

## GENERAL INFORMATION REQUIREMENTS

### *Paragraph 2.983(a)*

Name of Applicant: Nucomm, Inc.  
Address of Applicant: 101 Bilby Road  
Hackettstown, NJ 07840  
Name of Manufacturer: Nucomm, Inc.

### *Paragraph 2.983(b)*

Equipment  
Identification: **FCC ID: I4U2713MMPT3-12-1**

Para. 2.1051  
Spurious Emissions at Antenna Terminals

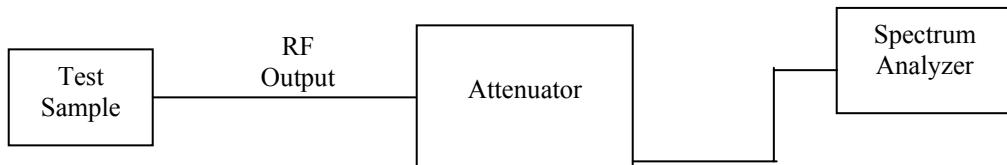
Applicant: Nucomm, Inc.  
FCC ID: I4U2713MMPT3-12-1  
Retlif Testing Laboratories Report No.: R-9761

## Spurious Emissions at Antenna Terminals (Para. 2.1051)

### A. Measurement Procedure:

The RF output of the transmitter was directly coupled through attenuators to the input of a spectrum analyzer. With the transmitter on, the spectrum analyzer was swept from 30 MHz to 18 GHz. (Emissions above 18 GHz were measured during spurious case radiated emissions due to limitations in this set-up. i.e.: RG223 cable only rated to 18 GHz). It was verified that all emissions not associated with the fundamental transmission were at least  $43 + 10 \log (P)$  down from the fundamental transmit power level (P).

Setup of the test is shown below:



### B. Test Results:

The results for the above test are submitted as a separate attachment named AntCe.pdf.

Para. 2.1053

FIELD STRENGTH of SPURIOUS EMISSIONS, EFFECTIVE RADIATED POWER

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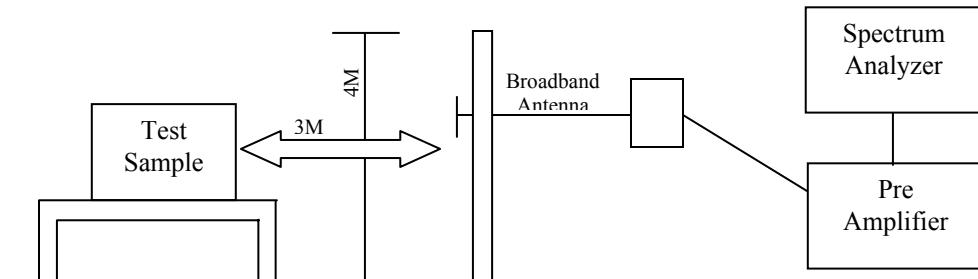
## FIELD STRENGTH of SPURIOUS EMISSIONS, EFFECTIVE RADIATED POWER (Para. 2.1053)

### A. Measurement Procedure:

The spurious emissions of the transmitter from 10 kHz to 40 GHz were measured in accordance with TIA/EIA603, Paragraph 2.2.1.2 as described below:

The transmitter under test was placed on an 80-cm high non-metallic table on the Open Air Test Site with its antenna terminated into a shielded load. A receive antenna was placed three meters away from the transmitter. The turntable was rotated 360 degrees and the receive antenna was raised and lowered from 1 to 4 meters until a maximum reading was obtained at each spurious emission detected. This reading was recorded. The transmitter under test was replaced with a dipole (or equivalent antenna) and signal generator. The signal generator was set to the frequency for the spurious emission. The level of the signal generator was increased until the level was equal to that previously measured. The required input level from the signal generator in dBm was recorded and the antenna gain (in dB) of the transmit antenna was added. This was the Effective Radiated Power of the spurious emission.

Setup of the test is shown below:



### A. Test Results:

The results for the above test are submitted as a separated attachment named Respur1.pdf, Respur2.pdf and Respur3.pdf.

## EQUIPMENT LISTS

### Antenna Conducted Emissions, 30 MHz to 18 GHz

<b>EN</b>	<b>Type</b>	<b>Manufacturer</b>	<b>Description</b>	<b>Model No.</b>	<b>Cal Date</b>	<b>Due Date</b>
068	Attenuator	Weinschel	DC - 18 GHz	48-30-43	4/11/02	4/11/03
572	10db attenuator	Pasternack	DC - 18GHz	PE7019-10	8/23/02	8/23/03
589A	3 dB Attenuator	JFW Inc.	DC - 1 GHz, 200W	50FH-003-200	7/22/02	7/22/03
712	EMI Test Receiver	Rohde & Schwarz	20 Hz - 26.5 GHz	ESI26	9/20/02	9/20/03

### Spurious Radiated Emissions, 18 GHz to 75 GHz

<b>EN</b>	<b>Type</b>	<b>Manufacturer</b>	<b>Description</b>	<b>Model No.</b>	<b>Cal Date</b>	<b>Due Date</b>
068	Attenuator	Weinschel	DC - 18 GHz	48-30-43	4/11/02	4/11/03
129E	High Gain Horn Antenna	Microlab/FXR	18 GHz - 26.5 GHz	K638A	9/11/02	9/11/03
129G	High Gain Horn Antenna	Microlab/FXR	26.5 GHz - 40 GHz	U638A	9/11/02	9/11/03
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	1/23/03	7/23/03
141A	Graphics Plotter	Hewlett Packard	N/A	7470A	3/5/03	3/5/04
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	1/23/03	7/23/03
420	Amplifier	Hewlett Packard	2.0 GHz - 18 GHz	11975A	9/9/02	9/9/03
421	Harmonic Mixer	Hewlett Packard	18 GHz - 26.5 GHz	11970K	9/29/00	9/29/03
421A	Harmonic Mixer	Hewlett Packard	26.5 GHz - 40 GHz	11970A	9/29/00	9/29/03
421B	Harmonic Mixer	Hewlett Packard	40 GHz - 60 GHz	11970U	9/29/00	9/29/03
421C	Harmonic Mixer	Hewlett Packard	50 GHz - 75 GHz	11970V	9/29/00	9/29/03
572	10db attenuator	Pasternack	DC - 18GHz	PE7019-10	8/23/02	8/23/03

### TIA/EIA-603-1992 Section 2.2.12 Radiated Spurious Emissions (30MHz - 18GHz)

<b>EN</b>	<b>Type</b>	<b>Manufacturer</b>	<b>Description</b>	<b>Model No.</b>	<b>Cal Date</b>	<b>Due Date</b>
067	Open Area Test Site	Retlif	3 Meter	RNY	09/20/2000	09/20/2003
068	Attenuator	Weinschel	DC - 18 GHz	48-30-43	04/11/2002	04/11/2003
128	Double Ridged Guide	Electro-Mechanics	1 GHz - 18 GHz	3105	06/07/2002	06/07/2003
129D	High Gain Horn Antenna	Microlab/FXR	12.4 GHz - 18 GHz	Y638A	09/25/2002	09/25/2003
133	Broadband Pre-Amplifier	Electro-Metrics	10 kHz - 1 GHz, 26dB	BPA-1000	06/11/2002	06/11/2003
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	01/23/2003	07/23/2003
141A	Graphics Plotter	Hewlett Packard	N/A	7470A	03/05/2003	03/05/2004
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	01/23/2003	07/23/2003
151	Wide Range Oscillator	Hewlett Packard	5 Hz - 600 kHz	200CDR	01/13/2003	01/13/2004
206B	6.0 dB Attenuator	Texscan	0 - 1.0 GHz	FP-50 - 6 dB	06/11/2002	06/11/2003
451C	Tuned Dipole Antenna	Empire Devices	400 - 1000 MHz	DM-105-T3	08/08/2000	08/08/2003
543	Preamplifier	Hewlett Packard	1.0 GHz - 26.5 GHz	8449B	07/11/2002	07/11/2003
572	10db attenuator	Pasternack	DC - 18GHz	PE7019-10	08/23/2002	08/23/2003
654	Attenuator	Weinschel		AF117A-69-11	03/13/2002	03/13/2003
711	Microwave Sweeper	Gigatronics	500 MHz - 20 GHz	GT9000S/5-20	10/17/2002	10/17/2003
762	AM/FM Signal Generator	Marconi Instru.	10 kHz - 1.2 GHz	2023	07/29/2002	07/29/2003
767	Biconilog	EMCO	26 - 2000 MHz	3142B	09/03/2002	09/03/2003

## TEST SETUP PHOTOGRAPHS



Applicant: Nucomm, Inc.  
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Equipment Photographs  
RF Amp

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Equipment Photographs  
Control Unit

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