PROOF OF PERFORMANCE MEASUREMENTS

Radio Station KXYZ

1320 Khz

Houston, Texas

April 26, 1982

RADIO 13
KXYZ 24 HOURS "EN ESPAÑOL"

HOUSTON SPEAKS SPANISH

24 HOURS ON

5000 WATTS **KXYZ** 1320 AM

The following equipment performance measurements for Radio Station KXYZ were conducted on Monday, April 26, 1982 between the hours of 1:30am and 4:00 am CDT. All measurements were made by Ronald D. Haney, chief engineer of station KXYZ. William H. Waldrop, a third class operator assisted in the tests. The test equipment listed in figure #1 was connected as shown in figure #2.

Prior to its use, the test equipment frequency response was checked and found to be within 0.01 dB between 30 hertz and 30 kilohertz. The residual hum, noise and distortion of the test equipment was found to be under 0.05%.

All station equipment was adjusted for normal operation and all equipment normally used in the audio system was included in the tests. The Orban Optimod 9000 was switched into the proof mode for all measurements.

The frequency response of the system was measured by adjusting the audio oscillator to produce the modulating level indicated with a modulating frequency of 400 hertz. As the frequency was varied the level was measured compared to a 0 dB reference on the H.P. 332 distortion analyzer.

The harmonic distortion was measured by adjusting the audio generator to produce modulation levels indicated and by measuring the distortion using an RF input into the detector input of the H.P. 332 distortion analyzer. The carrier shift at each modulation level was measured by modulating the transmitter with 400 hertz with the percentages indicated and reading the carrier shift on the carrier level meter on the RCA modulation monitor.

The input signal was removed and system noise was measured using the detector input of the H.P. analyzer. The noise level given is relative to 400 hertz at 100% modulation.

The Potomac Instruments FIM-41 was tuned to harmonics of the transmitter operating frequency at a distance of approximately 2 miles from the antenna array to avoid internally generated spurrious responses due to reciever overload.

ALL DATA CONTAINED HEREIN IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

Ronald D. Haney
chief engineer
P1-9-11388

RADIO STATION KXYZ
1320 khz
Houston, Texas

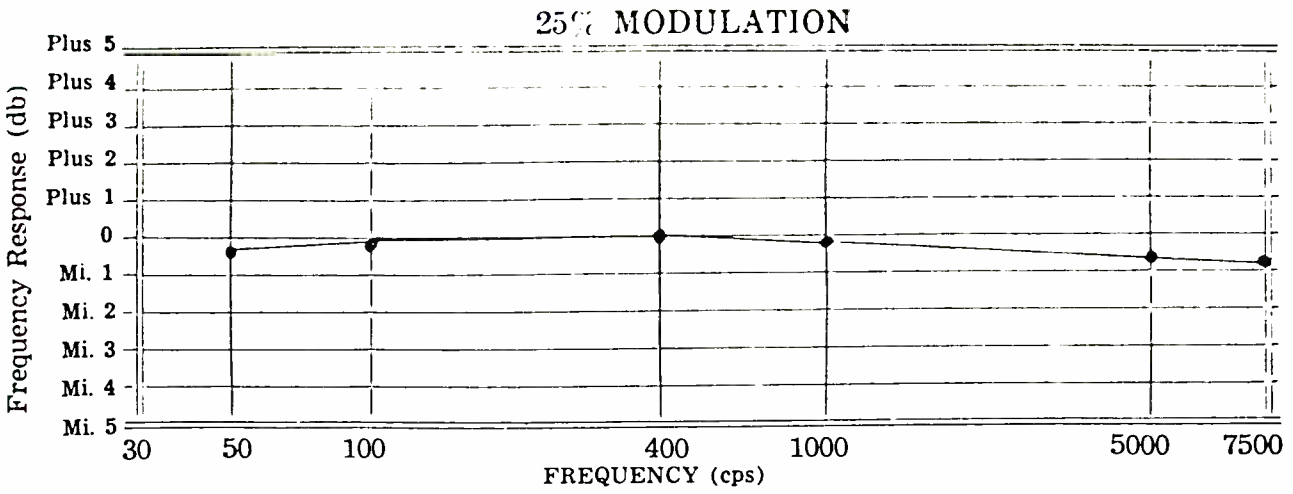
FREQUENCY RESPONSE

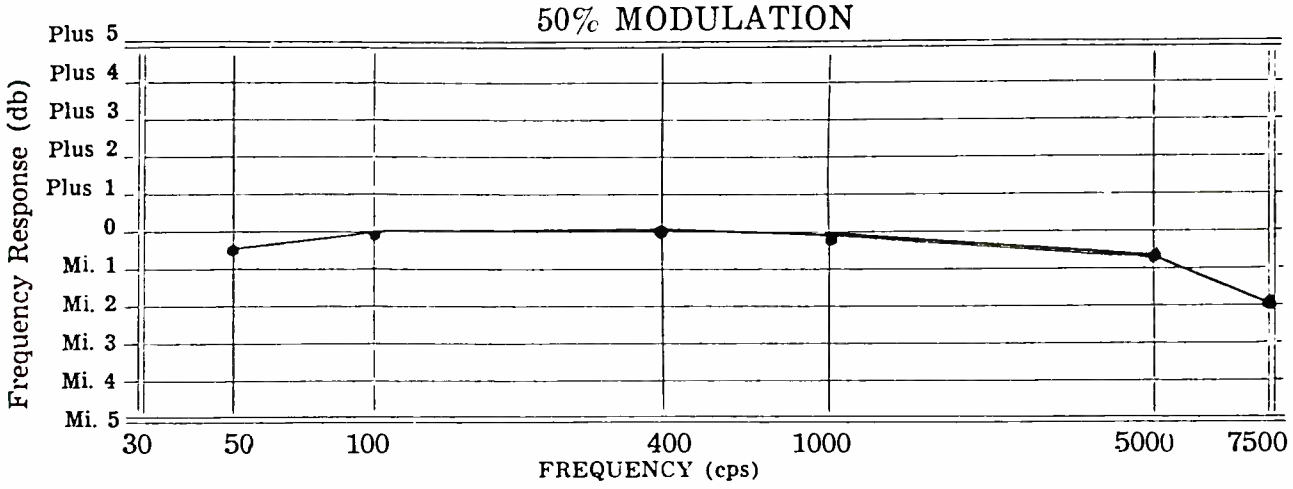
FREQUENCY Hertz	98% Modulation	85% Modulation	50% Modulation	25% Modulation
50	-0.42	-0.20	-0.40	-0.41
100	-0.20	+0.10	-0.10	-0.15
400	0.00	0.00	0.00	0.00
1,000	-0.25	-0.20	-0.20	-0.15
5,000	-1.10	-1.00	-0.81	-0.75
7,500	-2.00	-2.10	-2.00	-0.82
10,000	-2.50	-2.00	-2.20	-2.20

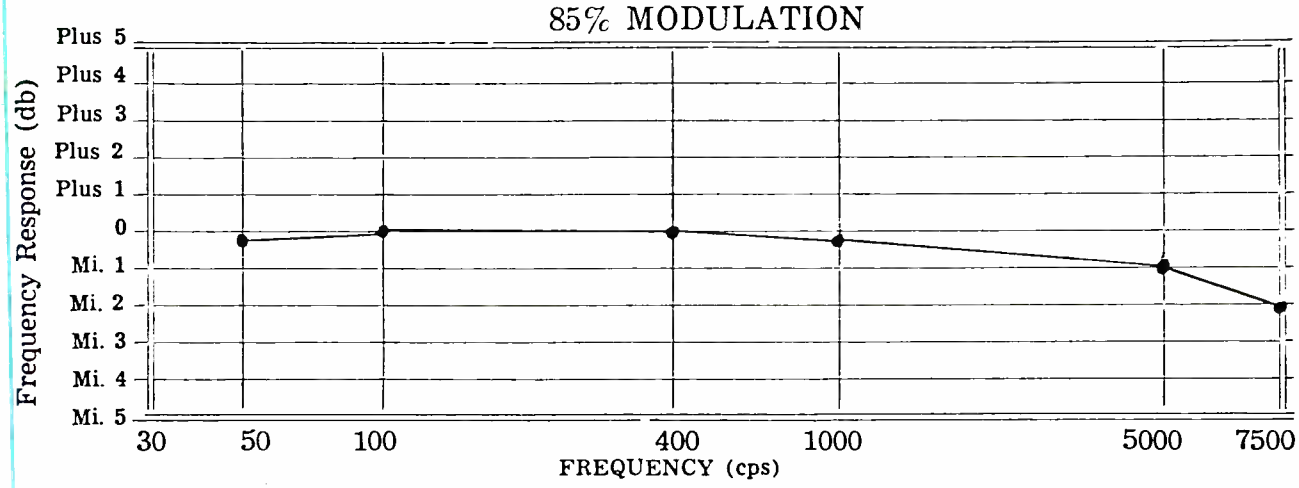
HARMONIC DISTORTION

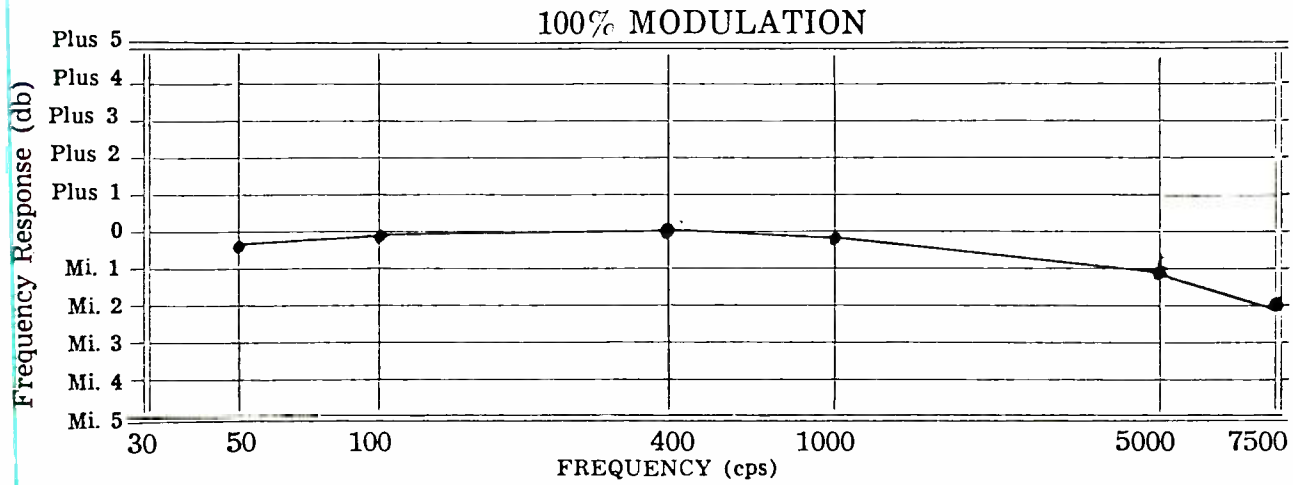
FREQUENCY Hertz	98% Modulation	85% Modulation	50% Modulation	25% Modulation
50	1.65%	1.35%	0.82%	0.76%
100	1.05%	0.79%	0.75%	0.75%
400	1.75%	1.34%	1.15%	0.86%
1,000	2.69%	2.20%	2.02%	1.42%
5,000	2.95%	2.35%	2.45%	1.62%
7,500	1.23%	1.44%	2.04%	1.47%
10,000	1.64%	1.89%	2.38%	1.74%

NOISE LEVEL = -55.5dB Below 100% modulation at 400 hertz









Engineer Ronald D. Haney

License No. P1-9-11388

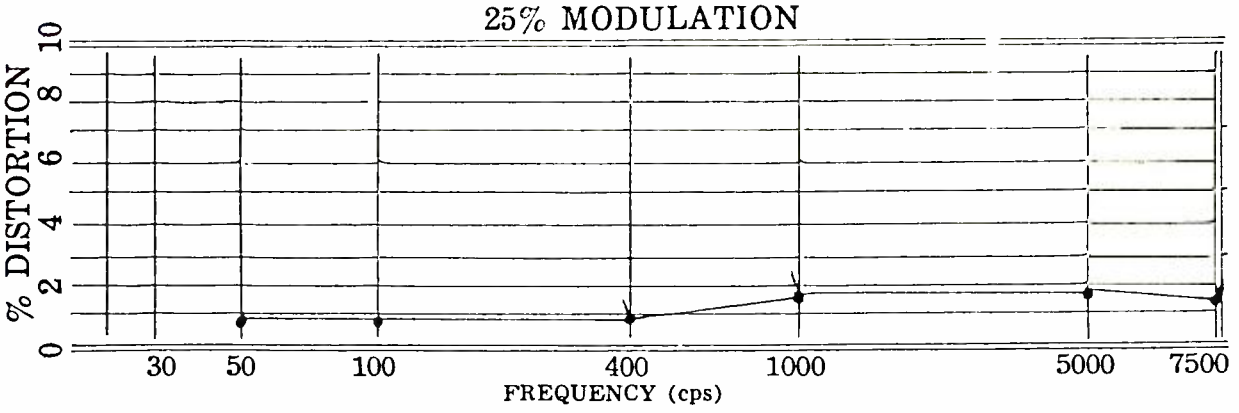
Date April 26, 1982

RADIO STATION KXYZ
April 26, 1982

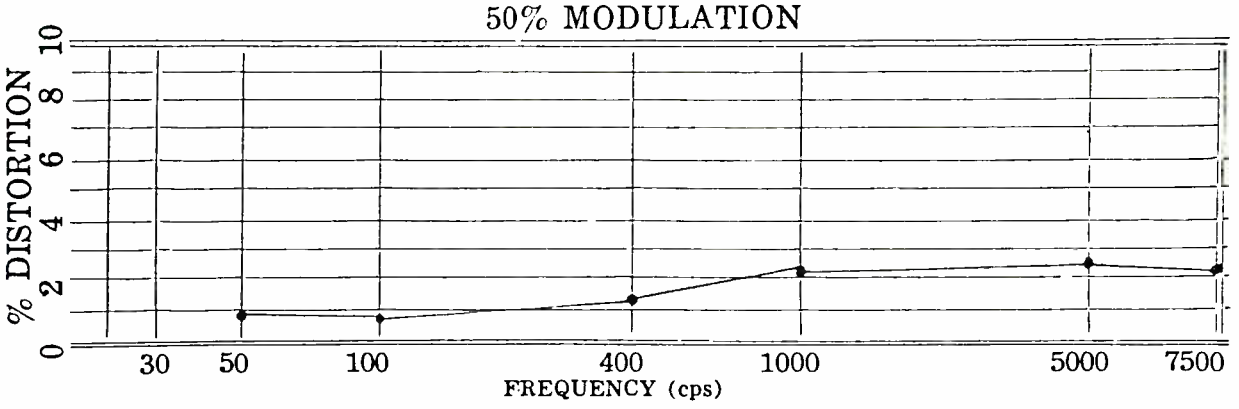
HARMONIC FREQUENCY CONTENT

	30 CPS	50 CPS	100 CPS	400 CPS	1000 CPS	5000 CPS	7500 CPS
25% Modulation	n/a	0.76%	0.75%	0.86%	1.42%	1.62%	1.47%
50% Modulation	n/a	0.92%	0.75%	1.15%	2.02%	2.45%	2.04%
85% Modulation	n/a	1.35%	0.79%	1.34%	2.20%	2.35%	1.44%
100% Modulation	n/a	1.65%	1.05%	1.75%	2.69%	2.95%	1.23%

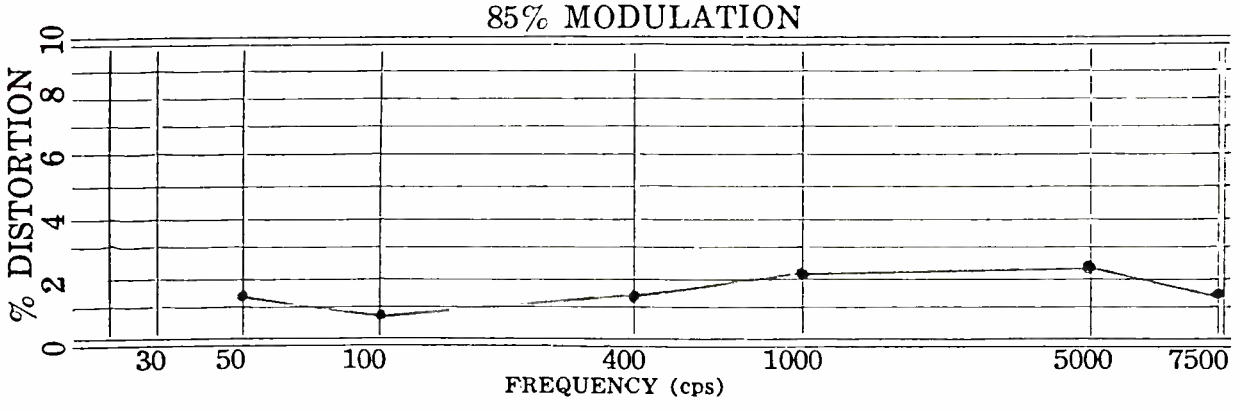
25% MODULATION



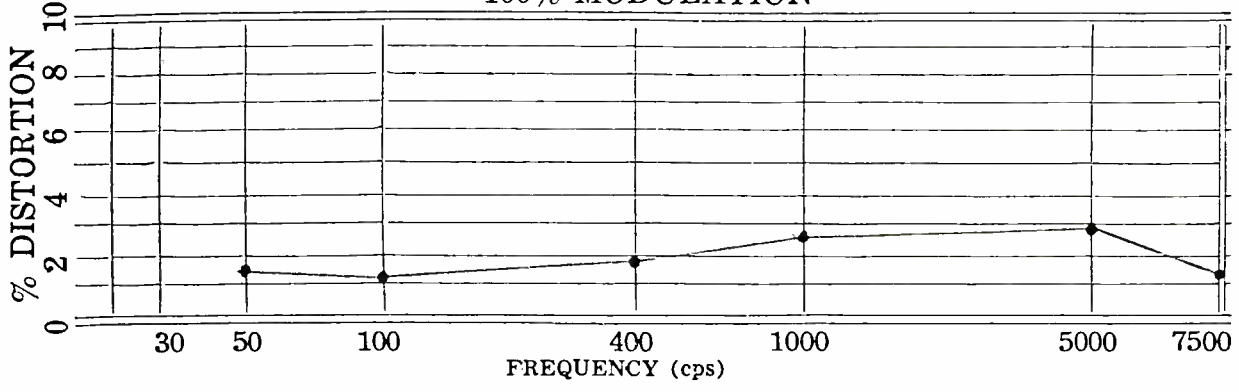
50% MODULATION



85% MODULATION



100% MODULATION



Engineer Ronald D. Haney
License No. P1-9-11388
Date April 26, 1982

PROOF OF PERFORMANCE MEASUREMENTS

RADIO STATION KXYZ
1320 khz
Houston, Texas
April 26, 1982

CARRIER SHIFT

100% modulation	--	1.60%
85% modulation	--	1.00%
50% modulation	--	0.70%
25% modulation	--	0.20%

HARMONIC RADIATION

1st Harmonic	--	no audio/meter indication
2nd Harmonic	--	no audio or meter indication

PROOF OF PERFORMANCE MEASUREMENTS
RADIO STATION KXYZ
1320 khz
Houston, Texas

TEST EQUIPMENT LIST

Potomac Instruments Audio Generator model AG-51 serial #407

Hewlett Packard Model 332 Distortion Analyzer

Hewlett Packard Frequency Counter

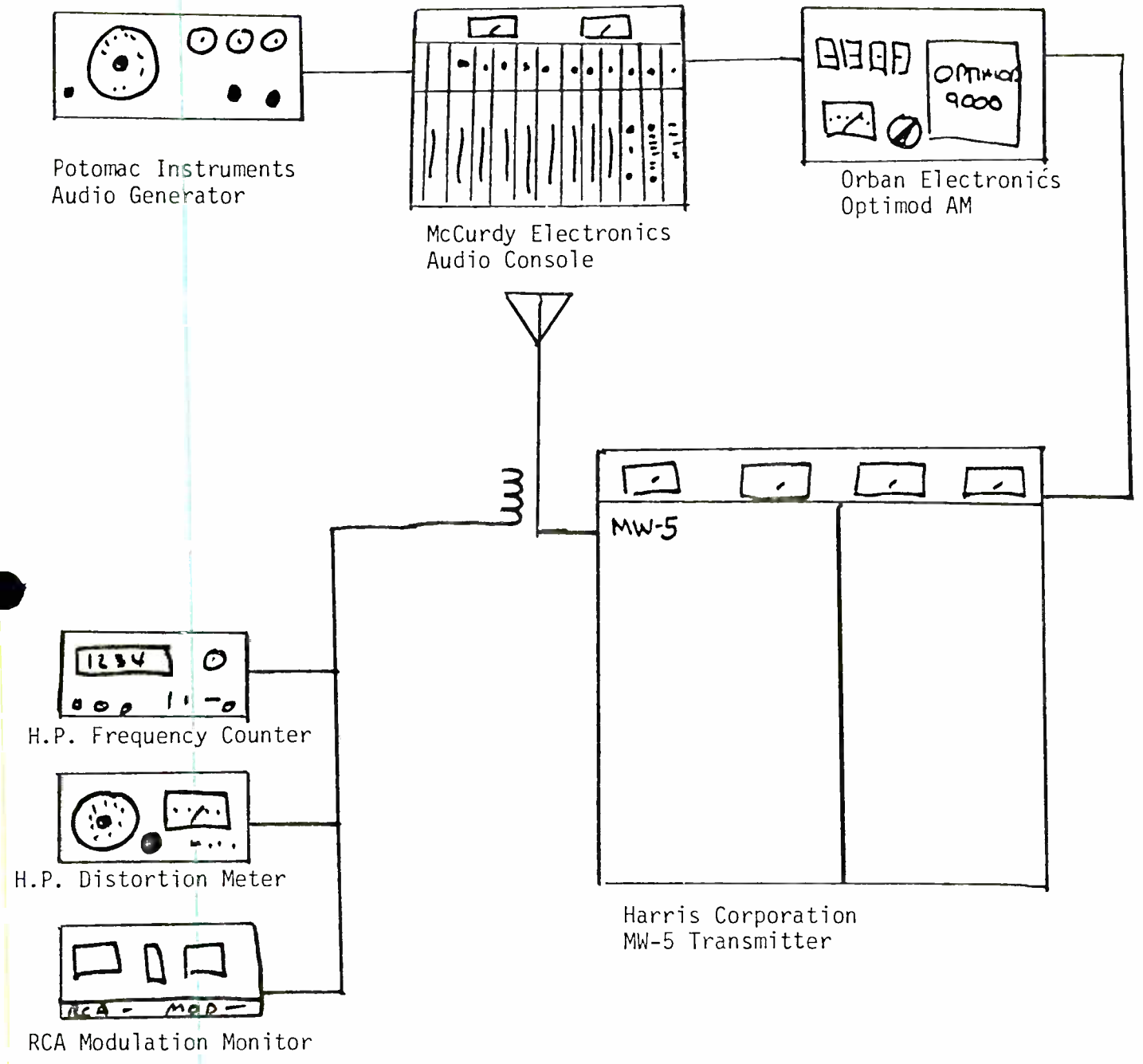
Potomac Instruments Model FIM 41 field intensity meter serial # 238

FIGURE #1

Radio Station KXYZ
1320 Khz
Houston, Texas

April 26, 1982

PROOF OF PERFORMANCE MEASUREMENTS



EQUIPMENT CONNECTION DIAGRAM

Figure #2