



Measurement of RF Interference from a  
Model Prophet LAN Transceiver

For : Supplynet Communications.  
Schaumburg, IL

P.O. No. : 102353

Date Received: February 20, 2006

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Test Personnel: Richard E. King EMC Engineer

Specification : FCC "Code of Federal Regulations" Title 47  
Part 15, Subpart B and  
Subpart C, Section 15.249

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**THIS REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF ELITE ELECTRONIC ENGINEERING INCORPORATED.**



REVISION HISTORY

Revision	Date	Description
—	03/27/2006	Initial release

## Measurement of RF Emissions from a Prophet LAN Transceiver

### **1.0 INTRODUCTION:**

**1.1 Description of Test Item** - This document presents the results of the series of radio interference measurements performed on a Prophet LAN Transceiver, (hereinafter referred to as the test item) No serial numbers were assigned.

The test item is used for monitoring a tank's levels. The test item is setup as either a transmitter or receiver. The transmitter was designed to transmit in the 902-928 MHz ISM band. The receiver is a super heterodyne type. The receiver contained one local oscillator with its IF at 10.7MHz. It uses an integral antenna.

The test item was submitted for testing by Supplynet Communications located in Schaumburg, IL.

**1.2 Purpose** - The test series was performed to determine if the test item meets the conducted and radiated RF emission requirements of the FCC "Code of Federal Regulations" Title 47, Part 15, Subpart B, 15.107 and 15.109 for receivers, and Subpart C, 15. 207 and 15.249 for Intentional Radiators. Testing was performed in accordance with ANSI C63.4-2004.

**1.3 Deviations, Additions and Exclusions** - There were no deviations, additions to, or exclusions from the test specification during this test series.

**1.4 Applicable Documents** - The following documents of the exact issue designated form part of this document to the extent specified herein:

- Federal Communications Commission "Code of Federal Regulations", Title 47, Part 15, dated 1 October 2005
- ANSI C63.4-2004, "American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz"

**1.5 Laboratory Identification** - This series of tests was performed by Elite Electronic Engineering Incorporated of Downers Grove, Illinois. The laboratory is accredited by the National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP). NVLAP Lab Code: 100278-0.

**1.6 Laboratory Conditions** The temperature at the time of the test was 22.7°C and the relative humidity was 16%.

**2.0 TEST ITEM SET-UP AND OPERATION:**

The test item is a Prophet LAN transceiver. A block diagram of the test item set-up is shown as Figure 1.

**2.1 Power Input** - The test item was powered with 9VDC via three 3VDC lithium batteries. There are no connections to AC sources with chargers or otherwise.

**2.2 Grounding** - The test item was ungrounded during testing.

**2.3 Peripheral Equipment** - The test item has no peripheral equipment.

**2.4 Interconnect Cables** - The test item has no interconnect cables or ports.

**2.5 Operational Mode** - Separate units were provided for the receiver and the transmitter tests.

The receiver unit was setup to receive when it powered up. The transmitter unit was setup to continuously transmit when it powered up.

**2.5.1 Test Frequencies:** The following low, middle and high test frequencies were used as required for frequency range greater than 10 MHz:

Frequency Range	Transmit	903.168 MHz lowest channel available.	Channel 1
		911.769 MHz Mid channel	Channel 8
		918.323 MHz High Channel	Channel 15
	Receive	903.168 MHz lowest channel available.	Channel 1
		911.769 MHz Mid channel	Channel 8
		918.323 MHz High Channel	Channel 15

**2.5.2 Modulation:** The test item uses frequency shift keying (FSK) modulation.

**2.6 Test Item Modifications** - No modifications were required for compliance.

**3.0 TEST EQUIPMENT:**

**3.1 Test Equipment List** - A list of the test equipment used can be found on Table I. All equipment was calibrated per the instruction manuals supplied by the manufacturer.

**3.2 Calibration Traceability** Test equipment is maintained and calibrated on a regular basis. All calibrations are traceable to the National Institute of Standards and Technology (NIST).

**3.3 Measurement Uncertainty** - All measurements are an estimate of their true value. The measurement uncertainty characterizes, with a specified confidence level, the spread of values which may be possible for a given measurement system.

The measurement uncertainty for these tests is presented below:



Conducted Emission Measurements		
Combined Standard Uncertainty	1.07	-1.07
Expanded Uncertainty (95% confidence)	2.1	-2.1

Radiated Emission Measurements		
Combined Standard Uncertainty	2.26	-2.18
Expanded Uncertainty (95% confidence)	4.5	-4.4

**4.0 REQUIREMENTS, PROCEDURES AND RESULTS:**

**4.1 Powerline Conducted Emissions** Since the test item was powered by internal batteries, no conducted emissions tests were performed.

**4.2 Radiated Measurements**

**4.2.1 Receiver**

**4.2.1.1 Requirements** - All emanations from a receiver shall be below the levels shown on the following table:

**RADIATED EMISSION LIMITS FOR RECEIVER**

Frequency MHz	Test Distance in Meters	Field Strength uV/m	Field Strength dBuV/m
30-88	3	100	40
88-216	3	150	43.5
216-960	3	200	46
Above 960	3	500	54

Note: The tighter limit shall apply at the edge between the two frequency bands.

**4.2.1.2 Procedures** - All tests were performed in a 32ft. x 20ft. x 18ft. hybrid ferrite-tile/anechoic absorber lined test chamber. The walls and ceiling of the shielded chamber are lined with ferrite tiles. Anechoic absorber material is installed over the ferrite tile. The floor of the chamber is used as the ground plane. The chamber complies with ANSI C63.4 2004 for site attenuation.

The shielded enclosure prevents emissions from other sources, such as radio and TV stations from interfering with the measurements. All powerlines and signal lines entering the enclosure pass through filters on the enclosure wall. The powerline filters prevent extraneous signals from entering the enclosure on these leads.

Since quasi-peak and average measurements require long integration times, it is not practical to automatically sweep through the quasi-peak or average levels. Therefore, radiated emissions from the

test item were first scanned using a peak detector and automatically plotted. The frequencies where significant emission levels were noted were then remeasured using the quasi-peak detector.

For preliminary radiated emissions sweeps from 30MHz to 5GHz, the broadband measuring antenna was positioned at a 3 meter distance from the test item. The frequency range from 30MHz to 5GHz was investigated using a peak detector function with the bilog antenna below 1GHz and the double-ridged waveguide antenna above 1GHz. The maximum levels were plotted.

Final radiated emissions were performed on all significant broadband and narrowband emissions found in the preliminary sweeps using the following methods:

- 1) Measurements below 1GHz were made using a quasi-peak detector and a bilog antenna. Measurements above 1GHz were made using an average detector and a double ridged waveguide antenna.
- 2) To ensure that maximum or worst case, emission levels were measured, the following steps were taken:
  - a) The test item was rotated so that all of its sides were exposed to the receiving antenna.
  - b) Since the measuring antenna is linearly polarized, both horizontal and vertical field components were measured.
  - c) The measuring antenna was raised and lowered from 1 to 4 meters for each antenna polarization to maximize the readings.

**4.2.1.3 Results** - The preliminary plots are presented on pages 15 through 20. The plots are presented for a reference only, and are not used to determine compliance. The final radiated

levels are presented on pages 21 through 23. As can be seen from the data, all emissions measured from the test item were within the specification limits for receivers. The emissions level closest to the limit (worst case) occurred at 3604.4MHz. The emissions level at this frequency was 8.3dB within the limit. Photographs of the test item setup are shown in Figures 2 and 3.

#### **4.2.2 Transmitter -**

**4.2.2.1 Requirements** - The radiated emissions from the transmitter shall be below the levels shown on the following table:

#### **RADIATED EMISSION LIMITS FOR ISM TRANSMITTER**



TX Frequency MHz	Test Distance in Meters	Field Strength for Fundamnetal mV/m	Field Strength for Harmonics and Spurious uV/m
902-928	3	50	500

In addition, emissions appearing in the Restricted Bands of Operation listed in paragraph 15.205(a) shall not exceed the general requirements shown in paragraph 15.209. Also, emissions radiated outside the specified frequency band, except for harmonics, shall be attenuated by at least 50dB below the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

**4.2.2.2 Procedures** - All measurements were performed in a 32ft. x 20ft. x 14ft. high shielded enclosure. The shielded enclosure prevents emissions from other sources, such as radio and TV stations from interfering with the measurements. All powerlines and signal lines entering the enclosure pass through filters on the enclosure wall. The powerline filters prevent extraneous signals from entering the enclosure on these leads. The floor of the chamber is used as the ground plane. The chamber complies with ANSI C63.4-2004 for site attenuation.

A preliminary radiated emissions test was performed to determine the emission characteristics of the test item. For the preliminary test, a broadband measuring antenna was positioned at a 3 meter distance from the test item. The entire frequency range from 30MHz to 10.0GHz was investigated using a peak detector function. The data was then processed by the computer to calculate equivalent field intensity.

The final open field emission tests were then manually performed over the frequency range of 30MHz to 10.0GHz. Between 30MHz and 1000MHz, a tuned dipole antenna was used as the pick-up device. A broadband double ridged waveguide antenna was used as the pick-up device for all frequencies above 1GHz. All significant broadband and narrowband signals were measured and recorded.

To ensure that maximum or worst case, emission levels were measured, the following steps were taken:

- (1) The test item was rotated so that all of its sides were exposed to the receiving antenna.
- (2) Since the measuring antenna is linearly polarized, both horizontal and vertical field components were measured.
- (3) The measuring antenna was raised and lowered from 1 to 4 meters for each antenna polarization to maximize the readings.
- (4) For hand-held or body-worn devices, the test item was rotated through three





orthogonal axes to determine which orientation produces the highest emission relative to the limit.

**4.2.2.3 Results** - The preliminary plots are presented on pages 24 through 29. The plots are presented for a reference only, and are not used to determine compliance. The final radiated levels are presented on data pages 30 through 32. As can be seen from the data, all emissions measured from the test item were within the specification limits for transmitters. The emissions level closest to the limit (worst case) occurred at 911.1MHz. The emissions level at this frequency was 0.7dB within the limit. Photographs of the test item setup are shown in Figures 2 and 3.

### **4.3 Occupied Bandwidth Measurements**

**4.3.1 Requirement** - In accordance with paragraph 15.249(d), all emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuate by at least 50dB below the level of the fundamental or to the general radiated emissions limits in 15.209, which ever is the lesser attenuation.

**4.3.2 Procedures** The test item was placed on an 80cm high non-conductive stand. The unit was set to transmit continuously. With an antenna positioned nearby, occupied bandwidth emissions were displayed on the spectrum analyzer. The resolution bandwidth was set to 100 kHz and span was set to 30 MHz. The frequency spectrum near the fundamental was plotted.

**4.3.3 Results** - - The plot of the emissions near the fundamental frequency is presented on data pages 33 through 35. As can be seen from this data page, the transmitter met the occupied bandwidth requirements. In addition, the 99% emission bandwidth measured 120 kHz when using the analyzer's special function key with the measurement BW set to 30 kHz.

## **5.0 CONCLUSIONS:**

It was determined that the Supplynet Communications Prophet LAN transceiver did fully meet the conducted and radiated emission requirements of the FCC "Code of Federal Regulations" Title 47, Part 15, Subpart B, Sections 15.107 and 15.109 for receivers when tested per ANSI C63.4-2004. and the conducted and radiated emission requirements of the FCC "Code of Federal Regulations" Title 47, Part 15, Subpart C, Sections 15.207 and 15.249 for Intentional Radiators when tested per ANSI C63.4-2004.

## **6.0 CERTIFICATION:**

Elite Electronic Engineering Incorporated certifies that the information contained in this report was obtained under conditions which meet or exceed those specified in the test specifications.

The data presented in this test report pertains to the test item at the test date. Any electrical or



mechanical modification made to the test item subsequent to the specified test date will serve to invalidate the data and void this certification.

**7.0 ENDORSEMENT DISCLAIMER:**

This report must not be used to claim product endorsement by NVLAP or any agency of the US Government.



TABLE I: TEST EQUIPMENT LIST

ELITE ELECTRONIC ENG. INC.

Page: 1

Eq ID	Equipment Description	Manufacturer	Model No.	Serial No.	Frequency Range	Cal Date	Cal Inv	Due Date
Equipment Type: ACCESSORIES, MISCELLANEOUS								
XZG0	ATTENUATOR/SWITCH DRIVER	HEWLETT PACKARD	11713A	3439A02724	---		N/A	
Equipment Type: AMPLIFIERS								
APK0	PRE-AMPLIFIER	HEWLETT PACKARD	8449B	3008A00662	1-26.5GHZ	03/06/06	12	03/06/07
Equipment Type: ANTENNAS								
NDQ1	TUNED DIPOLE ANTENNA	EMCO	3121C-DB4	313	400-1000MHZ	03/10/06	12	03/10/07
NTA0	BIBLOG ANTENNA	CHASE EMC LTD.	BIBLOG CBL611	2057	0.03-2GHZ	08/15/05	12	08/15/06
NWHO	RIDGED WAVE GUIDE	SENSOR	4105	2081	1-12.4GHZ	10/01/05	12	10/01/06
Equipment Type: CONTROLLERS								
CDS2	COMPUTER	GATEWAY	MFATXPNT	NMZ 0028483108	1.8GHZ		N/A	
CMA0	MULTI-DEVICE CONTROLLER	EMCO	2090	9701-1213	---		N/A	
Equipment Type: PRINTERS AND PLOTTERS								
HRE1	LASER JET 5P	HEWLETT PACKARD	C3150A	USHB061052	---		N/A	
Equipment Type: RECEIVERS								
RAC1	SPECTRUM ANALYZER	HEWLETT PACKARD	85660B	3407A08369	100HZ-22GHZ	02/13/06	12	02/13/07
RACB	RF PRESELECTOR	HEWLETT PACKARD	85685A	3506A01491	20HZ-2GHZ	02/13/06	12	02/13/07
RAF3	QUASI PEAK ADAPTER	HEWLETT PACKARD	85650A	3303A01775	0.01-1000MHZ	02/13/06	12	02/13/07
RAK1	RF SECTION	HEWLETT PACKARD	85462A	3411A00181	0.009-6500MHZ	02/20/06	12	02/20/07
RAKJ	RF FILTER SECTION	HEWLETT PACKARD	85460A	3330A00154	---	02/20/06	12	02/20/07

Cal. Interval: Listed in Months I/O: Initial Only N/A: Not Applicable

Note 1: For the purpose of this test, the equipment was calibrated over the specified frequency range, pulse rate, or modulation prior to the test or monitored by a calibrated instrument.

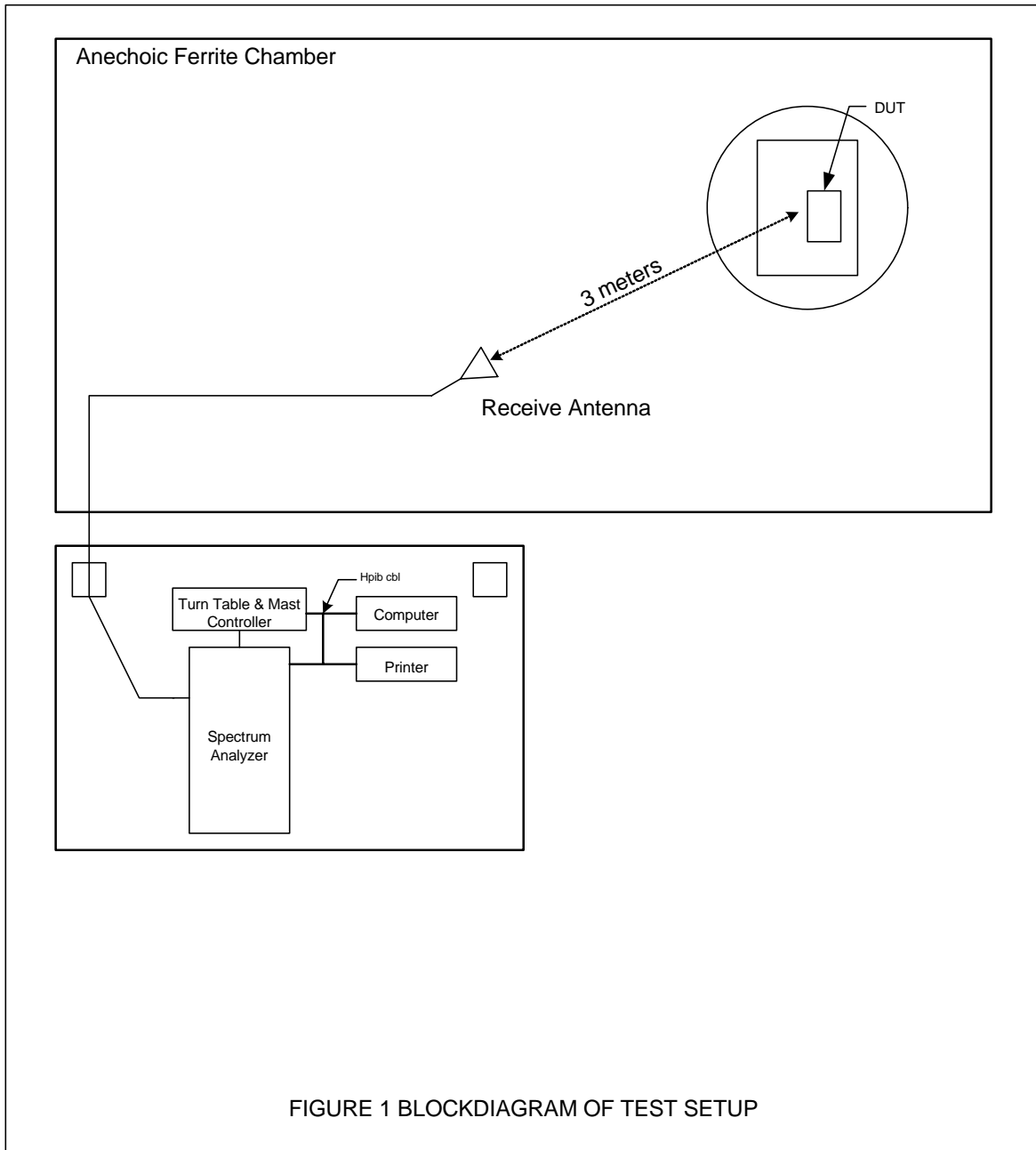


Figure 2



Test Set-up for Radiated Emissions of the Transmitter and Receiver – Horizontal Polarization



Test Set-up for Radiated Emissions of the Transmitter and the Receiver – Vertical Polarization

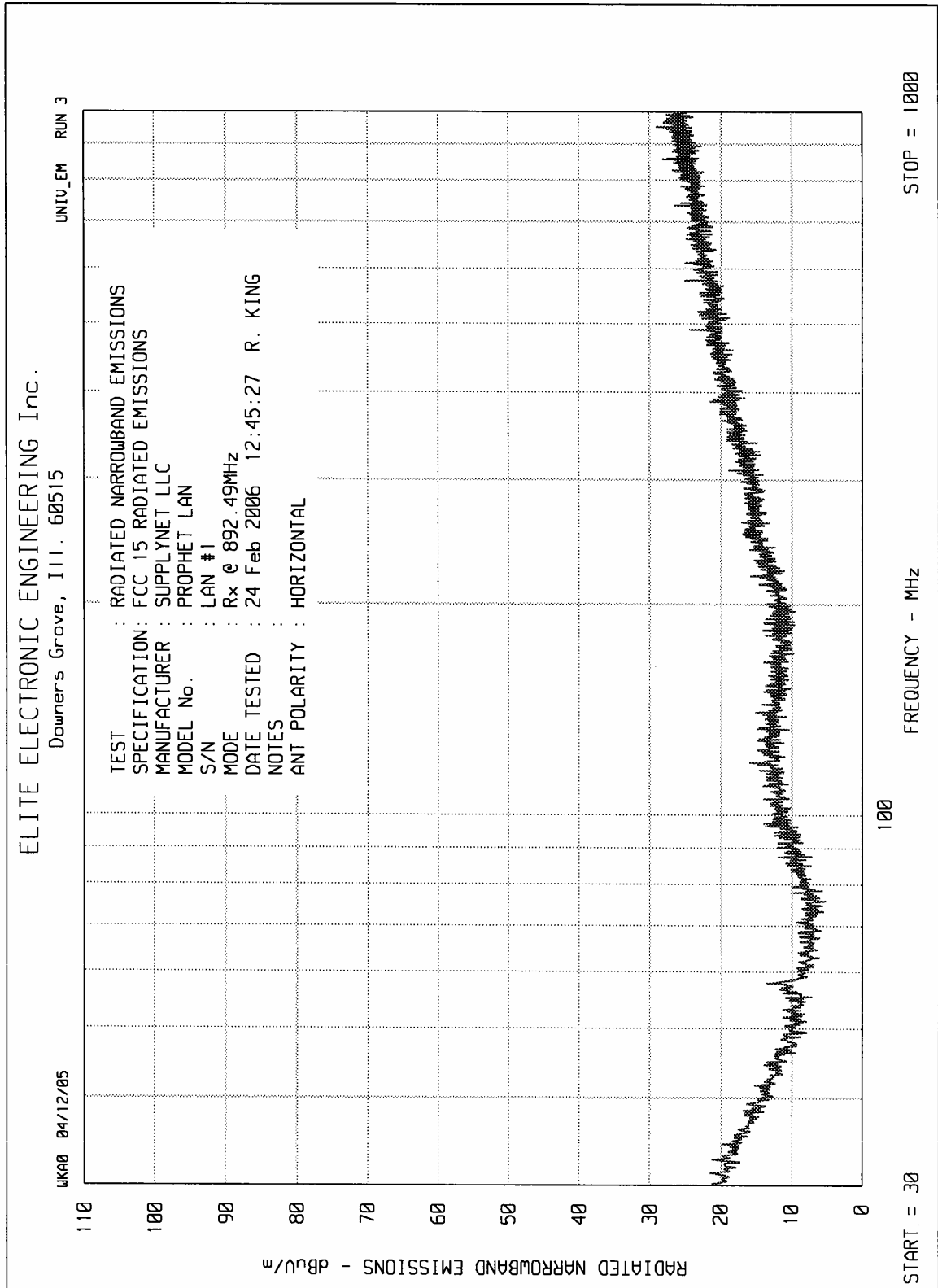
Figure 3

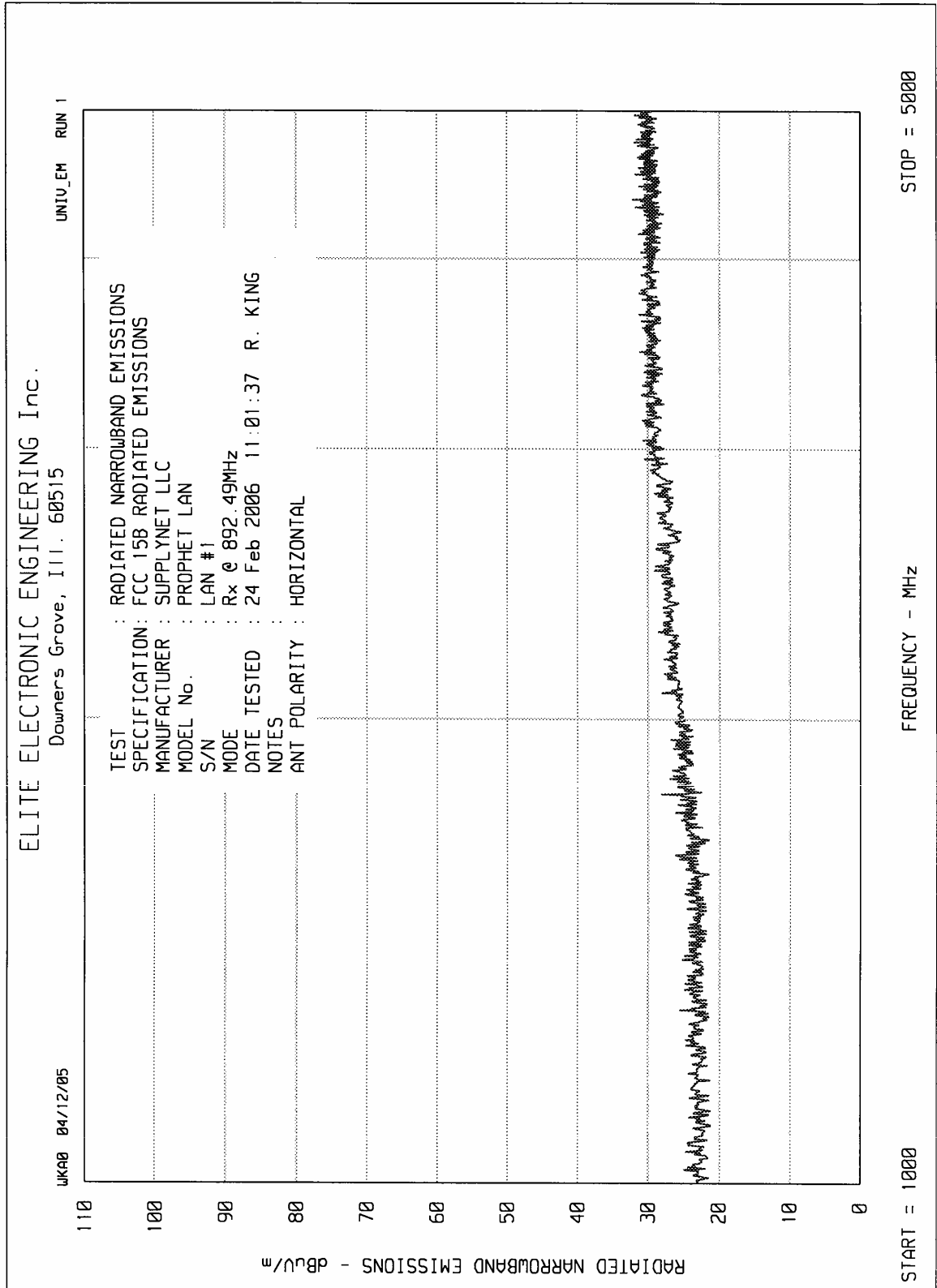


Test Set-up for Radiated Emissions of the Transmitter and the Receiver, 1GHz to 4GHz – Horizontal Polarization

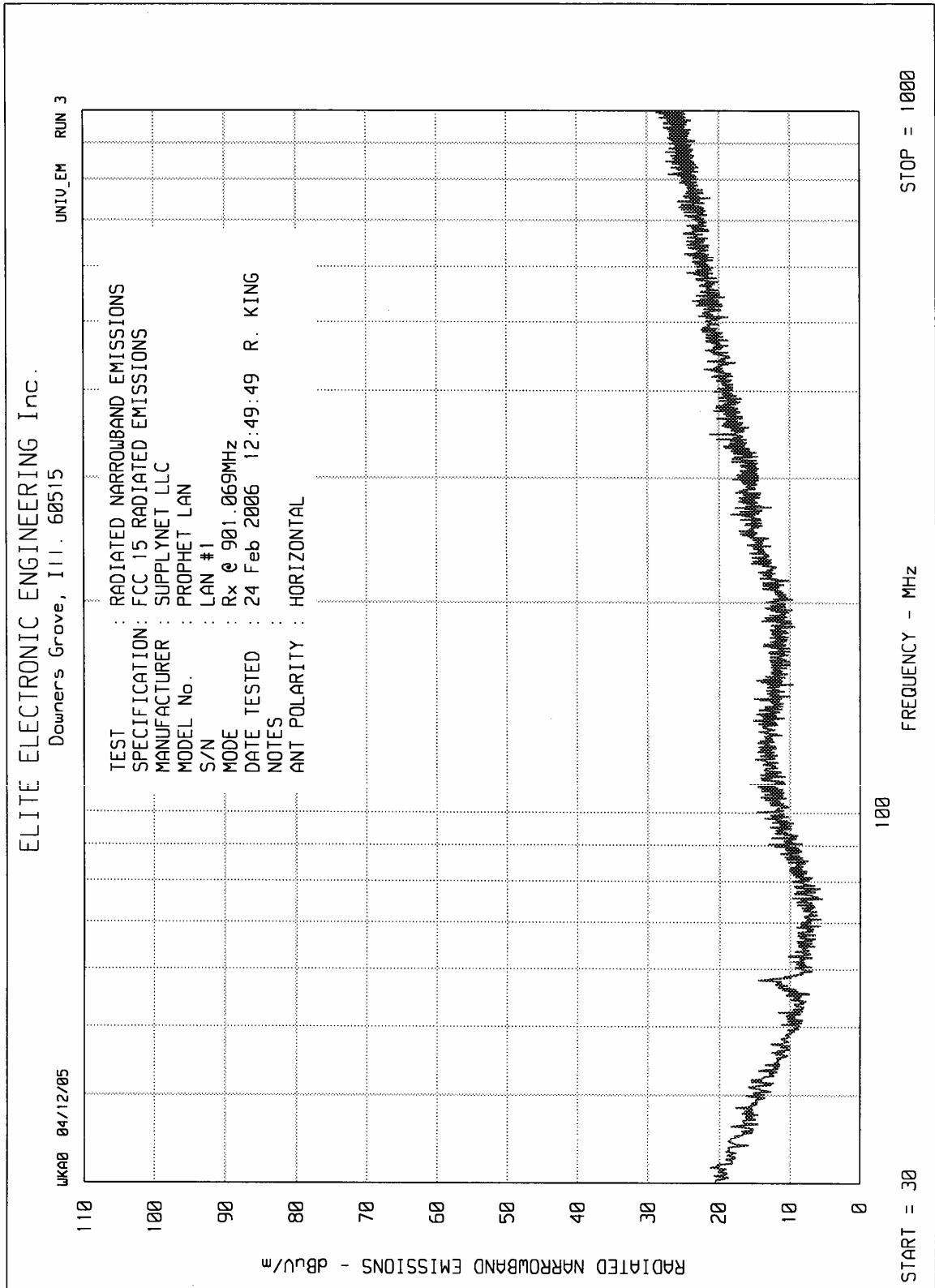


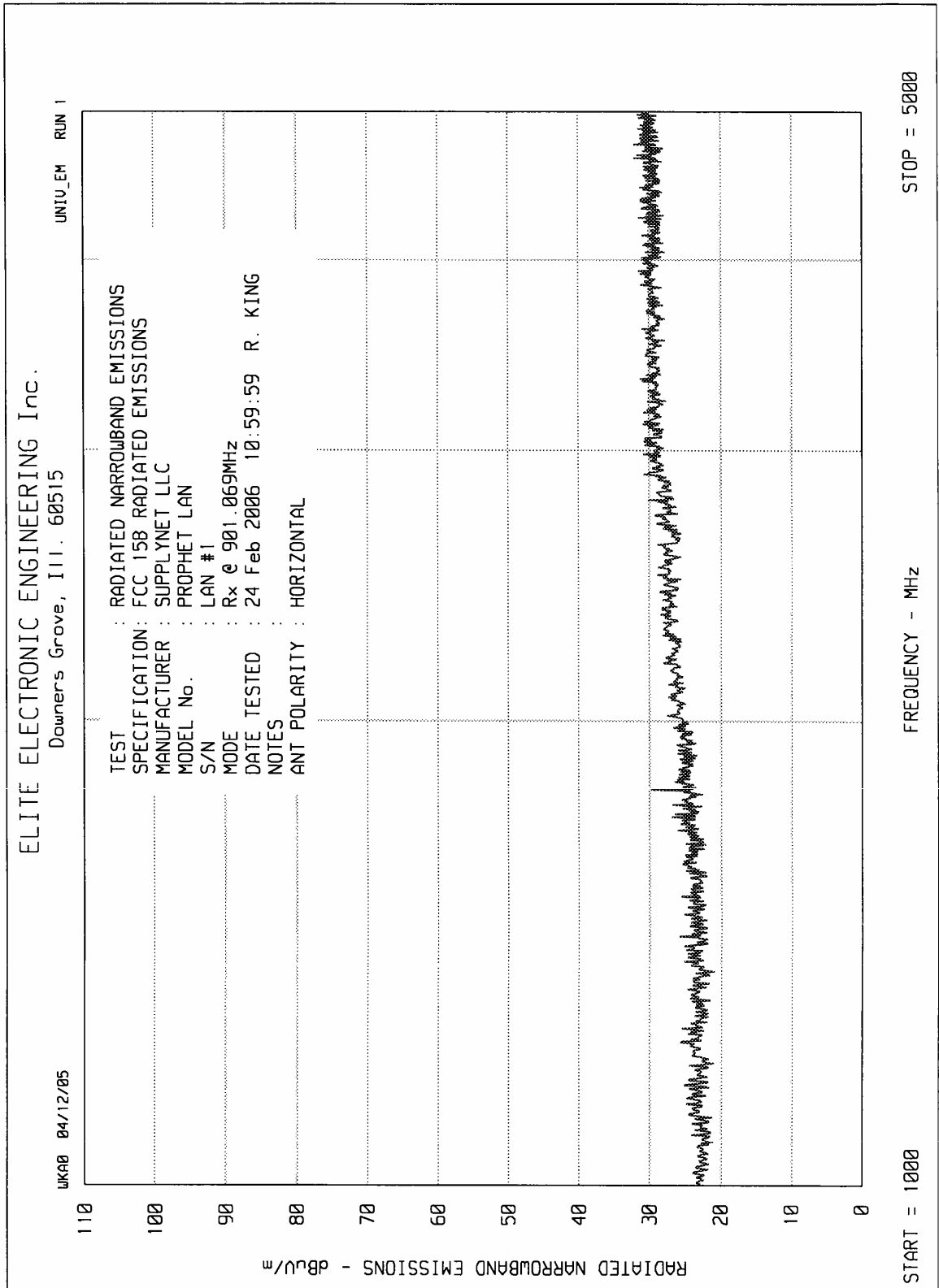
Test Set-up for Radiated Emissions of the Transmitter and the Receiver, 1GHz to 4GHz – Vertical Polarization

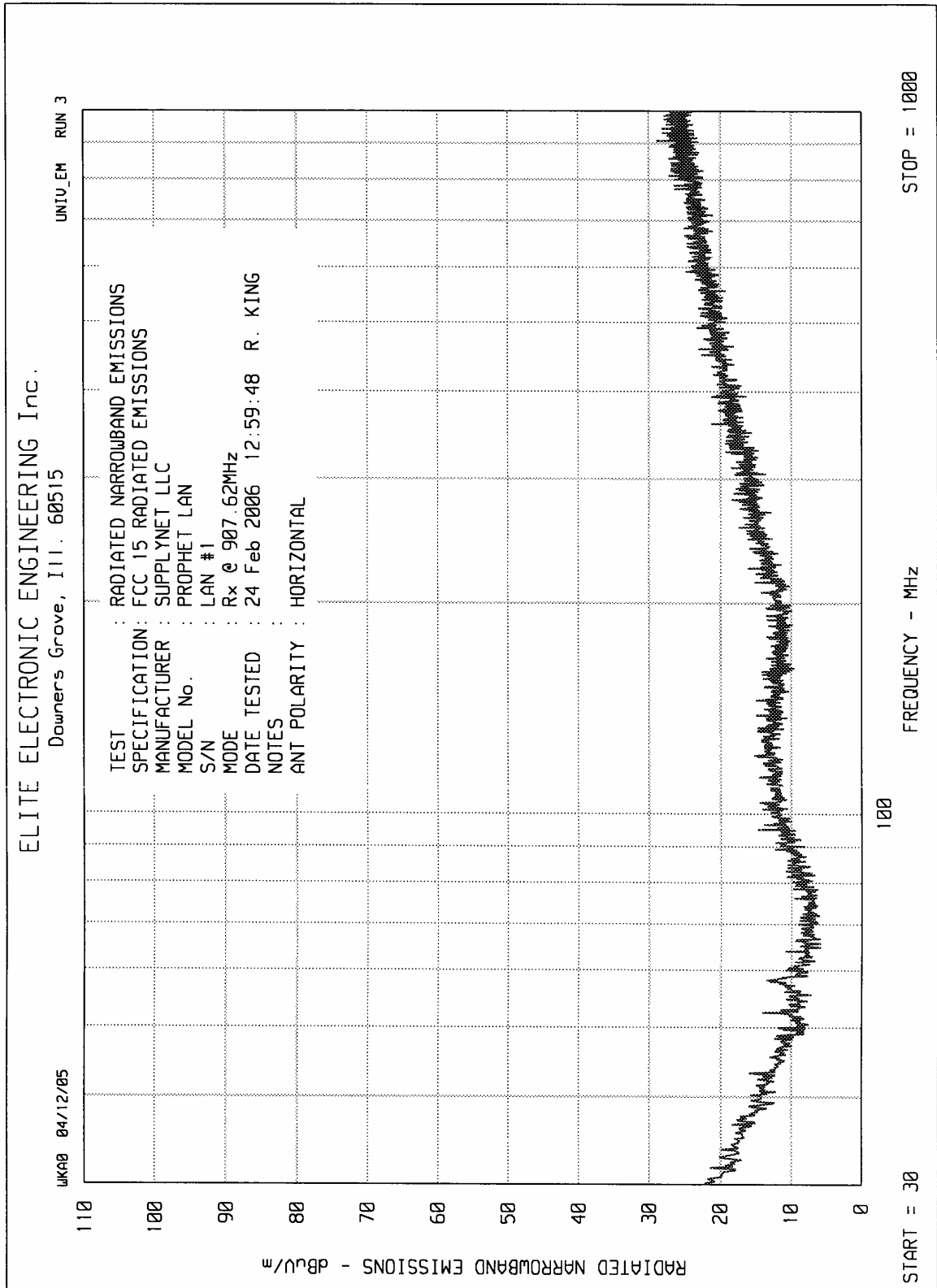


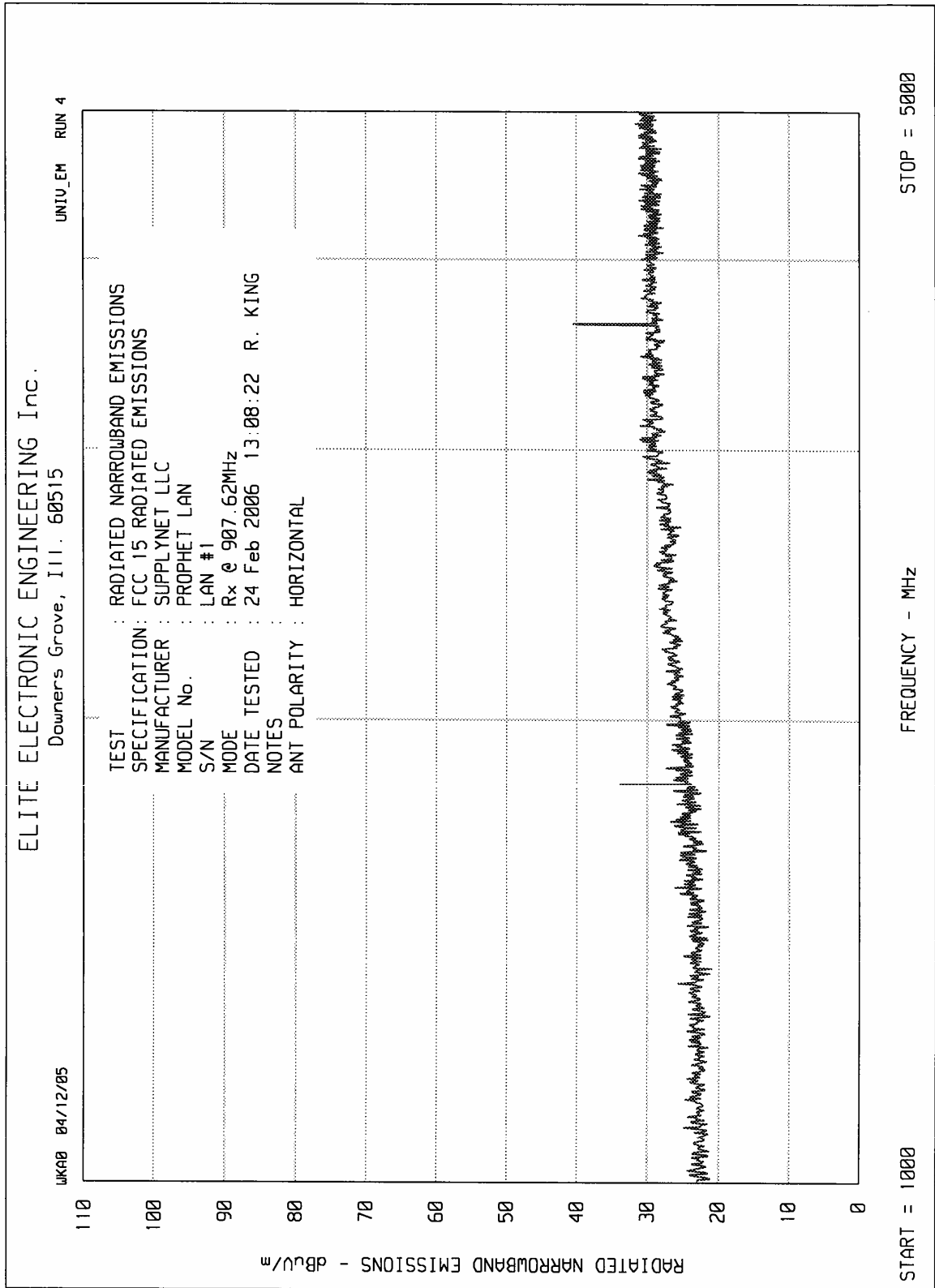














**MANUFACTURER** : Supplynet Communications  
**MODEL** : Prophet LAN  
**S/N** : LAN #1  
**SPECIFICATION** : FCC-15B Radiated Emissions  
**MODE** : Rx @ 901.168MHz  
**DATE** : February 24, 2006  
**NOTES** :

Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total dBuV/m at 3 M	Total uV/m at 3M	Limit uV/m at 3M	Margin (dB)
892.5	H	4.9		2.1	27.6	0.0	0.0	34.6	53.7	200.0	-11.4
892.5	V	4.3		1.9	27.6	0.0	0.0	33.9	49.4	200.0	-12.1
1785.0	H	36.9		2.8	26.0	-36.3	0.0	29.4	29.4	500.0	-24.6
1785.0	V	49.4		2.8	27.9	-36.3	0.0	43.8	155.1	500.0	-10.2
2677.5	H	41.2	*	3.7	31.3	-35.9	0.0	40.3	103.2	500.0	-13.7
2677.5	V	42.4	*	3.7	31.3	-34.5	0.0	42.9	139.6	500.0	-11.1
3570.0	H	43.0		4.3	32.4	-34.6	0.0	45.1	179.9	500.0	-8.9
3570.0	V	42.9		4.3	32.4	-34.6	0.0	45.0	177.6	500.0	-9.0
4462.5	H	41.5	*	4.8	32.8	-34.7	0.0	44.4	166.5	500.0	-9.6
4462.5	V	41.9	*	4.8	32.8	-34.7	0.0	44.8	174.3	500.0	-9.2

Checked BY : *RICHARD E. KING*

Richard E. King



**MANUFACTURER** : Supplynet Communications  
**MODEL** : Prophet LAN  
**S/N** : LAN #1  
**SPECIFICATION** : FCC-15B Radiated Emissions  
**MODE** : Rx @ 911.797MHz  
**DATE** : February 24, 2006  
**NOTES** :

Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total dBuV/m at 3 M	Total uV/m at 3M	Limit uV/m at 3M	Margin (dB)
901.1	H	4.9		2.1	27.7	0.0	0.0	34.7	54.1	200.0	-11.4
901.1	V	4.2		1.9	27.7	0.0	0.0	33.9	49.3	200.0	-12.2
1802.2	H	34.8		2.8	26.0	-36.3	0.0	27.3	23.1	500.0	-26.7
1802.2	V	46.5		2.8	28.0	-36.3	0.0	41.0	112.2	500.0	-13.0
2703.3	H	42.9	*	3.7	31.3	-35.9	0.0	42.1	127.1	500.0	-11.9
2703.3	V	42.1	*	3.7	31.3	-34.5	0.0	42.7	136.4	500.0	-11.3
3604.4	H	44.4		4.4	32.5	-34.6	0.0	46.7	215.6	500.0	-7.3
3604.4	V	43.4		4.4	32.5	-34.6	0.0	45.7	191.7	500.0	-8.3
4505.5	H	42.1	*	4.8	32.8	-34.7	0.0	45.0	178.3	500.0	-9.0
4505.5	V	40.9	*	4.8	32.8	-34.7	0.0	43.8	155.3	500.0	-10.2

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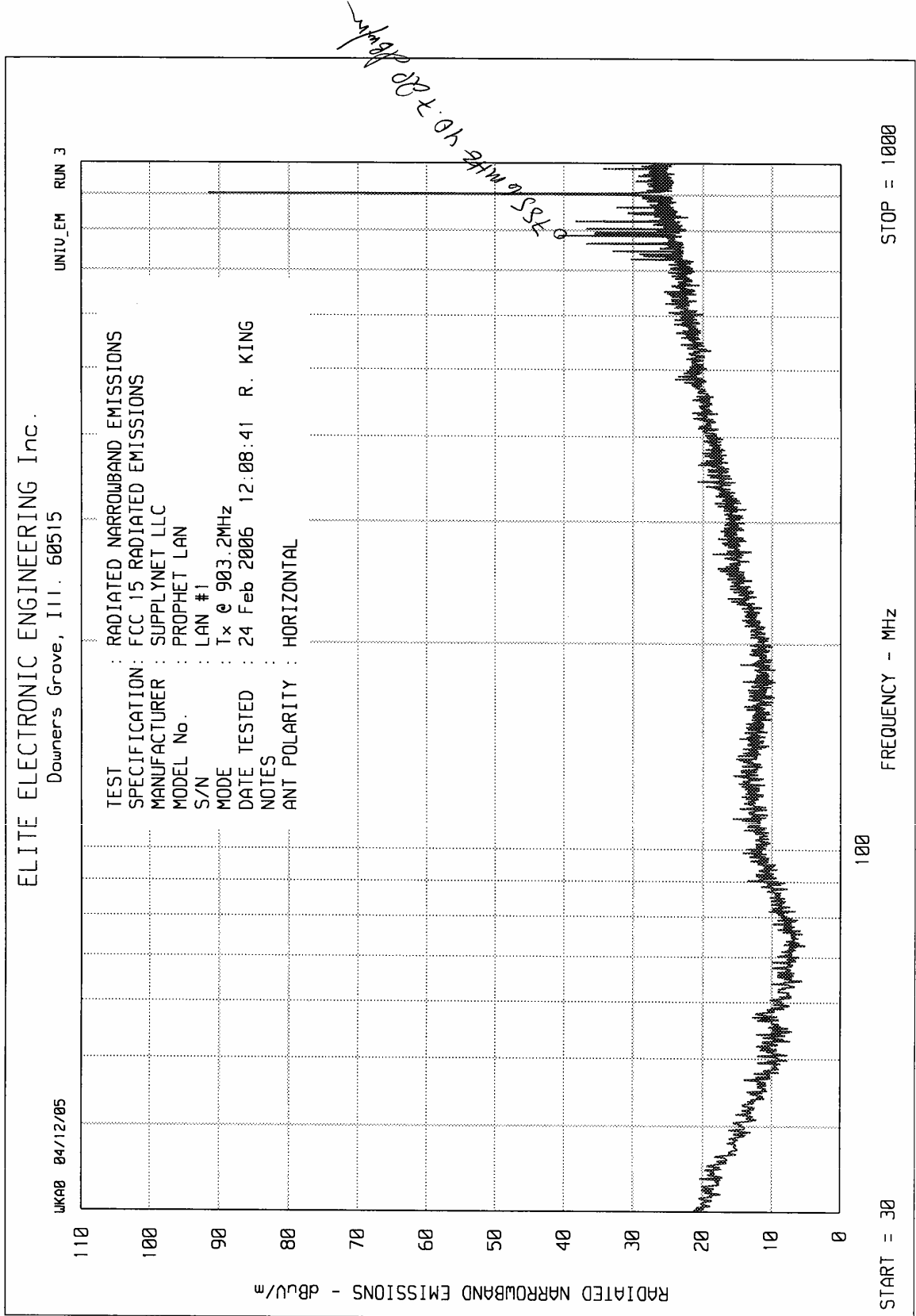


**MANUFACTURER** : Supplynet Communications  
**MODEL** : Prophet LAN  
**S/N** : LAN #1  
**SPECIFICATION** : FCC-15B Radiated Emissions  
**MODE** : Rx @ 918.323MHz  
**DATE** : February 24, 2006  
**NOTES** :

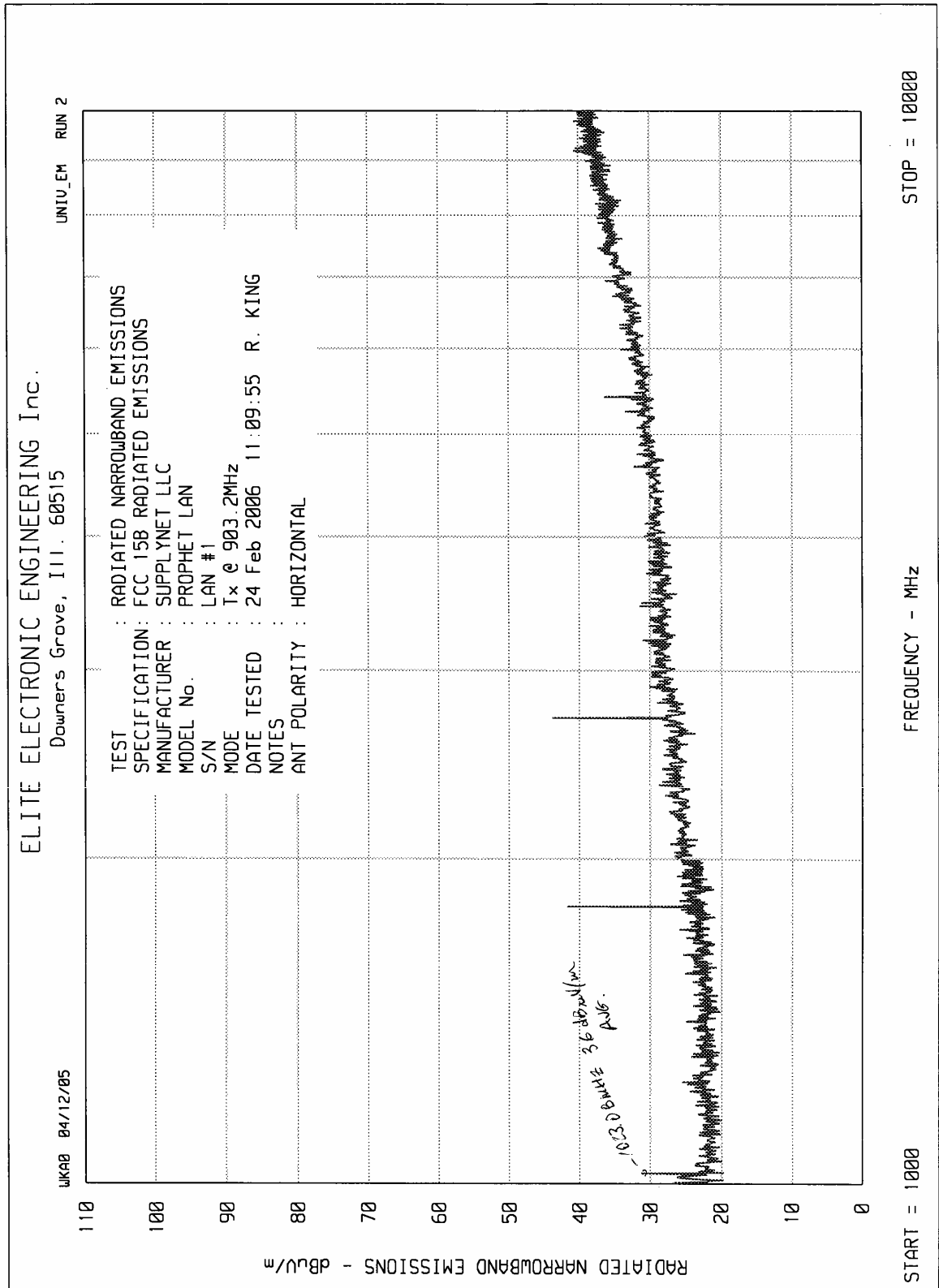
Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total dBuV/m at 3 M	Total uV/m at 3M	Limit uV/m at 3M	Margin (dB)
907.6	H	4.5		2.1	27.8	0.0	0.0	34.3	52.1	200.0	-11.7
907.6	V	5.2		1.9	27.8	0.0	0.0	34.9	55.8	200.0	-11.1
1815.2	H	39.4		2.9	26.0	-36.3	0.0	31.9	39.5	500.0	-22.1
1815.2	V	38.5		2.9	28.1	-36.3	0.0	33.1	45.3	500.0	-20.9
2722.9	H	42.2	*	3.8	31.4	-35.9	0.0	41.5	118.4	500.0	-12.5
2722.9	V	42.1	*	3.8	31.4	-34.5	0.0	42.8	137.6	500.0	-11.2
3630.5	H	41.7		4.4	32.5	-34.6	0.0	44.0	158.6	500.0	-10.0
3630.5	V	41.4		4.4	32.5	-34.6	0.0	43.7	153.2	500.0	-10.3
4538.1	H	42.0	*	4.8	32.9	-34.7	0.0	45.0	178.8	500.0	-8.9
4538.1	V	41.3	*	4.8	32.9	-34.7	0.0	44.3	165.0	500.0	-9.6

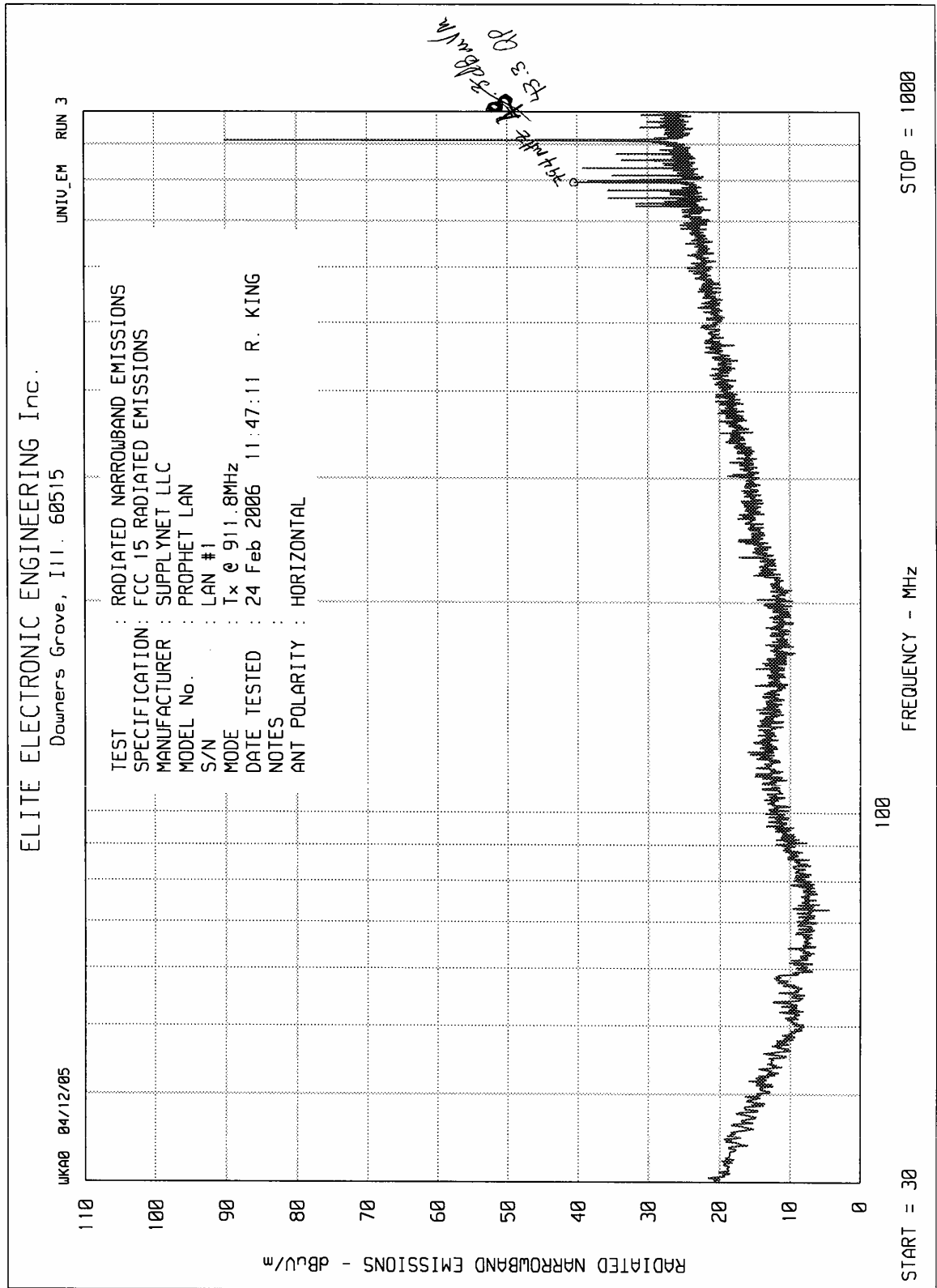
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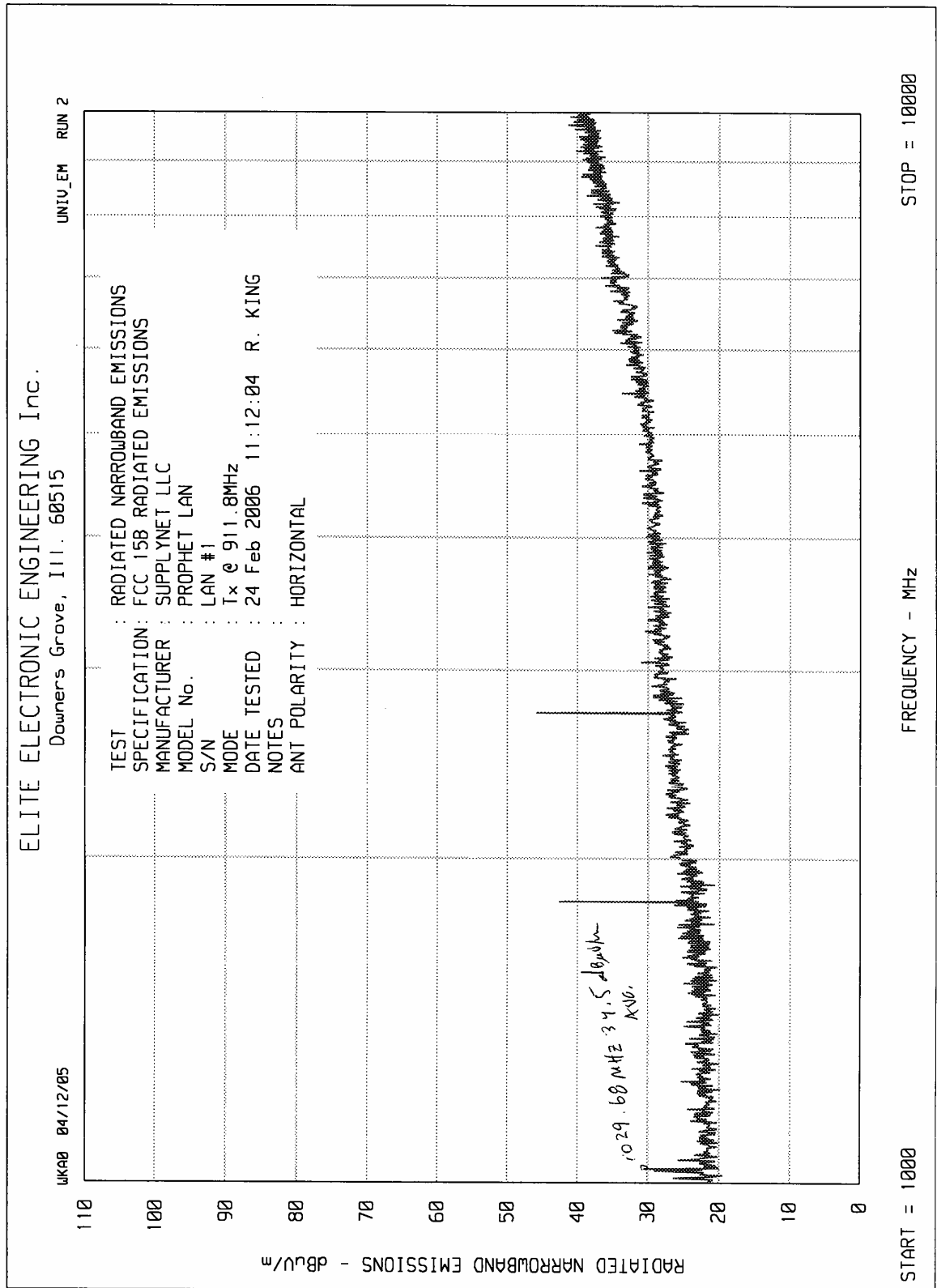
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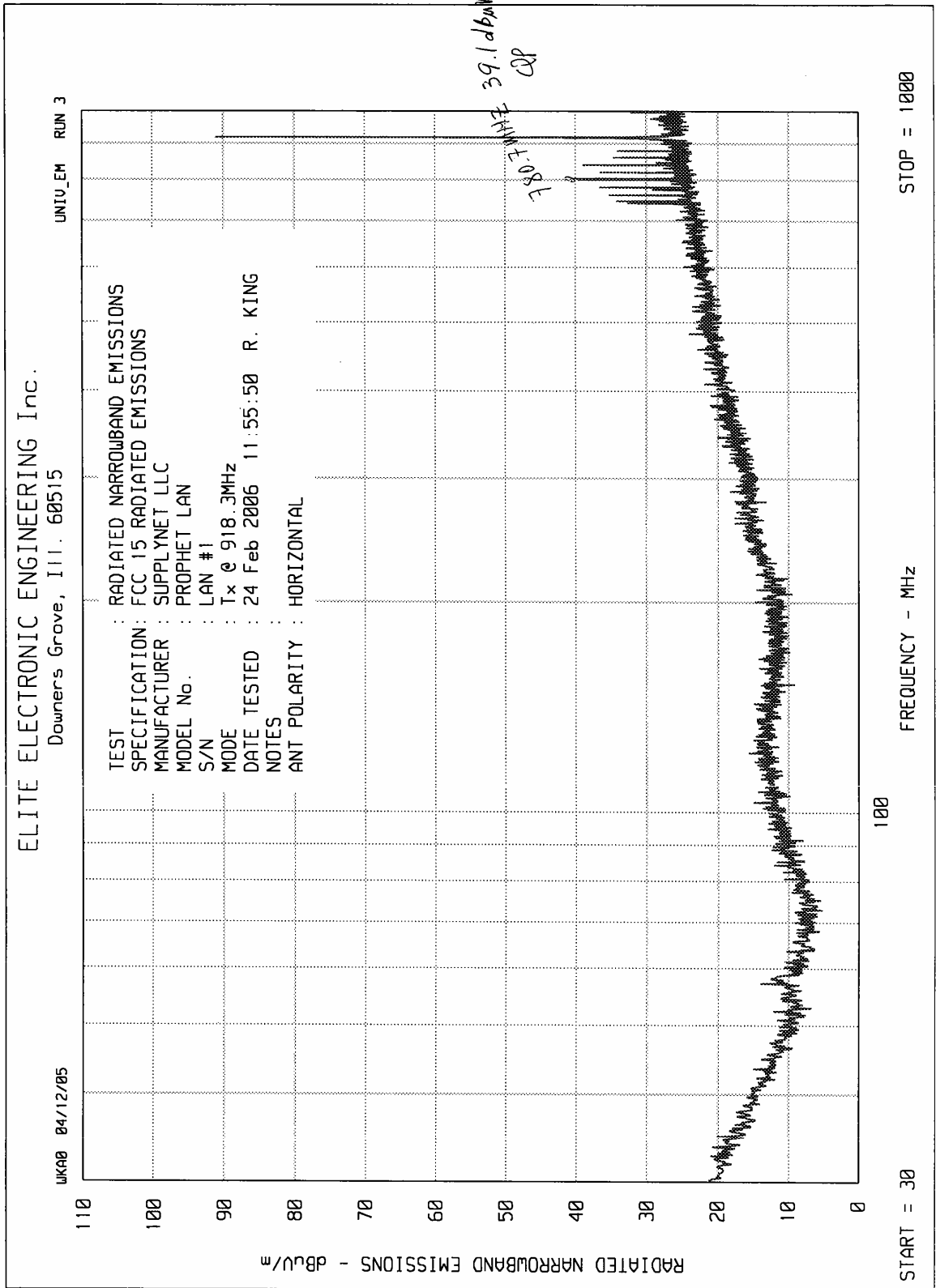


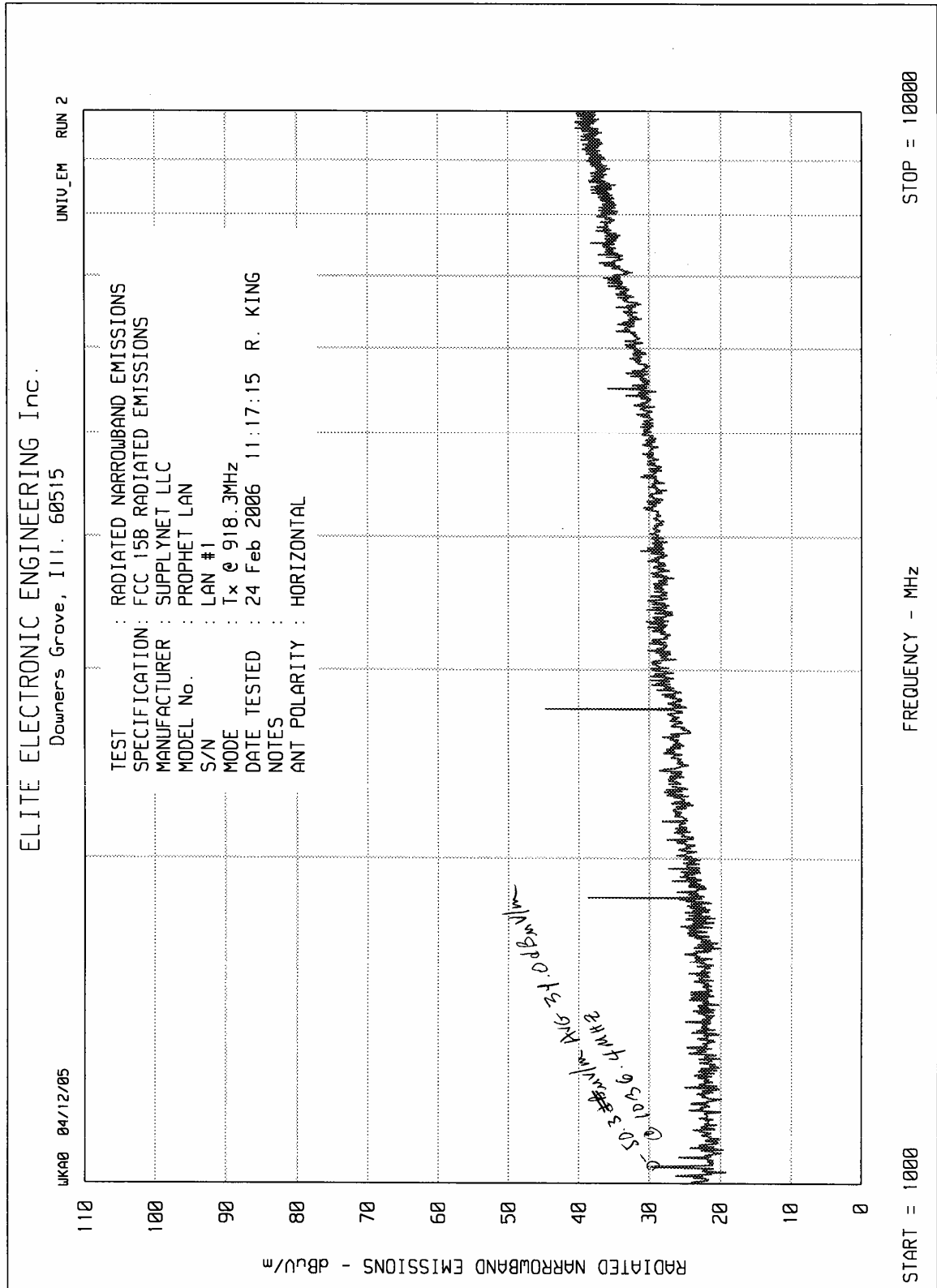














**MANUFACTURER** : Supplynet Communications  
**MODEL** : Prophet LAN  
**S/N** : LAN #1  
**SPECIFICATION** : FCC-15C Radiated Emissions  
**MODE** : Tx @ 903.18MHz  
**DATE** : February 24, 2006  
**NOTES** :

Freq (MHz)	Ant Pol	Meter Reading (dBUV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total dBuV/m at 3 M	Total uV/m at 3M	Limit uV/m at 3M	Margin (dB)
903.2	H	62.8		1.9	27.5	0.0	0.0	92.2	40840.1	50000.0	-1.8
903.2	V	58.3		1.9	27.5	0.0	0.0	87.7	24326.9	50000.0	-6.3
1806.4	H	51.1		2.8	28.0	-36.3	0.0	45.6	189.8	500.0	-8.4
1806.4	V	39.7		2.8	28.0	-36.3	0.0	34.2	51.4	500.0	-19.8
2709.5	H	53.3		3.7	31.4	-35.9	0.0	52.5	420.7	500.0	-1.5
2709.5	V	49.4		3.7	31.4	-35.9	0.0	48.6	268.2	500.0	-5.4
3612.7	H	37.2		4.4	32.5	-35.6	0.0	38.5	83.9	500.0	-15.5
3612.7	V	38.8		4.4	32.5	-35.6	0.0	40.0	100.3	500.0	-14.0
4515.9	H	32.8		4.8	32.9	-35.3	0.0	35.2	57.3	500.0	-18.8
4515.9	V	41.8	*	4.8	32.9	-35.3	0.0	44.1	161.0	500.0	-9.8
5419.1	H	36.9		5.2	35.3	-35.2	0.0	42.2	128.6	500.0	-11.8
5419.1	V	46.2		5.2	35.3	-35.2	0.0	51.5	374.7	500.0	-2.5
6322.3	H	43.0	*	5.8	36.1	-35.3	0.0	49.7	305.0	500.0	-4.3
6322.3	V	42.4	*	5.8	36.1	-35.3	0.0	49.1	284.6	500.0	-4.9
7225.5	H	42.3	*	6.6	37.6	-35.5	0.0	50.9	352.2	500.0	-3.0
7225.5	V	41.8	*	6.6	37.6	-35.5	0.0	50.4	332.5	500.0	-3.5
8128.6	H	42.0	*	7.1	37.6	-35.8	0.0	50.9	352.3	500.0	-3.0
8128.6	V	42.7	*	7.1	37.6	-35.8	0.0	51.6	381.9	500.0	-2.3
9031.8	H	42.4	*	7.5	37.9	-36.1	0.0	51.7	384.8	500.0	-2.3
9031.8	V	42.4	*	7.5	37.9	-36.1	0.0	51.7	384.8	500.0	-2.3

Checked BY : RICHARD E. KING

Richard E. King



**MANUFACTURER** : Supplynet Communications  
**MODEL** : Prophet LAN  
**S/N** : LAN #1  
**SPECIFICATION** : FCC-15C Radiated Emissions  
**MODE** : Tx @ 911.1MHz  
**DATE** : February 21, 2006  
**NOTES** :

Freq (MHz)	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total dBuV/m at 3 M	Total uV/m at 3M	Limit uV/m at 3M	Margin (dB)
911.1	H	63.6		1.9	27.7	0.0	0.0	93.2	45907.3	50000.0	-0.7
911.1	V	60.0		1.9	27.7	0.0	0.0	89.6	30260.9	50000.0	-4.4
1822.2	H	52.3		2.8	28.1	-36.3	0.0	46.9	221.2	500.0	-7.1
1822.2	V	44.3		2.8	28.1	-36.3	0.0	38.9	88.1	500.0	-15.1
2733.3	H	46.8		3.8	31.4	-35.9	0.0	46.1	202.3	500.0	-7.9
2733.3	V	51.9		3.8	31.4	-35.9	0.0	51.2	363.5	500.0	-2.8
3644.4	H	37.4		4.4	32.5	-35.5	0.0	38.8	87.2	500.0	-15.2
3644.4	V	35.9		4.4	32.5	-35.5	0.0	37.3	73.0	500.0	-16.7
4555.5	H	30.5		4.8	33.0	-35.3	0.0	32.9	44.4	500.0	-21.0
4555.5	V	33.8		4.8	33.0	-35.3	0.0	36.3	65.3	500.0	-17.7
5466.6	H	34.2		5.2	35.4	-35.2	0.0	39.6	95.7	500.0	-14.4
5466.6	V	40.3		5.2	35.4	-35.2	0.0	45.7	193.8	500.0	-8.2
6377.7	H	40.6	*	5.9	36.1	-35.3	0.0	47.4	233.2	500.0	-6.6
6377.7	V	40.4	*	5.9	36.1	-35.3	0.0	47.2	227.9	500.0	-6.8
7288.8	H	40.4	*	6.7	37.7	-35.6	0.0	49.2	288.3	500.0	-4.8
7288.8	V	39.7	*	6.7	37.7	-35.6	0.0	48.5	266.0	500.0	-5.5
8199.9	H	41.3	*	7.1	37.7	-35.8	0.0	50.3	327.3	500.0	-3.7
8199.9	V	40.8	*	7.1	37.7	-35.8	0.0	49.8	308.9	500.0	-4.2
9111.0	H	42.7	*	7.5	38.0	-36.2	0.0	52.0	398.1	500.0	-2.0
9111.0	V	41.4	*	7.5	38.0	-36.2	0.0	50.7	342.7	500.0	-3.3

Checked BY : RICHARD E. King

Richard E. King



**MANUFACTURER** : Supplynet Communications  
**MODEL** : Prophet LAN  
**S/N** : LAN #1  
**SPECIFICATION** : FCC-15C Radiated Emissions  
**MODE** : Tx @ 918.3 MHz  
**DATE** : February 21, 2006  
**NOTES** :

Freq (MHz)	Ant Pol	Meter Reading (dBuV)		CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Total dBuV/m at 3 M	Total uV/m at 3M	Limit uV/m at 3M	Margin (dB)
			Ambient								
918.3	H	62.6		2.0	27.8	0.0	0.0	92.4	41755.6	50000.0	-1.6
918.3	V	52.3		2.0	27.8	0.0	0.0	82.1	12726.7	50000.0	-11.9
1836.6	H	50.1		2.8	28.1	-36.3	0.0	44.8	173.6	500.0	-9.2
1836.6	V	40.4		2.8	28.1	-36.3	0.0	35.1	56.7	500.0	-18.9
2754.9	H	51.6		3.8	31.5	-35.9	0.0	51.0	356.5	500.0	-2.9
2754.9	V	48.7		3.8	31.5	-35.9	0.0	48.1	252.7	500.0	-5.9
3673.2	H	35.7		4.4	32.6	-35.5	0.0	37.2	72.2	500.0	-16.8
3673.2	V	35.9		4.4	32.6	-35.5	0.0	37.3	73.5	500.0	-16.7
4591.5	H	30.5		4.8	33.1	-35.3	0.0	33.1	45.3	500.0	-20.9
4591.5	V	32.3		4.8	33.1	-35.3	0.0	34.9	55.7	500.0	-19.1
5509.8	H	33.9		5.3	35.5	-35.2	0.0	39.5	94.0	500.0	-14.5
5509.8	V	32.5		5.3	35.5	-35.2	0.0	38.0	79.3	500.0	-16.0
6428.1	H	30.2	*	5.9	36.2	-35.3	0.0	37.0	71.0	500.0	-17.0
6428.1	V	28.7	*	5.9	36.2	-35.3	0.0	35.5	59.7	500.0	-18.5
7346.4	H	40.5	*	6.7	37.8	-35.6	0.0	49.4	296.5	500.0	-4.5
7346.4	V	40.5	*	6.7	37.8	-35.6	0.0	49.4	296.5	500.0	-4.5
8264.7	H	40.6	*	7.1	37.7	-35.8	0.0	49.7	303.8	500.0	-4.3
8264.7	V	41.1	*	7.1	37.7	-35.8	0.0	50.2	321.8	500.0	-3.8
9183.0	H	42.8	*	7.5	38.1	-36.3	0.0	52.1	402.5	500.0	-1.9
9183.0	V	42.5	*	7.5	38.1	-36.3	0.0	51.8	388.8	500.0	-2.2

Checked BY : RICHARD E. King

Richard E. King



ELITE ELECTRONIC ENGINEERING Inc.

MKR 903.18 MHz  
61.40 dBuV

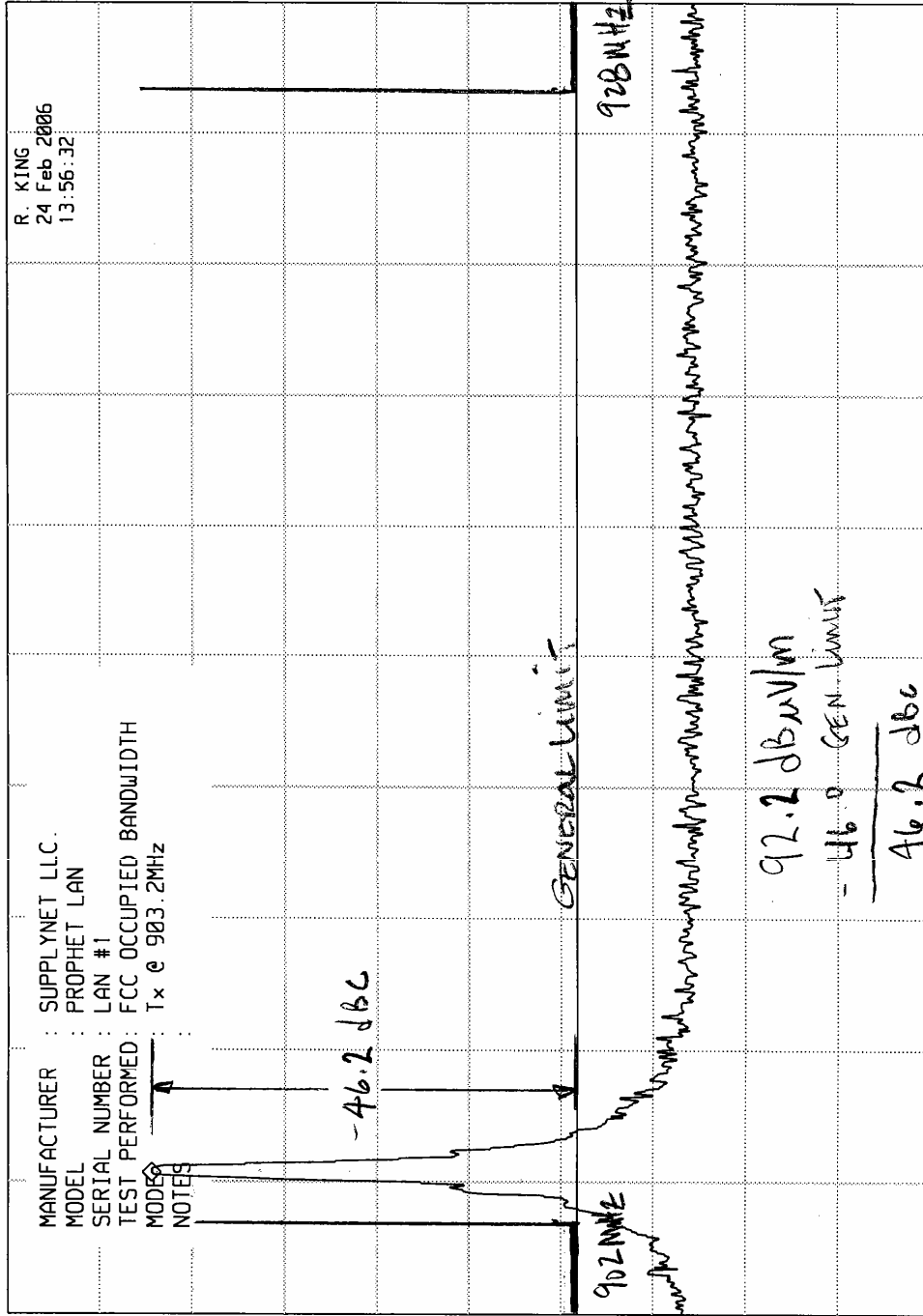
hp

10 dB/

OFFSET  
-20.0  
dB

DL  
15.2  
dBuV

REF 77.0 dBuV    ATTN 0 dB



R. KING  
24 Feb 2006  
13:56:32

START 900.0 MHz  
RES BW 100 kHz(i)

UBW 1 MHz

STOP 930.0 MHz  
SWP 22.5 msec



ELITE ELECTRONIC ENGINEERING Inc.

MKR 911.79 MHz  
62.50 dBu

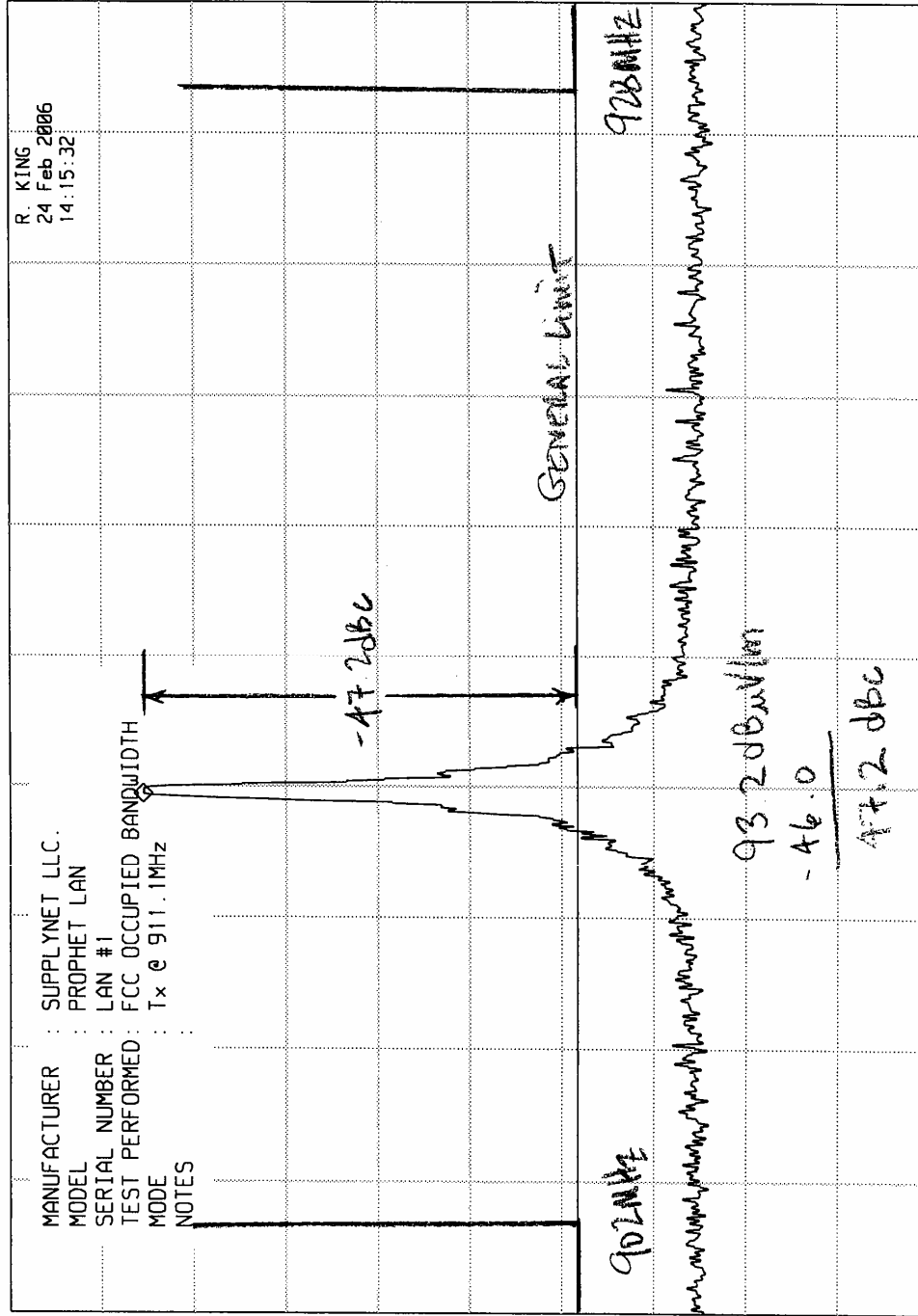
hp

10 dB/

OFFSET  
-20.0  
dB

DL 15.2  
dBu

REF 77.0 dBu ATTEN 0 dB





ELITE ELECTRONIC ENGINEERING Inc.

MKR 918.36 MHz  
62.00 dBu

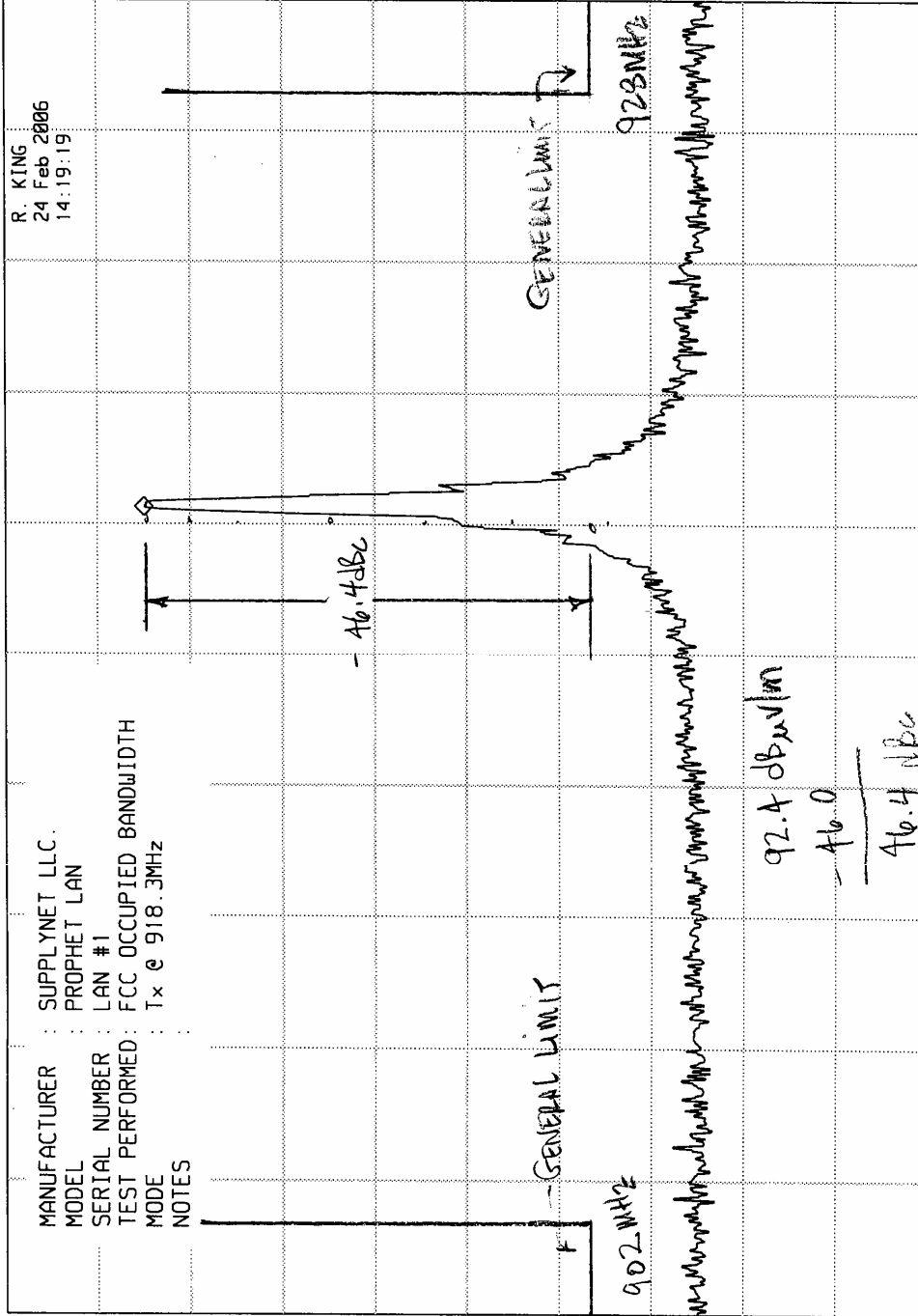
hp

10 dB/

OFFSET  
-20.0  
dB

DL  
15.2  
dBu

REF 77.0 dBu    ATTN 0 dB



START 900.0 MHz  
RES BW 100 kHz(i)    UBW 1 MHz  
STOP 930.0 MHz  
SWP 22.5 msec