



Flom Test Labs
EMI, EMC, RF Testing Experts Since 1963

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Date of Report: February 27, 2006
Date of Submission: March 10, 2006

Federal Communications Commission
Via Electronic Filing

Attention: Authorization & Evaluation Division

Applicant: Moultrie Feeders
Equipment: Feeder Activator
FCC ID: T2VMFH-ACT
FCC Rules: 15.231, Confidentiality

Gentlemen:

On behalf of the Applicant, enclosed please find Application Form 731, Engineering Test Report and all pertinent documentation, the whole for approval of the referenced equipment as shown.

Filing fees are attached.

We trust the same is in order. Should you need any further information, kindly contact the writer who is authorized to act as agent.

Sincerely yours,

David E. Lee, FCC/IC Compliance Manager

enclosure(s)
cc: Applicant
DEL/del



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Transmitter Certification

of

FCC ID: T2VMFH-ACT
Model: CHICKEN FEEDER

to

Federal Communications Commission

Rule Part 15.231, Confidentiality

Date of report: February 27, 2006

On the Behalf of the Applicant:

Moultrie Feeders

At the Request of:

Ulvation, LLC.
3134 New London Road
Hamilton, OH 45013

Attention of:

Daniel Ulrich
513-708-4885
Email: ulrichd@ulvation.com

Supervised by:

David E. Lee, Compliance Test Manager

List of Exhibits

(FCC **Certification** (Transmitters) - Revised 9/28/98)

Applicant: Moultrie Feeders

FCC ID: T2VMFH-ACT

By Applicant:

1. Letter of Authorization
2. Confidentiality Request: 0.457 And 0.459
3. Identification Drawings, 2.1033(c)(11)
 - Label
 - Location of Label
 - Compliance Statement
 - Location of Compliance Statement
4. Photographs, 2.1033(c)(12)
5. Documentation: 2.1033(c)
 - (3) User Manual
 - (10) Schematic Diagram
 - (10) Theory of Operation
 - Block Diagram
 - Active Devices

By M.F.A. Inc.:

- A. Testimonial & Statement of Certification

The applicant has been cautioned as to the following:

15.21 Information to User.

The users manual or instruction manual for an intentional 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.

15.27(a) Special Accessories.

Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors are required to enable an unintentional or intentional radiator to comply with the emission limits in this part, the equipment must be marketed with, i.e. shipped and sold with, those special accessories. However, in lieu of shipping or packaging the special accessories with the unintentional or intentional radiator, the responsible party may employ other methods of ensuring that the special accessories are provided to the consumer, without additional charge.

Information detailing any alternative method used to supply the special accessories for a grant of equipment authorization or retained in the verification records, as appropriate. The party responsible for the equipment, as detailed in § 2.909 of this chapter, shall ensure that these special accessories are provided with the equipment. The instruction manual for such devices shall include appropriate instructions on the first page of text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment.

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| 2.202(g) | Necessary Bandwidth and Emission Bandwidth | 14 |

Required information per ISO/IEC Guide 25-1990, paragraph 13.2:

a) **Test Report**

b) Laboratory: M. Flom Associates, Inc.
(FCC: 31040/SIT) 3356 N. San Marcos Place, Suite 107
(Canada: IC 2044) Chandler, AZ 85225

c) Report Number: d0620041

d) Client: Ulvation, LLC.
3134 New London Road
Hamilton, OH 45013

e) Identification: FCC ID: T2VMFH-ACT
Description: Feeder Activator

f) EUT Condition: Not required unless specified in individual tests.

g) Report Date: February 27, 2006
EUT Received: February 21, 2006

h, j, k): As indicated in individual tests.

i) Sampling method: No sampling procedure used.

l) Uncertainty: In accordance with MFA internal quality manual.

m) Supervised by:



David E. Lee, FCC Compliance Manager

n) Results: The results presented in this report relate only to the item tested.

o) Reproduction: This report must not be reproduced, except in full, without written permission from this laboratory.

List Of General Information Required For Certification

In Accordance With FCC Rules And Regulations,
Volume II, Part 2 and to 15.231

Sub-part 2.1033

(c)(1): **Name and Address of Applicant:**

Moultrie Feeders
150 Industrial Road
Alabaster, AL 35007

Manufacturer:

Applicant

(c)(2): **FCC ID:**

Model Number:

Feeder Remote Control

(c)(3): **Instruction Manual(s):**

Please See Attached Exhibits

(c)(4): **Type of Emission:**

00K

(c)(5): **Frequency Range, MHz:**

315.00

(c)(6): **Power Rating, mV/m @ 3m:**

3.82

☐ Switchable

☐ Variable

☒ N/A

(c)(7): **Maximum Power Rating, mV/m @ 3m**

6.05

15.203: **Antenna Requirement:**

- ☒ The antenna is permanently attached to the EUT
- ☐ The antenna uses a unique coupling
- ☐ The EUT must be professionally installed
- ☐ The antenna requirement does not apply

Subpart 2.1033 (continued)

(c)(8): **Voltages & currents in all elements in final RF stage, including final transistor or solid state device:**

| | | |
|------------------------|---|----------------|
| Collector Current | = | Less than 10mA |
| Collector Voltage, Vdc | = | 12.0 |
| Supply Voltage, Vdc | = | 12.0 |

(c)(9): **Tune-Up Procedure:**

Please See Attached Exhibits

(c)(10): **Circuit Diagram/Circuit Description:**

Including description of circuitry & devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation and limiting power.

Please See Attached Exhibits

(c)(11): **Label Information:**

Please See Attached Exhibits

(c)(12): **Photographs:**

Please See Attached Exhibits

(c)(13): **Digital Modulation Description:**

☐ ATTACHED EXHIBITS
☒ N/A

(c)(14): **Test and Measurement Data:**

Follows

Sub-part

2.1033(b):

Test And Measurement Data

All tests and measurement data shown were performed in accordance with FCC Rules and Regulations, Volume II; Part 2, Sub-part J, Sections 2.1031, 2.1033, 2.1035, 2.1041, 2.1043, 2.1045, and the following individual Parts:

| | | |
|-------------------------------------|--------|---|
| <input type="checkbox"/> | 15.209 | Radiated emission limits; general requirements |
| <input type="checkbox"/> | 15.211 | Tunnel radio systems |
| <input type="checkbox"/> | 15.213 | Cable locating equipment |
| <input type="checkbox"/> | 15.214 | Cordless telephones |
| <input type="checkbox"/> | 15.217 | Operation in the band 160-190 kHz |
| <input type="checkbox"/> | 15.219 | Operation in the band 510-1705 kHz |
| <input type="checkbox"/> | 15.221 | Operation in the band 525-1705 kHz (leaky coax) |
| <input type="checkbox"/> | 15.223 | Operation in the band 1.705-10 MHz |
| <input type="checkbox"/> | 15.225 | Operation in the band 13.553-13.567 MHz |
| <input type="checkbox"/> | 15.227 | Operation in the band 26-27.28 MHz (remote control) |
| <input type="checkbox"/> | 15.229 | Operation in the band 40.66-40.70 MHz |
| <input checked="" type="checkbox"/> | 15.231 | Periodic operation in the band 40.66-40.70 MHz and above 70 MHz |
| <input type="checkbox"/> | 15.233 | Operation within the bands 43.71-44.49, 46.60-46.98 MHz 48.75-49.51 MHz and 49.66-50.0 MHz |
| <input type="checkbox"/> | 15.235 | Operation within the band 49.82-49.90 MHz |
| <input type="checkbox"/> | 15.237 | Operation within the bands 72.0-73.0 MHz, 74.6-74.8 MHz and 75.2-76.0 MHz (auditory assistance) |
| <input type="checkbox"/> | 15.239 | Operation in band 88-108 MHz |
| <input type="checkbox"/> | 15.241 | Operation in the band 174-216 MHz (biomedical) |
| <input type="checkbox"/> | 15.243 | Operation in the band 890-940 MHz (materials) |
| <input type="checkbox"/> | 15.245 | Operation within the bands 902-928 MHz, 2435-2465 MHz, 5785-5815 MHz, 10500-10550 MHz, and 24075-24175 MHz (filed disturbance sensors) |
| <input type="checkbox"/> | 15.247 | Operation within bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz (spread spectrum) |
| <input type="checkbox"/> | 15.249 | Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz, and 24.0- 24.25 GHz |
| <input type="checkbox"/> | 15.251 | Operation within the bands 2.9-3.26 GHz, 3.267-3.332 GHz, 3.339-3.3458 GHz, and 3.358- 3.6 GHz (vehicle identification systems) |
| <input type="checkbox"/> | 15.321 | Specific requirements for asynchronous devices operating in the 1910-1920 MHz and 2390- 2400 MHz bands (Unlicensed PCS) |
| <input type="checkbox"/> | 15.323 | Specific requirements for isochronous devices operating in the 1920-1930 MHz sub-band (Unlicensed PCS) |

Standard Test Conditions and Engineering Practices

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with ANSI C63.4-1992/2003, and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104 °F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Prior to testing, the EUT was tuned up in accordance with the manufacturer's alignment procedures. All external gain controls were maintained at the position of maximum and/or optimum gain throughout the testing.

Measurement results, unless otherwise noted, are worst case measurements.

Name of Test: Signaling Restriction

Specification: 47 CFR 15.231(a)

Provisions

To Paragraph 15.231

(a) Types of momentary signals

- ☒ The EUT only transmits a control signal.
☐ The EUT meets the requirements provided in (e).

(a)(1) Manually operated transmitters

- ☐ The EUT can not be manually activated.
☒ The EUT ceases transmission within 5 seconds or deactivation.
☐ The EUT is employed during emergencies.

(a)(2) Automatically activated transmitters

- ☒ The EUT can not be automatically activated.
☐ The EUT does not transmit for more than 5 seconds.
☐ The EUT only operates during an alarm condition.

(a)(3) Automatically activated transmitters

- ☐ The EUT does not transmit at regular predetermined intervals.
☐ The EUT meets the requirements provided in (e).
☐ The EUT does not transmit more than one, one second per hour.

(a)(4) Emergency transmitters

- ☐ The EUT is not an emergency transmitter.
☐ The EUT only operates during an alarm condition.



Verified By:

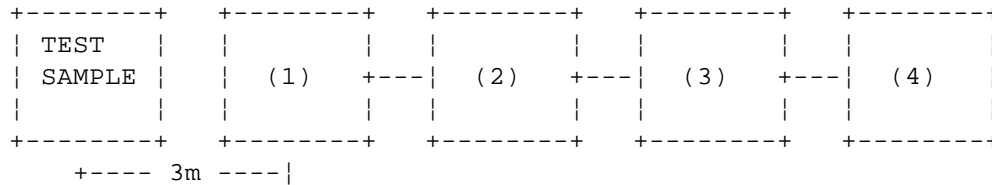
David E. Lee, FCC/IC Compliance Manager

Name of Test: Field Strength of Emissions

Specification: 47 CFR 2.1053(a)

Guide: ANSI C63.4 2003

Radiated Test Setup



Measurement Procedure

1. In the field, tests were conducted over the range shown. The test sample was set up on a wooden turntable above ground, and at a distance of three meters from the antenna connected to the Spectrum Analyzer.
2. In order to obtain the maximum response at each frequency, the turntable was rotated, and the search antenna was raised and lowered. The EUT was also adjusted for maximum response. Tests were conducted in Horizontal & Vertical polarization modes.
3. The field strength was calculated from:

$$E \text{ } \mu\text{V/m @ 3 m} = \text{Log}_{10}^{-1} \left(\frac{\text{dB}\mu\text{V} + \text{A.F.} + \text{C.L.}}{20} \right)$$

4. Measurement Results: Attached for "Worst Case" conditions.

Test Equipment:

| Asset | Description | s/n | Cycle | Last Cal |
|---|------------------------------------|------------|--------|----------|
| <small>Per ANSI C63.4-1992/2000 Draft, 10.1.4</small> | | | | |
| Transducer | | | | |
| X i00088 | EMCO 3109-B 25MHz-300MHz | 2336 | 24 mo. | Sep-05 |
| | i00065 EMCO 3301-B Active Monopole | 2635 | 24 mo. | Sep-05 |
| X i00089 | Apriel 2001 200MHz-1GHz | 001500 | 24 mo. | Sep-05 |
| X i00103 | EMCO 3115 1GHz-18GHz | 9208-3925 | 24 mo. | Jan-06 |
| Amplifier | | | | |
| i00028 | HP 8449A | 2749A00121 | 12 mo. | Mar-05 |
| Spectrum Analyzer | | | | |
| | i00029 HP 8563E | 3213A00104 | 12 mo. | Jan-06 |
| X i00033 | HP 85462A | 3625A00357 | 12 mo. | Jan-05 |
| | i00048 HP 8566B | 2511AD1467 | 12 mo. | Jan-05 |

Test Setup:

Radiated Emissions



Name of Test: Radiated Spurious Emissions (Harmonic)

Limits: Fundamental – 6.041mV/m @ 3m
 Harmonics – 0.6041 mV/m @ 3m

g0620063: 2006-Feb-14 Tue 11:24:00

State: 2:High Power

Ambient Temperature: 23°C ± 3°C

| Frequency Tuned, MHz | Frequency Emission, MHz | Meter, dBuV | Detector | CF, dB | uV/m @ 3m |
|-------------------------|----------------------------|-------------|----------|--------|-----------|
| 315.000000 | 315.045000 | 52.66 | QP | 18.97 | 3815.0 |
| 315.000000 | 630.090000 | 17.28 | QP | 29.39 | 213.0 |
| 315.000000 | 945.150000 | 16.76 | QP | 35.21 | 389.0 |
| 315.000000 | 1259.675000 | 11.71 | QP | 27.14 | 87.0 |
| 315.000000 | 1889.470000 | 17.12 | QP | 30.73 | 245.0 |
| 315.000000 | 2204.390000 | 15.37 | QP | 32.27 | 239.0 |
| 315.000000 | 2519.310000 | 12.89 | QP | 33.45 | 204.0 |
| 315.000000 | 3149.150000 | 8.07 | QP | 34.95 | 142.0 |

All other emissions are more than 20dB below the limit.



Supervised By:

David E. Lee, FCC/IC Compliance Manager

Name of Test: Radiated Spurious Emissions (Non-Harmonic)

Test Equipment: As per previous page

Measurement Results: Radiated Spurious Emissions (Non-Harmonic)

Frequency of Carrier, MHz = 315.00
 Spectrum Searched = 0 to 10 x F_C

Results: Transmitter Spurious Emissions

g05c0082: 2005-Dec-02 Fri 14:35:00

State: 0:General

| Frequency Emission, MHz | Level, dBuV | @ m | C.F., dB | $\mu\text{V/m}$ | @ m | Margin, dB |
|-------------------------|-------------|-----|----------|-----------------|-----|------------|
| 109.890000 | 10.56 | 3 | 10.39 | 11.16 | 3 | -22.1 |
| 127.820000 | 19.61 | 3 | 12.28 | 39.31 | 3 | -11.1 |
| 178.810000 | 11.53 | 3 | 12.37 | 15.67 | 3 | -19.1 |
| 300.710000 | 20.85 | 3 | 15.32 | 64.34 | 3 | -9.8 |
| 472.440000 | 10.52 | 3 | 18.64 | 28.71 | 3 | -16.8 |
| 787.543000 | 12.14 | 3 | 25.27 | 74.22 | 3 | -8.6 |



Supervised By:

David E. Lee, FCC/IC Compliance Manager

Name of Test: Emission Masks (Occupied Bandwidth)
Specification: 47 CFR 2.1049(c)(1)
Guide: ANSI/TIA/EIA-603-1992, Paragraph 2.2.11
Test Equipment: As per attached page

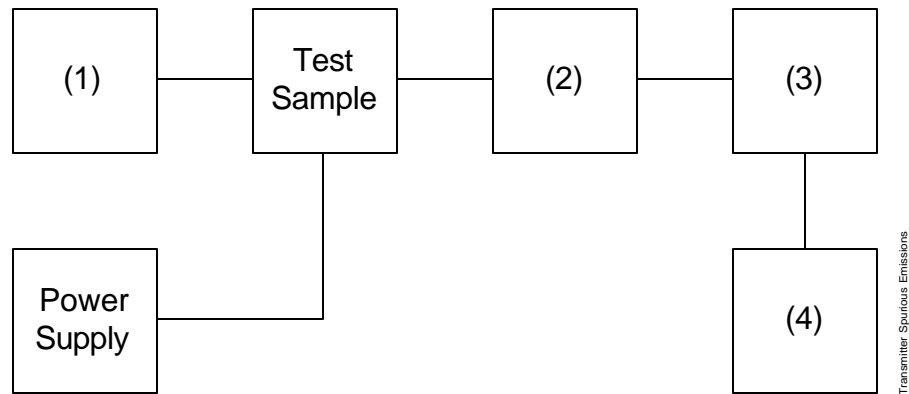
Measurement Procedure

1. The EUT and test equipment were set up as shown on the following page, with the Spectrum Analyzer loosely coupled.
2. The transmit function was enabled.
3. The Occupied Bandwidth was measured with the Spectrum Analyzer controls set as shown on the test results.
4. Measurement Results: Attached

Transmitter Spurious Emission

Test A. Occupied Bandwidth (In-Band Spurious)

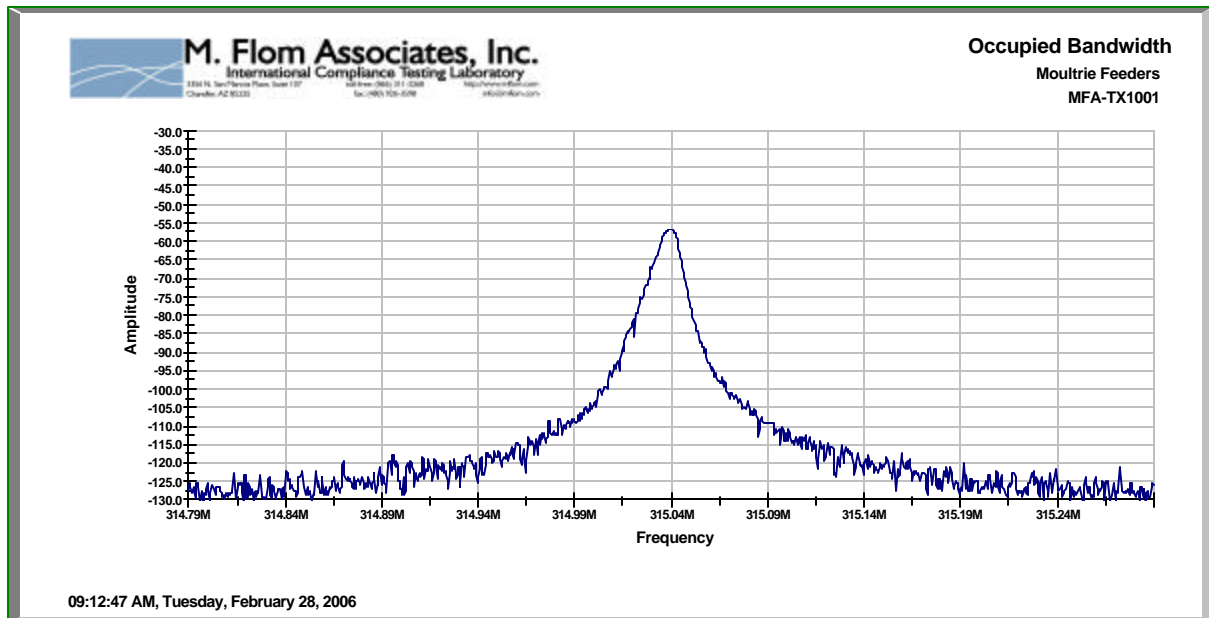
Test B. Out-of-Band Spurious



| | Asset | Description | s/n | Cycle | Last Cal |
|-------|-----------------------------------|-------------------|------------|--------|----------|
| (1) | Audio Oscillator/Generator | | | | |
| _____ | i00017 | HP 8903A | 2216A01753 | 12 mo. | Jun-05 |
| (2) | Coaxial Attenuator | | | | |
| _____ | i00069 | Bird 8329 (30 dB) | 1006 | NCR | |
| _____ | i00113 | Sierra 661A-3D | 1059 | NCR | |
| (3) | Filters; Notch, HP, LP, BP | | | | |
| _____ | i00126 | Eagle TNF-1 | 100-250 | NCR | |
| _____ | i00125 | Eagle TNF-1 | 50-60 | NCR | |
| _____ | i00124 | Eagle TNF-1 | 250-850 | NCR | |
| (4) | Spectrum Analyzer | | | | |
| X | i00048 | HP 8566B | 2511A01467 | 12 mo. | Jul-05 |
| _____ | i00029 | HP 8563E | 3213A00104 | 12 mo. | Jan-06 |

Name of Test: Emission Masks (Occupied Bandwidth)

State:



Power: High (Loose Coupled)
99% Power Bandwidth: 78kHz

Supervised By:

David E. Lee, FCC/IC Compliance Manager

Name of Test: Necessary Bandwidth and Emission Bandwidth

Specification: 47 CFR 2.202(g)

Modulation = 00K

Necessary Bandwidth Measured, MHz: 0.078



Supervised By:

David E. Lee, FCC/IC Compliance Manager

Radiated Measurements For Part 15 Transmitters W/ Integral Antennas

Radiated Measurements

| Range Of Measurement | Specification | Resolution B/W | Video B/A |
|----------------------|---------------|----------------|----------------|
| 30 to 1000 MHz | CISPR | ≥ 100 kHz | ≥ 100 kHz |
| >1000 MHz | FCC, 15.37(b) | 1 MHz | ≥ 1 MHz |
| (if averaging) | FCC, 15.37(b) | 1 MHz | 10 Hz |

Measuring Equipment

a. Antennas:

| | | |
|---|----------------|----------------|
| | EMCO 3109 | 20 - 300 MHz |
| X | APREL AALP2001 | 200 - 1000 MHz |
| | APREL AAB20200 | 20 - 200 MHz |
| X | APREL AAH118 | 1 - 18 GHz |

b. Instruments:

| | | |
|---|----------|------------------------------------|
| X | HP8566B | Spectrum Analyzer |
| X | HP85685A | Preselector, w/ preamp below 2 GHz |
| X | HP85650A | Quasi Peak Adapter |
| | HP8449 | Preamp, above 2 GHz |

Occupied Bandwidth

Occupied Bandwidth is measured as a radiated signal without attenuators and/or filter. RBW, VBW and scan settings as shown were set to produce a meaningful result in accordance with ANSI C63.4, Section 13.1.7.

Part 15.21, 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 avoided by the party responsible for compliance could void the user's authority to operate the equipment.

§ 15.205 Restricted Bands of Operation

(a) Except as shown in paragraph (b) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

| MHz | MHz | MHz | GHz |
|-------------------|---------------------|---------------|-------------|
| 0.090-0.110 | 16.42-16.423 | 399.9-410 | 4.5-5.25 |
| 0.495-0.505 | 16.69475-16.69625 | 608-614 | 5.35-5.46 |
| 2.1735-2.1905 | 16.80425-16.80475 | 960-1240 | 7.25-7.75 |
| 4.125-4.128 | 25.5-25.67 | 1300-1427 | 8.025-8.5 |
| 4.17725-4.17775 | 37.5-38.25 | 1435-1626.5 | 9.0-9.2 |
| 4.20725-4.20775 | 73-74.6 | 1645.5-1646.5 | 9.3-9.5 |
| 6.215-6.218 | 74.8-75.2 | 1660-1710 | 10.6-12.7 |
| 6.26775-6.26825 | 108-121.94 | 1718.8-1722.2 | 13.25-13.4 |
| 6.31175-6.31225 | 123-138 | 2200-2300 | 14.47-14.5 |
| 8.291-8.294 | 149.9-150.05 | 2310-2390 | 15.35-16.2 |
| 8.362-8.366 | 156.52475-156.52525 | 2483.5-2500 | 17.7-21.4 |
| 8.37625-8.38675 | 156.7-156.9 | 2655-2900 | 22.01-23.12 |
| 8.41425-8.41475 | 162.0125-167.17 | 3260-3267 | 23.6-24.0 |
| 12.29-12.293 | 167.72-173.2 | 3332-3339 | 31.2-31.8 |
| 12.51975-12.52025 | 240-285 | 3345.8-3358 | 36.43-36.5 |
| 12.57675-12.57725 | 322-339.4 | 3600-4400 | |
| 13.36-13.41 | | | |

**Testimonial
and
Statement of Certification**

This is to certify:

1. **That** the application was prepared either by, or under the direct supervision of, the undersigned.
2. **That** the technical data supplied with the application was taken under my direction and supervision.
3. **That** the data was obtained on representative units, randomly selected.
4. **That**, to the best of my knowledge and belief, the facts set forth in the application and accompanying technical data are true and correct.



Certifying Engineer:

David E. Lee, FCC/IC Compliance Manager