.4/40	
o	H	318.90	5.6	19.0	24.6	46.0	-21.4	1.8/45	
o	H	326.30	4.5	19.0	23.5	46.0	-22.5	1.0/45	
o	H	352.10	1.0	19.2	20.2	46.0	-25.8	1.1/250	
o	H	363.10	0.5	19.6	20.1	46.0	-25.9	1.2/270	
o	H	388.90	0.9	20.5	21.4	46.0	-24.6	1.0/275	
o	H	481.10	No detected						Detected at 1m
o	H	521.70	No detected						Detected at 1m
o	H	676.50	No detected						Detected at 1m
o	H	724.40	No detected						Detected at 1m
o	V	173.00	No detected						Detected at 1m
o	V	188.00	1.7	19.7	21.4	43.5	-22.1	1.0/165	
o	V	296.80	5.7	18.7	24.4	46.0	-21.6	1.5/0	
o	V	304.10	5.8	18.9	24.7	46.0	-21.3	1.3/280	
o	V	311.50	8.9	18.9	27.8	46.0	-18.2	1.2/270	
o	V	318.90	4.6	19.0	23.6	46.0	-22.4	1.3/310	
o	V	326.30	1.9	19.0	20.9	46.0	-25.1	1.0/30	
o	V	352.10	1.1	19.2	20.3	46.0	-25.7	2.3/0	
o	V	363.10	1.2	19.6	20.8	46.0	-25.2	1.8/220	
o	V	388.90	1.5	20.5	22.0	46.0	-24.0	1.4/270	
o	V	481.10	No detected						Detected at 1m
o	V	521.70	No detected						Detected at 1m
o	V	676.50	No detected						Detected at 1m
o	V	724.40	No detected						Detected at 1m

Receiver Conducted Emissions Data

Date:6/29/03

Tested Site: International Technologies

Measuring Apparatus: HP 8546A EMI Receiver and Solar LISN

EUT: Loudmouth, Main unit (Receiver), Ser No.: Eng. Proto

Config.: EUT plus disc player, adaptor for power, adaptor charger, decoy motor and external speaker

Compliance Spec: FCC Part 15, Class B

450KHz to 30 MHz: 48 dBuV

All values are in quasi-peak detection mode.

Wire	Frequency	Reading	Limit	Margin	Net Read	FCC Limit	comment
	MHz	dBuV	dBuV	dB	uV	uV	
Line 2	0.67	44.8	48.0	-3.2	173.78	250.00	
Line 2	9.8	29.5	48.0	-18.5	29.85	250.00	
Line 2	12.05	31	48.0	-17.0	35.48	250.00	
Line 2	13.61	27.9	48.0	-20.1	24.83	250.00	
Line 2	15.6	24.4	48.0	-23.6	16.60	250.00	
Line 2	17.56	19.3	48.0	-28.7	9.23	250.00	
Line 2	22.12	11.3	48.0	-36.7	3.67	250.00	
Line 2	25.81	9.7	48.0	-38.3	3.05	250.00	
Line 2	29.49	7.8	48.0	-40.2	2.45	250.00	
Line 1	0.88	42.9	48.0	-5.1	139.64	250.00	
Line 1	9.8	25.6	48.0	-22.4	19.05	250.00	
Line 1	12.16	32.9	48.0	-15.1	44.16	250.00	
Line 1	13.61	26.9	48.0	-21.1	22.13	250.00	
Line 1	15.6	24	48.0	-24.0	15.85	250.00	
Line 1	17.56	14.5	48.0	-33.5	5.31	250.00	
Line 1	22.12	11.6	48.0	-36.4	3.80	250.00	
Line 1	25.81	9.7	48.0	-38.3	3.05	250.00	
Line 1	29.49	8.3	48.0	-39.7	2.60	250.00	

Appendix C
Photographs of EUT

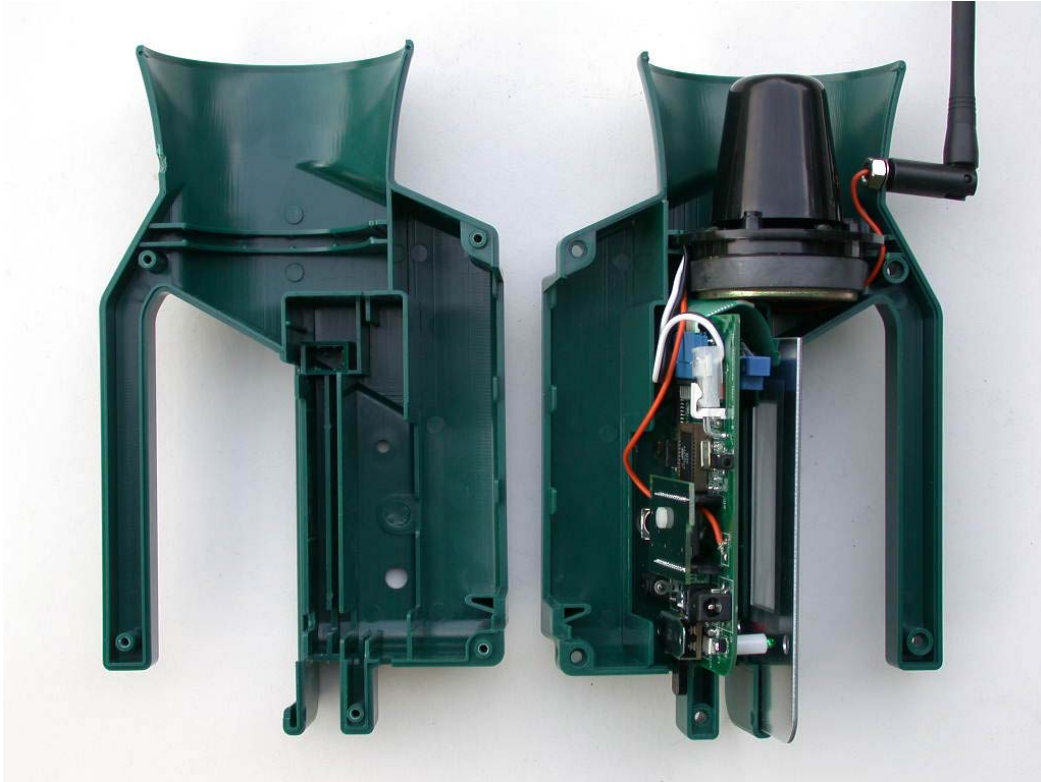
Transmitter and Receiver, Top View



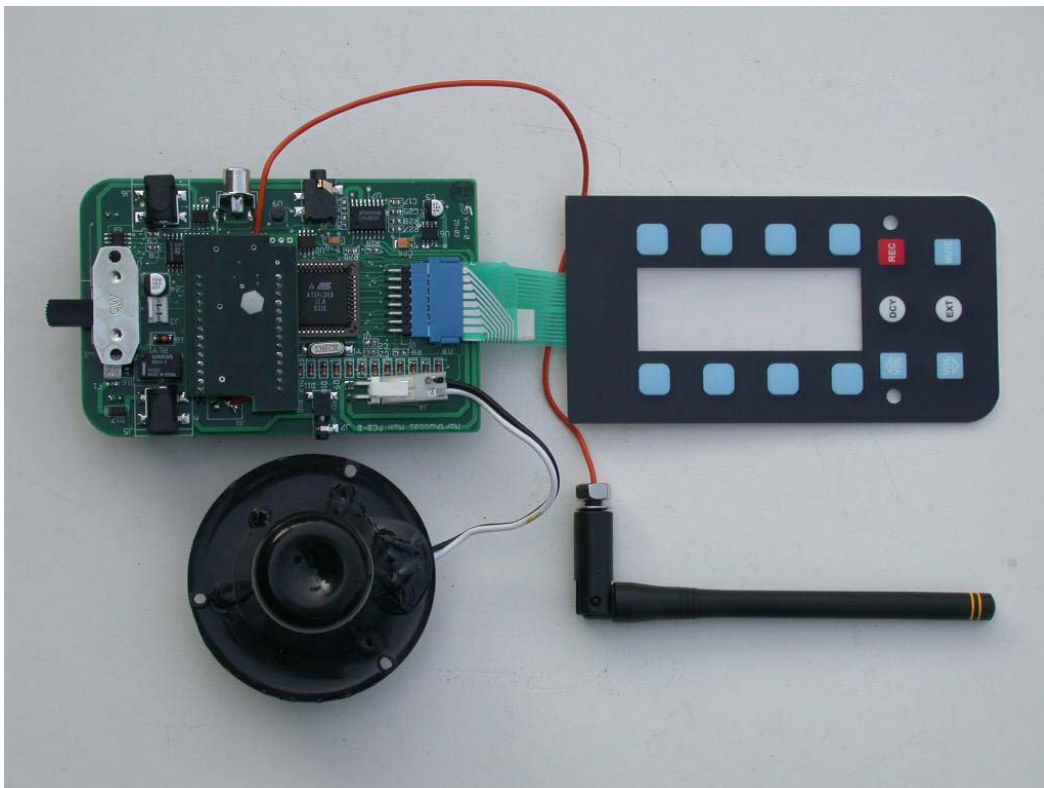
Transmitter and Receiver, Bottom View



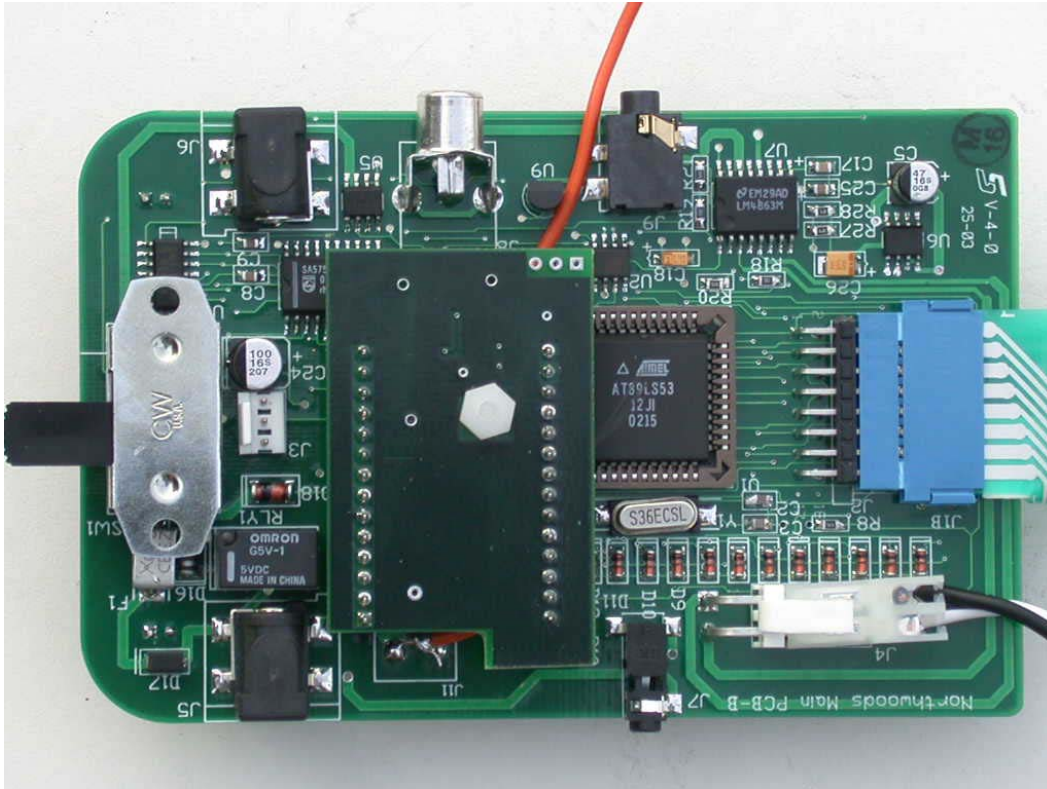
Receiver, Open View



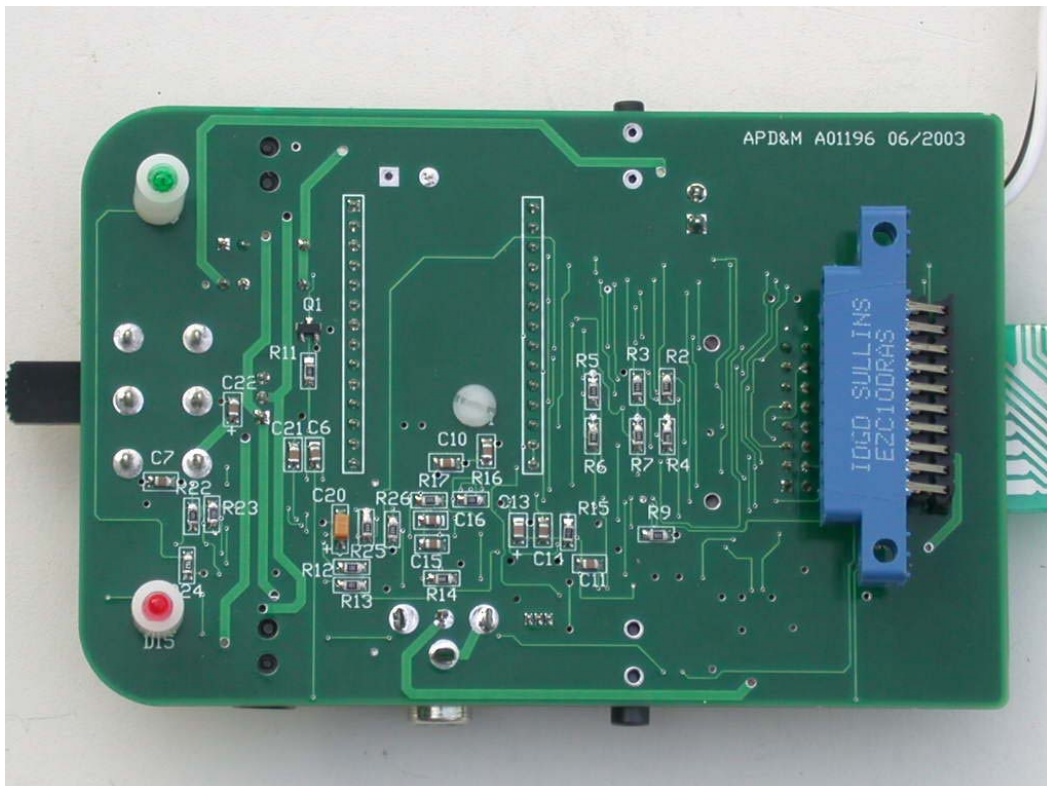
Receiver, Without Enclosure



Receiver, Component Side of Printed Circuits Board



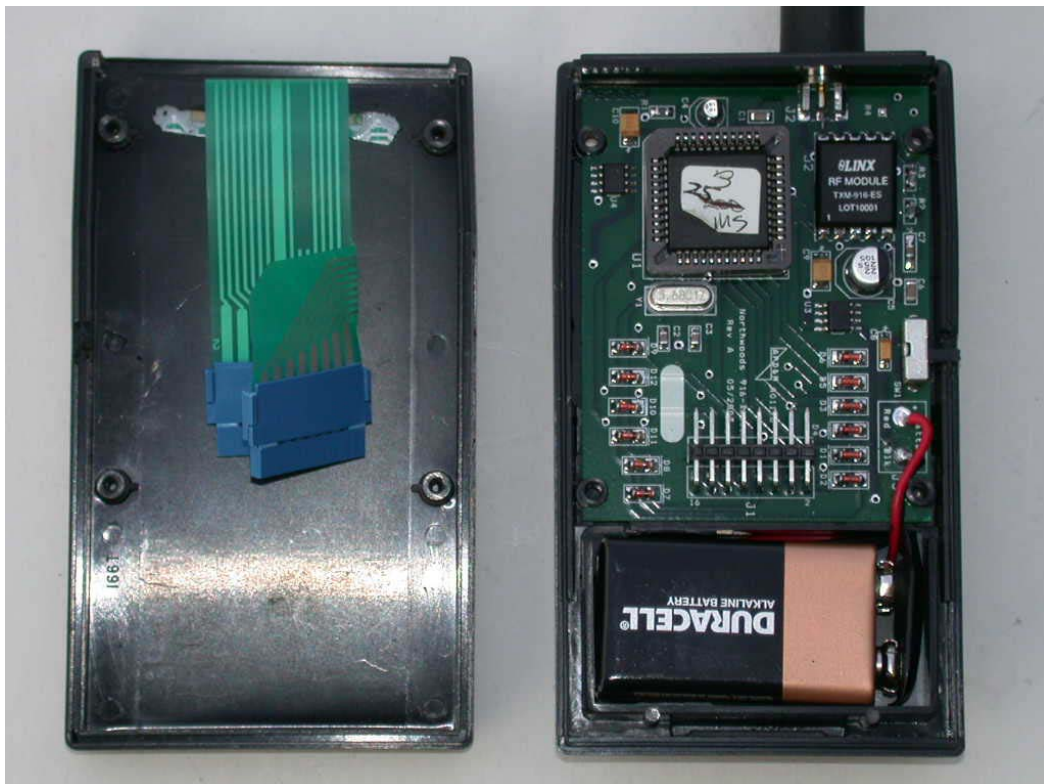
Receiver, Circuit Side of Printed Circuits Board



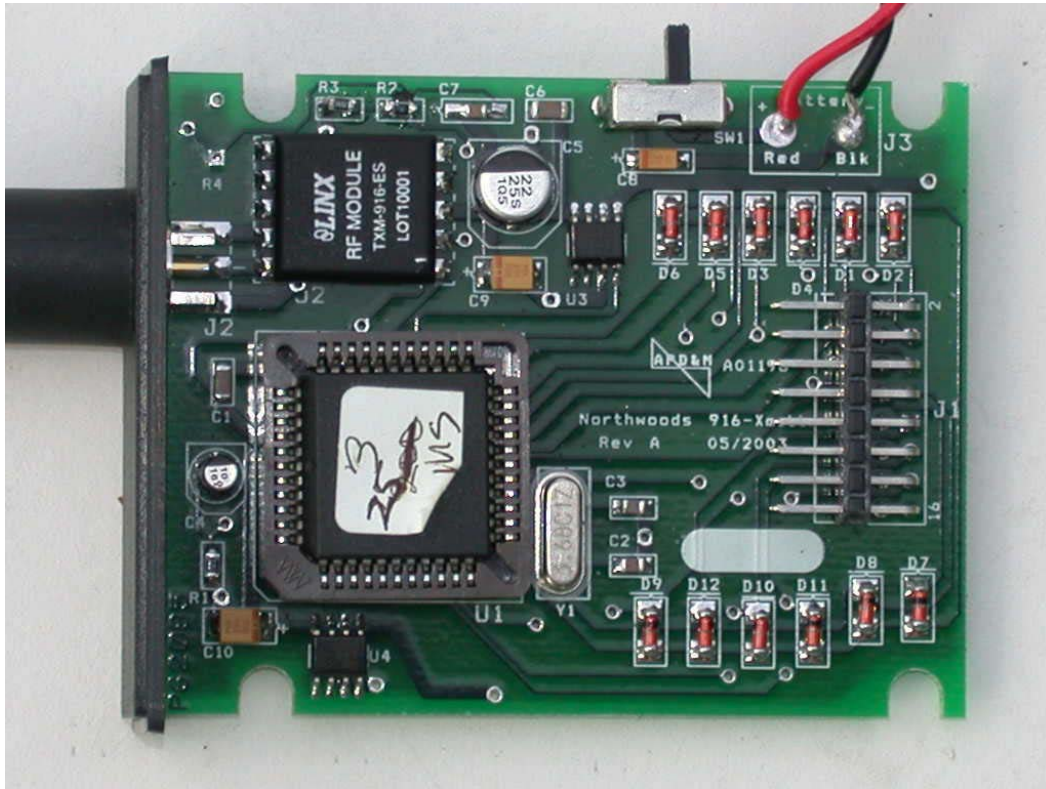
Transmitter, Front and Rear



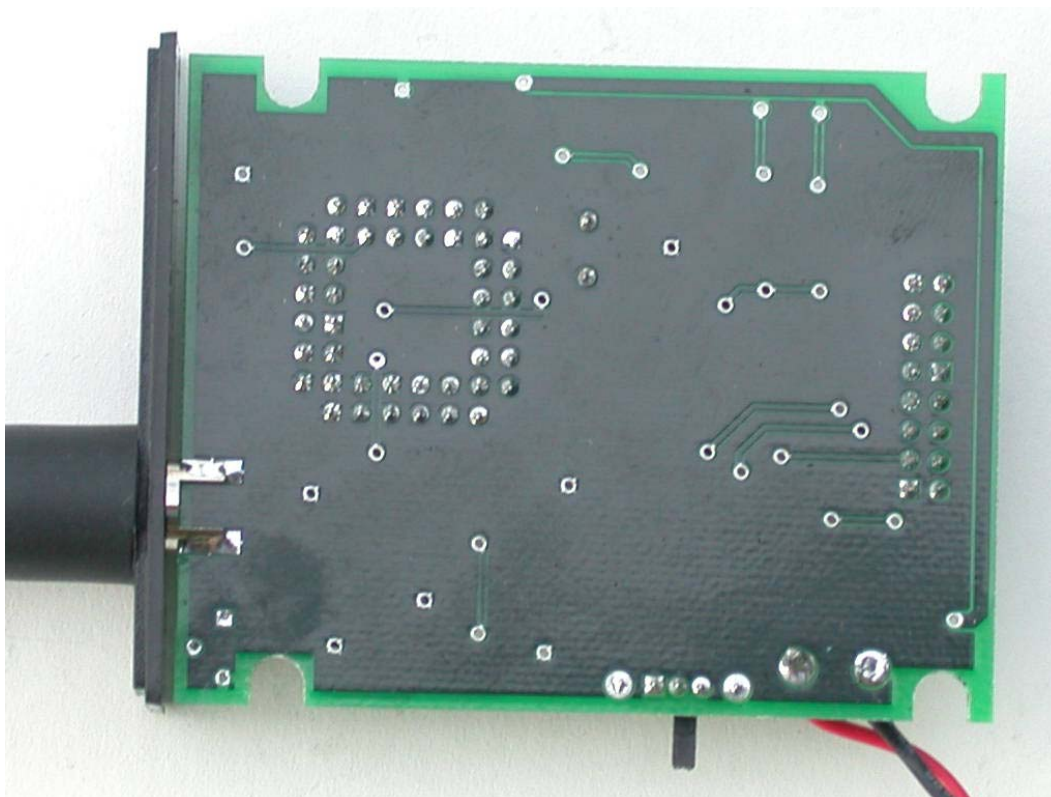
Transmitter Open View



Transmitter, Component Side of Printed Circuits Board



Transmitter, Circuit Side of Printed Circuits Board



Appendix D
Photographs of Test Setup

Radiated Test Set-up for Receiver



Conducted Test Set-up for Receiver



30 to 1 GHz Radiated Test Set-up for Transmitter



1 to 10 GHz Radiated Test Set-up for Transmitter



Appendix E

Operation Manual

Remote Control Operation

Your Loudmouth electronic caller with remote control is always ready.

The off/on switch which controls your caller also doubles as off/on for your remote receiver.

The hand held transmitter is also ready but in a sleep mode. By pressing any button you will activate the system.

The LT1 transmitter will turn volume up/down, change sounds, mute, and control optional decoy.

Prior to your trip in the field make sure your caller is ready. If you have a rechargeable battery pack, see to it that they are fully charged. If you are using C batteries make sure that they are good working order. The transmitter uses a 9-volt battery. Full battery power directly affects both distance and efficiency.

#1 Make sure sound cartridge is installed.

#2 With the antenna in a vertical position, face your caller in the direction that you expect the animal to approach from. Keep the caller, especially the antenna, in sight. Range varies, but keeping both antennas vertical and in view of each other is critical to effective operation.

#3 Turn caller on. The on/off switch is to the rear of the caller under the sound cartridge. Slide switch to right and you will see a green LED indicator light come on. Now you are ready.

#4 The transmitter keypad works the same as the caller's keypad. Sounds one through eight are selected by first pressing button one, release, and then selecting sound. For sounds nine through sixteen press button two, release, and then select sound. Do not push two buttons at the same time or the sound selected will not play.

The decoy button is used to turn on the decoy and also turning off the decoy. Push once to start and push a second to stop.

For maximum range elevate caller by placing it on a rock or stump. Hanging the caller from a limb or placing it on a bush will also aid in increasing range.

FCC Statement:

“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.”**

Modifications to this device by the user may void the user’s authority to operate the device.