



**KTL Ottawa**

*Safety - EMI - Telecom - ISO Guide 25*

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**ENGINEERING TEST REPORT**

**ON:  
THE BLICK COMMUNICATIONS LTD.  
"POCKET TRANSCEIVER"**

**FCC ID: N4RGPM**

**IN ACCORDANCE WITH:  
FCC PART 90, SUBPART I  
PRIVATE LAND MOBILE TRANSMITTER**

**PROJECT NO.: 8R00429.3**

**TESTED FOR:**

**BLICK COMMUNICATIONS LTD.  
15 COFTON ROAD  
MARSH BARTON, EXETER, DEVON  
EX2 8QW, UK**

**TESTED BY:**

**KTL OTTAWA INC.  
3325 RIVER ROAD, R.R. 5  
OTTAWA, ONTARIO K1V 1H2**



**NVLAP LAB CODE: 100351-0**

**JULY 1998**

**This document contains 36 pages including this one.**

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**This report applies only to the items tested.**

*EQUIPMENT: Pocket Transceiver*  
*FCC ID: N4RGPM*

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*EQUIPMENT: Pocket Transceiver*  
*FCC ID: N4RGPM*

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EQUIPMENT: Pocket Transceiver  
FCC ID: N4RGPM

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**Section 1. Summary of Test Results**

Manufacturer: Blick Communications Ltd.

Model No.: Pocket Transceiver

Serial No.: 12345678

General: All measurements are traceable to national standards.

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 90, Subpart I.

☒ New Submission

☐ Production Unit

☐ Class II Permissive Change

☒ Pre-Production Unit

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE.

See "Summary of Test Data".

NVLAP

NVLAP LAB CODE: 100351-0

TESTED BY:

Tom Tidwell  
Tom Tidwell, Senior Technologist

DATE:

10 Sept. 1998

APPROVED BY:

Russell H Grant  
Russell Grant, Technologist

DATE:

Sept 10, 98

EQUIPMENT: Pocket Transceiver  
FCC ID: N4RGPM

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**Summary Of Test Data**

NAME OF TEST	PARA. NO.	SPEC.	MEAS.	RESULT
RF Power Output	90.217	120 mW	0.917	Complies
Audio Frequency Response	TIA EIA-603.3.2.6	N/A	N/A	N/A
Audio Low-Pass Filter Response	TIA EIA-603.3.2.6	N/A	N/A	N/A
Modulation Limiting	TIA EIA-603.3.2.6	N/A	N/A	N/A
Occupied Bandwidth	90.210	-30 dBc	<-30 dBc	Complies
Spurious Emissions at Antenna Terminals	90.210	-30 dBc	<-30 dBc	Complies
Field Strength of Spurious Emissions	90.210	-30 dBc	<-30 dBc	Complies
Frequency Stability	90.213	N/A	N/A	N/A
Transient Frequency Behavior	90.214	N/A	N/A	N/A

**Footnotes For N/A's:**

This equipment is exempt from the technical requirements set forth in Part 90, Subpart I per 90.217. This testing is to verify that the equipment complies with the requirements of 90.217 (b).

**Test Conditions:**

Temperature: 25 °C  
Humidity: 54 %

EQUIPMENT: Pocket Transceiver  
FCC ID: N4RGPM

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## Section 2. General Equipment Specification

### Transmitter

Supply Voltage Input:	1.5 Vdc "AA" Battery										
Frequency Range:	170.955 MHz (Fixed)										
Tunable Bands:	N/A										
Necessary Bandwidth:	3.4 kHz [(300 bps x 2) + (1.4 kHz x 2)]										
Type(s) of Modulation:	<table><thead><tr><th>F3E (Voice)</th><th>F1D</th><th>F2D</th><th>D7W (QAM)</th><th>Other</th></tr></thead><tbody><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr></tbody></table>	F3E (Voice)	F1D	F2D	D7W (QAM)	Other	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F3E (Voice)	F1D	F2D	D7W (QAM)	Other							
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
Data Rate(s)	300 bps										
Emission Designator:	3K40F1D										
Output Impedance:	50 ohms										
RF Power Output (rated):	1 mW										
Duty Cycle:	N/A										
Channel Spacing(s):	12.5 kHz										
Operator Selection of Operating Frequency:	N/A										
Power Output Adjustment Capability:	N/A										

**Note:**

The antenna connection is non-standard and the antenna is affixed to the E.U.T. with a unique connection.

*EQUIPMENT: Pocket Transceiver*  
*FCC ID: N4RGPM*

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**Receiver**

<b>Frequency Range:</b>	170.955 MHz
<b>Tunable Bands:</b>	N/A
<b>Local Oscillator:</b>	Direct Conversion
<b>1<sup>st</sup> IF:</b>	N/A
<b>2<sup>nd</sup> IF:</b>	N/A
<b>Operator Selection of Operating Frequency:</b>	N/A

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PRIVATE LAND MOBILE TRANSMITTER  
PROJECT NO.: 8R00429.3

*EQUIPMENT: Pocket Transceiver*  
*FCC ID: N4RGPM*

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**Description of Modifications For Class II Permissive Change**

**NOT APPLICABLE**



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**Modifications Made During Testing**

**NOT APPLICABLE**

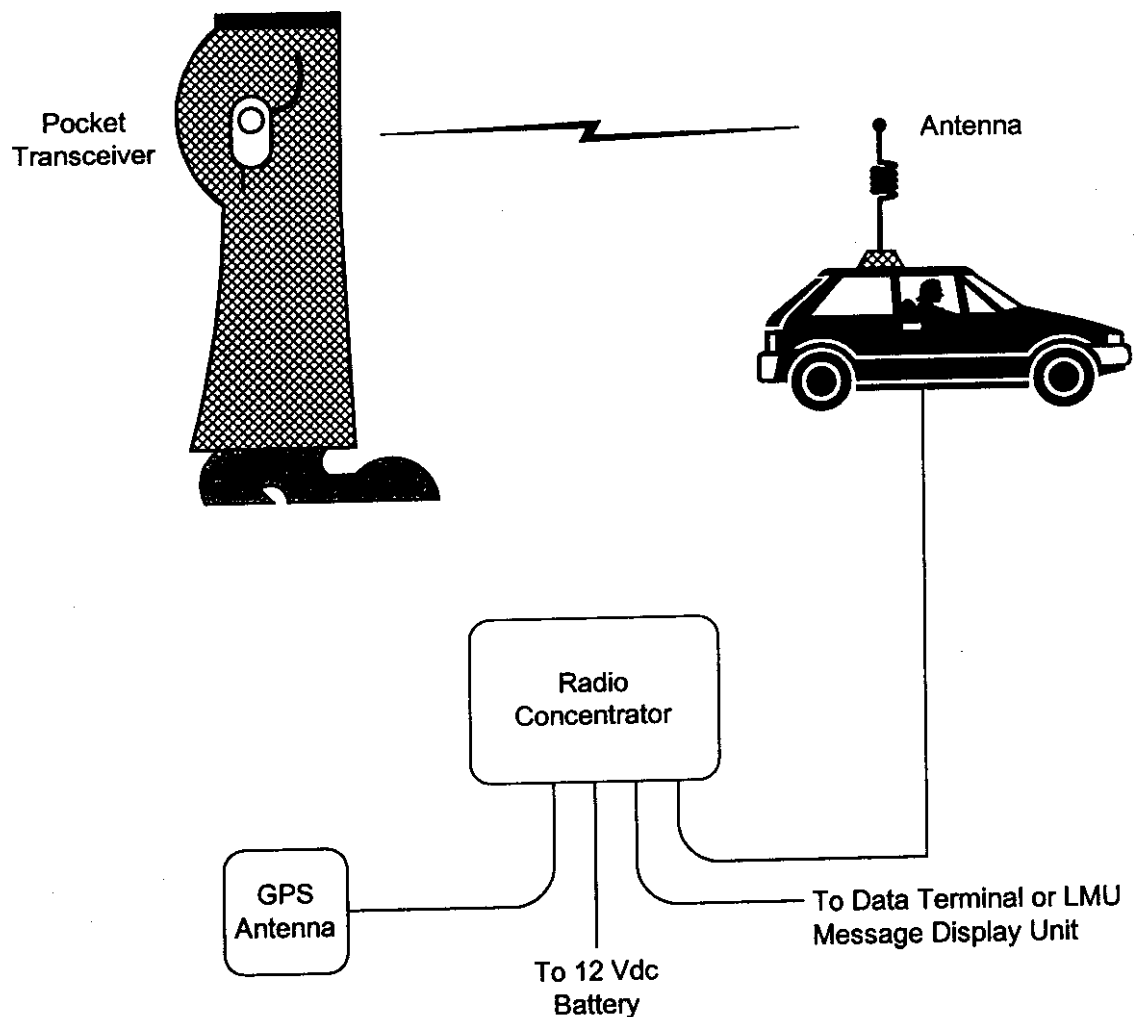
*EQUIPMENT: Pocket Transceiver*  
*FCC ID: N4RGPM*

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### Theory of Operation

The pocket transceiver is a low power radio that operates at a fixed frequency of 170.955 MHz. When the transmit button is pressed, a short alarm transmission is sent to the vehicle mounted radio concentrator (< 1 sec.).

### System Diagram



EQUIPMENT: Pocket Transceiver  
FCC ID: N4RGPM**Section 3. RF Power Output**

NAME OF TEST: RF Power Output	PARA. NO.: 2.985
TESTED BY: Tom Tidwell	DATE: July 31, 1998

Test Results: Complies.

**Measurement Data:**

Frequency (MHz)	Measured Power (dBm)	Rated Power (dBm)	Measured/Rated (dB)
170.955	N/A	N/A	N/A

The peak field strength of the fundamental emission is 97 dB $\mu$ V/m @ 3 m. This equates to 0.917 mW E.R.P. The E.U.T. was tested on three orthogonal axis to obtain worst-case results.

$$\text{E.R.P.} = \frac{V^2 R^2}{30G}$$

$$\text{E.R.P.} = \frac{0.0708^2 \times 3^2}{30(1.64)}$$

$$\text{E.R.P.} = 0.000917\text{W}$$

$$\text{E.R.P.} = 0.917 \text{ mW}$$

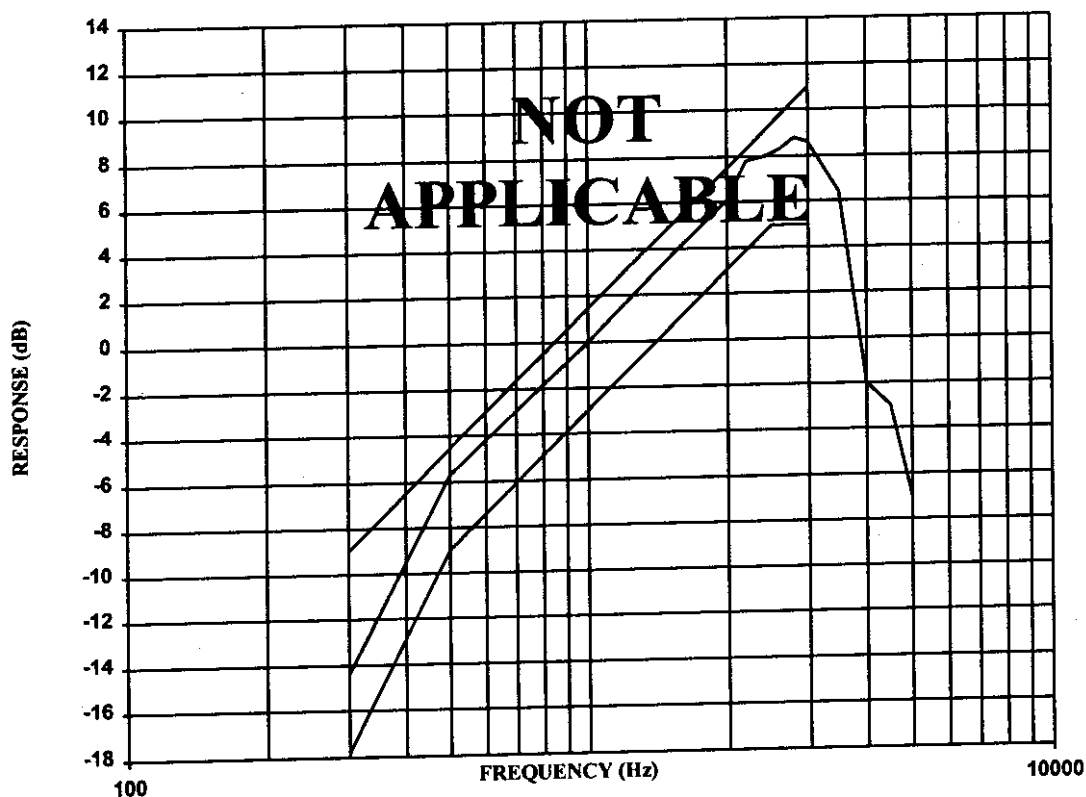
EQUIPMENT: Pocket Transceiver  
FCC ID: N4RGPM**Section 4. Audio Frequency Response**

NAME OF TEST: Audio Frequency Response

PARA. NO.: 2.987(a)

TESTED BY:

DATE:

**Audio Frequency Response**

Frequency	300	600	900	1.2 k	1.5 k	1.8 k	2.1k	2.3 k	2.6 k	3.0 k	3.5 k	4 k

Frequency	4.5 k	5 k	5.5 k	6 k	6.5 k	7 k	7.5 k	8 k	8.5 k	9 k	9.5 k	10 k

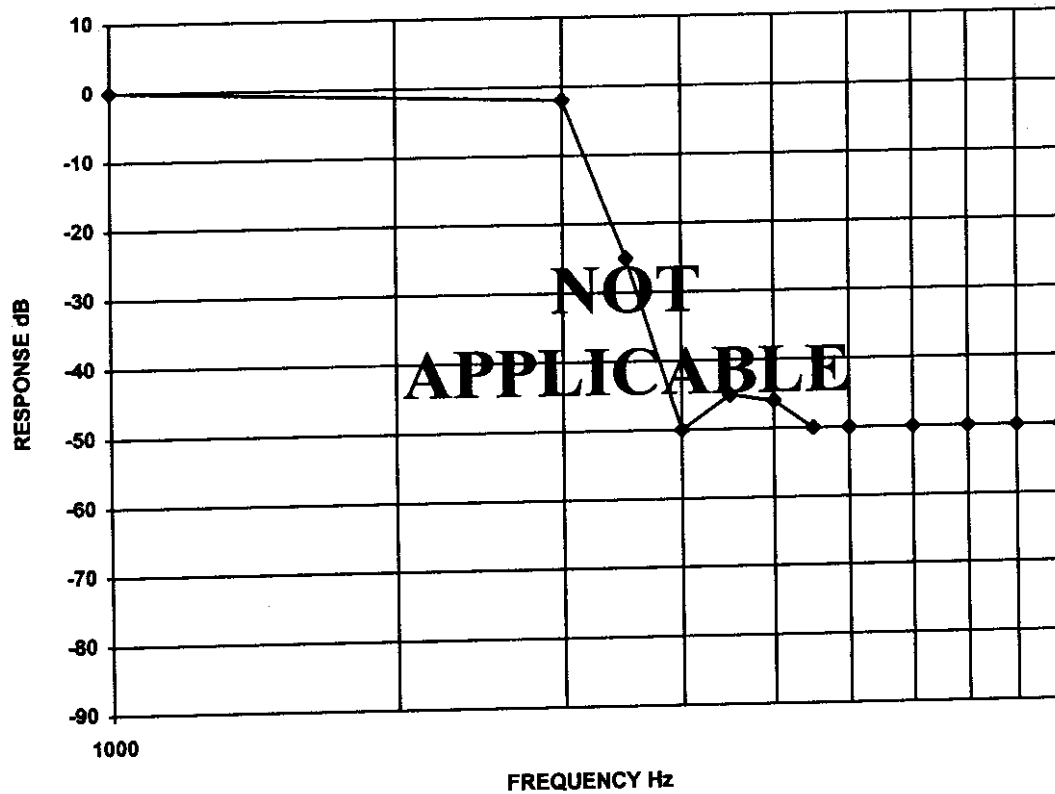
EQUIPMENT: Pocket Transceiver  
FCC ID: N4RGPM**Section 5. Audio Low-Pass Filter Response**

NAME OF TEST: Audio Low-Pass Filter Response

PARA. NO.: 2.987(a)

TESTED BY:

DATE:

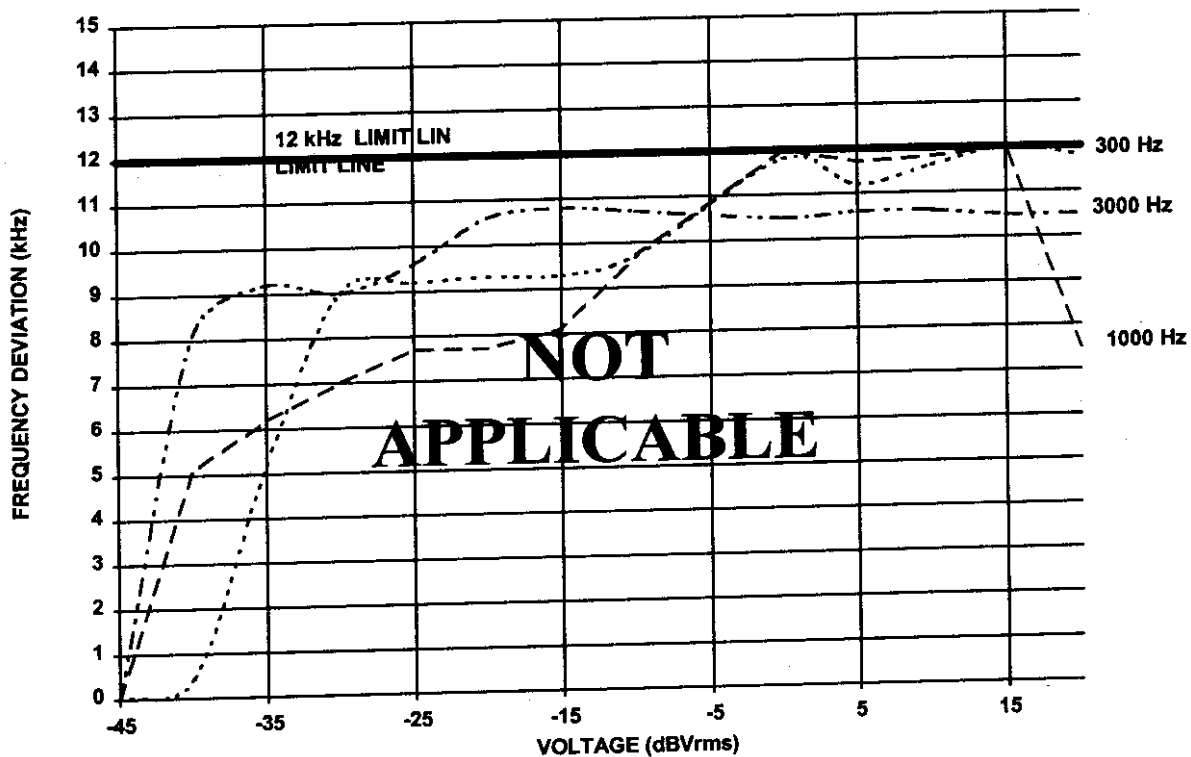
**Audio Low-Pass Filter Response**

Frequency	1k	3k	3.5k	4k	4.5k	5k	5.5k	6k	7k	8k	9k	10k

EQUIPMENT: Pocket Transceiver  
FCC ID: N4RGPM

## Section 6. Modulation Limiting

NAME OF TEST: Modulation Limiting	PARA. NO.: 2.987(b)
TESTED BY:	DATE:



Maximum deviation for non-voice modulation 1.41 kHz.

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*EQUIPMENT: Pocket Transceiver*  
*FCC ID: N4RGPM*

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**Section 7.      Occupied Bandwidth**

NAME OF TEST: Occupied Bandwidth

PARA. NO.: 2.989

TESTED BY: Tom Tidwell

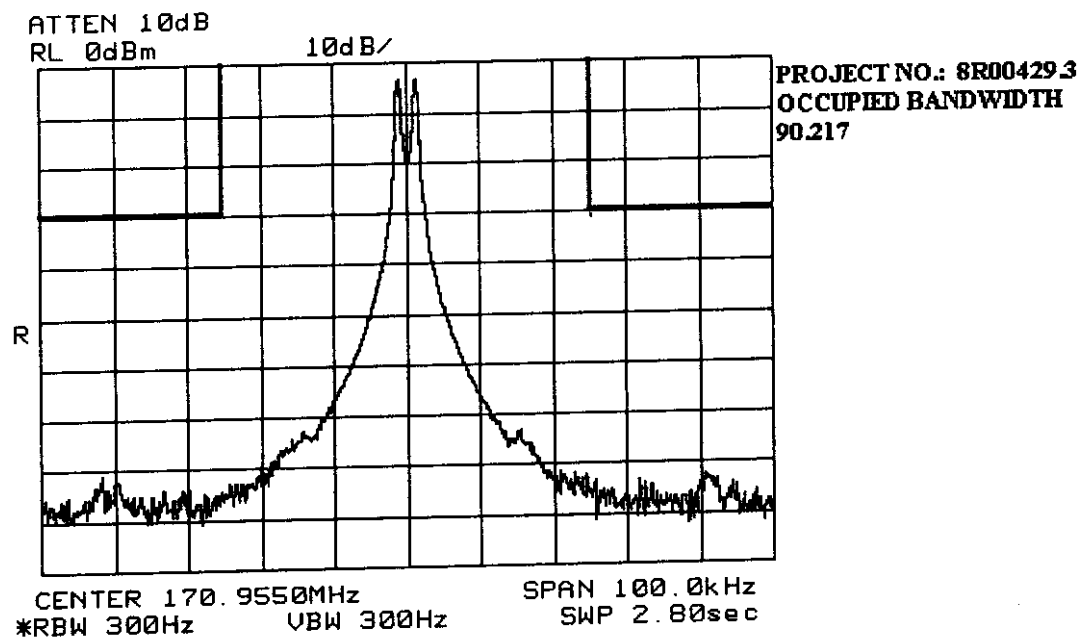
DATE: July 30, 1998

**Test Results:**                      Complies.

**Test Data:**                        See attached graph(s).

EQUIPMENT: Pocket Transceiver  
FCC ID: N4RGPM

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*EQUIPMENT: Pocket Transceiver*  
*FCC ID: N4RGPM*

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**Section 8.        Spurious Emissions at Antenna Terminals**

NAME OF TEST: Spurious Emissions @ Antenna Terminals	PARA. NO.: 2.991
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TESTED BY:	DATE:
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**Test Results:**                      Complies/Does Not Comply.

**Test Data:**                        See attached graph(s).

**NOT APPLICABLE**

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PRIVATE LAND MOBILE TRANSMITTER  
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*EQUIPMENT: Pocket Transceiver*  
*FCC ID: N4RGPM*

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**Section 9.      Field Strength of Spurious Emissions**

NAME OF TEST: Field Strength of Spurious Emissions	PARA. NO.: 2.993
TESTED BY: Tom Tidwell	DATE: July 31, 1998

**Test Results:**                      Complies.

**Test Data:**                        See attached table.

EQUIPMENT: Pocket Transceiver  
FCC ID: N4RGPM

### Test Data - Radiated Emissions

Distance: 3m		A tower		Receiver: 014		Detector: As per table		Detector: As per table			
Freq. (MHz)	Ant. *	Pol. (V/H)	Ant. HGT. (m)	Table (deg.)	RCVD Signal (dBµV/m)	Ant. Factor (dB)**	Amp. Gain (dB)***	Dist. Corr. (dB)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
170.96	B/C2	V	3		81.9	15.1			97.0	97.0	0.0*
170.96	B/C2	H	3		71.5	15.1			86.6	97.0	10.4
341.92	E/D3	V	3		32.0	22.7			54.7	67.0	12.3
341.92	E/D3	H	3		25.0	22.7			47.7	67.0	19.3
512.88	E/D4	V	3		35.2	28.0			63.2	67.0	3.8
512.88	E/D4	H	3		37.1	28.0			65.1	67.0	1.9
683.84	E/D4	V	3		33.1	31.5			64.6	67.0	2.4
683.84	E/D4	H	3		23.2	31.5			54.7	67.0	12.3
854.8	E/D4	V	3		31.5	33.7			65.2	67.0	1.8
854.8	E/D4	H	3		21.8	33.7			55.5	67.0	11.5
1025.77	Hm2	V	5		26.7	28.2			54.9	67.0	12.1
1025.77	Hm2	H	5		17.8	28.2			46.0	67.0	21.0
1196.75	Hm2	V	5		18.0	28.8			46.8	67.0	20.2
1196.75	Hm2	H	5		15.7	28.8			44.5	67.0	22.5

#### Notes:

The spectrum was search up to the 10<sup>th</sup> harmonic of the fundamental frequency.

B/C = Biconical, B/L = Biconilog, L/P = Log-Periodic, H = Horn, D/P = Dipole

\* Includes cable loss when amplifier is not used.

\*\* Includes cable loss. ( ) Denotes failing emission level.

(1) 120 kHz RBW, 1 MHz VBW, Peak, (2) 10 kHz Peak, (3) 100 kHz RBW, 300 kHz VBW Peak,

(4) 300 kHz RBW, 1 MHz VBW, Peak, (5) 1 MHz RBW, 3 MHz VBW, Peak, (6) 1 MHz RBW, 10 Hz VBW, Peak

*EQUIPMENT: Pocket Transceiver*  
*FCC ID: N4RGPM*

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**Section 10.      Frequency Stability**

NAME OF TEST: Frequency Stability	PARA. NO.: 2.995
TESTED BY: Russell Grant	DATE: July 31, 1998

**Test Results:**                      Complies.

**Measurement Data:**            See attached tables.

EQUIPMENT: Pocket Transceiver  
FCC ID: N4RGPM

## Frequency Stability

## Variation With Frequency

Time (min.)	Frequency (MHz)				
	-30 °C	-20 °C	-10 °C	0 °C	10 °C
0.0	170.954737	170.954934	170.955184	170.955832	170.956108
0.5	170.954732	170.954952	170.955208	170.955846	170.956108
1.0	170.954727	170.954965	170.955221	170.955856	170.956109
1.5	170.954724	170.954975	170.955233	170.955865	170.956109
2.0	170.954721	170.954987	170.955252	170.955875	170.956110
2.5	170.954716	170.954998	170.955268	170.955885	170.956110
3.0	170.954714	170.955015	170.955281	170.955893	170.956110
3.5	170.954711	170.954026	170.955295	170.955902	170.956109
4.0	170.954707	170.954035	170.955310	170.955909	170.956109
4.5	170.954703	170.954044	170.955325	170.955916	170.956109
5.0	170.954699	170.954052	170.955345	170.955924	170.956108

Time (min.)	Frequency (MHz)			
	20 °C	30 °C	40 °C	50 °C
0.0	170.956002	170.955894	170.955522	170.955281
0.5	170.956001	170.955890	170.955521	170.955280
1.0	170.956000	170.955870	170.955520	170.955279
1.5	170.955999	170.955883	170.955519	170.955278
2.0	170.955997	170.955876	170.955519	170.955278
2.5	170.955996	170.955875	170.955518	170.955277
3.0	170.955996	170.955871	170.955518	170.955277
3.5	170.955995	170.955867	170.955517	170.955276
4.0	170.955994	170.955865	170.955516	170.955276
4.5	170.955994	170.955863	170.955516	170.955275
5.0	170.955993	170.955860	170.955515	170.955275

Temperature	Maximum Deviation	
	MHz	ppm
-30°C	0.000301	1.76
-20°C	0.000974	5.70
-10°C	0.000345	2.02
0°C	0.000924	5.40
10°C	0.001110	6.49
20°C	0.001002	5.86
30°C	0.000894	5.23
40°C	0.000522	3.05
50°C	0.000281	1.64

EQUIPMENT: Pocket Transceiver  
FCC ID: N4RGPM

### Frequency Stability, continued

#### Variation With Voltage

Time (min.)	Voltage		
	85% STV	STV	115% STV
0.0	170.956000	170.956002	170.955999
0.5	170.956002	170.956001	170.956001
1.0	170.956004	170.956000	170.956001
1.5	170.956005	170.955999	170.955998
2.0	170.956007	170.955997	170.955999
2.5	170.956006	170.955996	170.956001
3.0	170.956010	170.955996	170.956003
3.5	170.956011	170.955995	170.956001
4.0	170.956009	170.955994	170.956002
4.5	170.956012	170.955994	170.955999
5.0	170.956013	170.955993	170.956000

Voltage	Maximum Deviation	
	MHz	ppm
85% STV	0.001013	5.93
100% STV	0.001002	5.86
115% STV	0.001002	5.86

EQUIPMENT: *Pocket Transceiver*

FCC ID: *N4RGPM*

**Section 11. Transient Frequency Behaviour**

NAME OF TEST: Transient Frequency Behaviour	PARA. NO.: 90.214
TESTED BY:	DATE:

**Test Results:** Complies/Does Not Comply.

**Measurement Data:** See attached graphs.

**NOT APPLICABLE**

EQUIPMENT: Pocket Transceiver  
FCC ID: N4RGPM

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## Section 12. Test Equipment List

CAL CYCLE	EQUIPMENT	MANUFACTURER	MODEL	SERIAL	LAST CAL.	NEXT CAL.	
1 Year	Spectrum Analyzer	Hewlett Packard	8565E	FA000981	May 20/98	May 20/99	
1 Year	Attenuator	Narda	768-20	9507	July 24/98	July 24/99	
1 Year	Receiver	Rohde & Schwarz	ESVP	892661/014	Mar. 31/98	Mar. 31/99	
2 Year	Horn Antenna	EMCO #2	3115	4336	Oct. 30/97	Oct. 30/99	
1 Year	Log Periodic Antenna	EMCO	LPA-25	1141	July 27/98	July 27/99	
1 Year	Dipole Antenna Set	EMCO	3121C	1029	Oct. 28/97	Oct. 28/98	
1 Year	Biconical (2) Antenna	EMCO	3109	9503-2894	June 2/98	June 2/99	
1 Year	Low Noise Amplifier	Avantek	AWT-8035	1005	Aug. 4/98	Aug. 4/99	

NA: Not Applicable  
NCR: No Cal Required



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ANNEX A

*EQUIPMENT: Pocket Transceiver*  
*FCC ID: N4RGPM*

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**ANNEX A**  
**TEST METHODOLOGIES**

*EQUIPMENT: Pocket Transceiver*  
*FCC ID: N4RGPM*

**NAME OF TEST: RF Power Output****PARA. NO.: 2.985****Minimum Standard:**

Para. No. 90.205(a). The maximum allowable station ERP is dependent upon the stations HAAT and required service area and will be authorized in accordance with Table 1 of 90.205(d).

**Method Of Measurement:**Detachable Antenna:

The peak power at antenna terminals is measured using an in-line peak power meter. Power output is measured with the maximum rated input level.

Integral Antenna:

If the antenna is not detachable from the circuit then the Peak Power Output is derived from the peak radiated field strength of the fundamental emission by using the plane wave relation  $GP/4\pi R^2 = E^2/120\pi$  and proceeding as follows:

$$P = \frac{E^2 R^2}{30G} = \frac{E^2 3^2}{30G}$$

where,

P = the equivalent isotropic radiated power in watts

E = the maximum measured field strength in V/m

R = the measurement range (3 meters)

G = the numeric gain of the transmit antenna in relation to an isotropic radiator

*EQUIPMENT: Pocket Transceiver*  
*FCC ID: N4RGPM*

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**NAME OF TEST: Audio Frequency Response**

**PARA. NO.: 2.987(a)**

**Test Method:** TIA/EIA-603

**Minimum Standard:** TIA/EIA-603, Para. 3.2.6 from 300 Hz to 3000 Hz. The transmitter audio frequency response shall have a nominal 6 dB per octave pre-emphasis characteristic.

**NAME OF TEST: Audio Low-Pass Filter Frequency Response**

**PARA. NO.: 2.987(a)**

**Test Method:** TIA/EIA-603

**Minimum Standard:** TIA/EIA-603

**NAME OF TEST: Modulation Limiting**

**PARA. NO.: 2.987(a)**

**Test Method:** TIA/EIA-603

**Minimum Standard:** TIA/EIA-603

EQUIPMENT: Pocket Transceiver

FCC ID: N4RGPM

NAME OF TEST: Occupied Bandwidth

PARA. NO.: 2.989

Minimum Standard: Para. No. 90.210, see table 1 below for applicable mask.

Table 1

Frequency Band (MHz)	Mask for equipment with Low Pass Filter	Mask for equipment without Low Pass Filter
Below 25	A or B	A or C
25 - 50	B	C
72 - 76	B	C
150 - 174	B, D or E	C, D or E
150 Paging only	B	C
220 - 222	F	F
421 - 512	B, D or E	C, D or E
450 paging only	B	H
806 - 821/ 851 - 866	B	G
821 - 824/ 866 - 869	B	H
896 - 901/ 935 - 940	I	J
902 - 928	K	K
929 - 930	B	G
Above 940	B	C
All other bands	B	C

**Test Method:**

RBW: 1% of emission bandwidth in 0 - 1 GHz range. 1 MHz at frequencies above 1 GHz.

VBW:  $\Rightarrow$  RBW

The spectrum is search up to 10 times the fundamental frequency.

EQUIPMENT: Pocket Transceiver  
FCC ID: N4RGPM

NAME OF TEST: Field Strength of Spurious

PARA. NO.: 2.993

Minimum Standard: Para. No. 90.210, see table 1 for applicable mask.

## Calculation of Field Strength Limit

An example of attenuation requirement of  $50 + 10 \log P$  is equivalent to -20 dBm ( $1 \times 10^{-5}$  Watts) at the antenna terminal. We determine the field strength limit by using the plane wave relation.

$$GP/4\pi R^2 = E^2/120\pi$$

For emissions  $\leq 1$  GHz:

G = 1.64 (Dipole Gain)

P =  $10^{-5}$  Watts (Maximum spurious output power)

R = 3m (Measurement Distance)

$$E = \frac{\sqrt{30GP}}{R} = E = \frac{\sqrt{30 \times 1.64 \times 10^{-5}}}{3} = 0.00739 \text{ V/m} = 77.4 \text{ dB}\mu\text{V/m}$$

For emissions  $> 1$  GHz:

G = 1 (Isotropic Gain)

P =  $1 \times 10^{-5}$  Watts (Maximum spurious output power)

R = 3m (Measurement Distance)

$$E = 77.4 - 20 \log \sqrt{1.64} = 75.2 \text{ dB}\mu\text{V/m@3m}$$

MASK	Spurious Limit	FS Limit Below 1 GHz	FS Limit Above 1 GHz
A,B,C,G,H,I	-13dBm	84.4 dB $\mu$ V/m@3m	82.2 dB $\mu$ V/m@3m
D,J	-20dBm	77.4 dB $\mu$ V/m@3m	75.2 dB $\mu$ V/m@3m
E,F,K	-25dBm	72.4 dB $\mu$ V/m@3m	70.2 dB $\mu$ V/m@3m

EQUIPMENT: Pocket Transceiver  
FCC ID: N4RGPM

**NAME OF TEST: Frequency Stability****PARA. NO.: 2.995**

**Minimum Standard:** Para. No. 990.213. The transmitter carrier frequency shall remain within the assigned frequency below in ppm.

**Table 2**

Frequency Band (MHz)	Fixed And Base Stations	Mobile Stations	
		> 2 Watts o/p pwr	< 2 Watts o/p pwr
Below 25	100	100	200
25 - 50	20	20	50
72 - 76	5	-	50
150 - 174	5	5	5
220 - 222	0.1	1.5	1.5
421 - 512	2.5	5	5
806 - 821	1.5	2.5	2.5
821 - 824	1.0	1.5	15
851 - 866	1.5	2.5	2.5
866 - 869	1.0	1.5	1.5
869 - 901	0.1	1.5	1.5
902 - 928	2.5	2.5	2.5
929 - 930	1.5	-	-
935 - 940	0.1	1.5	1.5
1427 - 1435	300	300	300
Above 2450	-	-	-

**NAME OF TEST: Transient Frequency Behaviour****PARA. NO.: 2.214****Minimum Standard:****Transient Frequency Behaviour for Equipment Designed to Operate on 25 kHz Channels**

Time intervals <sup>1,2</sup>	Maximum Frequency difference <sup>3</sup> (kHz)	Frequency ranges (MHz) All equipment					
		Base station and portable radios			Mobile Radios		
		150 - 174 (ms)	450 - 500 (ms)	500 - 512 (ms)	150 - 174 (ms)	450 - 500 (ms)	500 - 512 (ms)
t <sub>1</sub> <sup>4</sup>	± 25	5.0	10.0	20.0	5.0	10.0	5.0
t <sub>2</sub>	± 12	20.0	25.0	50.0	20.0	25.0	20.0
t <sub>3</sub> <sup>4</sup>	± 25	5.0	10.0	10.0	5.0	10.0	5.0

**Transient Frequency Behaviour for Equipment Designed to Operate on 12.5 kHz & 6.25 kHz Channels**

Time intervals <sup>1,2</sup>	Maximum Frequency difference <sup>3</sup> (kHz)	Frequency ranges (MHz) All equipment		
		150 - 174 (ms)	450 - 500 (ms)	500 - 512 (ms)
t <sub>1</sub> <sup>4</sup>	± 12.5 / ± 6.25	5.0	10.0	20.0
t <sub>2</sub>	± 6.25 / ± 3.125	20.0	25.0	50.0
t <sub>3</sub> <sup>4</sup>	± 12.5 / ± 6.25	5.0	10.0	10.0

**KTL Ottawa**

FCC PART 90, SUBPART I  
PRIVATE LAND MOBILE TRANSMITTER  
PROJECT NO.: 8R00429.3  
ANNEX B

*EQUIPMENT: Pocket Transceiver*  
*FCC ID: N4RGPM*

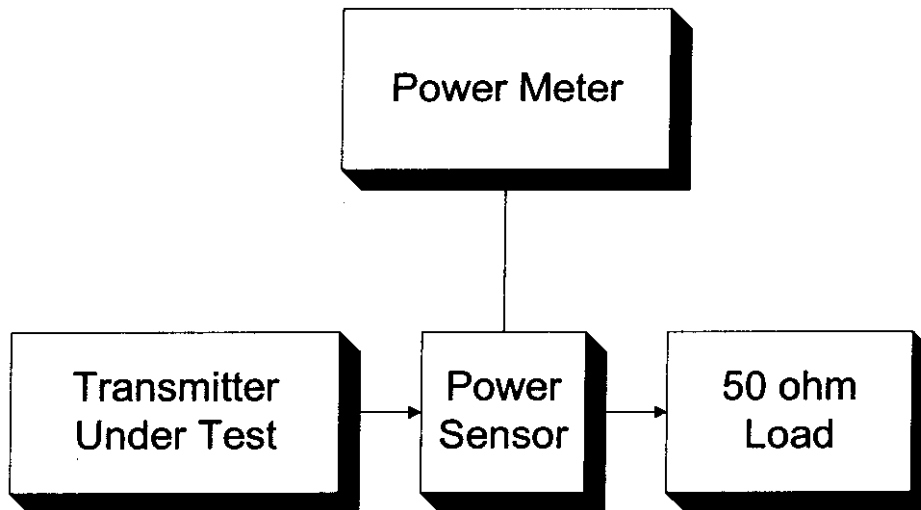
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**ANNEX B**  
**TEST DIAGRAMS**

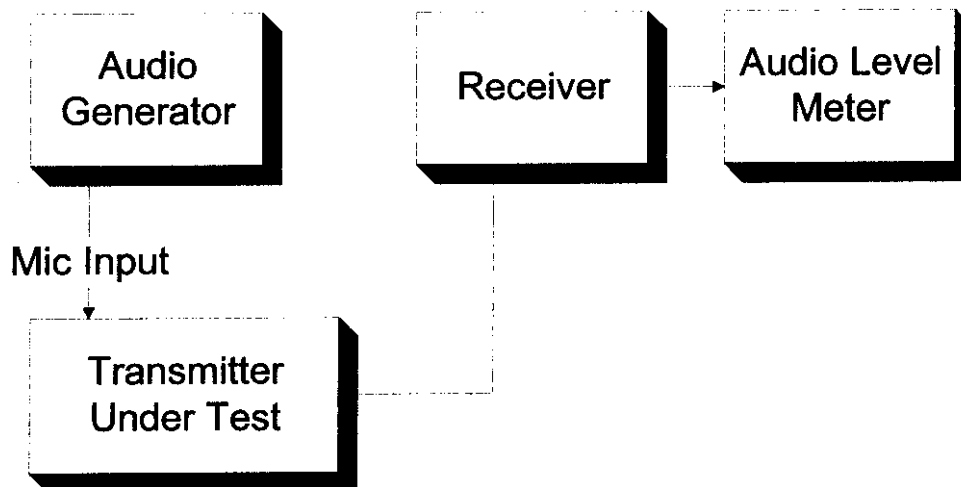
*EQUIPMENT: Pocket Transceiver*  
*FCC ID: N4RGPM*

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**Para. No. 2.985 - R.F. Power Output**



**Para. No. 2.987(a) - Audio Frequency Response**

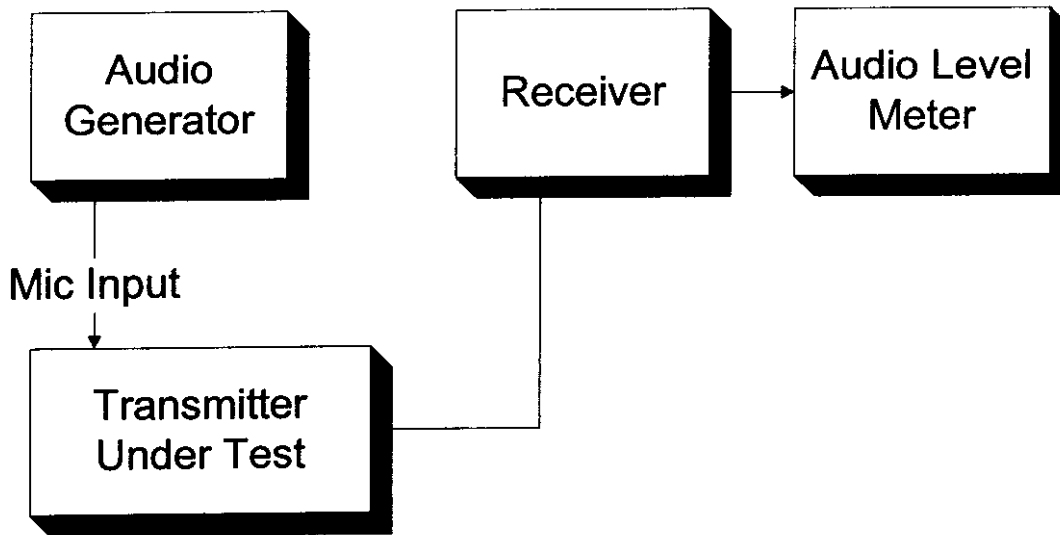




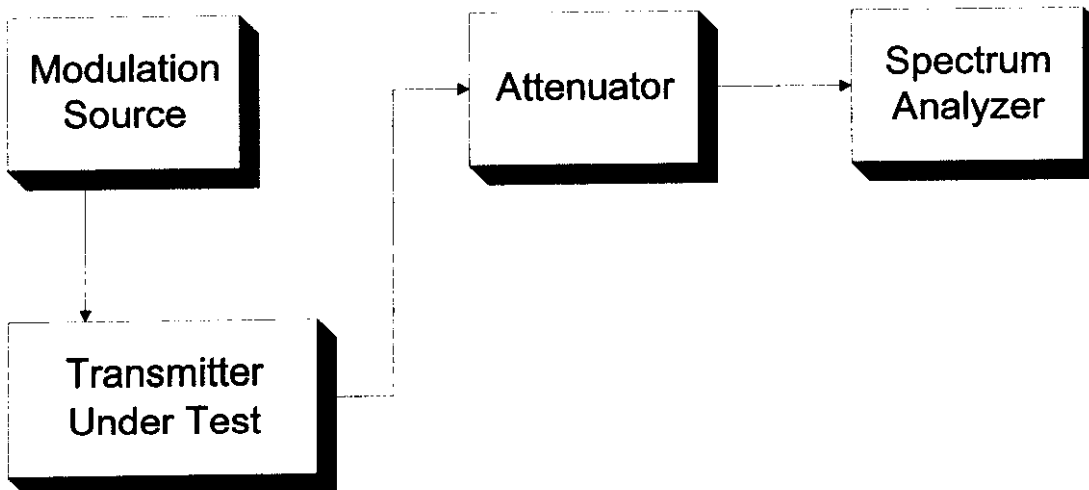
EQUIPMENT: Pocket Transceiver  
FCC ID: N4RGPM

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**Para. No. 2.987(b) - Modulation Limiting**

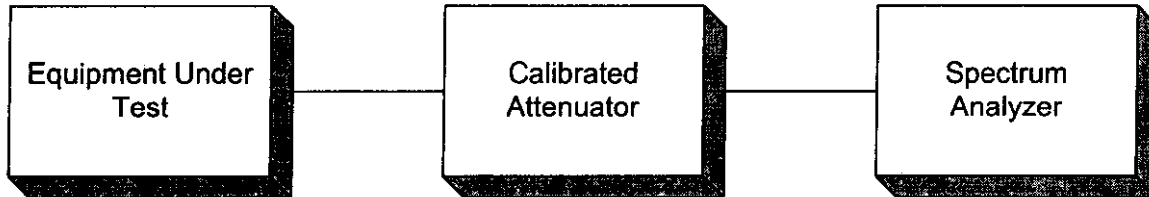


**Para. No. 2.989 - Occupied Bandwidth**

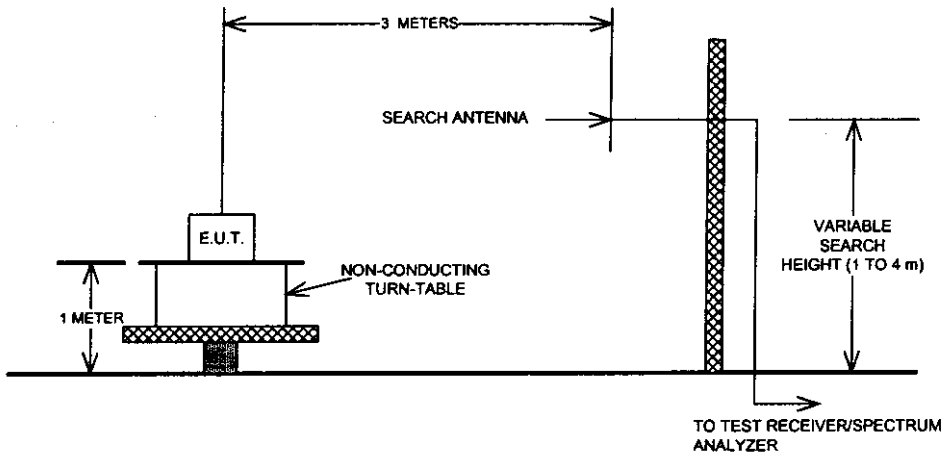


*EQUIPMENT: Pocket Transceiver*  
*FCC ID: N4RGPM*

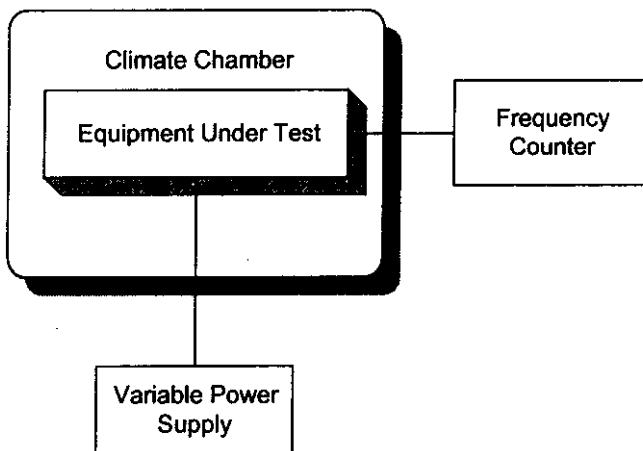
**Para. No. 2.991 - Spurious Emissions at Antenna Terminals**



**Para. No. 2.993 - Field Strength of Spurious Radiation**



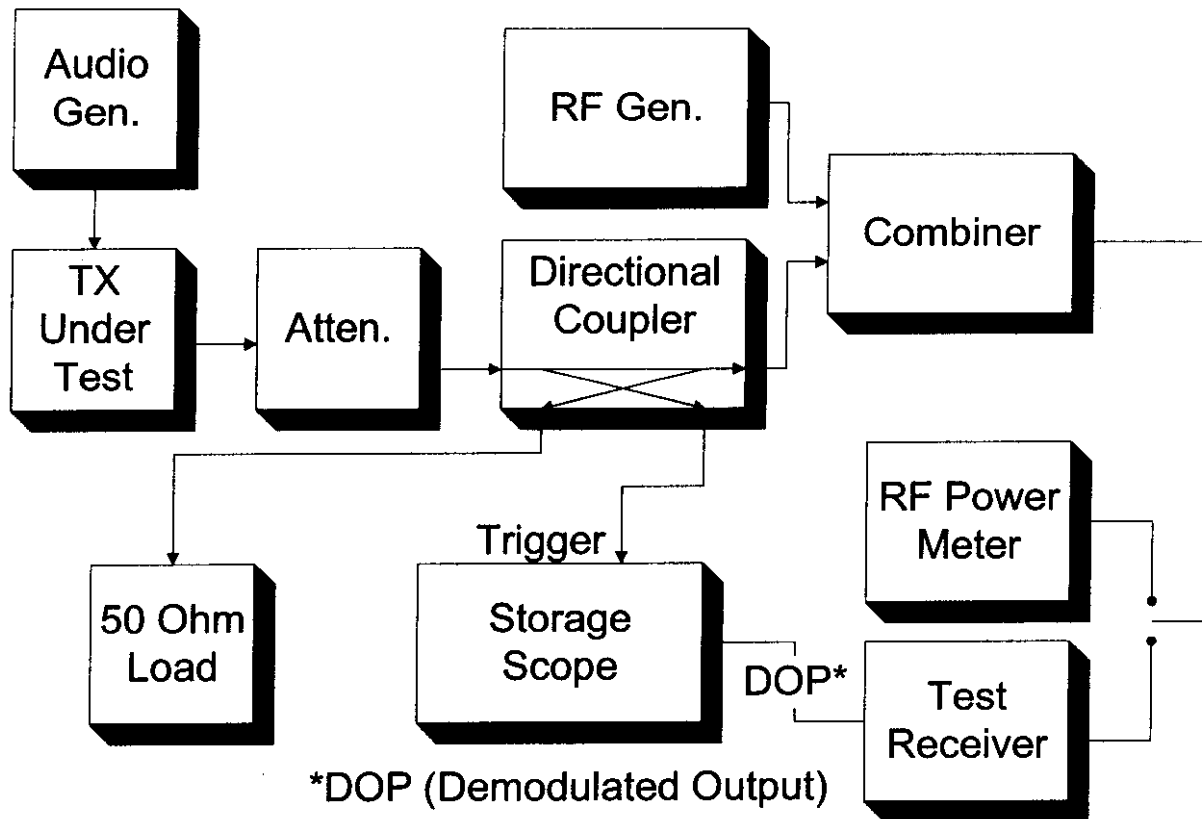
**Para. No. 2.995 - Frequency Stability**



EQUIPMENT: Pocket Transceiver  
FCC ID: N4RGPM

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**Para. No. 90.214 - Transient Frequency Behaviour**



**Voice**

This measurement was made using measurement procedure TIA/EIA Land Mobile FM or PM Communications Equipment Measurement and Performance Standards TIA/EIA-603 February 1993 Telecommunications Industry Association (American National Standard ANSI/TIA/EIA-603-1992 Approved: October 27, 1992) Para. no. 2.2 Methods of Measurement for Transmitters Para. no. 2.2.19 Transient Frequency Behaviour (page no. 83).

**Data**

This measurement was made using measurement procedure TIA/EIA Digital C4FM/CQPSK Transceiver Measurement Methods TSB102.CAAA Para. no. 2.2.17 Transient Frequency Behaviour (page no. 74).