

**Client:** Aero Comm, Inc.  
**FCC ID:** KJA501540302  
**Model:** 50124-03-02

**Report No.:** 9252-01-001  
**Issue Date:** April, 18, 2000

# Certification Test Report

## For a VHF Transmitter

**Manufacturer:**  
Aero Comm, Inc.  
19516 Amaranth Drive  
Germantown, MD 20874

**Testing Facility:**  
F-Squared Laboratories  
10880 Moxley Road  
Damascus, MD 20872

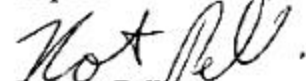
The VHF Transmitter, Model 50124-03-02, sn 221 has been tested and found to comply with the requirements of the Federal Communications Commission outlined in the Federal Register CFR 47 Part 2.1041 and Part 90 for Private Land Mobile Radio VHF Transmitter. The results found in this test report relate only to the items tested. The product was received on September 13, 1999 and the testing was completed on September 20, 1999.

**Evaluation Conducted By:**



**Dale Royston**  
EMC Technical Manager

**Report Reviewed By:**



**Robert Pellizze**  
General Manager



*success through compliance*

**F-Squared Laboratories**  
9890A Main Street  
Damascus, MD 20872  
(301) 253 - 4500  
Fax: (301) 253 - 5179

This report shall not be duplicated except in full without the written approval of F-Squared Laboratories

## Table of Contents

Exhibit	Title	Page
	Cover Page	1
	Table of Contents	2
I	Engineering Statements	3
II	Authorization Letter	6
III	Measurement Instrument List	7
IV	Labeling	8
V	EUT Information and Data	10
VI	Block Diagram	14
VII	EUT Configuration and Cables	15
VIII	Conducted Data	16
IX	Radiated Data (Per Section 2.1053)	18
X	Data for CFR 47 Part 2.1041	19
	Section 2.1046 –RF Power Output	20
	Section 2.1047 –Modulation Characteristics	21
	Sections 2.1049 (i) and 90.219 (b & c) - Emissions Mask	23
	Section 2.1051 – Spurious Emissions at Antenna Terminal	25
	Section 2.1055/90.213 – Frequency Stability	27
XI	EUT & Test Setup Photos	40
XII	Compliance Information	44
XIII	Operation & Instruction Manual	45

**Client:** Aero Comm, Inc.  
**FCC ID:** KJA501540302  
**Model:** 50124-03-02

**Report No.:** 9252-01-001  
**Issue Date:** April, 18, 2000

## **Exhibit I**

### **Engineering Statements**

This report has been prepared on behalf of Aero Comm, Inc. to certify a Private Land Mobile Radio Service VHF Transmitter. The test was performed for above said device under Parts 2.1033 (c ) and Part 90 of the FCC Rules and Regulations. The test results found in this test report relate only to the items tested.

**EQUIPMENT UNDER TEST:** VHF Transmitter  
Model: 50124-03-02  
Power Supply General Requirements: 12 VDC, 0.3 Amps

**FCC ID:** KJA501540302

**APPLICABLE RULES:** CFR 47 Part 2.1033 (c); 2.1046, 90.209, 90.213, 2.1055/90.213

**EQUIPMENT CATEGORY:** Transmitter, Licensed

**MEASUREMENT LOCATION:** F-Squared Laboratories in Damascus, MD. Site description and attenuation data are on file with the FCC's Sampling and Measurement Branch at the FCC Laboratory in Columbia, MD.

**MEASUREMENT PROCEDURE:** All measurements were performed according to the 1992 version of ANSI C63.4. A list of the measurement equipment can be found in Exhibit II.

**UNCERTAINTY BUDGET:**

- Radiated Emission  
Combined Uncertainty (+ or -) 2.24 dB  
Expanded Uncertainty (+ or -) 4.48 dB
- Conducted Emission  
Combined Uncertainty (+ or -) 1.13 dB  
Expanded Uncertainty (+ or -) 2.26 dB

**ENGINEERING STATEMENT#1:**

I hereby state that: The measurements shown in this application were made in accordance with the procedures indicated and the energy emitted by this equipment was found to be within the limits. I assume full responsibility for the accuracy and completeness of these measurements.

I further state that: On the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of Parts 2.1033 (c); 2.1046, 90.209, 2.1055/90.213, and 90.219 of the FCC Rules under normal use and maintenance.

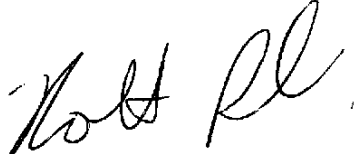
**ENGINEERING STATEMENT#2:**

Radio Frequency Radiation Exposure Declaration

The FCC Rule as noted in Part 2.1091 is not applicable for this fixed station device. Furthermore, the maximum power output available from the device is 25 dBmW (~0.32 Watts).

**ENGINEERING STATEMENT#3:**

EMI Countermeasures Statement by the Manufacturer as shown on the next page.

Certified by: 

Robert Pellizze, General Manager

**Client:** Aero Comm, Inc.  
**FCC ID:** KJA501540302  
**Model:** 50124-03-02

**Report No.:** 9252-01-001  
**Issue Date:** April, 18, 2000

## EMI Countermeasures Statement

*Aero Comm, Inc.*  
a division of International FiberCom, Inc.

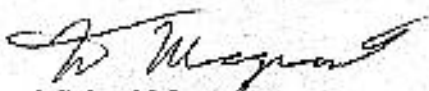
August 24, 1999

Federal Communications Commission  
7435 Oakland Mills Road  
Columbia, MD 21046  
Attn: Chief Equipment Authorization Branch

Gentlemen:

This testimony is to assure that the EMI countermeasures will be included in the production process of this equipment in order to comply with the Class B Radio Emissions limitations as listed in this test report submitted by F-Squared Laboratories.

Sincerely,

  
Michael Magnant  
Chief of Operations

**Client:** Aero Comm, Inc.  
**FCC ID:** KJA501540302  
**Model:** 50124-03-02

**Report No.:** 9252-01-001  
**Issue Date:** April, 18, 2000

## Exhibit II

*Aero Comm, Inc.*  
a division of International FiberCom, Inc.

August 24, 1999

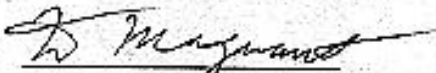
**Federal Communications Commission**  
7435 Oakland Mills Road  
Columbia, MD 21046  
Attn: Chief Equipment Authorization Branch

To Whom It May Concern:

F-Squared Laboratories is hereby authorized to act on our behalf before the Federal Communications Commission in matters concerning the obtainment of FCC Class B approval for our systems. Any and all acts carried out by the named party on our behalf shall have the same effects as acts on our own. This authorization is valid until further notice.

The applicant certifies that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits, that includes FCC benefits, pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 853(a), or, in the case of a non-individual applicant (e.g., corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits, that includes FCC benefits, pursuant to that section. For the definition of a "party" for these purposes, see 47 CFR 1.2002(b).

Dated this 24<sup>th</sup> day of August.

By:   
Michael Magrant  
Chief of Operations

Applicant: AeroComm, Inc.

Phone Number: (301) 540-0700

## Exhibit III

### List of Measurement Instrumentation

<b>Equipment Type</b>	<b>Manufacturer</b>	<b>Model #</b>	<b>Serial #</b>	<b>Cal. Due Date</b>
Receiver Systems	Rohde & Schwarz	ESMI	DE23119	Feb. 2000
LISN #1	Solar	8012-50-R-24-BNC	910488	Jan. 2000
LISN #2	Solar	8012-50-R-24-BNC	933201	Jan. 2000
Biconical Antenna	Compliance Design Inc.	B100	383	Jan. 2000
Biconical Antenna	Compliance Design Inc.	B200	292	Jan. 2000
Biconical Antenna	Compliance Design Inc.	B300	318	Jan. 2000
Horn Antenna	Antenna Research Associates	DRG-118/A	1105	Feb. 2000
Antenna Mast	Compliance Design Inc.	M100	NA	NA
Turntable	F <sup>2</sup> Laboratories	Site 1	NA	NA
Spectrum Analyzer	HP	8391A	3149A07546	Feb. 2000
Enviornental Chamber	Enviotronics	N/A	N/A	N/A
Amplifiler	HP	8447f	3113A04704	July 2000
Data Logger	Honeywell	DRS-4505	88137287001	Jan 2000

**Note:** All testing was conducted between September 13, 1999 and September 20, 1999.  
At the time of the testing, all equipment was in calibration.

**Client:** Aero Comm, Inc.  
**FCC ID:** KJA501540302  
**Model:** 50124-03-02

**Report No.:** 9252-01-001  
**Issue Date:** April, 18, 2000



## Exhibit IV

### Labeling

The following are the label specifications for the FCC ID Label:

FCC ID to be on label	KJA501540302
Sample label (facsimile)	-On following page
Sketch of label placement	-On following page
Type of material	-As shown on following page
Size of type, FCC ID	-As shown on following page
Size of type, Statement	-As shown on following page
Label Dimensions	-As shown on sample
Method -permanently marking label	-Indelibly printed
Label attachment	-Permanently glued
FCC Statement	-As shown on following page

**Client:** Aero Comm, Inc.  
**FCC ID:** KJA501540302  
**Model:** 50124-03-02

**Report No.:** 9252-01-001  
**Issue Date:** April, 18, 2000

## **Transmitter Label**

Please see File label.pdf

## Exhibit V

### **Equipment Under Test Information and Data**

**TEST ITEM CONDITION:**

The equipment to be tested was received in good condition. Electrical and mechanical drawings are included in the Operation and Instruction manual as supplied in Exhibit XIII.

**TESTING ALGORITHM:**

The EUT was driven with the nominal signal level into a representative load

**CONDUCTED EMISSION TESTING:**

The EUT was placed on a 0.8 meter high, 1 X 1.5 meter non-conductive table. Power was provided to the EUT through a LISN bonded to a 3 X 2 meter ground plane. The LISN and peripherals were supplied power through a filtered AC power source. The output of the LISN was connected to the input of the receiver and emissions in the range 450kHz to 30 MHz were measured. The measurements were recorded using the quasi-peak values, and the resolution bandwidth during testing was 9kHz. All data for conducted emissions is found in Exhibit V.

**RADIATED EMISSIONS: SPURIOUS EMISSIONS TESTING**

The EUT was tested at a distance of 3 meters. The emissions were maximized by rotating the table and raising/lowering the antenna mounted on a 4 meter mast. Cable and peripheral positions were also varied to produce maximum emissions. Both horizontal and vertical field components were measured. The output of the antenna was connected to the input of the receiver and emissions were measured in the range 30MHz to 2 GHz. The measured values up to 1GHz with a resolution bandwidth of 120KHz are quasi-peak readings made at 3 meters. Emissions from 1 GHz to 2 GHz were measured with a resolution bandwidth of 1 MHz and placed in the average detector mode. All data for radiated spurious emissions is found in Exhibit VI.

**RADIATED SPURIOUS EMISSION ANTENNA PORT TESTING:**

The EUT was tested near the spectrum analyzer and source signal generators with the shortest available length cables to insure correct data collection. The output of the EUT was connected to the EMI receiver input port and the emissions were measured as shown in Exhibit VII.

**EMISSIONS MASK TESTING:**

The output of the EUT was connected to the receiver and the emissions were measured as shown in Exhibit VIII.

**CALCULATION OF DATA #1:**

**RADIATED EMISSIONS** - The antenna factors (including cable losses) of the biconical antennas were used along with the pre-amplifier gain, which were entered into the memory of the receiver. The receiver uses these values to correct the reading for amplitude automatically. The field strength reading was taken directly from the receiver and compared to the FCC limits in dBuV/m. The following equation is used to convert to uV/m:

$$E_{uV/m} = \text{antilog}(E_{dBuV/m}/20)$$

**SAMPLE OF FIELD STRENGTH CALCULATION:**

$$E_a = V_a + AF + A_e + (-AG)$$

Where  $E_a$  = Field Strength(dBuV/m)

$V_a$  =  $20 \times \log_{10}$  (Measure RF voltage, uV)

$A_e$  = Cable Loss Factor, dB

$AG$  = Amplifier Gain, dB

$AF$  = Antenna Factor dB(m-1)

i.e. If the reading is 57.0 dBuV, the antenna factor 8.0 dB, cable loss factor 1.0 dB and Amplifier gain is 25.0 dB, so the field strength will be:

$$\begin{aligned} E_a(\text{dBuV/m}) &= 57 + 8 + 1 + (-25) \\ &= 41 \text{ dBuV/m} \end{aligned}$$

or

$$\begin{aligned} E_a(\text{uV/m}) &= 10^{(41/20)} \\ &= 112.20 \text{ uV/m} \end{aligned}$$

**CALCULATION OF DATA#2:**

Emission Mask Limits – All of the calculations were based on the output power level of the EUT and Emissions Mask B of section 90.210 (B). The EUT has an audio low-pass filter and the limits specified in sub sections 1 to 3 were applied. The mask was applied on the center frequency of 173.3375 MHz. An Excel spreadsheet was used with the various emission masks based on frequency to derive the limits. The limits are based on the following Mask (B) criteria's:

KHz offset from Center Frequency	DB of attenuation down from Center Frequency
0 - 12.5 KHz	0
12.5 – 25 KHz	25
25 KHz – 62.5 KHz	35
Beyond 62.5 KHz	43+Log (Output Power in Watts)

The required attenuation below and above the center frequency (CF) is shown to reveal the performance of the EUT. The spreadsheet on the next page reveals all of the limit data points used for the test as shown in Exhibit X. The emissions mask level was adjusted to the EUT unmodulated output level to provide a comparison between the modulated and unmodulated EUT output.

**Client:** Aero Comm, Inc.  
**FCC ID:** KJA501540302  
**Model:** 50124-03-02

**Report No.:** 9252-01-001  
**Issue Date:** April, 18, 2000

**EMISSION Mask dBmW Limit Levels**

Public Safety and Industrial/Business Pool Emissions Mask FMHz	EUT Out (dBmW)
173.2	-18
173.27	-18
173.275	-18
173.275	-11.35
173.3125	-11.35
173.3125	-1.35
173.325	-1.35
173.325	23.65
173.3375	23.65
173.35	23.65
173.35	-1.35
173.3625	-1.35
173.3625	-11.35
173.4	-11.35
173.4	-18
173.4	-18
173.45	-18

---

**Client:** Aero Comm, Inc.  
**FCC ID:** KJA501540302  
**Model:** 50124-03-02

**Report No.:** 9252-01-001  
**Issue Date:** April, 18, 2000

## **Exhibit VI**

### **Transmitter Block diagram**

Please see file block.pdf

## Exhibit VII

### EUT Configuration and Cables

**EUT:**

Device	Manufacturer	Model #	FCC ID
VHF Transmitter	AeroComm Inc.	50124-03-02	KJA501540302

**Peripherals:**

None

**Cables:** All one meter or greater in length – bundled according to **ANSI C63.4 – 1992**

**EUT** Power - Unshielded

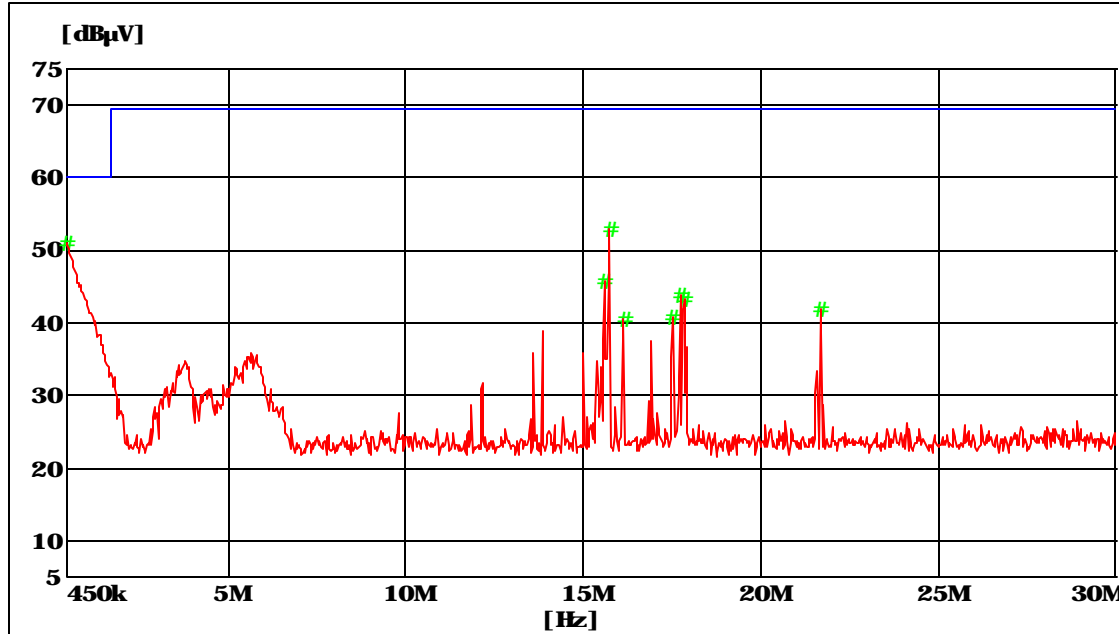
**Internal Devices:**

**The EUT has no OEM internal circuits.**



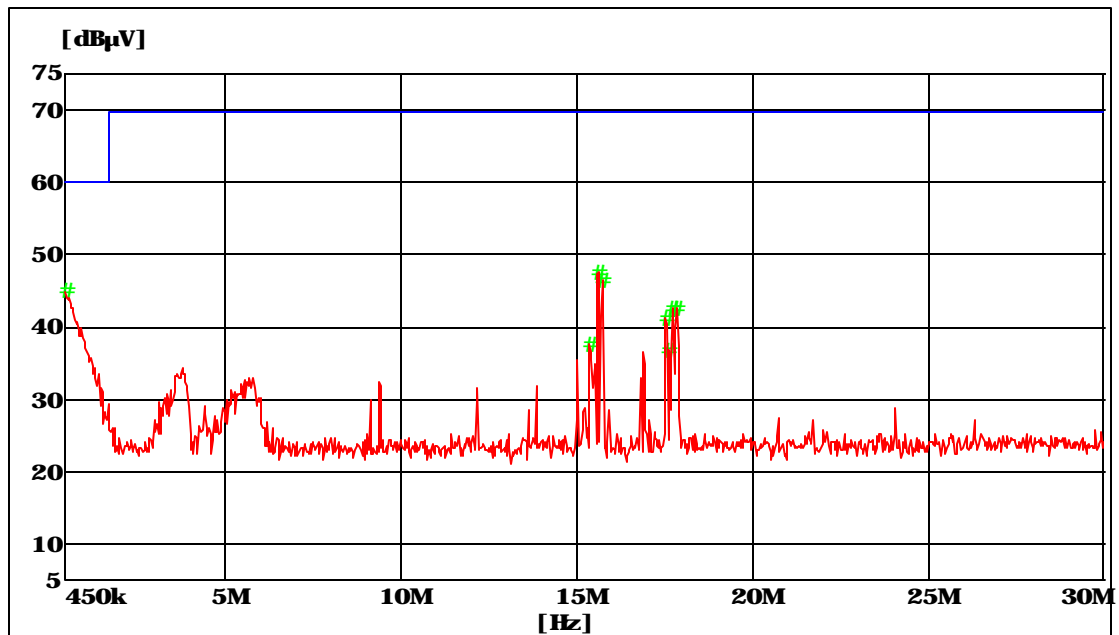
## Exhibit VIII

Conducted Test Line: Phase



Frequency MHz	Level dBµV
0.450000	51.04
15.619000	45.77
15.750333	52.98
16.144333	40.43
17.523333	40.77
17.753167	43.77
17.851667	43.31
21.693167	41.76

Conducted Test Line: Neutral



Frequency MHz	Level dBµV
0.450000	44.97
15.356333	37.73
15.619000	47.58
15.717500	46.54
17.523333	41.13
17.621833	36.94
17.720333	42.68
17.851667	42.55

See next page for equipment setup configuration.

**Client:** Aero Comm, Inc.  
**FCC ID:** KJA501540302  
**Model:** 50124-03-02

**Report No.:** 9252-01-001  
**Issue Date:** April, 18, 2000

**Conducted Emissions Test Setup Configuration:**

Conducted Emissions: Transmitter JCN 9252-01

Setup: Resolution Bandwidth: 9 KHz, Video Bandwidth: 30 kHz

Transmitter Key Down Mode

Please note: The above is AC Conducted Emissions. The unit was powered through a linear AC/DC supply.

## Exhibit IX

### RADIATED DATA (Per Section 2.1053 Field Strength of Spurious Enclosure Radiation)

Frequency (MHz)	Reading (dBuV/m)		Emission(uV/m)		*FCC Limits @ 3 Meters	
	Horizontal	Vertical	Horizontal	Vertical	(dBuV/m)	(uV/m)
173.32	53.10	47.17	451.86	228.30	53.90	495.45
346.66	33.91	27.36	49.60	23.33	53.90	495.45
520.01	35.64	28.78	60.53	27.48	53.90	495.45
693.34	21.17	<20.0	11.44	<10.0	53.90	495.45
866.68	<20.0	<20.0	<10.0	<10.0	53.90	495.45
1040.01	33.18	32.57	45.60	42.51	60.00	1000.00
1213.34	<20.0	<20.0	<10.0	<10.0	60.00	1000.00
1386.69	<20.0	<20.0	<10.0	<10.0	60.00	1000.00
1560.00	<20.0	<20.0	<10.0	<10.0	60.00	1000.00

\*Class A converted for a 3-meter site measurement

VCO frequency: 173.3375 MHz

Radiated Spurious Enclosure Emissions: VHF Transmitter

Setup: Resolution Bandwidth: 120 KHz, Video Bandwidth: 1 MHz – 30 MHz – 1000 MHz  
 1 MHz, Video Bandwidth: 3 MHz – 1000 – 2000 MHz

Transmitter Output: +23.5 dBmW into a 50 ohm termination (Dummy Antenna)

PASS       FAIL

## **Exhibit X**

### **Data for CFR 47 Part 2.1041**

Section 2.1046 –RF Power Output

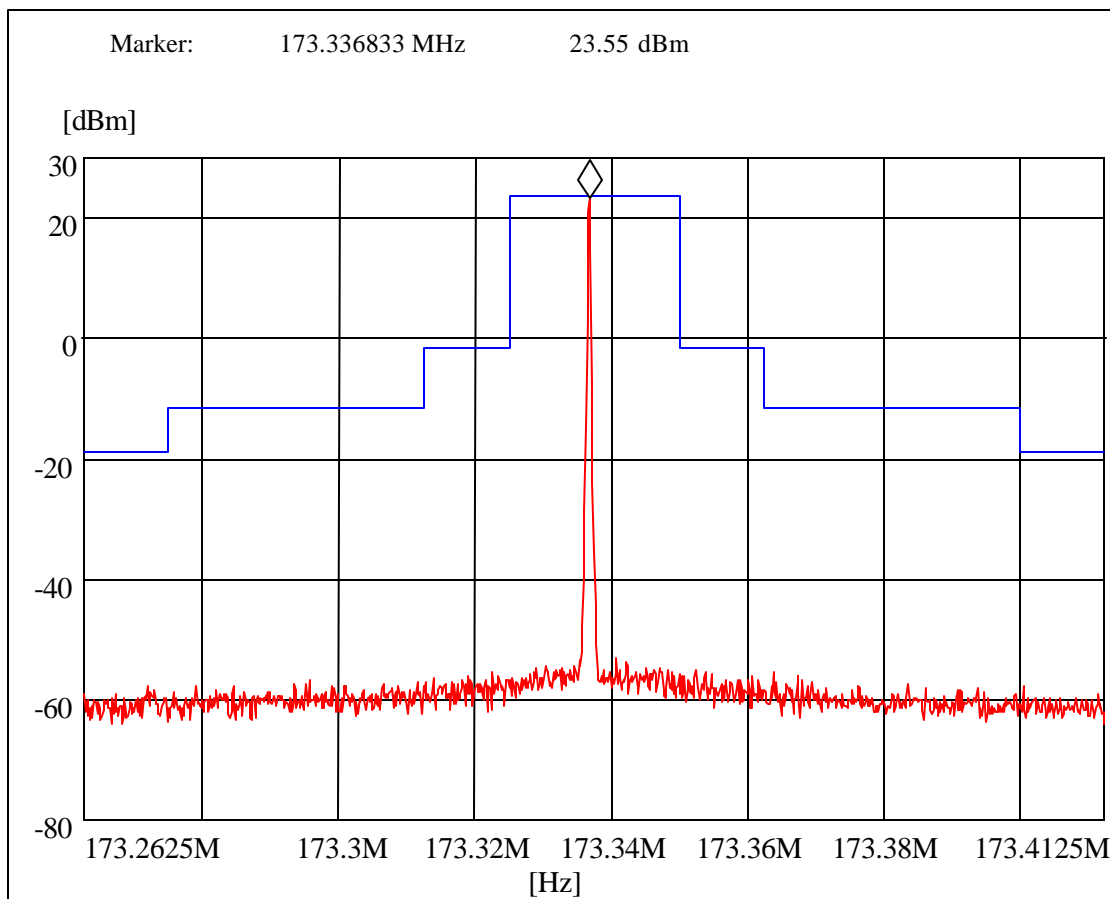
Section 2.1047 –Modulation Characteristics

Sections 2.1049 (i) and 90.219 (b) - Emissions Mask

Section 2.1051 – Spurious Emissions at Antenna Terminal

Sections 2.1055 & 90.213

Section 2.1046 (a) – RF power output



Test setup Configuration:

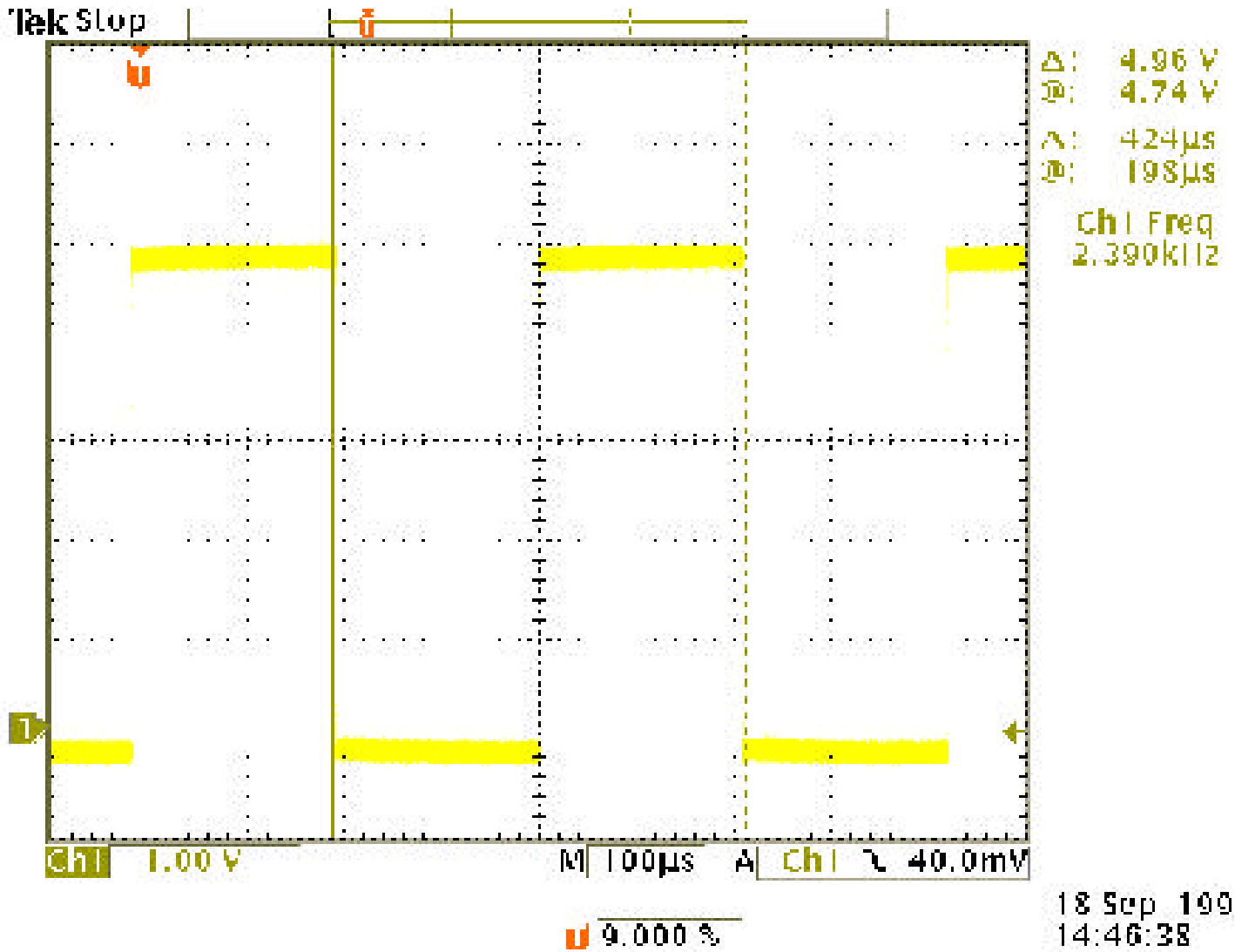
EUT: Aerocom Model 50154-03-02 S/N 221

Modulation: None

Output measured via 6 dB pads.

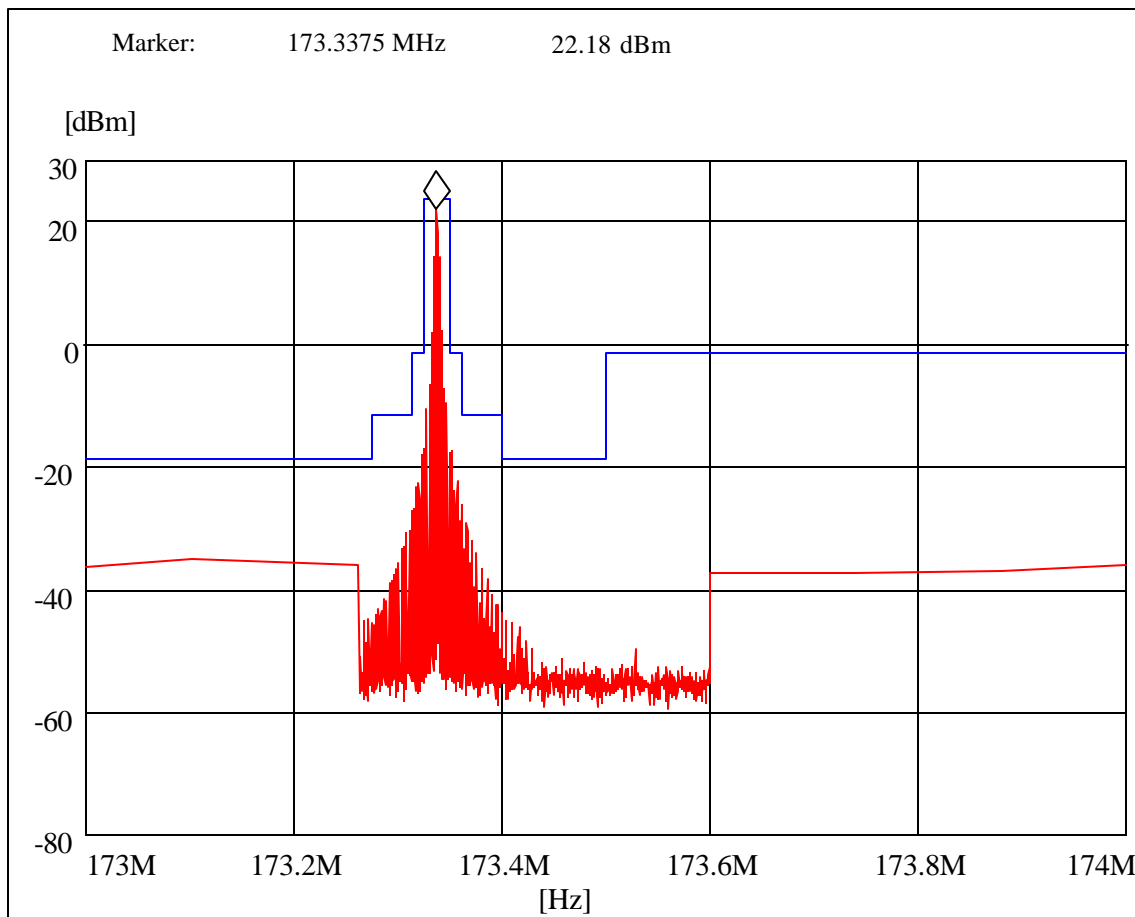
Unmodulated Peak Output Level (Also used for Emissions Masks Limit Determination)

Section 2.1047 (a) – Modulation Characteristics



Waveform of the Modulation Input Signal to the Transmitter

Plot 1 of 2 – TTL input signal to the modulation input of EUT.

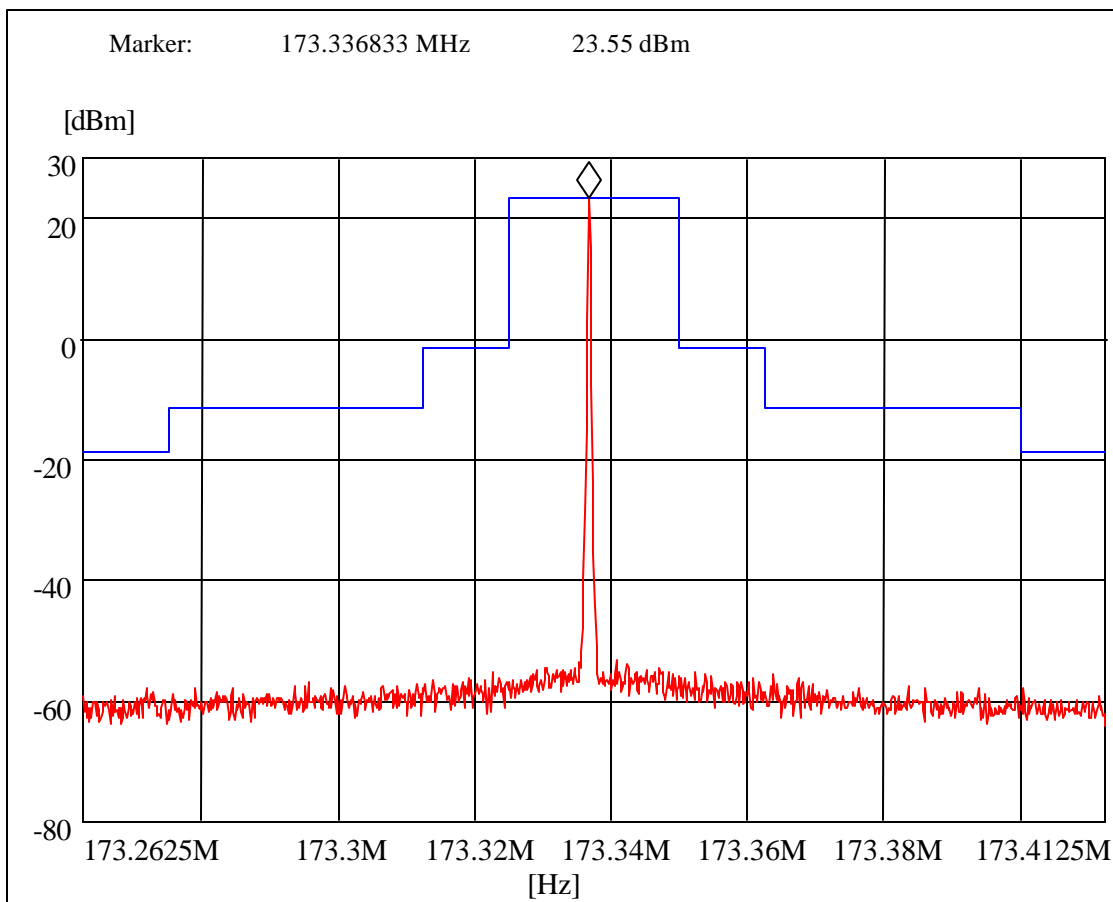


FM Modulated Emissions: Modulation Characteristics Plot 2 of 2

Setup: Resolution Bandwidth: 9 KHz, Video Bandwidth: 0.1 MHz

FM modulated with 2.4 KHz TTL level. Output self limiting to  $\leq 12.5$  KHz deviation depth.

Section 2.1049 (i) and 90.219 (b) – Occupied Bandwidth/Emissions Mask



Test setup Configuration:

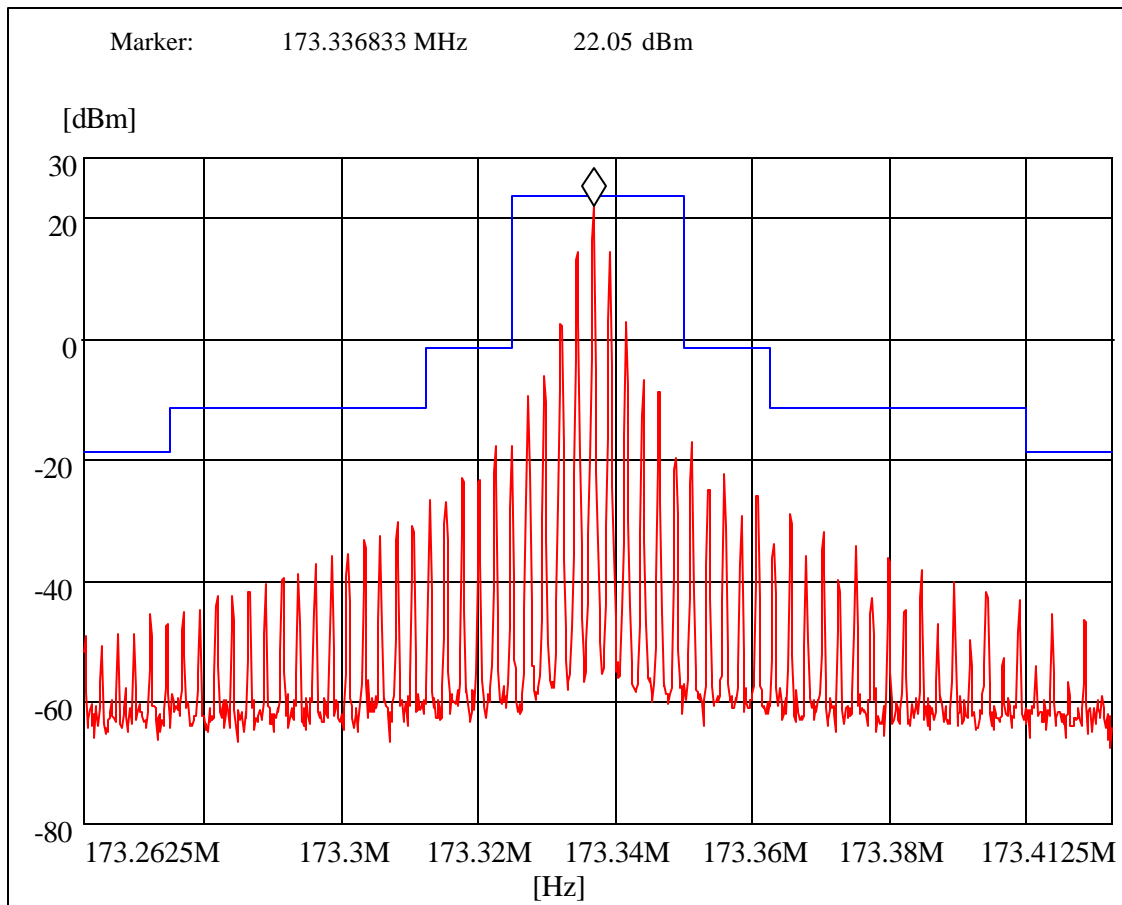
EUT: Aero Comm, Inc. Model 50154-03-02 S/N 221

Modulation: None

Output measured via 6 dB pads.

Unmodulated Emissions Masks Limit Determination, Peak Output Power





Test setup Configuration:

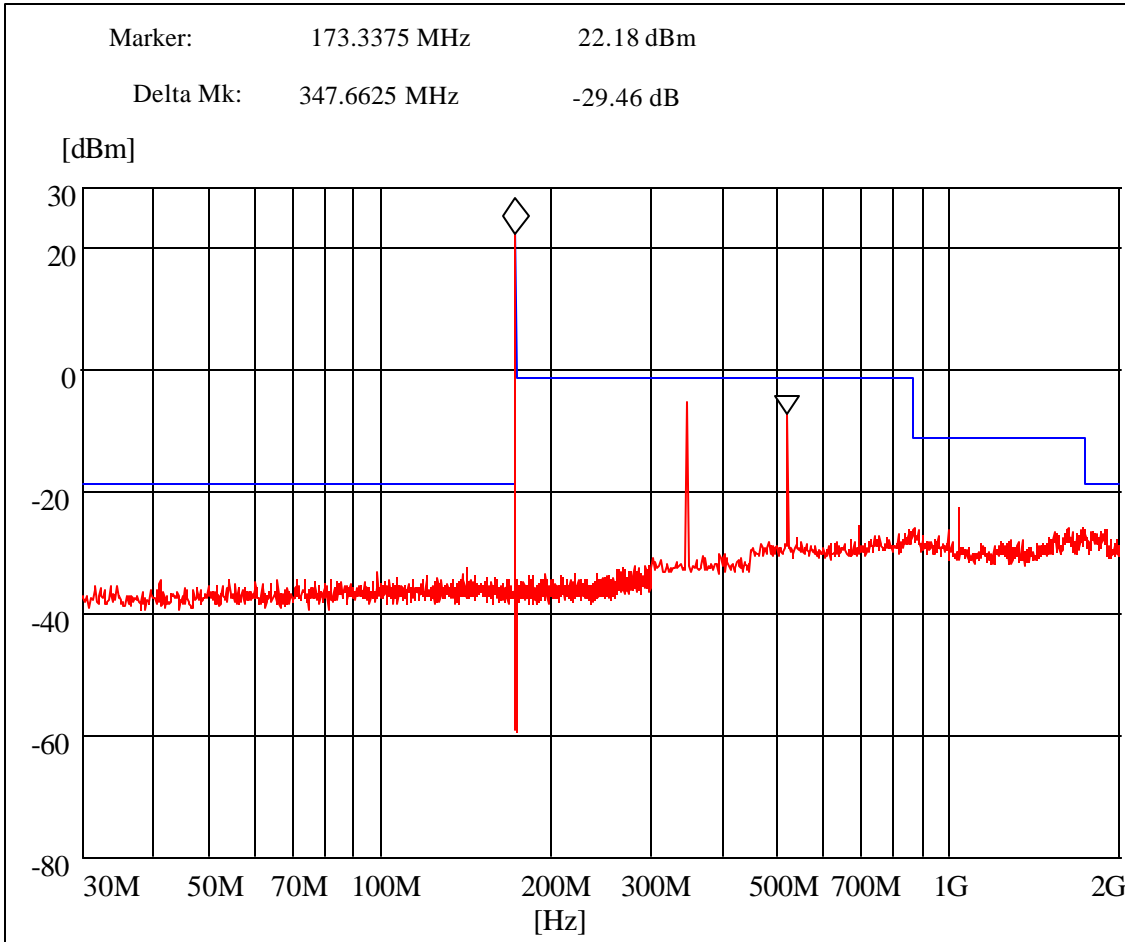
EUT: Saleroom Model 50154-03-02 S/N 221

Modulation: TTL input, 2.4 KHz, Square Wave, FM

Output measured via 6 dB pads.

Modulated Emissions Mask (200 Hz)

Section 2.1051 (a) – Spurious Emissions at Antenna Terminals



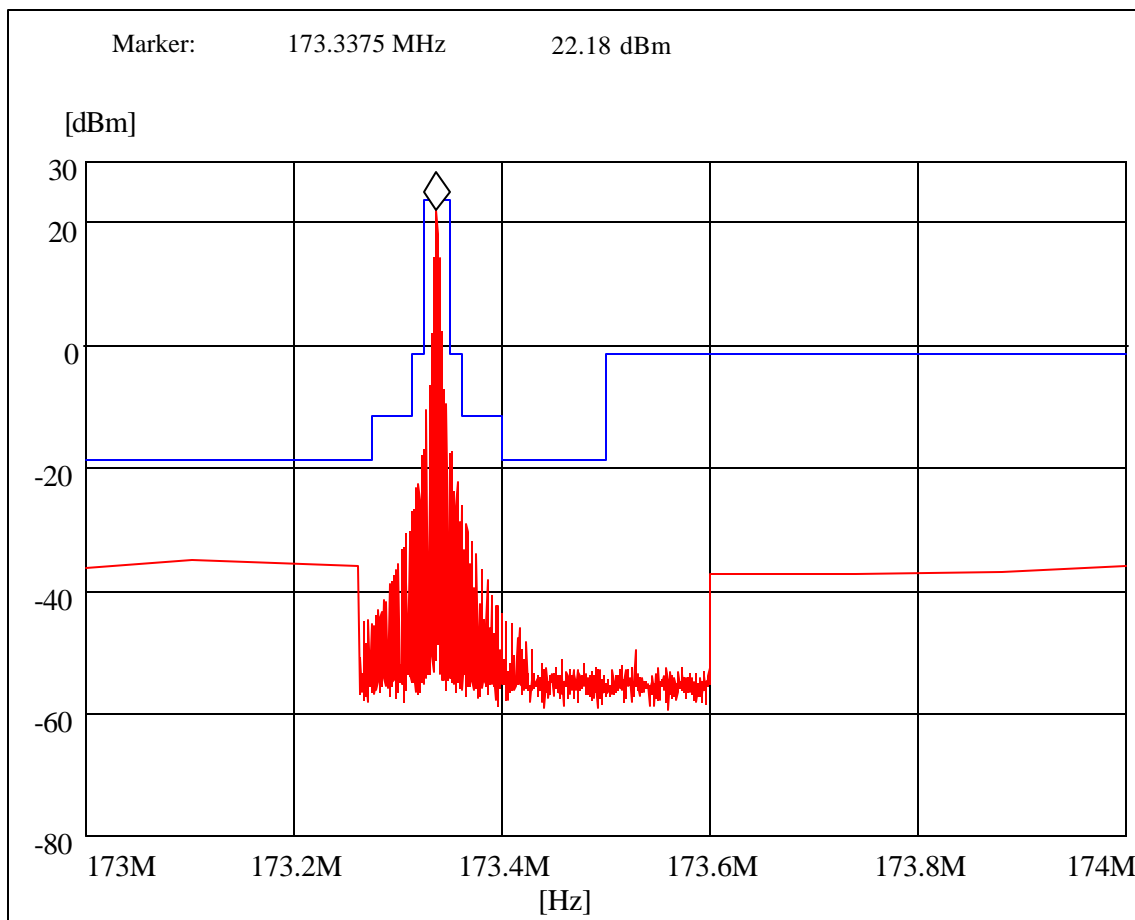
Spurious Emissions at Antenna Terminals (2.1051) Plot 1 of 2

Test setup Configuration:

EUT: Aero Comm, Inc. Model 50154-03-02 S/N 221

Modulation: TTL input, 2.4 KHz, Square Wave, FM

Output measured via 6 dB pads.



Spurious Emissions at Antenna Terminals (2.1051) Plot 2 of 2

Test setup Configuration:

EUT: Aero Comm, Inc. Model 50154-03-02 S/N 221

Modulation: TTL input, 2.4 KHz, Square Wave, FM

Output measured via 6 dB pads.

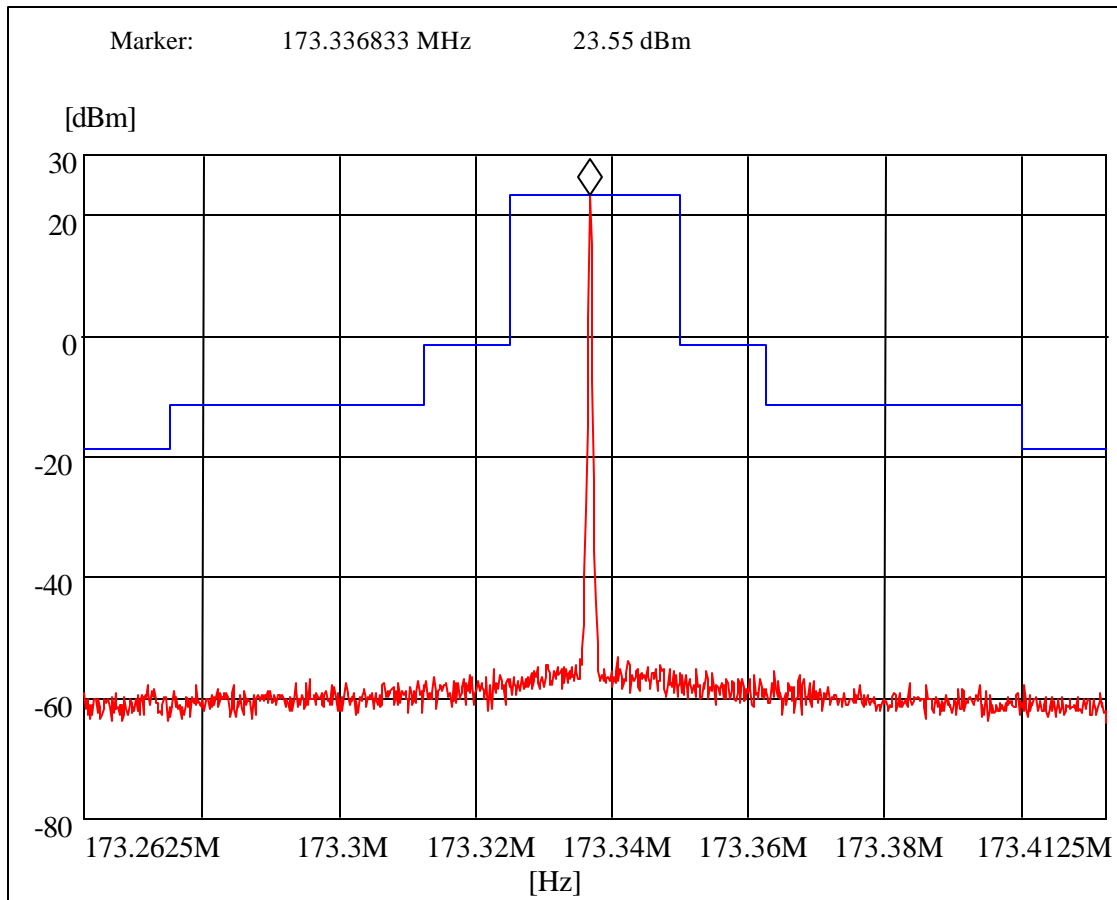
Section 2.1055/90.213 – Frequency Stability

<u>Measured Frequency MHz</u>	<u>Ambient Temperature</u>	<u>Deviation (Limit=866.65 Hz)</u>
173.33735	-29.1 °C	150 Hz
173.33800	-20 °C	500 Hz
173.33830	-10 °C	800 Hz
173.33833	0 °C	830 Hz
173.33800	10 °C	500 Hz
173.33763	20 °C	130 Hz
173.33710	30 °C	400 Hz
173.33775	40 °C	250 Hz
173.33685	50 °C	650 Hz

**Measured Transmitter Frequency (5 ppm limit = 866.65 Hz)**

Data Plots are as follows: (Spectrum Analyzer Readout confirmed with Crystal Oven Controlled Frequency Generator Output)

Voltage Stability:



Test setup Configuration:

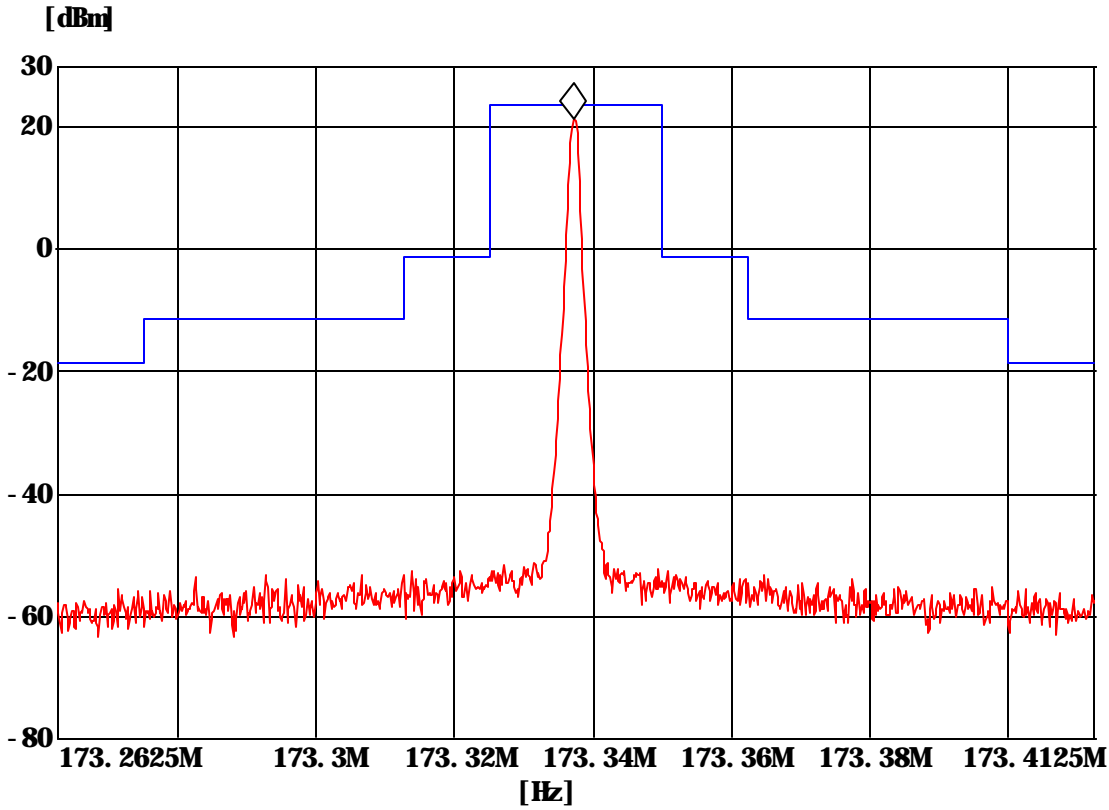
EUT: Aero Comm, Inc. Model 50154-03-02 S/N 221 @ 12 VDC

Modulation: None

Output measured via 6 dB pads.

Unmodulated Emissions Mask Peak Level

M a r k e r 1 : 7 3 2



Frequency Stability Test ( 2.1055 @ 85 %)

Test setup Configuration:

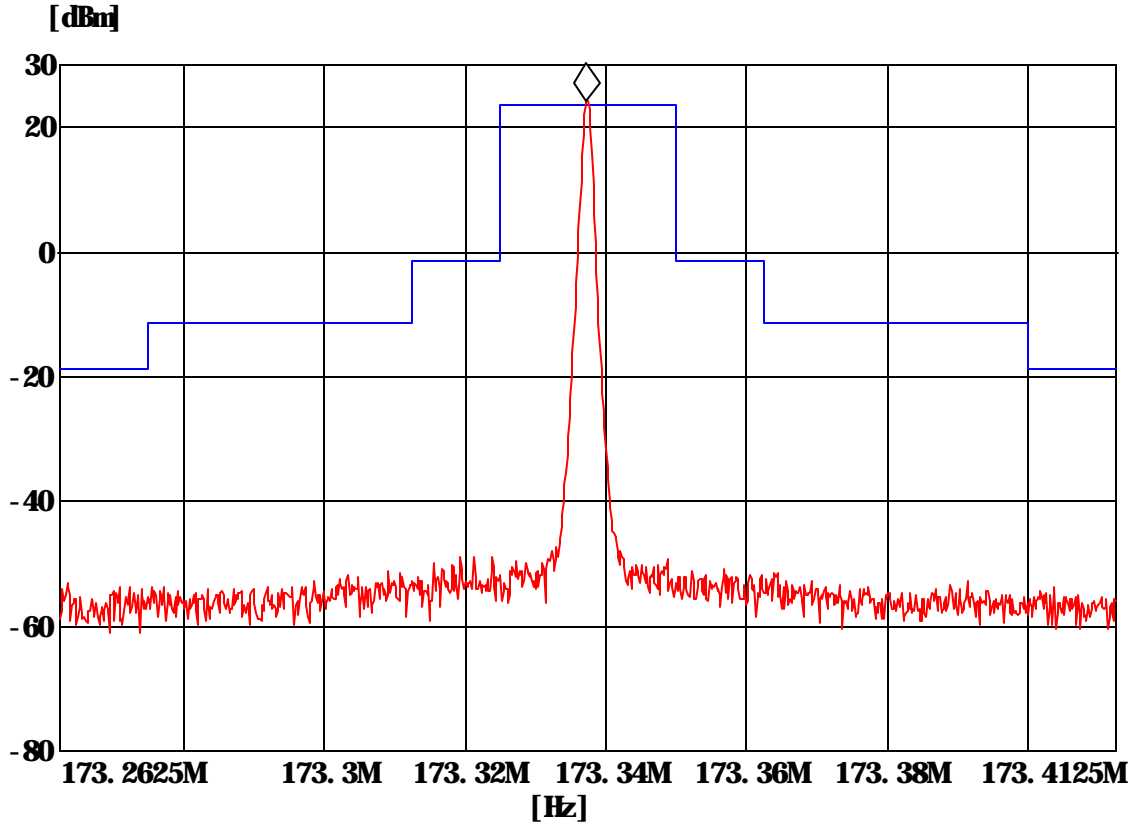
EUT: Aero Comm, Inc. Model 50154-03-02 S/N 221

Modulation: None

Output measured via 6 dB pads.

Unmodulated Emissions Mask Peak Level With DC input voltage @ 10.2 VDC.

M a r k e r 1 : 7 3 2



Frequency Stability Test ( 2.1055 @ 115 %)

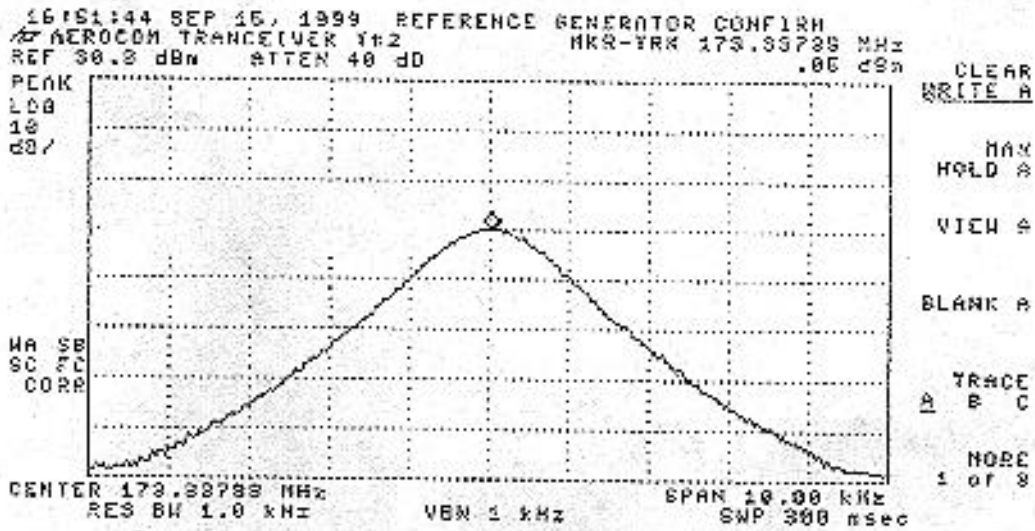
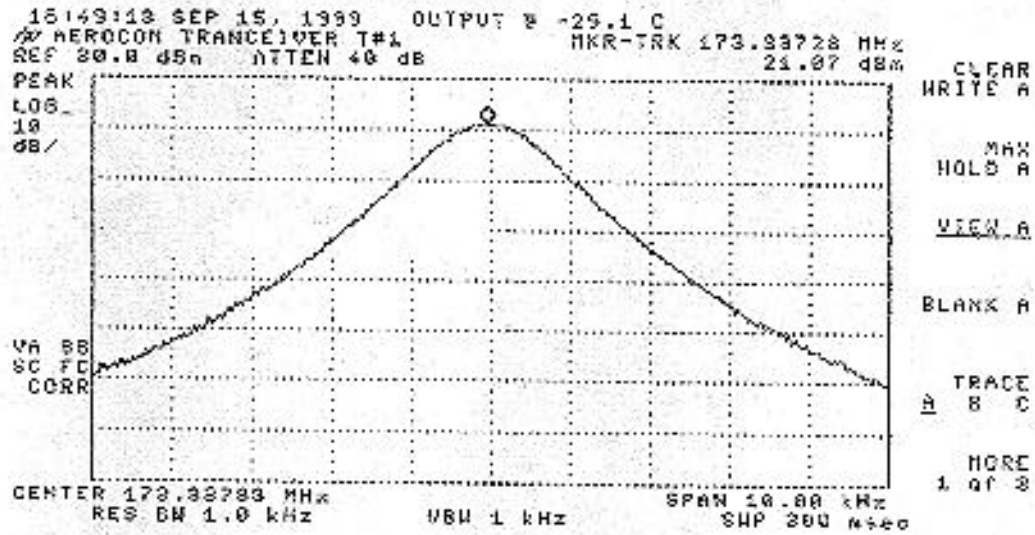
Test setup Configuration:

EUT: Aero Comm, Inc. Model 50154-3-02 S/N 221

Modulation: None

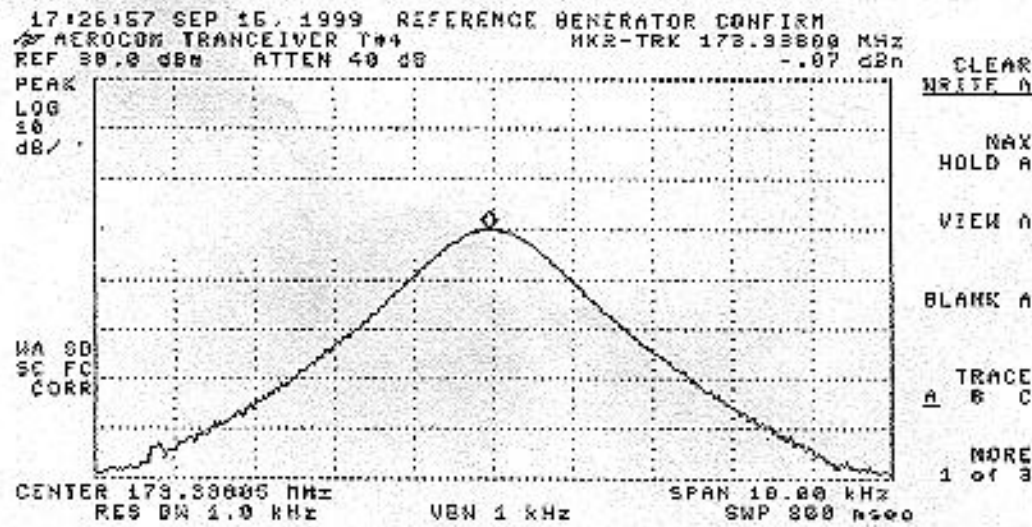
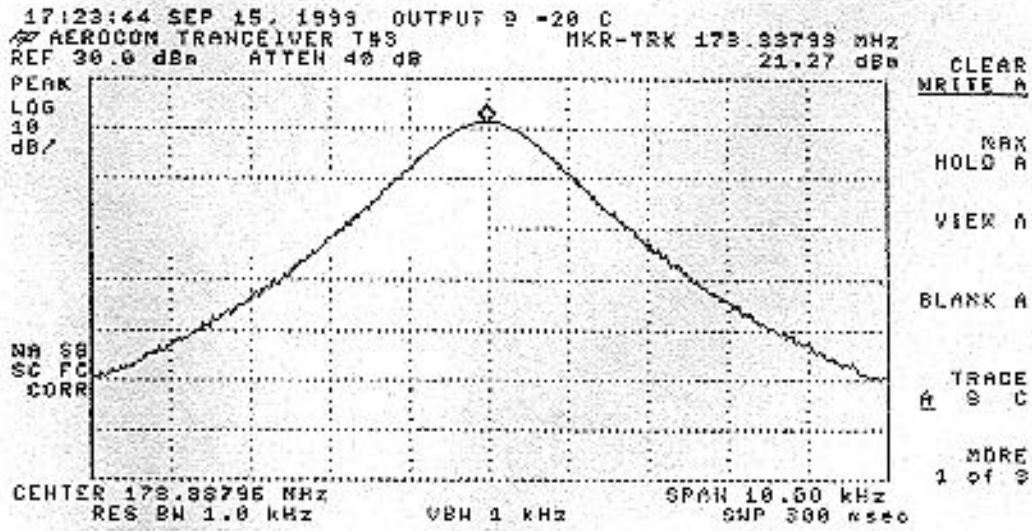
Output measured via 6 dB pads.

Unmodulated Emissions Mask Peak Level With DC input voltage @ 13.8 VDC.

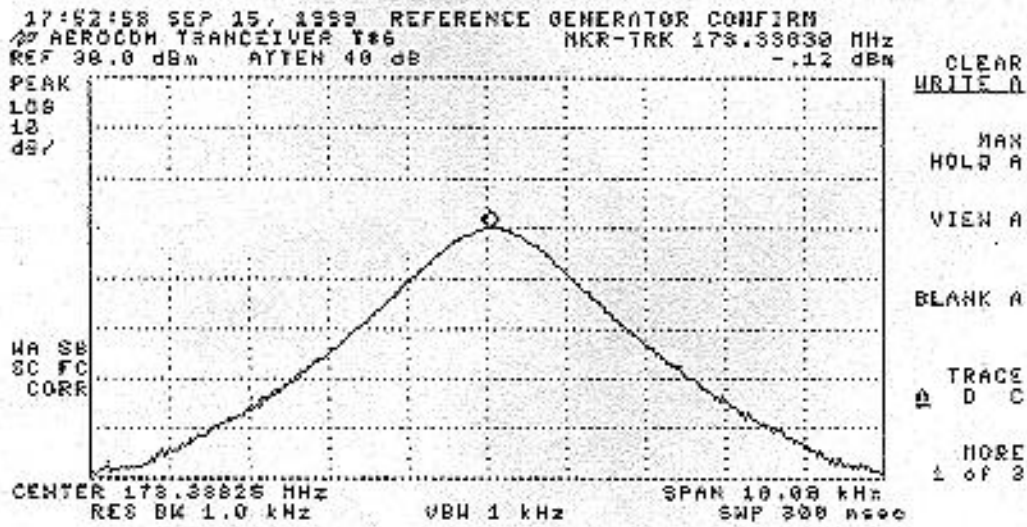
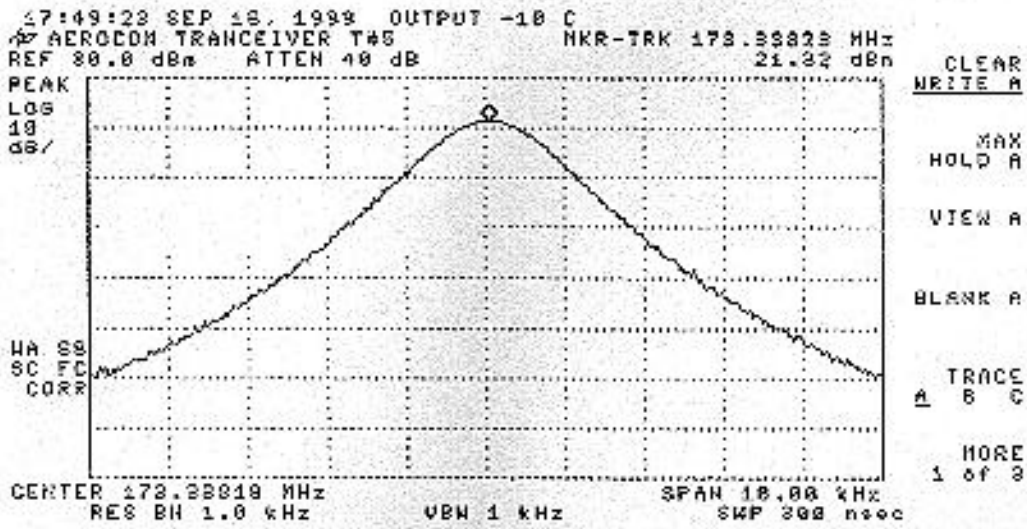


Transmitter Output and Signal Generator Confirmation @ -29.1 °C

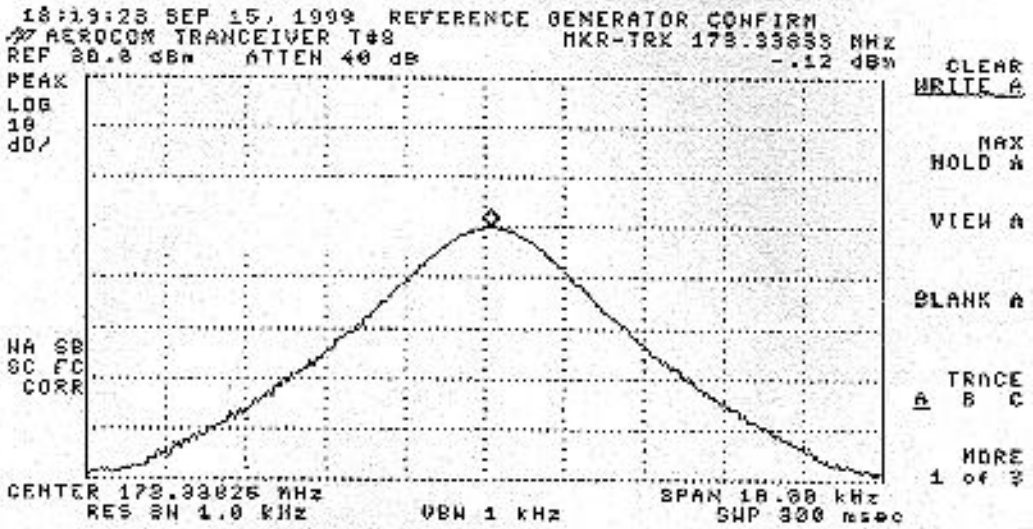
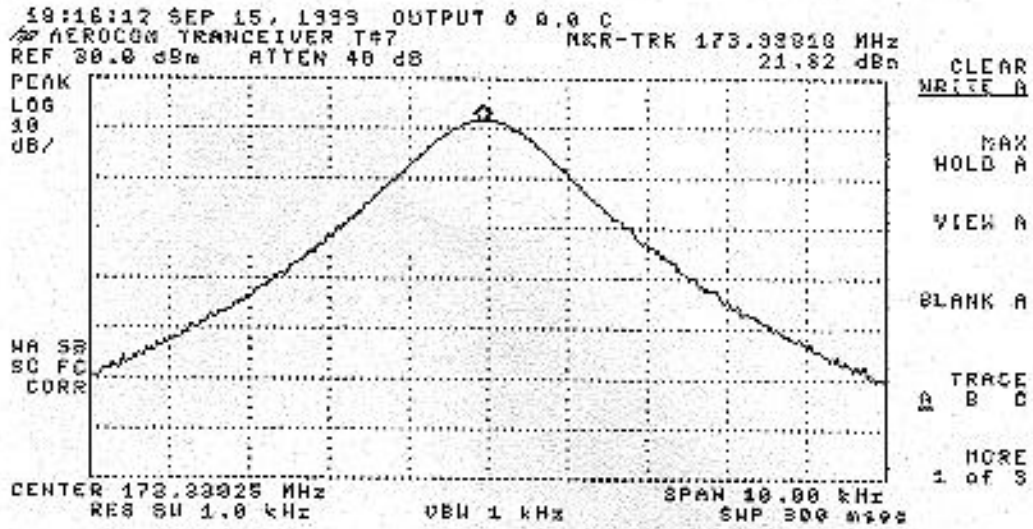




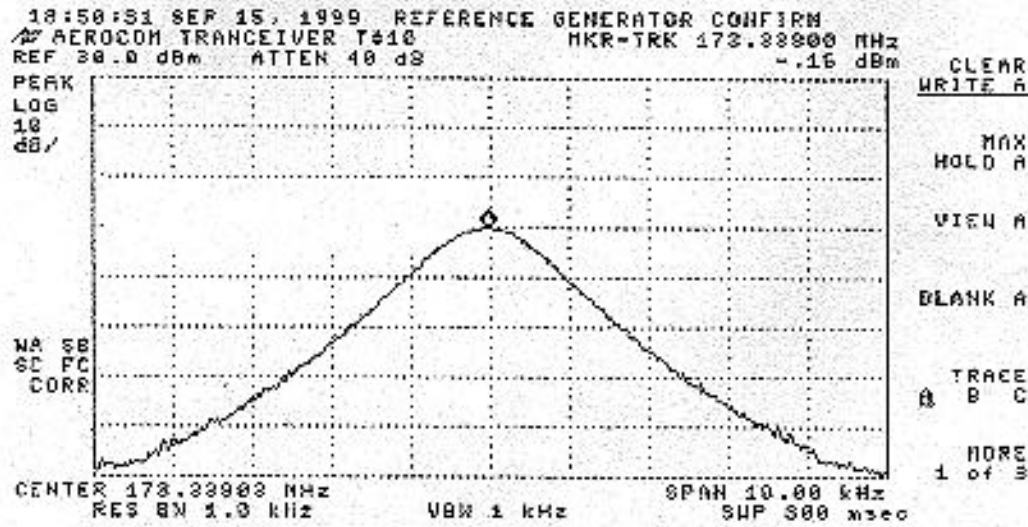
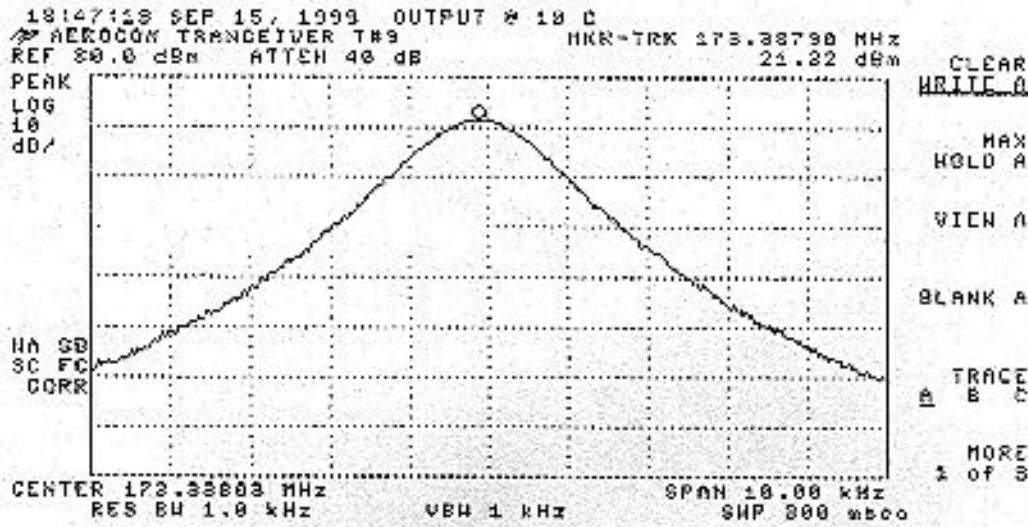
Transmitter Output and Signal Generator Confirmation @ -20 °C



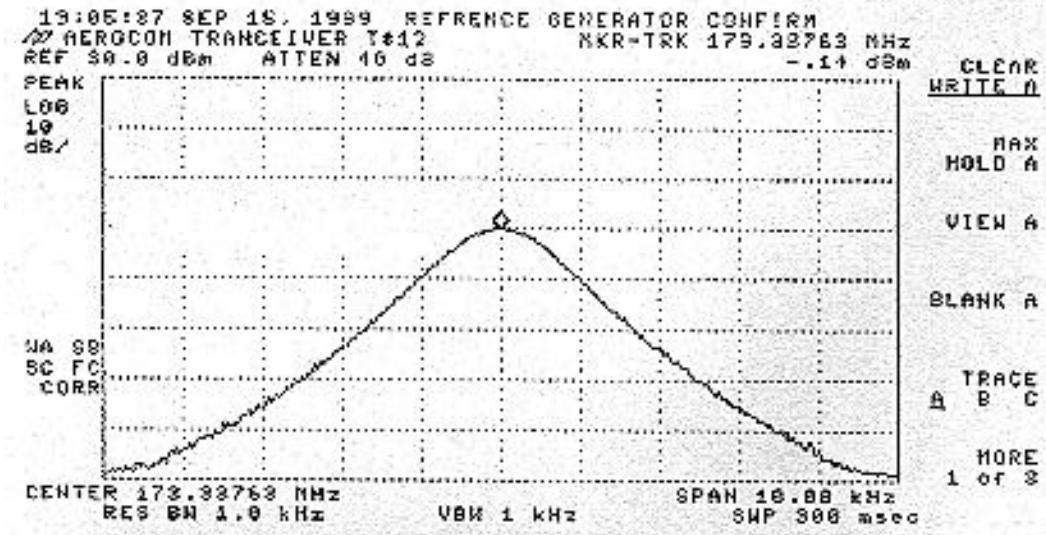
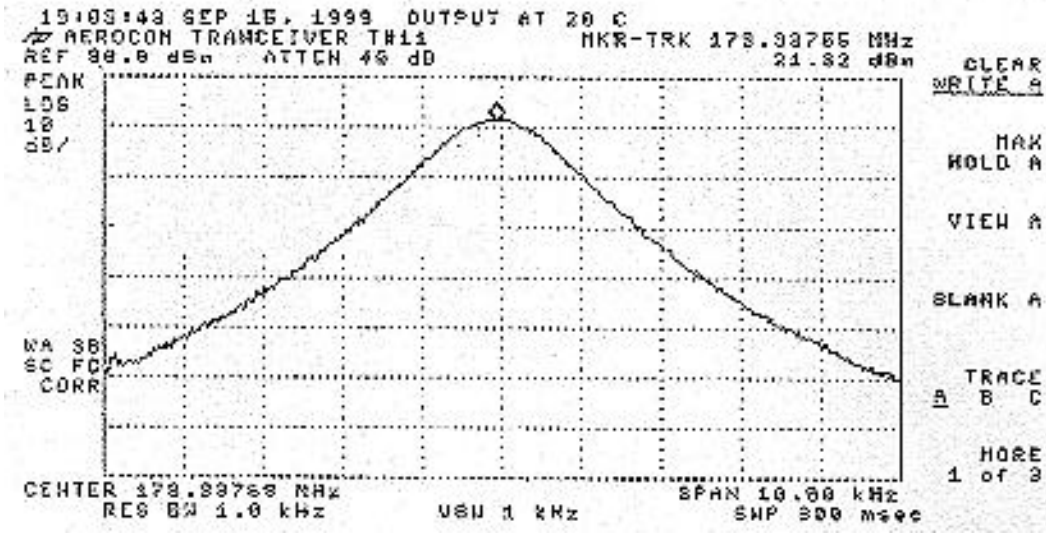
Transmitter Output and Signal Generator Confirmation @ -10 °C



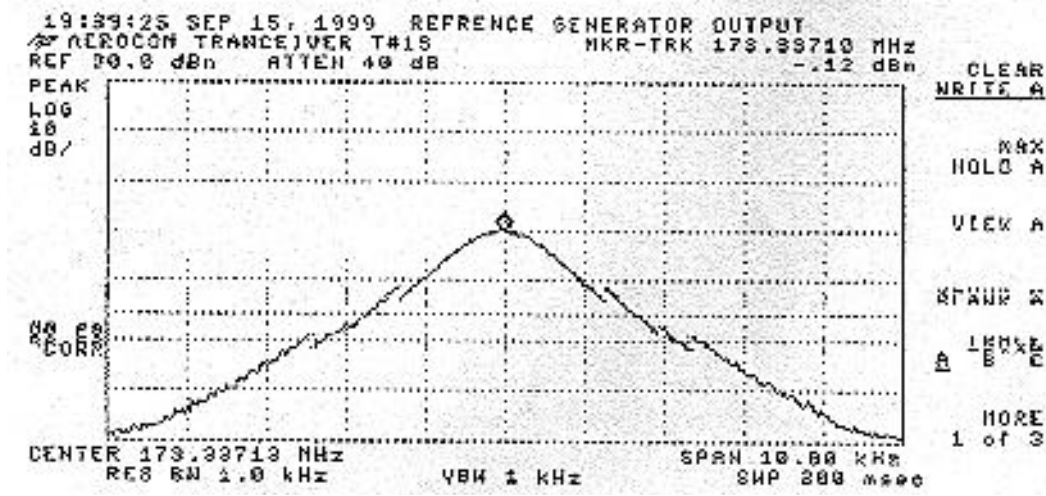
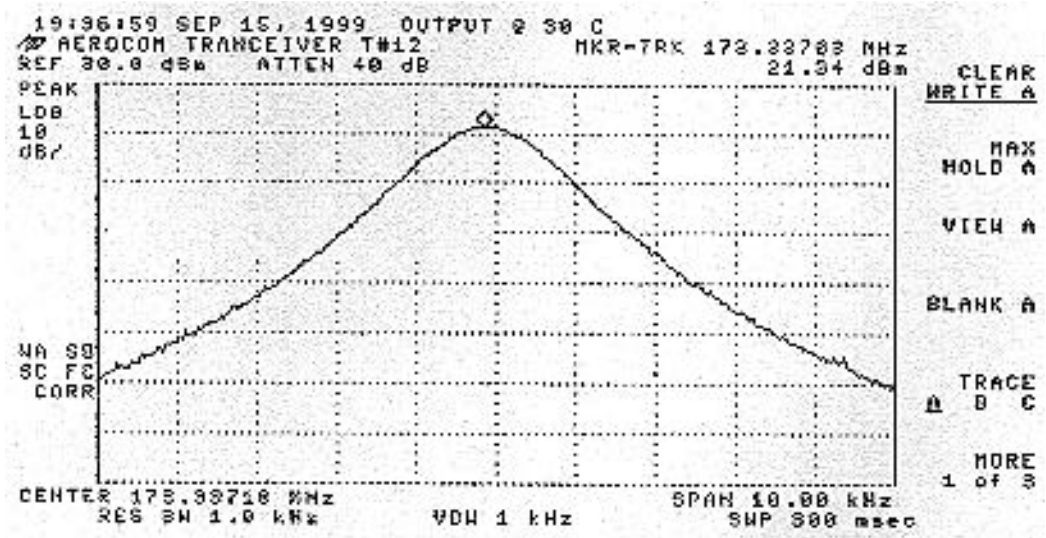
Transmitter Output and Signal Generator Confirmation @ 0°C



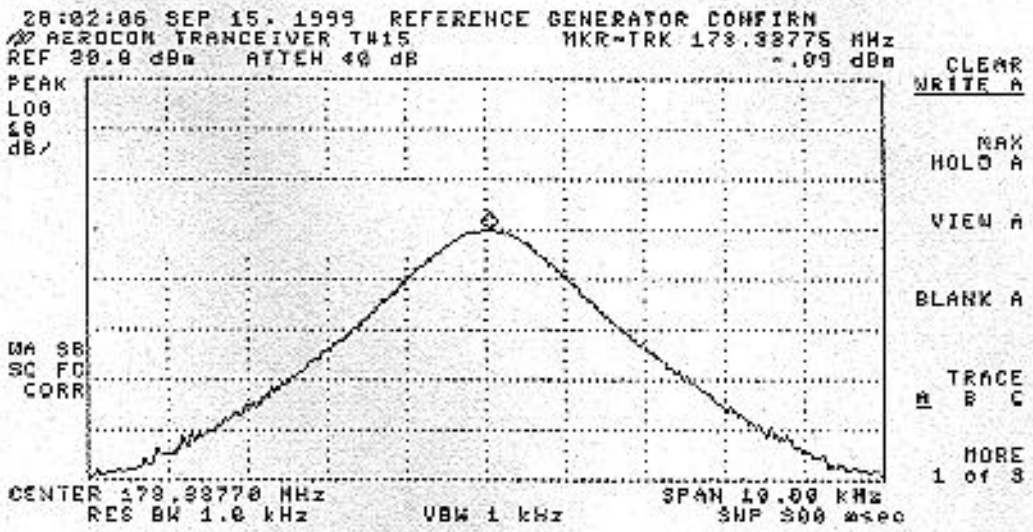
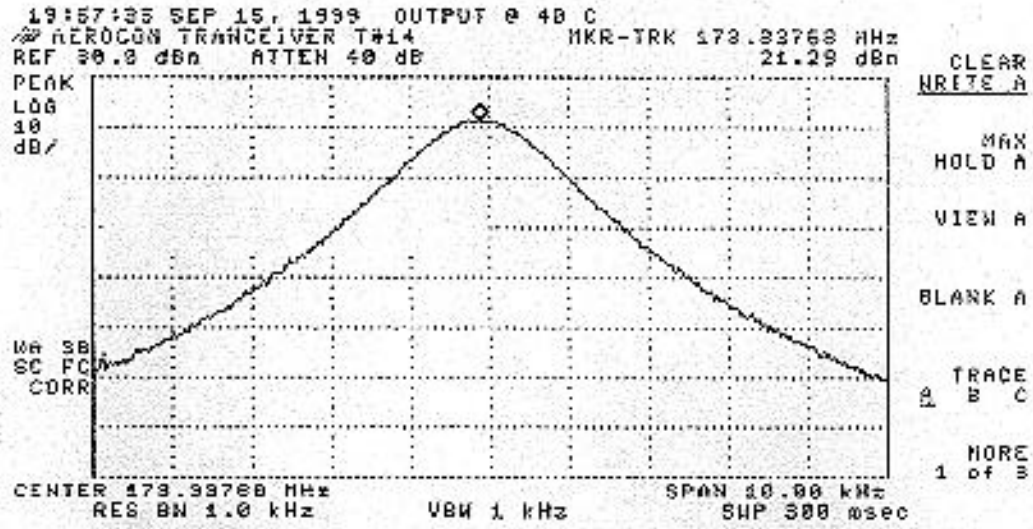
Transmitter Output and Signal Generator Confirmation @ 10 °C



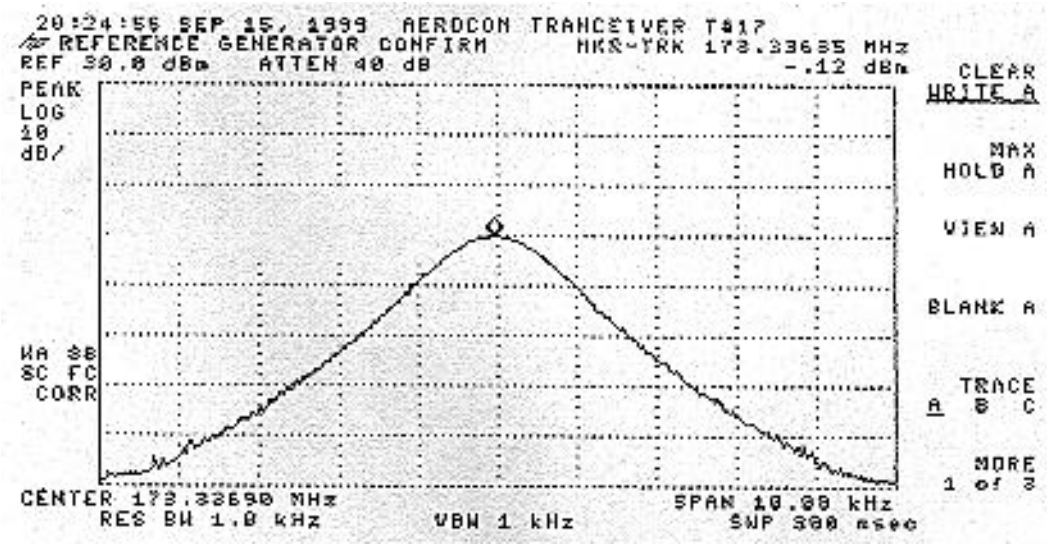
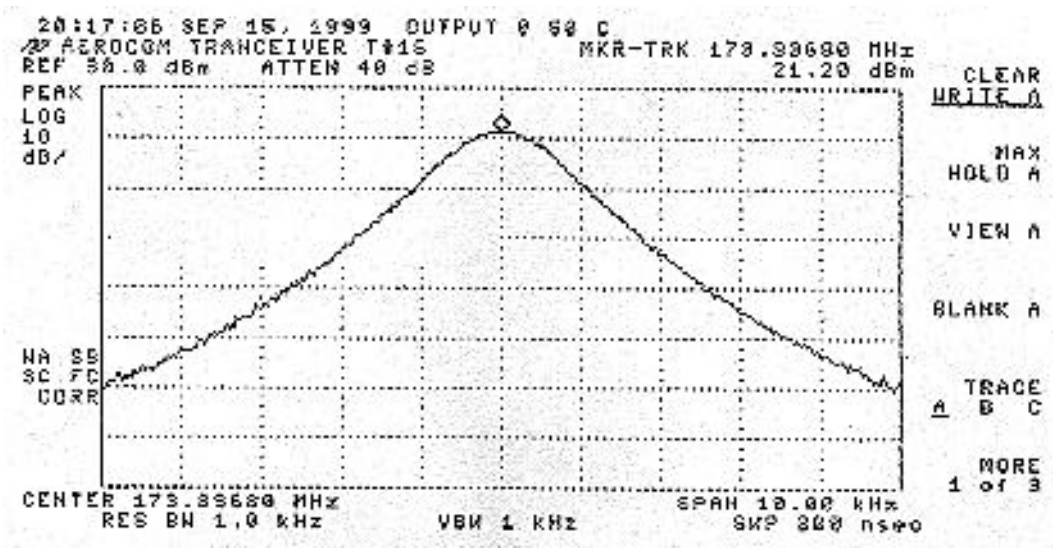
Transmitter Output and Signal Generator Confirmation @ 20 °C



Transmitter Output and Signal Generator Confirmation @ 30°C



Transmitter Output and Signal Generator Confirmation @ 40°C



Transmitter Output and Signal Generator Confirmation @ 50 °C



**Exhibit XI**



**TEST SET-UP**

**&**

**EUT**

**PHOTOS**

**Client:** Aero Comm, Inc.  
**FCC ID:** KJA501540302  
**Model:** 50124-03-02

**Report No.:** 9252-01-001  
**Issue Date:** April, 18, 2000

**TEST SET UP PHOTO**  
**Please see test.pdf**

**Client:** Aero Comm, Inc.  
**FCC ID:** KJA501540302  
**Model:** 50124-03-02

**Report No.:** 9252-01-001  
**Issue Date:** April, 18, 2000

**PHOTOGRAPH OF EUT**  
**Please see extrn.pdf**

**Client:** Aero Comm, Inc.  
**FCC ID:** KJA501540302  
**Model:** 50124-03-02

**Report No.:** 9252-01-001  
**Issue Date:** April, 18, 2000

**PHOTOGRAPH OF Overall Internal View**  
**Please see intern.pdf**

**Client:** Aero Comm, Inc.  
**FCC ID:** KJA501540302  
**Model:** 50124-03-02

**Report No.:** 9252-01-001  
**Issue Date:** April, 18, 2000

## **Exhibit XII**

### **Compliance Information**

**The following statement, or equivalent, is required to be in the user's manual:**

#### **FCC COMPLIANCE STATEMENT**

The equipment described in this manual generates and uses radio frequency energy. If it is not installed and used properly, that is, in strict accordance with the manufacturer's instructions, it may cause interference to radio and television reception.

This equipment has been tested and found to comply with the limits for a Private Land Mobile Radio Service VHF Transmitter pursuant to CFR 47 Part 2.1041 and Part 90 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference at the end use installation intended for this product. This device can only be operated with a station license issued by the FCC.

Warning to User:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Client:** Aero Comm, Inc.  
**FCC ID:** KJA501540302  
**Model:** 50124-03-02

**Report No.:** 9252-01-001  
**Issue Date:** April, 18, 2000

## **Exhibit XIII**

### **Operation and Instruction Manual**

The EUT does not have an operation/users manual. Aero Comm, Inc. installs and maintains this equipment