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.

TABLE OF CONTENTS

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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 85224

c) Report Number: d98b0068

d) Client: Fleet Management Services, Inc.
115 S Weber, Suite 2
Chandler, AZ 85226

e) Identification: 08-0100-0100
FCC ID: OAI 08-0100-0100
Description: Mobile Data Collection Device

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

g) Report Date: November 23, 1998
EUT Received: November 2, 1998

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:

Morton Flom, P. Eng.

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.

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LIST OF GENERAL INFORMATION REQUIRED FOR CERTIFICATION

IN ACCORDANCE WITH FCC RULES AND REGULATIONS,
VOLUME II, PART 2 AND TO

90.203, 90.214

Sub-part 2.1033
(c)(1): NAME AND ADDRESS OF APPLICANT:

Fleet Management Services, Inc.
115 S Weber, Suite 2
Chandler, AZ 85226

VENDOR:

Applicant

(c)(2): FCC ID: OAI 08-0100-0100

MODEL NO: 08-0100-0100

(c)(3): INSTRUCTION MANUAL(S):

PLEASE SEE ATTACHED EXHIBITS

(c)(4): TYPE OF EMISSION: 11K0F1D, 6K25F1D

(c)(5): FREQUENCY RANGE, MHz: 450 to 470

(c)(6): POWER RATING, Watts: 2
___ Switchable ___ Variable _x_ N/A

(c)(7): MAXIMUM POWER RATING, Watts: 300

PAGE NO. 3 of 26.

Subpart 2.1033 (continued)

(c)(8): VOLTAGES & CURRENTS IN ALL ELEMENTS IN FINAL R. F. STAGE, INCLUDING FINAL TRANSISTOR OR SOLID STATE DEVICE:

COLLECTOR CURRENT, A = per manual
COLLECTOR VOLTAGE, Vdc = per manual
SUPPLY VOLTAGE, Vdc = 10 - 28

(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
_x_ N/A

(c)(14): TEST AND MEASUREMENT DATA:

FOLLOWS

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Sub-part 2.1033(c)(14): 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 2.947, 2.1033(c), 2.1041, 2.1046, 2.1047, 2.1079, 2.1051, 2.1053, 2.1055, 2.1057 and the following individual Parts:

____ 21 - Domestic Public Fixed Radio Services
____ 22 - Public Mobile Services
____ 22 Subpart H - Cellular Radiotelephone Service
____ 22.901(d) - Alternative technologies and auxiliary services
____ 23 - International Fixed Public Radiocommunication services
____ 24 - Personal Communications Services
____ 74 Subpart H - Low Power Auxiliary Stations
____ 80 - Stations in the Maritime Services
____ 80 Subpart E - General Technical Standards
____ 80 Subpart F - Equipment Authorization for Compulsory Ships
____ 80 Subpart K - Private Coast Stations and Marine Utility Stations
____ 80 Subpart S - Compulsory Radiotelephone Installations for Small Passenger Boats
____ 80 Subpart T - Radiotelephone Installation Required for Vessels on the Great Lakes
____ 80 Subpart U - Radiotelephone Installations Required by the Bridge-to-Bridge Act
____ 80 Subpart V - Emergency Position Indicating Radiobeacons (EPIRB'S)
____ 80 Subpart W - Global Maritime Distress and Safety System (GMDSS)
____ 80 Subpart X - Voluntary Radio Installations
____ 87 - Aviation Services
__x__ 90 - Private Land Mobile Radio Services
____ 94 - Private Operational-Fixed Microwave Service
____ 95 Subpart A - General Mobile Radio Service (GMRS)
____ 95 Subpart C - Radio Control (R/C) Radio Service
____ 95 Subpart D - Citizens Band (CB) Radio Service
____ 95 Subpart E - Family Radio Service
____ 95 Subpart F - Interactive Video and Data Service (IVDS)
____ 101 - Fixed Microwave Services

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, section 6.1.9, 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.

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NAME OF TEST: Carrier Output Power (Conducted)

SPECIFICATION: 47 CFR 2.1046(a)

GUIDE: ANSI/TIA/EIA-603-1992, Paragraph 2.2.1

TEST EQUIPMENT: As per attached page

MEASUREMENT PROCEDURE

1. The EUT was connected to a resistive coaxial attenuator of normal load impedance, and the unmodulated output power was measured by means of an R. F. Power Meter.

2. Measurement accuracy is ±3%.

MEASUREMENT RESULTS
(Worst case)

FREQUENCY OF CARRIER, MHz = 467.1875

POWER SETTING	R. F. POWER, WATTS
High	2

SUPERVISED BY: Morton Flom, P. Eng.

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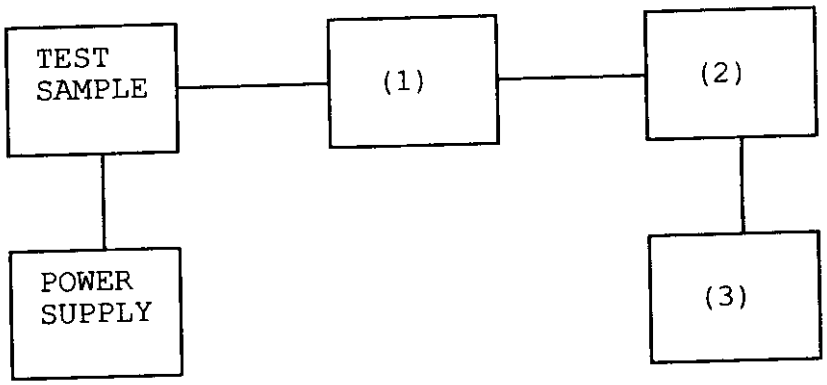
TRANSMITTER POWER CONDUCTED MEASUREMENTS

TEST 1: R. F. POWER OUTPUT
TEST 2: FREQUENCY STABILITY



	Asset	Description	s/n
(1)		COAXIAL ATTENUATOR	
___	i00122	Narda 766-10	7802
___	i00123	Narda 766-10	7802A
___	i00069	Bird 8329 (30 dB)	1006
x	i00113	Sierra 661A-3D	1059
(2)		POWER METERS	
___	i00014	HP 435A	1733A05836
x	i00039	HP 436A	2709A26776
x	i00020	HP 8901A POWER MODE	2105A01087
(3)		FREQUENCY COUNTER	
___	i00042	HP 5383A	1628A00959
x	i00019	HP 5334B	2704A00347
x	i00020	HP 8901A FREQUENCY MODE	2105A01087

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NAME OF TEST: Unwanted Emissions (Transmitter Conducted)

SPECIFICATION: 47 CFR 2.1051

GUIDE: ANSI/TIA/EIA-603-1992, Paragraph 2.2.13

TEST EQUIPMENT: As per attached page

MEASUREMENT PROCEDURE

1. The emissions were measured for the worst case as follows:
   (a): within a band of frequencies defined by the carrier frequency plus and minus one channel.
   (b): from the lowest frequency generated in the EUT and to at least the 10th harmonic of the carrier frequency, or 40 GHz, whichever is lower.

2. The magnitude of spurious emissions that are attenuated more than 20 dB below the permissible value need not be specified.

3. MEASUREMENT RESULTS: ATTACHED FOR WORST CASE

FREQUENCY OF CARRIER, MHz	=	467.1875
SPECTRUM SEARCHED, GHz	=	0 to 10 x F_C
MAXIMUM RESPONSE, Hz	=	N/A
ALL OTHER EMISSIONS	=	≥ 20 dB BELOW LIMIT
LIMIT(S), dBc $-(43+10\times\text{LOG } P)$	=	-46 (2 Watts)

SUPERVISED BY: Morton Flom, P. Eng.

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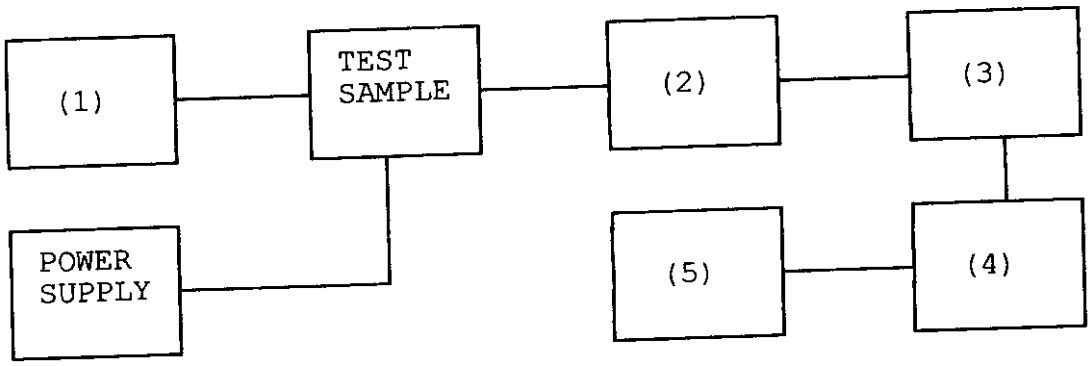
TRANSMITTER SPURIOUS EMISSION

TEST A. OCCUPIED BANDWIDTH (IN-BAND SPURIOUS)
TEST B. OUT-OF-BAND SPURIOUS



	Asset	Description	s/n
		(1) AUDIO OSCILLATOR/GENERATOR	
___	i00010	HP 204D	1105A04683
___	i00017	HP 8903A	2216A01753
x	i00012	HP 3312A	1432A11250
		(2) COAXIAL ATTENUATOR	
___	i00122	Narda 766-10	7802
___	i00123	Narda 766-10	7802A
x	i00069	Bird 8329 (30 dB)	1006
x	i00113	Sierra 661A-3D	1059
		(3) FILTERS; NOTCH, HP, LP, BP	
x	i00126	Eagle TNF-1	100-250
x	i00125	Eagle TNF-1	50-60
x	i00124	Eagle TNF-1	250-850
		(4) SPECTRUM ANALYZER	
x	i00048	HP 8566B	2511A01467
___	i00029	HP 8563E	3213A00104
		(5) SCOPE	
___	i00058	HP 1741A	2251A09356
___	i00030	HP 54502A	2927A00209
___	i00071	Tektronix 935	1935-B011343

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NAME OF TEST: Unwanted Emissions (Transmitter Conducted)
g98b0005: 1998-Nov-02 Mon 13:17:00
STATE: 2:High Power

FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	LEVEL, dBm	LEVEL, dBc	MARGIN, dB
467.187500	420.160000	-26.5	-59.5	-13.5
467.187500	934.376000	-28.4	-61.4	-15.4
467.187500	1401.564000	-27.1	-60.1	-14.1
467.187500	1868.741000	-37.8	-70.8	-24.8
467.187500	2336.049000	-41.6	-74.6	-28.6
467.187500	2802.835000	-43.5	-76.5	-30.5
467.187500	3270.784000	-43.7	-76.7	-30.7
467.187500	3737.720000	-44.6	-77.6	-31.6
467.187500	4204.841000	-44.1	-77.1	-31.1
467.187500	4671.450000	-44.6	-77.6	-31.6
467.187500	5139.401000	-43.2	-76.2	-30.2
467.187500	5606.108500	-44.4	-77.4	-31.4
467.187500	6072.990700	-38.1	-71.1	-25.1
467.187500	6541.030800	-38.2	-71.2	-25.2
467.187500	7007.514600	-38.6	-71.6	-25.6

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NAME OF TEST: Field Strength of Spurious Radiation

SPECIFICATION: 47 CFR 2.1053(a)

GUIDE: ANSI/TIA/EIA-603-1992, Paragraph 2.2.12

TEST EQUIPMENT: As per attached page

MEASUREMENT PROCEDURE

1. A description of the measurement facilities was filed with the FCC and was found to be in compliance with the requirements of Section 15.38, by letter from the FCC dated March 3, 1997, FILE 31040/SIT. All pertinent changes will be reported to the Commission by up-date prior to March 2000.

2. At first, in order to locate all spurious frequencies and approximate amplitudes, and to determine proper equipment functioning, the test sample was set up at a distance of three meters from the test instrument. Valid spurious signals were determined by switching the power on and off.

3. In the field, the test sample was placed on a wooden turntable above ground at three (or thirty) meters away from the search antenna. Excess power leads were coiled near the power supply.

   The cables were oriented in order to obtain the maximum response. At each emission frequency, the turntable was rotated and the search antennas were raised and lowered vertically.

4. The emission was observed with both a vertically polarized and a horizontally polarized search antenna and the worst case was used.

6. The field strength of each emission within 20 dB of the limit was recorded and corrected with the appropriate cable and transducer factors.

7. The worst case for all channels is shown.

8. Measurement results: ATTACHED FOR WORST CASE

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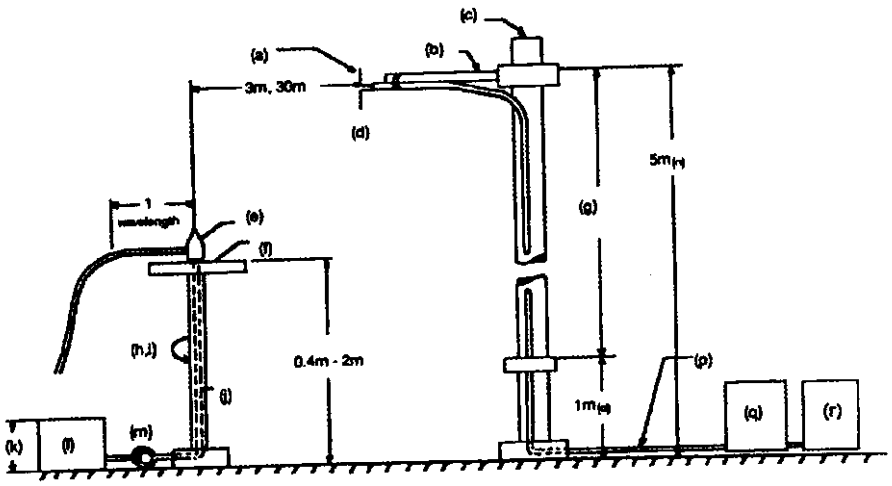
RADIATED TEST SETUP



NOTES:
(a) Search Antenna - Rotatable on boom
(b) Non-metallic boom
(c) Non-metallic mast
(d) Adjustable horizontally
(e) Equipment Under Test
(f) Turntable
(g) Boom adjustable in height.
(h) External control cables routed horizontally at least one wavelength.
(i) Rotatable
(j) Cables routed through hollow turntable center
(k) 30 cm or less
(l) External power source
(m) 10 cm diameter coil of excess cable
(n) 25 cm (V), 1 m-7 m (V, H)
(o) 25 cm from bottom end of 'V', 1m normally
(p) Calibrated Cable at least 10m in length
(q) Amplifier (optional)
(r) Spectrum Analyzer

	Asset	Description	s/n	Cycle (Per ANSI C63.4-1992, 10.1.4)	Last Cal
TRANSDUCER					
___	i00065	EMCO 3109B 100Hz-50MHz	2336	12 mo.	
___	i00033	Singer 94593-1 10kHz-32MHz	0219	12 mo.	
x	i00088	EMCO 3109-B 25MHz-300MHz	2336	12 mo.	Oct-98
x	i00089	Aprel 2001 200MHz-1GHz	001500	12 mo.	Oct-98
x	i00103	EMCO 3115 1GHz-18GHz	9208-3925	12 mo.	Oct-98
___	i00085	EMCO 3116 10GHz-40GHz	2076	12 mo.	
___					
AMPLIFIER					
___	i00028	HP 8449A	2749A00121	12 mo.	Mar-98
SPECTRUM ANALYZER					
___	i00029	HP 8563E	3213A00104	12 mo.	
x	i00033	HP 85462A	3625A00357	12 mo.	Dec-97
___	i00048	HP 8566B	2511AD1467	6 mo.	Mar-98
___					

PAGE NO. 13 of 26.

NAME OF TEST: Field Strength of Spurious Radiation

ALL OTHER EMISSIONS = ≥ 20 dB BELOW LIMIT

EMISSION, MHz/HARMONIC	SPURIOUS LEVEL, dBc High
2nd to 10th	<-55

SUPERVISED BY:

Morton Flom, P. Eng.

PAGE NO. 14 of 26.

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 previous page

MEASUREMENT PROCEDURE

1. The EUT and test equipment were set up as shown on the following page, with the Spectrum Analyzer connected.

2. For EUTs supporting audio modulation, the audio signal generator was adjusted to the frequency of maximum response and with output level set for ±2.5 kHz deviation (or 50% modulation). With level constant, the signal level was increased 16 dB.

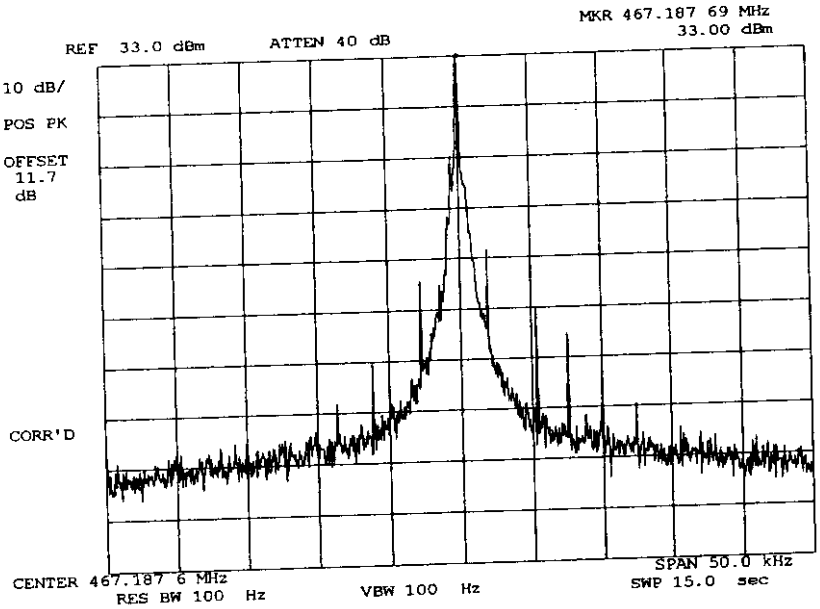
3. For EUTs supporting digital modulation, the digital modulation mode was operated to its maximum extent.

4. The Occupied Bandwidth was measured with the Spectrum Analyzer controls set as shown on the test results.

5. MEASUREMENT RESULTS: ATTACHED

PAGE NO. 15 of 26.

NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0001: 1998-Nov-02 Mon 10:28:00
STATE: 2:High Power



POWER: HIGH
MODULATION: NONE

SUPERVISED BY: Morton Flom, P. Eng.

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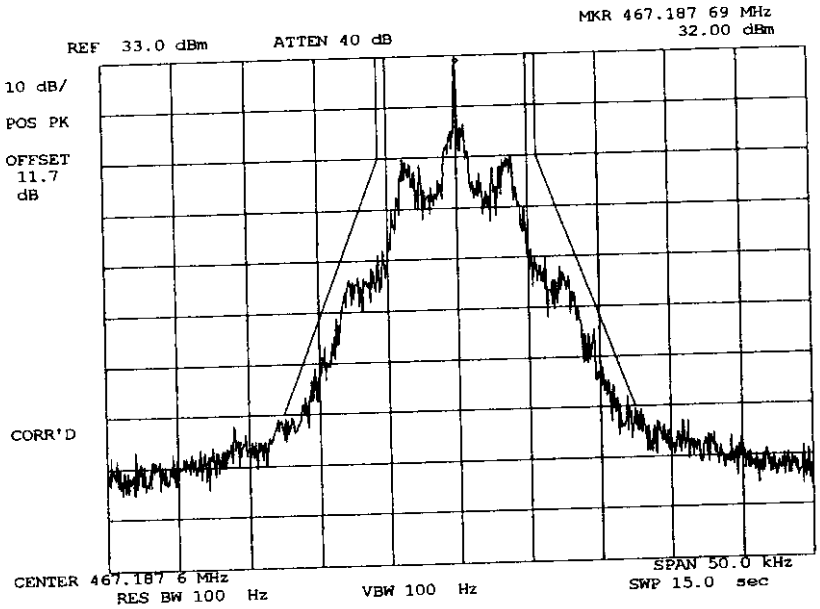
NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0002: 1998-Nov-02 Mon 10:43:00
STATE: 2:High Power

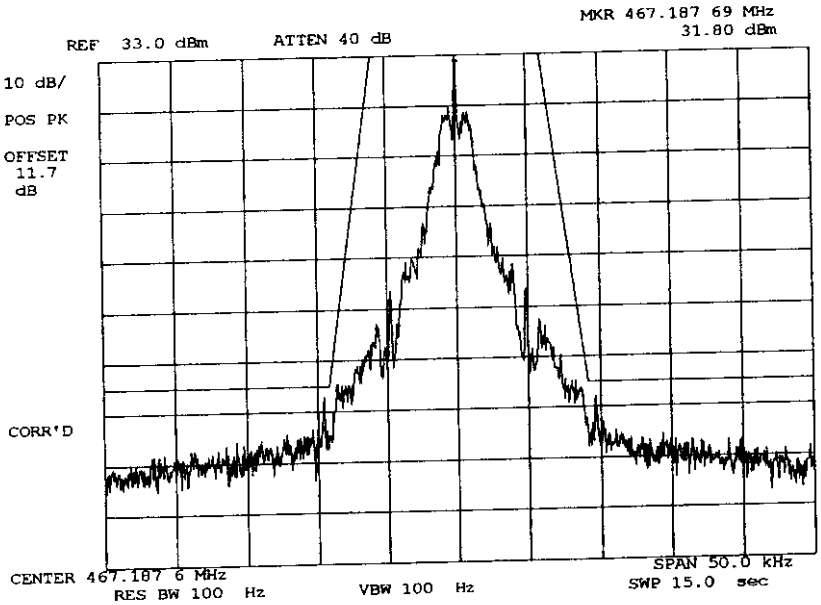


POWER: HIGH
MODULATION: FSK DATA 9600 BPS
MASK: D, VHF/UHF 12.5kHz BW

SUPERVISED BY: Morton Flom, P. Eng.

PAGE NO. 17 of 26.

NAME OF TEST: Emission Masks (Occupied Bandwidth)
g98b0003: 1998-Nov-02 Mon 11:56:00
STATE: 2:High Power



POWER: HIGH
MODULATION: FSK DATA 4800 BPS
MASK: E, VHF/UHF 6.25KHZ BW

SUPERVISED BY: Morton Flom, P. Eng.

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NAME OF TEST: Transient Frequency Behavior

SPECIFICATION: 47 CFR 90.214

GUIDE: ANSI/TIA/EIA-603-1992, Paragraph 2.2.19

TEST EQUIPMENT: As per attached page

MEASUREMENT PROCEDURE

1. The EUT was setup as shown on the attached page, following TIA/EIA-603 steps a, b, and c as a *guide*.

2. The transmitter was turned on.

3. Sufficient attenuation was provided so that the transmitter carrier level measured at the output of the combiner was 40 dB below the maximum input level of the test receiver. This level was recorded as step f.

4. The transmitter was turned off.

5. An RF signal generator (1) modulated with a 1 kHz tone at either 25, 12.5, or 6.25 kHz deviation, and set to the same frequency as the assigned transmitter frequency, (2) was adjusted to a level -20 dB below the level recorded for step f, as measured at the output of the combiner. This level was then fixed for the remainder of the test and is recorded at step h.

6. The oscilloscope was setup using TIA/EIA-603 steps j and k as a guide, and to either 10 ms/div (UHF) or 5 ms/div (VHF).

7. The 30 dB attenuator was removed, the transmitter was turned on, and the level of the carrier at the output of the combiner was recorded as step l.

8. The carrier on-time as referenced in TIA/EIA-603 steps m, n, and o was captured and plotted. The carrier off-time as referenced in TIA/EIA-603 steps p, q, r, and s was captured and plotted.

LEVELS MEASURED:

step f, dBm	= -23.0
step h, dBm	= -40.1
step l, dBm	= 10.8

Morton Flom, P. Eng.

SUPERVISED BY:

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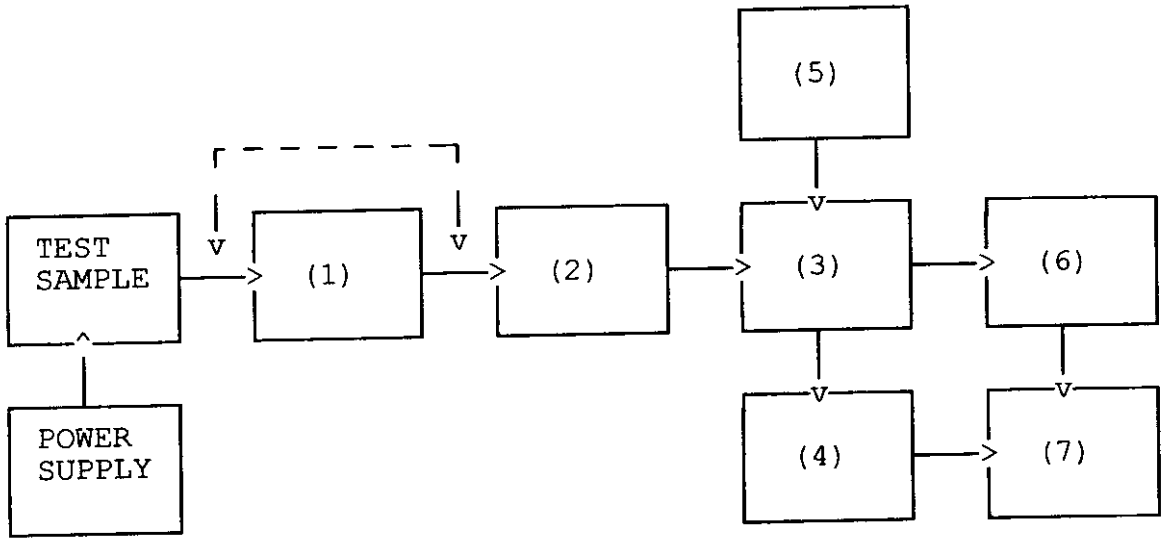
TRANSIENT FREQUENCY BEHAVIOR



	Asset	Description	s/n
(1) ATTENUATOR (Removed after 1st step)			
x	i00112	Philco 30 dB	989
(2) ATTENUATOR			
	i00112	Philco 30 dB	989
	i00172	Bird 30 dB	989
x	i00122	Narda 10 dB	7802
	i00123	Narda 10 dB	7802A
	i00110	Kay Variable	145-387
(3) COMBINER			
x	i00154	4 x 25 Ω COMBINER	154
(4) CRYSTAL DETECTOR			
x	i00159	HP 8470B	1822A10054
(5) RF SIGNAL GENERATOR			
	i00018	HP 8656A	2228A03472
	i00031	HP 8656A	2402A06180
x	i00067	HP 8920A	3345U01242
(6) MODULATION ANALYZER			
x	i00020	HP 8901A	2105A01087
(7) SCOPE			
x	i00030	HP 54502A	2927A00209

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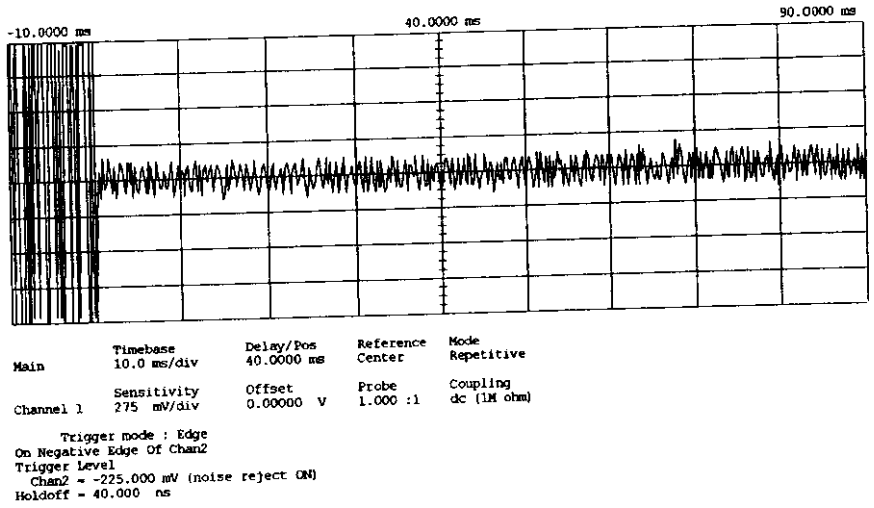
NAME OF TEST: Transient Frequency Behavior
g98b0008: 1998-Nov-02 Mon 14:05:00
STATE: 0:General

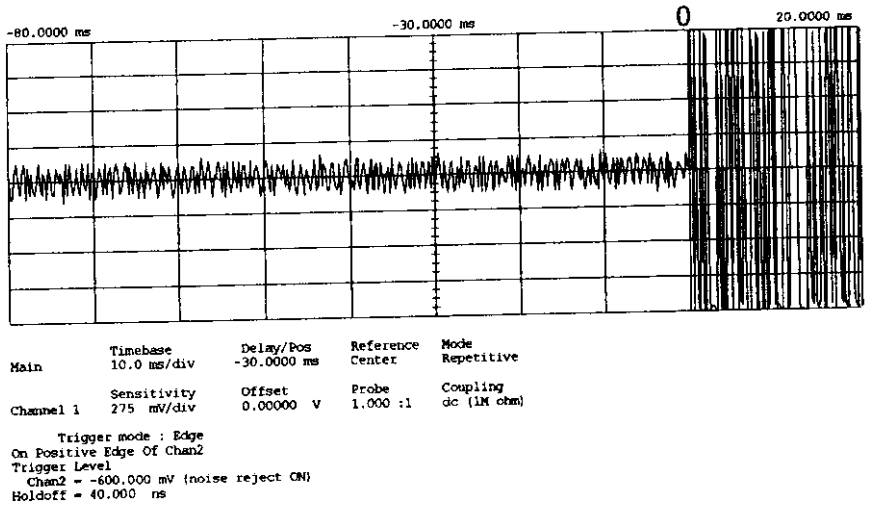


POWER: n/a
MODULATION: Ref Gen=12.5 kHz Deviation
DESCRIPTION: CARRIER ON TIME

SUPERVISED BY: Morton Flom, P. Eng.

PAGE NO. 21 of 26.

NAME OF TEST: Transient Frequency Behavior
g98b0009: 1998-Nov-02 Mon 14:07:00
STATE: 0:General



POWER: n/a
MODULATION: Ref Gen=12.5 kHz Deviation
DESCRIPTION: CARRIER OFF TIME

SUPERVISED BY: Morton Flom, P. Eng.

PAGE NO.	22 of 26.
NAME OF TEST:	Frequency Stability (Temperature Variation)
SPECIFICATION:	47 CFR 2.1055(a)(1)
GUIDE:	ANSI/TIA/EIA-603-1992, Paragraph 2.2.2
TEST CONDITIONS:	As Indicated
TEST EQUIPMENT:	As per previous page

MEASUREMENT PROCEDURE

1. The EUT and test equipment were set up as shown on the following page.

2. With all power removed, the temperature was decreased to -30°C and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was noted within one minute.

3. With power OFF, the temperature was raised in 10°C steps. The sample was permitted to stabilize at each step for at least one-half hour. Power was applied and the maximum frequency change was noted within one minute.

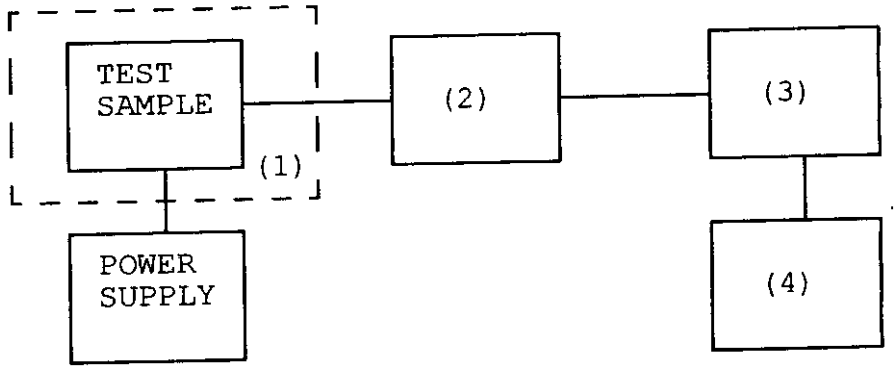
4. The temperature tests were performed for the worst case.

5. MEASUREMENT RESULTS: ATTACHED

PAGE NO. 23 of 26.

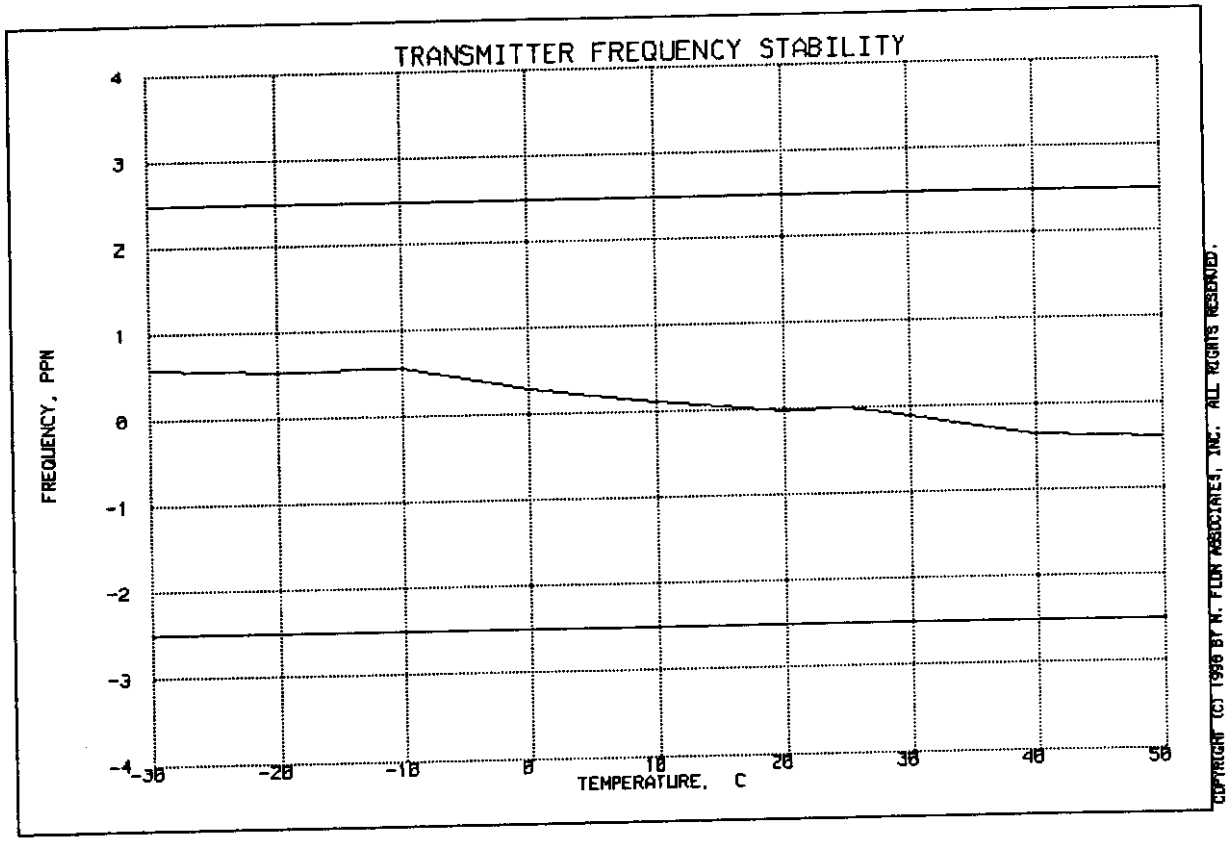
TRANSMITTER TEST SET-UP

TEST A. OPERATIONAL STABILITY
TEST B. CARRIER FREQUENCY STABILITY
TEST C. OPERATIONAL PERFORMANCE STABILITY
TEST D. HUMIDITY
TEST E. VIBRATION
TEST F. ENVIRONMENTAL TEMPERATURE
TEST G. FREQUENCY STABILITY: TEMPERATURE VARIATION
TEST H. FREQUENCY STABILITY: VOLTAGE VARIATION



	Asset	Description	s/n
(1)		TEMPERATURE, HUMIDITY, VIBRATION	
x	i00027	Tenny Temp. Chamber	9083-765-234
	i00	Weber Humidity Chamber	
	i00	L.A.B. RVH 18-100	
(2)		COAXIAL ATTENUATOR	
	i00122	NARDA 766-10	7802
	i00123	NARDA 766-10	7802A
x	i00113	SIERRA 661A-3D	1059
	i00069	BIRD 8329 (30 dB)	10066
(3)		R.F. POWER	
	i00014	HP 435A POWER METER	1733A05839
x	i00039	HP 436A POWER METER	2709A26776
x	i00020	HP 8901A POWER MODE	2105A01087
(4)		FREQUENCY COUNTER	
	i00042	HP 5383A	1628A00959
x	i00019	HP 5334B	2704A00347
x	i00020	HP 8901A	2105A01087

TRANSMITTER FREQUENCY STABILITY
FLEET MANAGEMENT SERVICES, Tracker
2 NOV 1998, 15:26



FREQUENCY OF CARRIER, MHz = 467.18774

LIMIT, ppm = 2.5

LIMIT, Hz = 1168

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NAME OF TEST: Frequency Stability (Voltage Variation)

SPECIFICATION: 47 CFR 2.1055(b)(1)

GUIDE: ANSI/TIA/EIA-603-1992, Paragraph 2.2.2

TEST EQUIPMENT: As per previous page

MEASUREMENT PROCEDURE

1. The EUT was placed in a temperature chamber at 25±5°C and connected as for "Frequency Stability - Temperature Variation" test.

2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.

3. The variation in frequency was measured for the worst case.

RESULTS: Frequency Stability (Voltage Variation)

LIMIT, ppm = 2.5
LIMIT, Hz = 1168

% of STV	Voltage	Frequency, MHz	Change, Hz
115	14.3	467.187584	-84
100	12.5	467.187500	0
85	10.6	467.187510	10

SUPERVISED BY: Morton Flom, P. Eng.

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NAME OF TEST: Necessary Bandwidth and Emission Bandwidth

SPECIFICATION: 47 CFR 2.202(g)

MODULATION = 11K0F1D

NECESSARY BANDWIDTH CALCULATION:

MAXIMUM MODULATION (M), kHz	= 3
MAXIMUM DEVIATION (D), kHz	= 2.5
CONSTANT FACTOR (K)	= 1
NECESSARY BANDWIDTH (B_N), kHz	= (2 x M) + (2 x D x K)
	= 11.0

MODULATION = 6K25F1D

NECESSARY BANDWIDTH CALCULATION:

MAXIMUM MODULATION (M), kHz	= 3
MAXIMUM DEVIATION (D), kHz	= 1.25
CONSTANT FACTOR (K)	= 1
NECESSARY BANDWIDTH (B_N), kHz	= (2 x M) + (2 x D x K)
	= 8.5

SUPERVISED BY: Morton Flom, P. Eng.

TESTIMONIAL AND STATEMENT OF CERTIFICATION

THIS IS TO CERTIFY THAT:

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: Morton Flom, P. Eng.

STATEMENT OF QUALIFICATIONS

EDUCATION:

1. B. ENG. in ENGINEERING PHYSICS, 1949, McGill University, Montreal, Canada.

2. Post Graduate Studies, McGill University & Sir George Williams University, Montreal.

PROFESSIONAL AFFILIATIONS:

1. ARIZONA SOCIETY OF PROFESSIONAL ENGINEERS (NSPE), #026 031 821.

2. ORDER OF ENGINEERS (QUEBEC) 1949. #4534.

3. ASSOCIATION OF PROFESSIONAL ENGINEERS, GEOPHYSICISTS & GEOLOGISTS OF ALBERTA #5916.

4. REGISTERED ENGINEERING CONSULTANT - GOVERNMENT OF CANADA, DEPARTMENT OF COMMUNICATIONS. Radio Equipment Approvals.

5. IEEE, Lifetime Member No. 0417204 (member since 1947).

EXPERIENCE:

1. Research/Development/Senior Project Engineer, R.C.A. LIMITED (4 years).

2. Owner/Chief Engineer of Electronics. Design/Manufacturing & Cable TV Companies (10 years).

3. CONSULTING ENGINEER (over 25 years).

M. Flom P. Eng.

MORTON FLOM, P. Eng.