



TEST SPECIFICATION:

FCC "Rules and Regulations", Part 90
Sections 90.205 to 90.209, 90.217 & 90.259

Private Land Mobile Radio Services for Operation in the

216 MHz to 220 MHz Band

THE FOLLOWING **MEETS** THE ABOVE TEST SPECIFICATION

Formal Name:	Transmitter 216-220 MHz
Kind of Equipment:	FSK Transmitter
Test Configuration:	Transmitting on low channel and transmitting on high channel
Emission Designator:	F2D
Transmitter FCC ID:	FBR-TX216SYN-2
Model Number:	TX216SYN
Serial Number:	001
Dates of Test:	October 13, 1999
Test Conducted For:	Fleetwood Group, Inc.
	P.O. Box 1259
	Holland, Michigan 49424-1259

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EMC Test Services
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Report No. 7686
11/09/99

SIGNATURE PAGE

A handwritten signature in cursive script that reads "Arnom C. Rowe".

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Test Engineer
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Jack Prawica
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Brian J. Mattson
General Manager

Company Official:

Fleetwood Group, Inc.

United States Department of Commerce
National Institute of Standards and Technology



ISO/IEC GUIDE 25:1990
ISO 9002:1987



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WHEELING, IL

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**ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS
FCC**

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NVLAP-01C (11-95)

Scope of Accreditation



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ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

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D.L.S. ELECTRONIC SYSTEMS, INC.

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NVLAP Code Designation / Description

International Special Committee on Radio Interference (CISPR) Methods

- | | |
|-----------|--|
| 12/CIS22 | IEC/CISPR 22:1993: Limits and methods of measurement of radio disturbance characteristics of information technology equipment |
| 12/CIS22a | IEC/CISPR 22:1993: Limits and methods of measurement of radio disturbance characteristics of information technology equipment, Amendment 1:1995, and Amendment 2:1996. |
| 12/CIS22b | CNS 13438:1997: Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment |

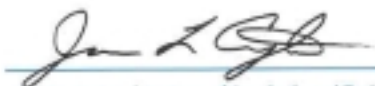
Federal Communications Commission (FCC) Methods

- | | |
|---------|---|
| 12/F01 | FCC Method - 47 CFR Part 15 - Digital Devices |
| 12/F01a | Conducted Emissions, Power Lines, 450 KHz to 30 MHz |
| 12/F01b | Radiated Emissions |

September 30, 2000

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National Institute of Standards and Technology NVLAP[®] National Voluntary Laboratory Accreditation Program	
ISO/IEC GUIDE 25:1990 ISO 9002:1987	Scope of Accreditation
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ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS	NVLAP LAB CODE 100276-0
D.L.S. ELECTRONIC SYSTEMS, INC.	
<i>NVLAP Code Designation / Description</i>	
Australian Standards referred to by clauses in ACA Technical Standards	
12/T51	AS/NZS 3548: Electromagnetic Interference - Limits and Methods of Measurement of Information Technology Equipment
September 30, 2000 Effective through	 For the National Institute of Standards and Technology

NVLAP-015 (11-95)



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1.0 SUMMARY OF TEST REPORT

It was found that the Transmitter 216-220 MHz S/N 001 meets the radio interference emission requirements of the FCC "Rules and Regulations", Part 90, Subpart I, Sections 90.205 to 90.209, 90.217 & 90.259 for Private Land Mobile Services operating in the 216 MHz to 220 MHz Frequency Band.

2.0 INTRODUCTION

On October 13, 1999, a series of radio frequency interference measurements were performed on FSK Transmitter, S/N 001. The tests were performed according to the procedures of FCC as stated in Part 2 Subpart J, Equipment Authorization Procedures of the Code of Federal Regulations 47, by personnel of D.L.S. Electronic Systems, Inc. who are responsible to Donald L. Sweeney, Senior EMC Engineer.

3.0 OBJECT

The purpose of this series of tests was to determine if the test sample could meet the radio frequency emission requirements of the FCC "Rules and Regulations", Part 90, Subpart I, Sections 90.205 to 90.209, 90.217 & 90.259 for Private Land Mobile Services operating in the 216 MHz to 220 MHz Frequency Band.

4.0 TEST SET-UP

All radiated emission tests were performed at D.L.S. Electronic Systems, Inc. The radiated tests were made with the test item placed on a wooden turntable located in the Test Room with the receive antenna placed one meter from the device under test.

5.0 TEST EQUIPMENT (Bandwidths and Detector Function)

All data was automatically plotted using peak detector function. This information was then used to determine the frequencies of maximum emissions. Manual measurements were performed on these frequencies using a peak detector function of the Analyzer with the bandwidths specified by the FCC. From 200 MHz to 1000 MHz a bandwidth of 100 kHz was used (except for Occupied Bandwidth), and above 1000 MHz, wide enough bandwidths were used, depending upon the test being made, to ensure proper measurement of the narrowband signal. A list of the equipment used can be found in Table 1. All equipment was calibrated per the instruction manuals supplied by the manufacturer.

6.0 RF POWER OUTPUT - PART 2.1046

As stated in PART 90.205 (c), the output power should not exceed the rated output power of the Transmitter 216-220 MHz transmitter by 20%. The RF output power was measured at the RF output terminal of the transmitter with the transmitter tuned according to the tune-up procedures specified in Part 2.1033 (c-9), and adjusted for its maximum output power. The RF output power was measured in the open field, using the following test method:

The radiated signal from the EUT was measured. The EUT was then substituted with a signal generator and a tuned dipole antenna. The output of the signal generator was increased until the level received by the tuned dipole equaled that of the previous measured from the EUT.

Actual Measurements Taken:

120.50 dBuV Measured output of the transmitter
+2.95dBuV Total system losses (Antenna, Pads & Cable)
123.45 dBuV which equals 0.0443 mW

LIMIT:

Manufacturer's rated output power = 0.05 mW

MARGIN:

0.05 mW - 0.043 mW = 0.0057 mW

NOTE:

See the following pages for the graphs of the actual measurements made:



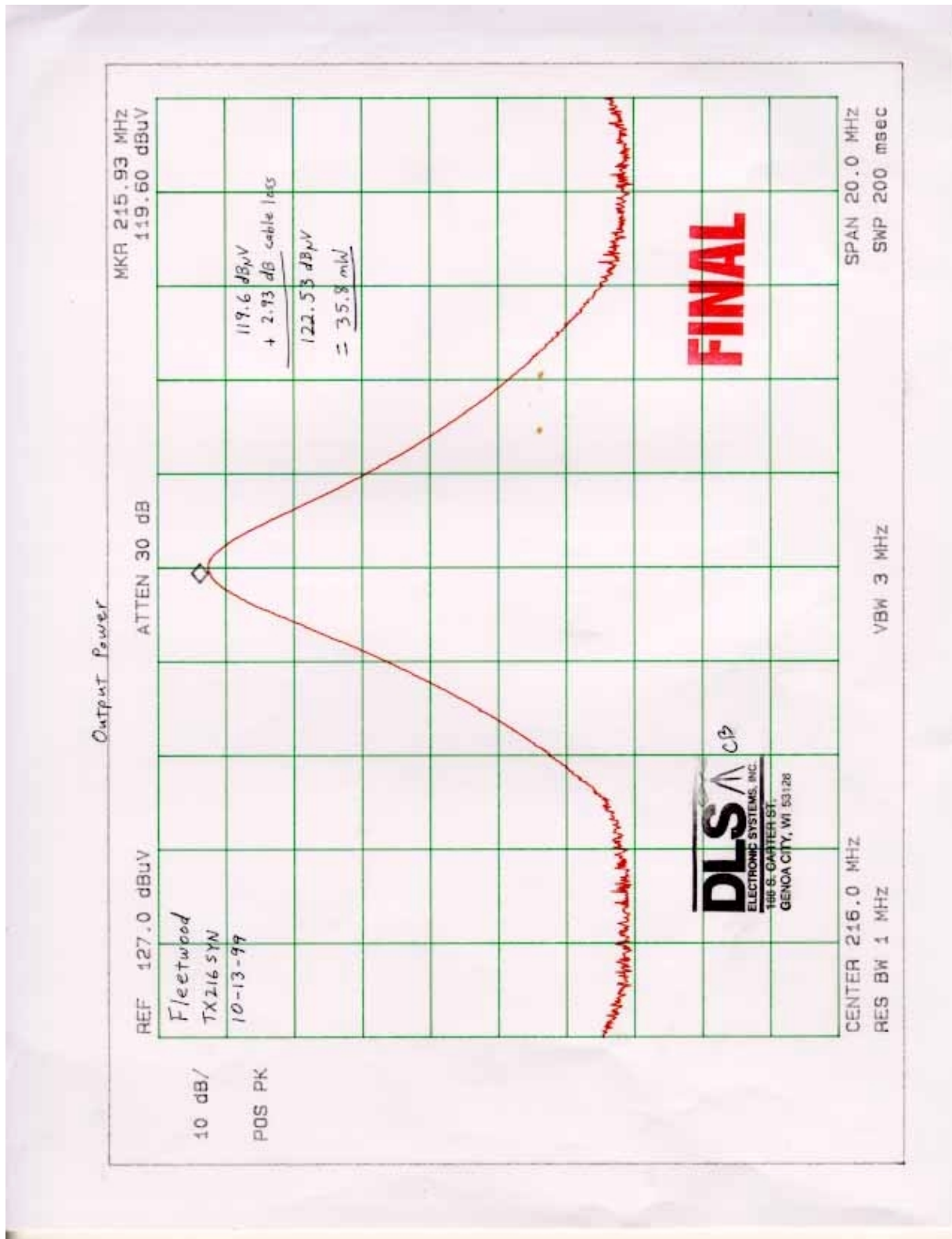
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1250 Peterson Drive, Wheeling, Illinois 60090, USA

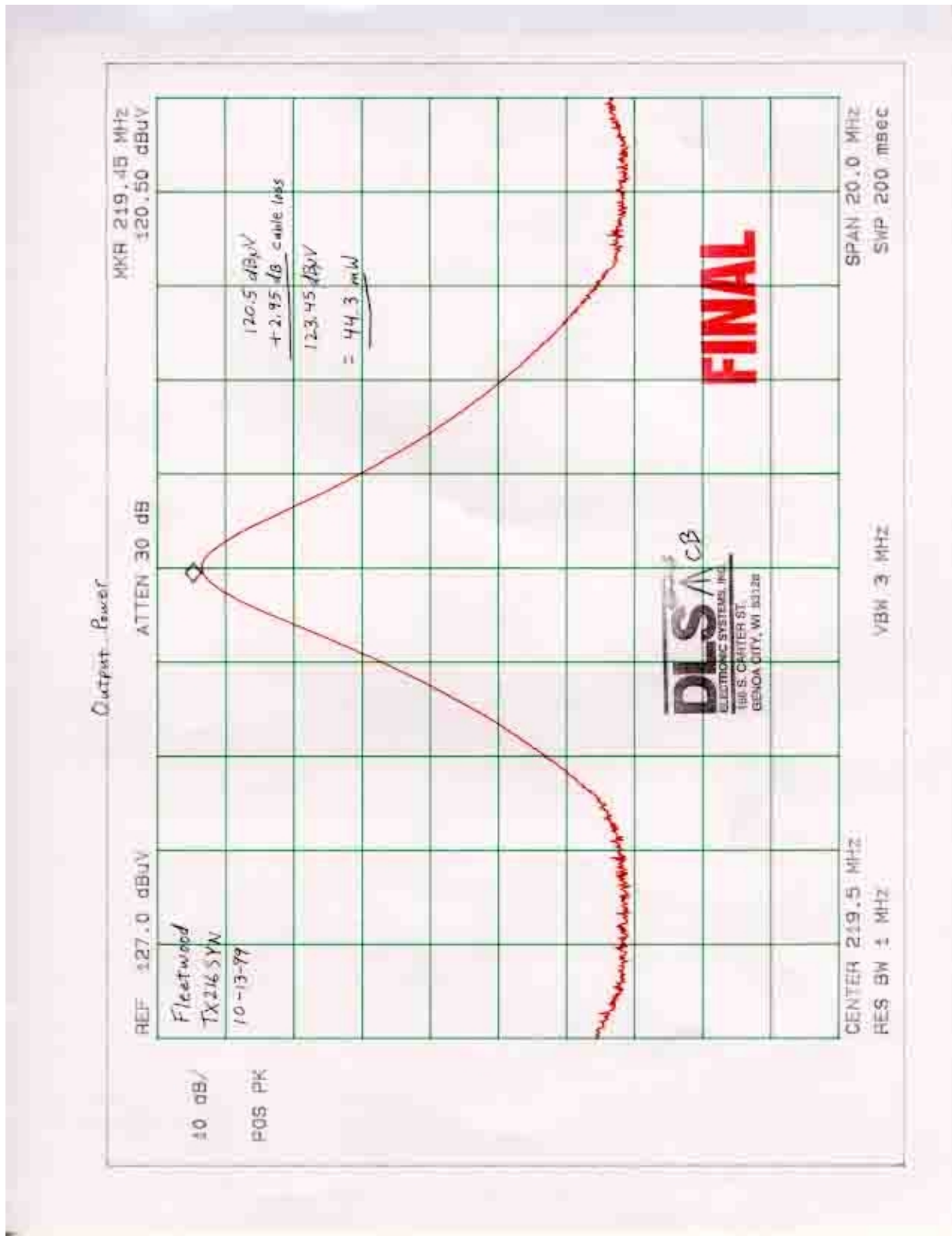
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GRAPHS TAKEN OF THE RF POWER

OUTPUT MEASUREMENTS

PART 2.1046







7.0 Modulation Characteristics - Part 2.1047

NOTE:

This test was not performed at D.L.S. Electronic Systems, Inc.



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GRAPHS TAKEN SHOWING THE FREQUENCY

RESPONSE OF THE

AUDIO MODULATING CIRCUIT

PART 2.1047

NOTE:

This test was not performed at D.L.S. Electronic Systems, Inc.

8.0 OCCUPIED BANDWIDTH – PART 2.1049

The occupied bandwidth is that between the lower and upper limits of the signal where the mean power is 99.0% of the total mean power and measured under the following conditions:

As stated in Part 2.1049 c-1 the Transmitter 216-220 MHz was modulated by a 2500 Hz tone at an input level 16 dB greater than that necessary to produce 50 percent modulation. This input level was established at the frequency of maximum response of the audio modulating circuit.

The allowed radiated emissions for transmitters operating in the 216 MHz to 220 MHz bands for Transmitter 216-220 MHz equipment is found under Part 90, Section 90.209 (b-4) & 90.209 (c-1) for Private Land Mobile Radio Services.

Paragraph (b) of Section 90.209 states that the maximum authorized bandwidth of emissions corresponding to the type emission specified in 90.207 and the maximum authorized frequency deviation in the case of frequency or phase modulation emission shall be as follows:

For all emissions in the frequency bands 216 MHz to 220 MHz, the maximum authorized bandwidth shall be 20 kHz . The maximum authorized frequency deviation for all frequency modulated emissions shall be 20 kHz .

Carson's Rule:

Section 2.202 (g)

$B_n = 2M_{2DK}, K=1$ B_n = Bandwidth

$M = 15 \text{ kHz},$ M = Maximum Modulating Frequency

$D = 45 \text{ kHz},$ D = Peak Deviation

$B_n = 2(15) + 2(45)(1) = 120 \text{ kHz}$

NOTE: See the following pages for the graphs of the actual measurements made:

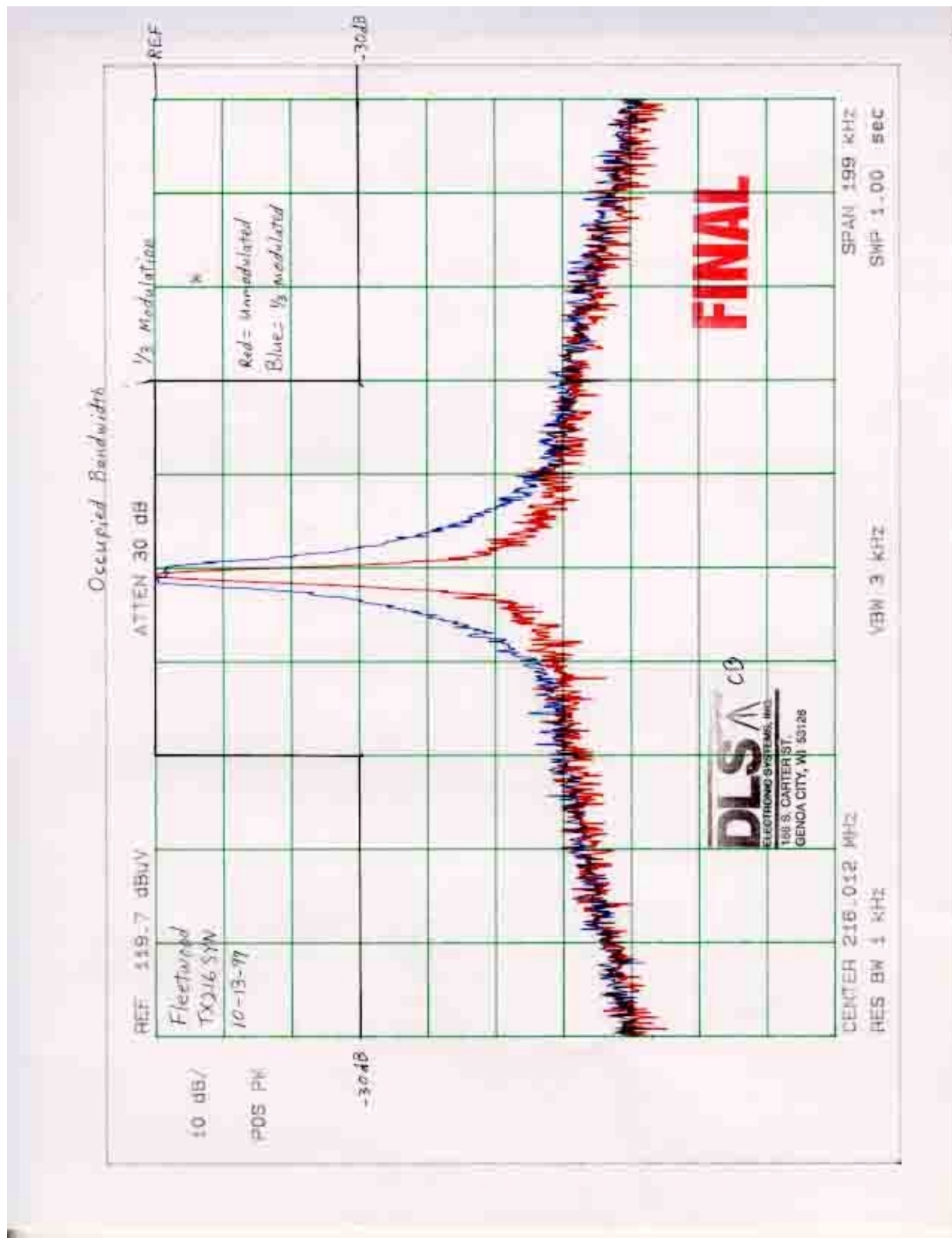


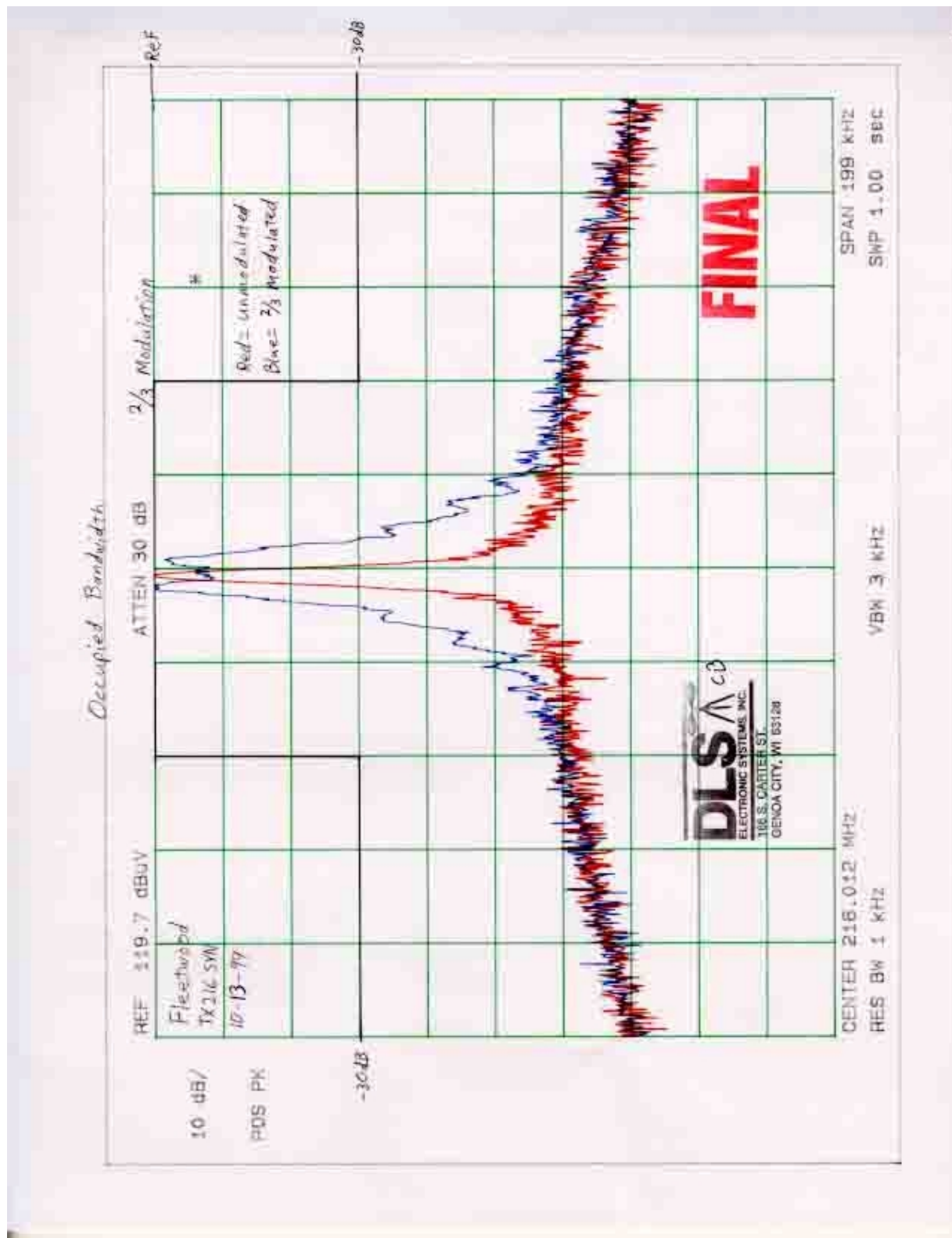
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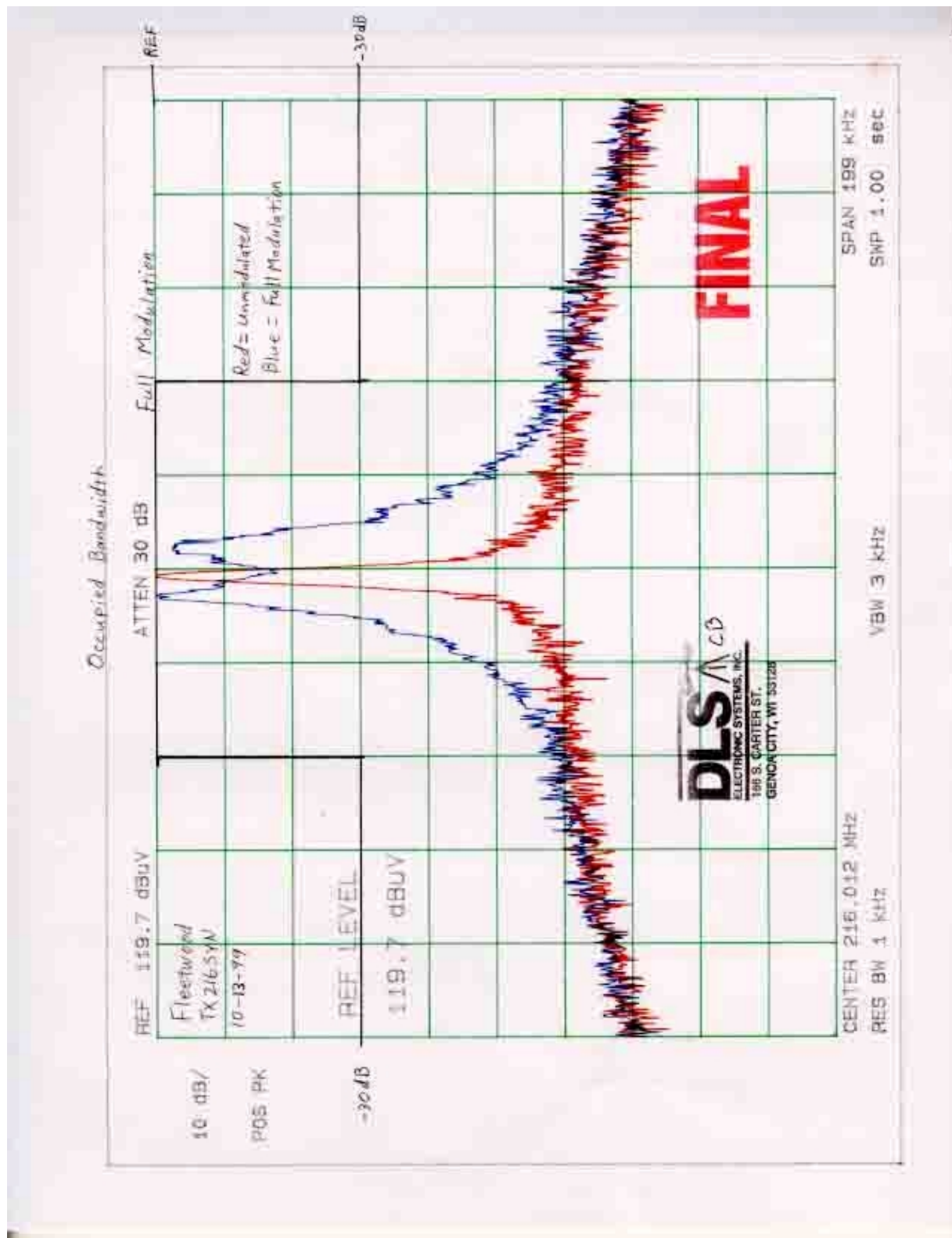
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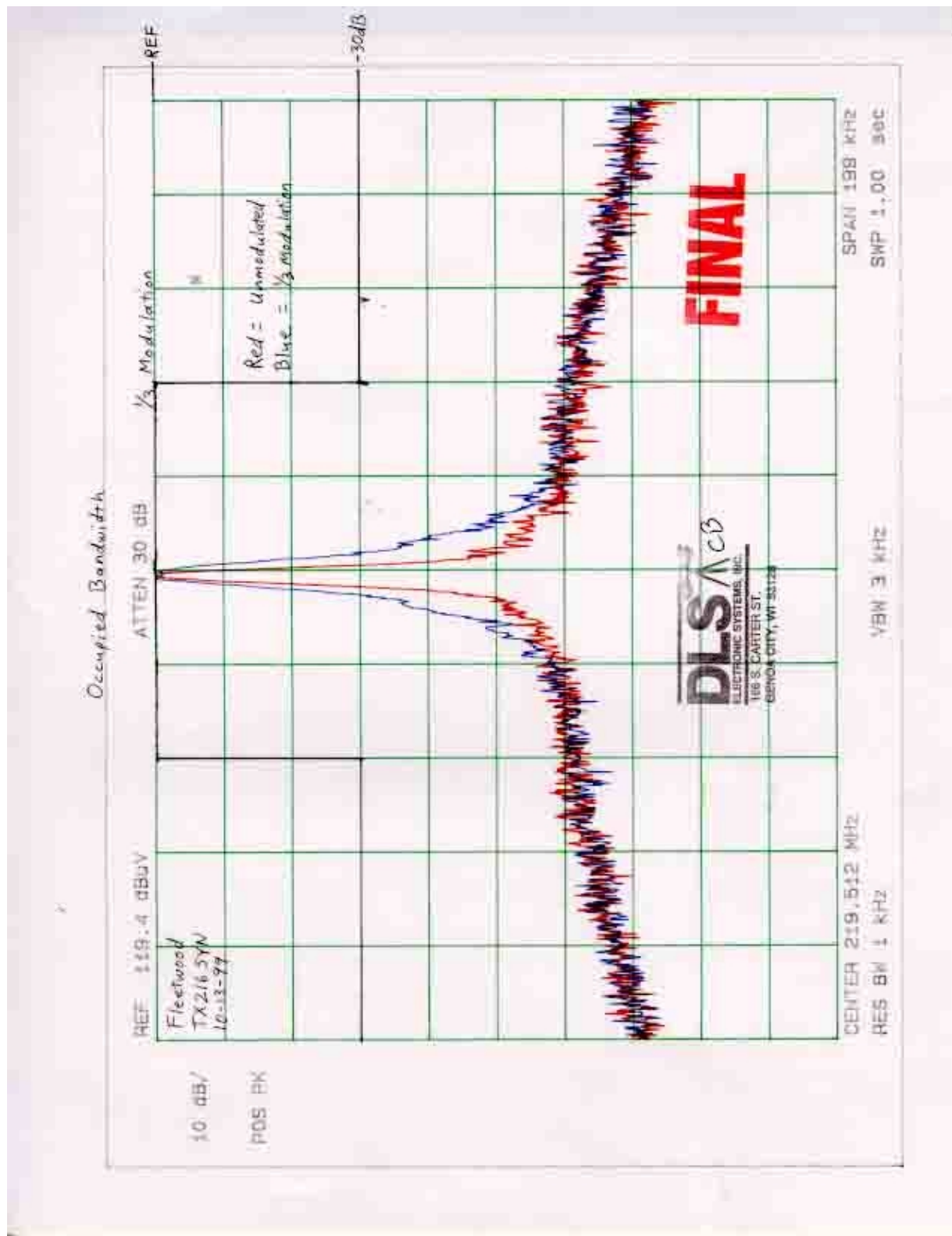
GRAPHS TAKEN OF THE OCCUPIED BANDWIDTH

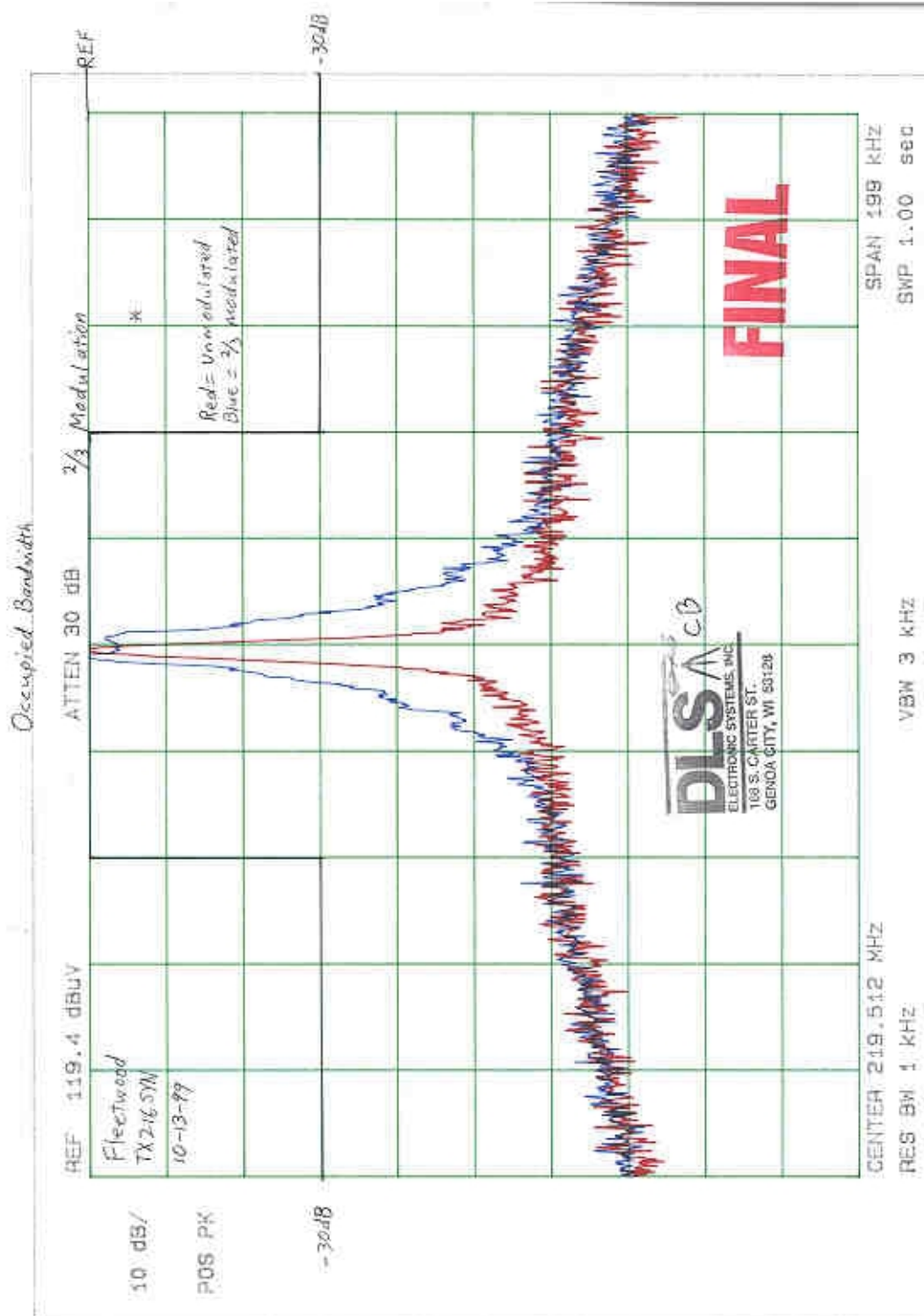
PART 2.1049

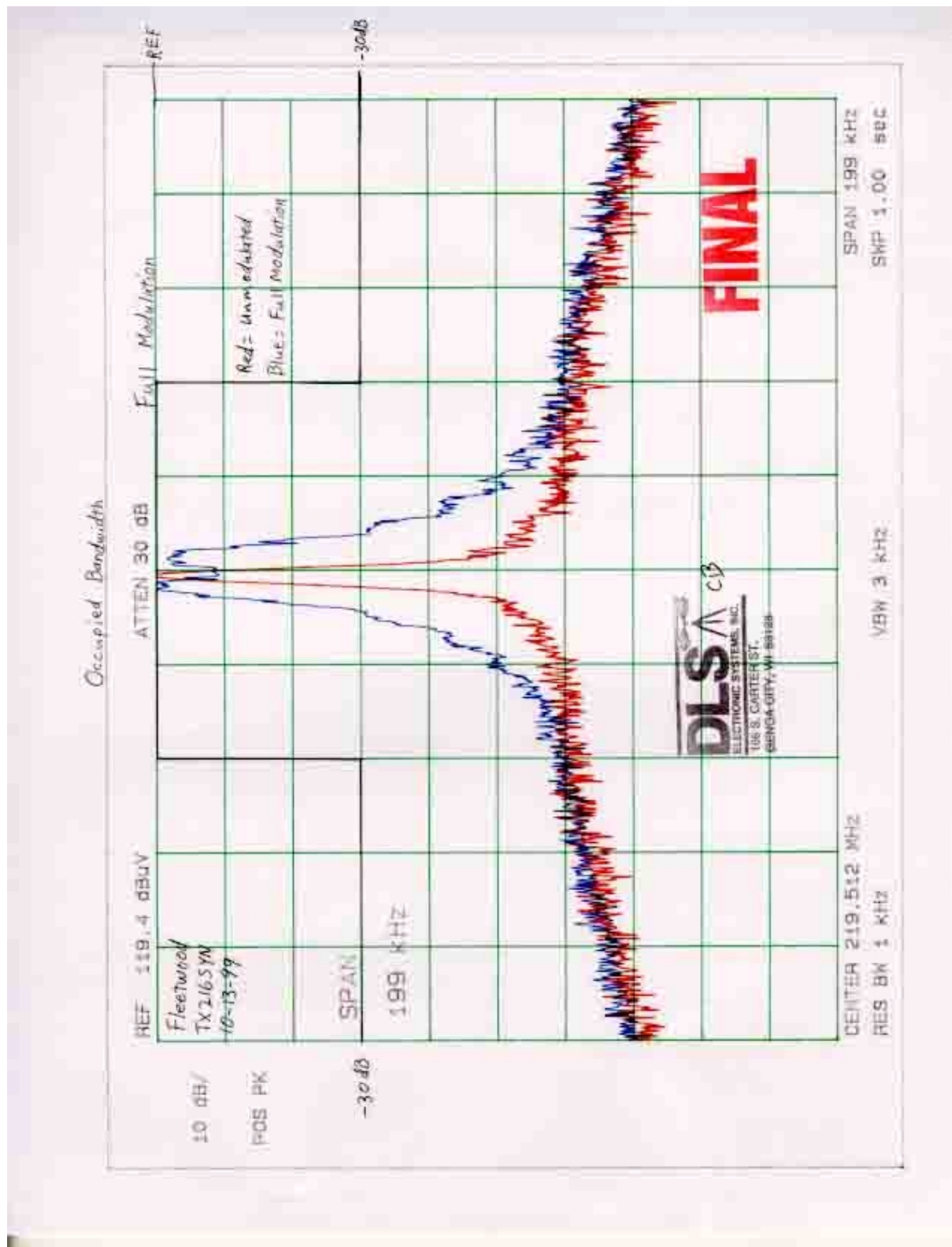








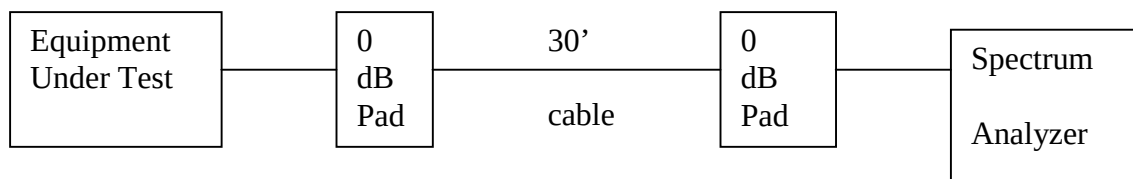




9.0 SPURIOUS CONDUCTED EMISSION MEASUREMENTS AT ANTENNA TERMINALS

PART 2.1051

Spurious conducted emissions were measured at the antenna terminals using an artificial load. Plots were made showing the amplitude of each harmonic emission with the equipment operated as specified in 2.1049. As shown by the radiated charts there was no reason to believe that there were any spurious emissions other than the harmonics that were than individually investigated when doing the conducted test at the antenna terminals. Measurements were made up to the harmonic of the fundamental. The following setup was used showing placement of the attenuators and the Notch Filter (if needed):



The limit for conducted emissions at the antenna terminal is stated in Part 90, Section 90.209, Paragraph c-2 iii. It states the mean power of the emissions shall be attenuated below the mean output power of the transmitter; on any frequency removed from the center of the authorized bandwidth by a displacement frequency equal to or greater than 15 kHz. The following formula is used: at least $43 + 10 \cdot \log_{10}(\text{mean power in watts})$ or 70 dB, whichever is the lesser attenuation.

NOTE: See the following pages for the data and graphs of the actual measurements made:



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CONDUCTED EMISSION DATA TAKEN FOR

SPURIOUS EMISSION MEASUREMENTS MADE

AT THE ANTENNA TERMINALS

PART 2.1051



SUMMARY DATA SHEET OF **OUT-OF-BAND** CONDUCTED EMISSIONS

TEST DATE:----- October 13, 1999
MANUFACTURER:----- Fleetwood Group, Inc.
MODEL NO:----- TX216SYN
S/N:----- 001
CONFIGURATION:----- **216.0125 MHz**
DETECTOR:----- **QUASI-PEAK**

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 90
SUBPART I / SECTION 90.201

****LOW POWER AUXILIARY STATIONS****

TEST EQUIPMENT: Spectrum Analyzer ----- HP 8566B
Quasi Peak Adapter ----- HP 85650A
TYPE OF TEST: MEASUREMENTS MADE AT THE ANTENNA TERMINALS

THE FOLLOWING ARE SIGNIFICANT CONDUCTED LEVELS FOUND:

FREQ IN MHz.	TOTAL dBuV	CABLE & PAD LOSSES	LIMIT dB	MARGIN dB
432.02	91.50	0.00	94.00	2.50
648.88	83.30	0.00	94.00	10.70
863.89	75.60	0.00	94.00	18.40
1081.90	69.50	0.00	94.00	24.50
1296.89	80.20	0.00	94.00	13.80
1513.86	69.90	0.00	94.00	24.10
1945.42	66.60	0.00	94.00	27.40
2161.38	78.80	0.00	94.00	15.20
2375.08	70.40	0.00	94.00	23.60



SUMMARY DATA SHEET OF **OUT-OF-BAND** CONDUCTED EMISSIONS

TEST DATE:----- October 13, 1999
MANUFACTURER:----- Fleetwood Group, Inc.
MODEL NO:----- TX216SYN
S/N:----- 001
CONFIGURATION:----- **219.5125 MHz**
DETECTOR:----- **QUASI-PEAK**

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 90
SUBPART I / SECTION 90.201

******LOW POWER AUXILIARY STATIONS******

TEST EQUIPMENT: Spectrum Analyzer ----- HP 8566B
Quasi Peak Adapter ----- HP 85650A

TYPE OF TEST: MEASUREMENTS MADE AT THE ANTENNA TERMINALS

THE FOLLOWING ARE SIGNIFICANT CONDUCTED LEVELS FOUND:

FREQ IN MHz.	TOTAL dBuV	CABLE & PAD LOSSES	LIMIT dB	MARGIN dB
439.02	87.80	0.00	94.00	6.20
659.40	79.60	0.00	94.00	14.40
877.89	73.40	0.00	94.00	20.60
1098.87	68.80	0.00	94.00	25.20
1318.43	77.40	0.00	94.00	16.60
1537.61	71.30	0.00	94.00	22.70
1975.93	67.50	0.00	94.00	26.50
2195.28	77.80	0.00	94.00	16.20
2414.53	65.70	0.00	94.00	28.30



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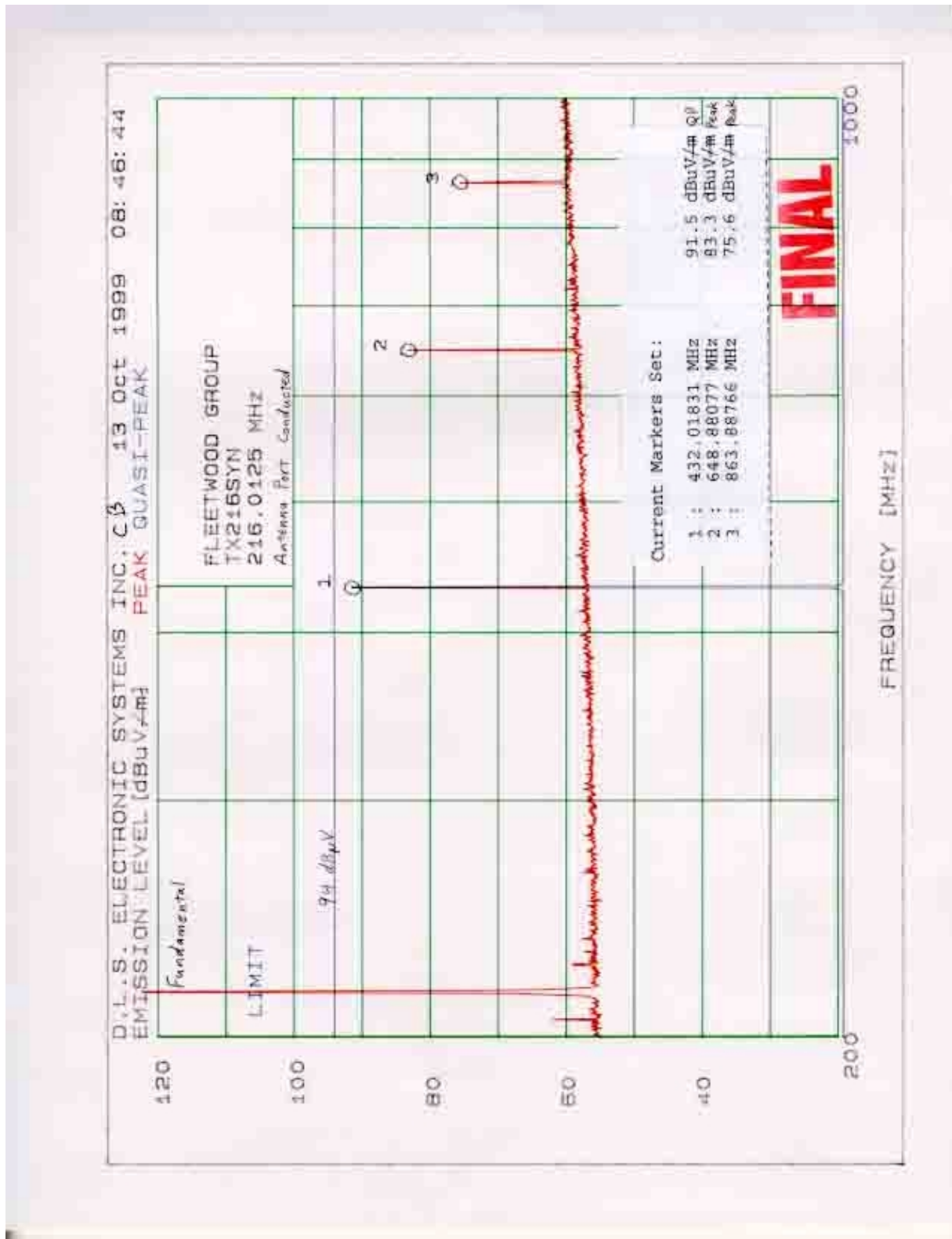
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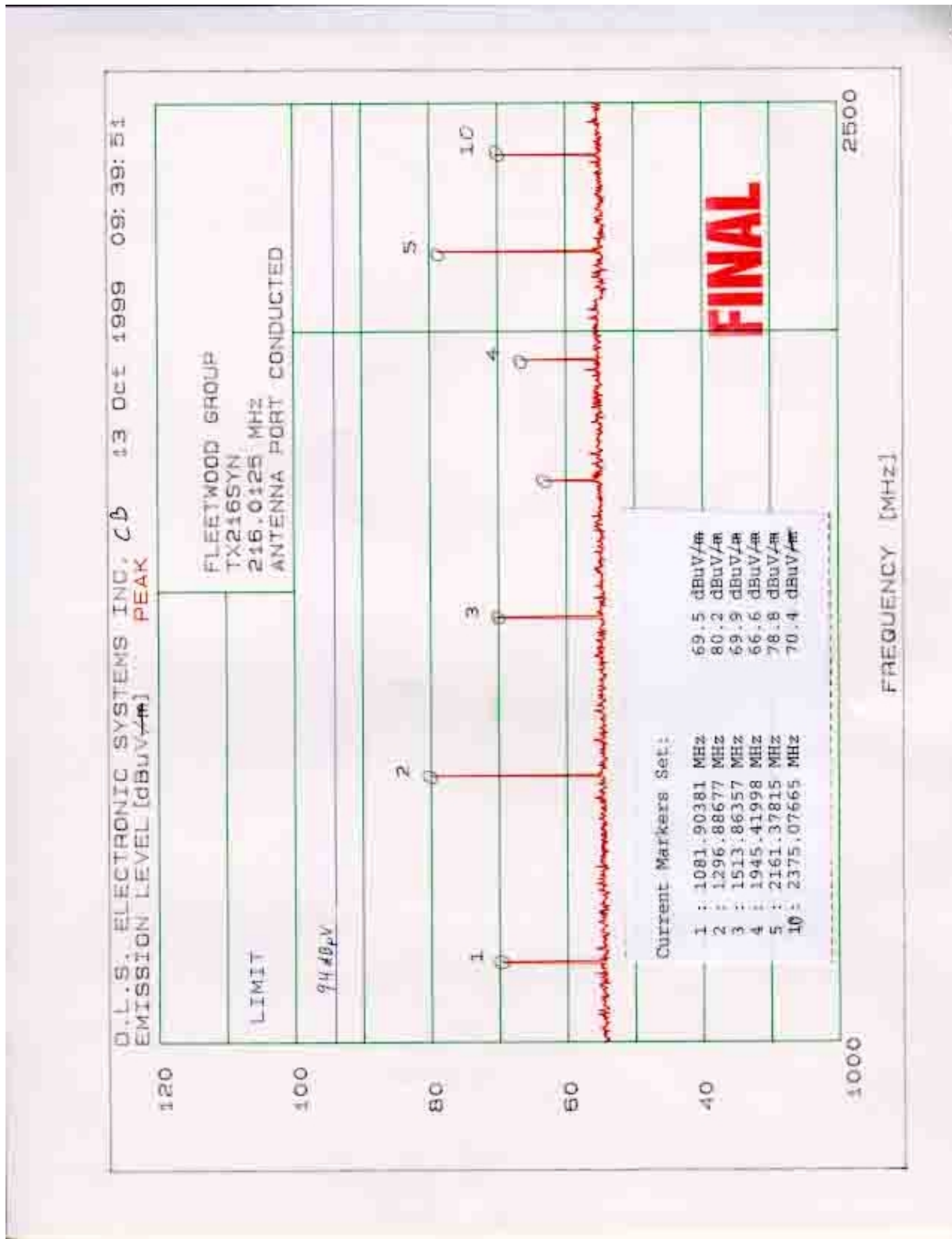
CONDUCTED EMISSION GRAPHS TAKEN FOR

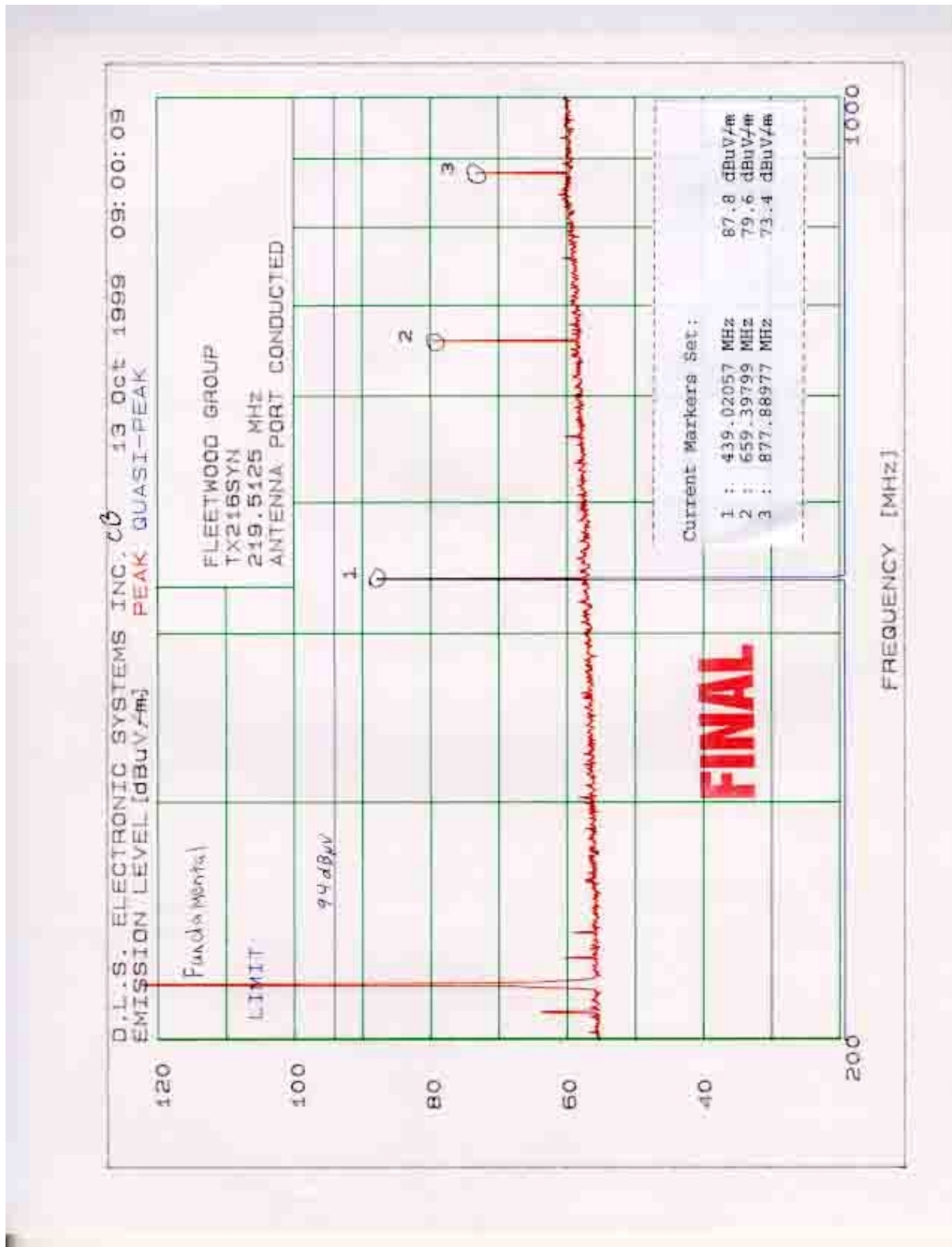
SPURIOUS EMISSION MEASUREMENTS MADE

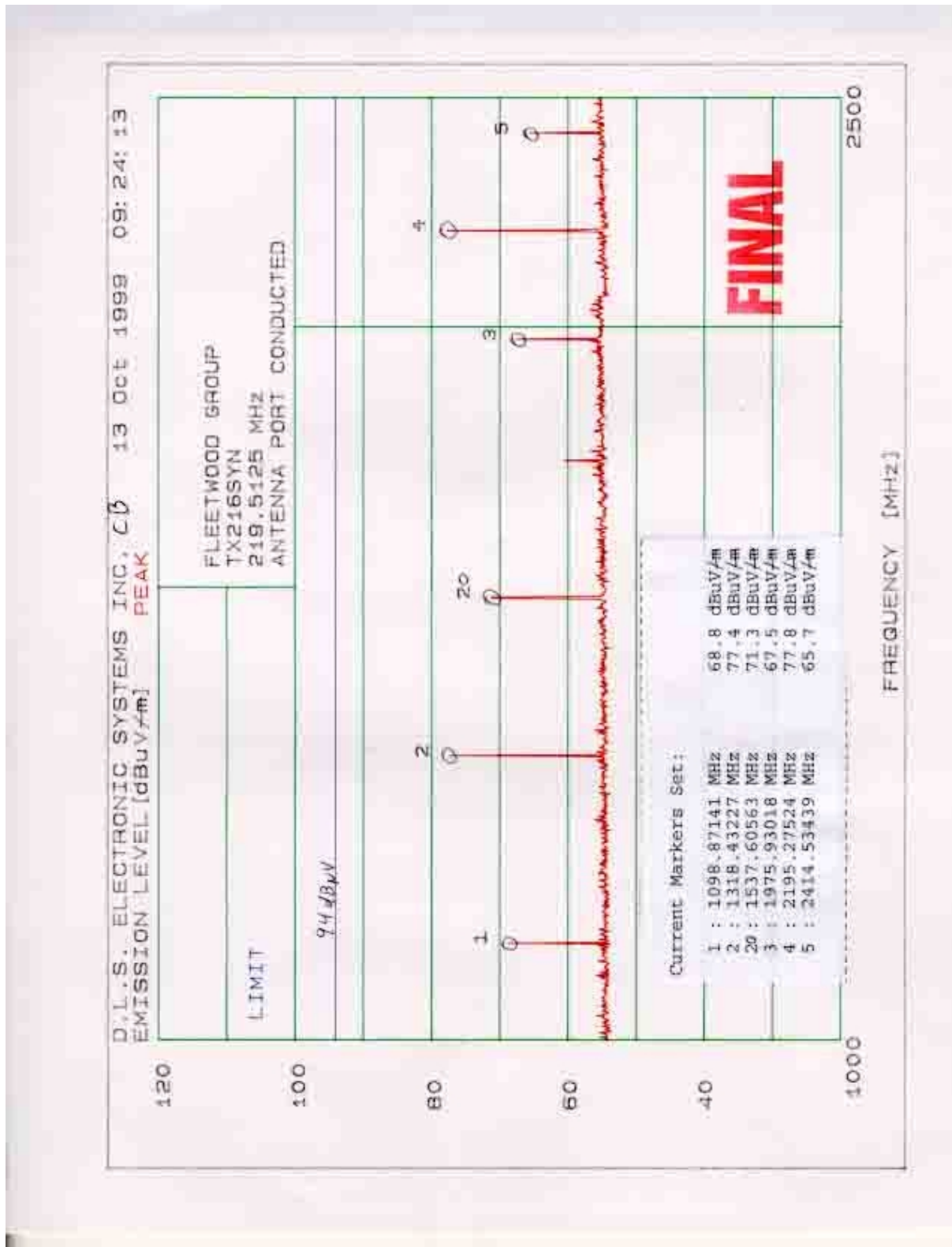
AT THE ANTENNA TERMINALS

PART 2.1051











10.0 FIELD STRENGTH OF SPURIOUS EMISSION MEASUREMENTS PART 2.1053

Radiated measurements were performed at a 1 or 3 meter test distance automatically scanning the frequency range from 200 MHz to 0 MHz, depending upon the fundamental frequency.

For the Transmitter 216-220 MHz, the highest fundamental frequency is 0 MHz so the scans were made up to 0 MHz, to cover the tenth harmonic.

All signals in the frequency range of 30 MHz to 200 MHz were measured with a Biconical Antenna and from 200 MHz to 1000 MHz a Log Periodic Antenna was used as the pickup devices. From 1000 MHz to 10000 MHz, a Double Ridge Horn Antenna was used. The cables and equipment were placed and moved within the range of positions likely to find their maximum emissions. Tests were made in both the horizontal and vertical planes of polarization.

To determine the limit for all spurious and harmonic emissions for the 216 MHz to 220 MHz, 0.05 watt power amplifier, the following two methods were used for correlation:



10.0 FIELD STRENGTH OF SPURIOUS EMISSION MEASUREMENTS (CONT) PART 2.1053

To determine the **LIMIT** for Spurious Emissions the following method was used:

Mean output power in watts:

Manufacturer's rated wattage **0.05 (See Paragraph 6.0, page 8)**

Free Space Formula

Convert to 3 meter test distance using the Free Space Formula

$$\frac{\sqrt{49.2 * \text{rated wattage}}}{\text{Distance}} = \frac{(49.2 * 0.05)^{.5}}{3} = 0.522812908607197 \text{ volts/meter}$$

$$0.522812908607197 \text{ v/m} = 522812.91 \text{ uV/m}$$

$$20 * \text{Log}(522812.91) = 114.37 \text{ dBuV/m}$$

So, the Fundamental at three meters equals **114.37**

The emissions must be reduced by:

$$43 + 10 * \text{LOG}_{10}(0.05) = 29.99 \text{ dB}$$

Therefore, the **LIMIT** at three meters equals:

114.37 dBuV/m extrapolated level for 0.05 watts

-29.99 dB required reduction below the unmodulated fundamental

84.38 dBuV/M maximum spurious emissions allowed



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RADIATED DATA TAKEN FOR FIELD STRENGTH

SPURIOUS EMISSION MEASUREMENTS

PART 2.1053



SUMMARY DATA SHEET OF **RADIATED** EMISSIONS <1000 MHz

TEST DATE:----- October 13, 1999
MANUFACTURER:----- Fleetwood Group, Inc.
MODEL NO:----- TX216SYN
S/N:----- 001
CONFIGURATION:----- **216.0125 MHz**
RATED POWER:----- 0.0500

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 90
SUBPART I / SECTION 90.201

****LOW POWER AUXILIARY STATIONS****

TEST EQUIPMENT: Receiver --- EMC-25 -- SN 804

Antennas --- BIA-25 --- SN 2614
LPA-25 --- SN 1205

TYPE OF TEST: RADIATED **VERTICAL** MEASURED **AT 3 METERS**

THE FOLLOWING ARE SIGNIFICANT RADIATED LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	METER CORR dB	ANTENNA FACTOR dBuV	TOTAL dBuV	LIMIT dB	MARGIN dB
432.00	56.00	1.50	15.97	73.47	84.46	10.99
648.00	32.35	7.50	19.30	59.15	84.46	25.31
864.00	25.73	5.50	21.81	53.04	84.46	31.42



SUMMARY DATA SHEET OF **RADIATED EMISSIONS <1000 MHz**

TEST DATE:----- October 13, 1999
MANUFACTURER:----- Fleetwood Group, Inc.
MODEL NO:----- TX216SYN
S/N:----- 001
CONFIGURATION:----- **216.0125 MHz**
RATED POWER:----- 0.0500

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 90
SUBPART I / SECTION 90.201

******LOW POWER AUXILIARY STATIONS******

TEST EQUIPMENT: Receiver --- EMC-25 -- SN 804

Antennas --- BIA-25 --- SN 2614
LPA-25 --- SN 1205

TYPE OF TEST: RADIATED **HORIZONTAL** MEASURED **AT 3 METERS**

THE FOLLOWING ARE SIGNIFICANT RADIATED LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	METER CORR dB	ANTENNA FACTOR dBuV	TOTAL dBuV	LIMIT dB	MARGIN dB
432.00	50.50	1.50	15.97	67.97	84.46	16.49
648.00	27.85	7.50	19.30	54.65	84.46	29.81
864.00	31.73	5.50	21.81	59.04	84.46	25.42



SUMMARY DATA SHEET OF **RADIATED EMISSIONS >1000 MHz**

TEST DATE:----- October 13, 1999
MANUFACTURER:----- Fleetwood Group, Inc.
MODEL NO:----- TX216SYN
S/N:----- 001
CONFIGURATION:----- **216.0125 MHz**
RATED POWER:----- 0.0500

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 90
SUBPART I / SECTION 90.201

******LOW POWER AUXILIARY STATIONS******

TEST EQUIPMENT: Receiver --- EMC-25 -- SN 645

TYPE OF TEST: RADIATED EMISSIONS USING **VERTICAL** POLARIZATION

THE FOLLOWING ARE SIGNIFICANT RADIATED LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	ANTENNA PLUS CABLE	PRE-AMP GAIN dB	TOTAL dBuV	ANTENNA DISTANCE IN METERS	LIMIT dBuV	MARGIN dB
1079.00	40.90	28.10	0.00	69.00	3	84.46	15.46
1512.00	42.70	29.30	0.00	72.00	3	84.46	12.46
1728.00	38.00	30.43	0.00	68.43	3	84.46	16.03
2160.00	40.50	30.12	0.00	70.62	1	94.00	23.38



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SUMMARY DATA SHEET OF **RADIATED** EMISSIONS **>1000 MHz**

TEST DATE:----- October 13, 1999
MANUFACTURER:----- Fleetwood Group, Inc.
MODEL NO:----- TX216SYN
S/N:----- 001
CONFIGURATION:----- **216.0125 MHz**
RATED POWER:----- 0.0500

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 90
SUBPART I / SECTION 90.201

******LOW POWER AUXILIARY STATIONS******

TEST EQUIPMENT: Receiver --- EMC-25 -- SN 645

TYPE OF TEST: RADIATED EMISSIONS USING **HORIZONTAL** POLARIZATION

THE FOLLOWING ARE SIGNIFICANT RADIATED LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	ANTENNA PLUS CABLE	PRE-AMP GAIN dB	TOTAL dBuV	ANTENNA DISTANCE IN METERS	LIMIT dBuV	MARGIN dB
1079.00	42.20	28.10	0.00	70.30	3	84.46	14.16
2069.50	38.60	29.70	0.00	68.30	1	94.00	25.70



SUMMARY DATA SHEET OF **RADIATED EMISSIONS <1000 MHz**

TEST DATE:----- October 13, 1999
MANUFACTURER:----- Fleetwood Group, Inc.
MODEL NO:----- TX216SYN
S/N:----- 001
CONFIGURATION:----- **219.5125 MHz**
RATED POWER:----- 0.0500

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 90
SUBPART I / SECTION 90.201

******LOW POWER AUXILIARY STATIONS******

TEST EQUIPMENT: Receiver --- EMC-25 -- SN 804

Antennas --- BIA-25 --- SN 2614
LPA-25 --- SN 1205

TYPE OF TEST: RADIATED **VERTICAL** MEASURED **AT 3 METERS**

THE FOLLOWING ARE SIGNIFICANT RADIATED LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	METER CORR dB	ANTENNA FACTOR dBuV	TOTAL dBuV	LIMIT dB	MARGIN dB
439.00	52.50	1.50	16.11	70.11	84.46	14.35
658.00	37.41	7.50	19.76	64.67	84.46	19.79
878.00	28.79	5.50	22.18	56.47	84.46	27.99



SUMMARY DATA SHEET OF **RADIATED** EMISSIONS <1000 MHz

TEST DATE:----- October 13, 1999
MANUFACTURER:----- Fleetwood Group, Inc.
MODEL NO:----- TX216SYN
S/N:----- 001
CONFIGURATION:----- **219.5125 MHz**
RATED POWER:----- 0.0500

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 90
SUBPART I / SECTION 90.201

****LOW POWER AUXILIARY STATIONS****

TEST EQUIPMENT: Receiver --- EMC-25 -- SN 804

Antennas --- BIA-25 --- SN 2614
LPA-25 --- SN 1205

TYPE OF TEST: RADIATED **HORIZONTAL** MEASURED **AT 3 METERS**

THE FOLLOWING ARE SIGNIFICANT RADIATED LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	METER CORR dB	ANTENNA FACTOR dBuV	TOTAL dBuV	LIMIT dB	MARGIN dB
439.00	50.50	1.50	16.11	68.11	84.46	16.35
658.00	32.41	7.50	19.76	59.67	84.46	24.79
878.00	32.29	5.50	22.18	59.97	84.46	24.49



SUMMARY DATA SHEET OF **RADIATED EMISSIONS >1000 MHz**

TEST DATE:----- October 13, 1999
MANUFACTURER:----- Fleetwood Group, Inc.
MODEL NO:----- TX216SYN
S/N:----- 001
CONFIGURATION:----- **219.5125 MHz**
RATED POWER:----- 0.0500

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 90
SUBPART I / SECTION 90.201

******LOW POWER AUXILIARY STATIONS******

TEST EQUIPMENT: Receiver --- EMC-25 -- SN 645

TYPE OF TEST: RADIATED EMISSIONS USING **VERTICAL** POLARIZATION

THE FOLLOWING ARE SIGNIFICANT RADIATED LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	ANTENNA PLUS CABLE	PRE-AMP GAIN dB	TOTAL dBuV	ANTENNA DISTANCE IN METERS	LIMIT dBuV	MARGIN dB
1097.00	41.30	28.10	0.00	69.40	3	84.46	15.06
1317.00	41.80	28.88	0.00	70.68	3	84.46	13.78
1536.00	41.50	29.30	0.00	70.80	3	84.46	13.66
2195.00	40.40	30.12	0.00	70.52	1	94.00	23.48



SUMMARY DATA SHEET OF **RADIATED** EMISSIONS **>1000 MHz**

TEST DATE:----- October 13, 1999
MANUFACTURER:----- Fleetwood Group, Inc.
MODEL NO:----- TX216SYN
S/N:----- 001
CONFIGURATION:----- **219.5125 MHz**
RATED POWER:----- 0.0500

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 90
SUBPART I / SECTION 90.201

******LOW POWER AUXILIARY STATIONS******

TEST EQUIPMENT: Receiver --- EMC-25 -- SN 645

TYPE OF TEST: RADIATED EMISSIONS USING **HORIZONTAL** POLARIZATION

THE FOLLOWING ARE SIGNIFICANT RADIATED LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	ANTENNA PLUS CABLE	PRE-AMP GAIN dB	TOTAL dBuV	ANTENNA DISTANCE IN METERS	LIMIT dBuV	MARGIN dB
1097.00	42.90	28.10	0.00	71.00	3	84.46	13.46
1535.00	39.30	29.30	0.00	68.60	3	84.46	15.86
2195.00	38.50	30.12	0.00	68.62	1	94.00	25.38