

11/7/73

TO: Mr. C. H. Kaman  
FROM: Materials & Process Engineering - A. L. Belbruno  
SUBJECT: Top Deflection History - Graphite No. 3

Graphite #3 - Graphite fibers longitudinal and birch veneer at 45° same as Graphite #2.

Top Data Prior to Bonding to Bowl\*

	THICKNESS	WEIGHT WITHOUT BRIDGE		DEFLECTION WITHOUT BRIDGE	DEFLECTION WITH THIN BRIDGE
Graphite #3	.046	169 Grams (5.97 oz)	2 lbs	.063	.042
			4 lbs	.101	.070

.63  
.42

	THICKNESS	WEIGHT	
Thin Bridge	.371"	17 Grams	(0.6 oz)

\*This data taken from memo dated 10/29/73.

Top Bonded to Bowl

	<u>Date</u>	<u>Strings Tight</u>	<u>Strings Loose</u>
Graphite #3-1	11/7/73	No strings	K = .120"
	Bridge, no bracing		

ALB/tm

*A. L. Belbruno*  
A. L. Belbruno

cc: L. Pickett  
R. Mayerjak

December 3, 1973

TO: Mr. C. H. Kaman  
FROM: Materials & Process Engineering - A. L. Belbruno  
SUBJECT: Top Deflection History

	<u>Strings Tight</u>	<u>Strings Loose</u>
Graphite #3-1	.035	.031

NOTE: Serialization of Graphite #3 as #3-1 on 11/7/73 was in error since it was not in playable condition.

ALB/tm

A. L. Belbruno

*A. L. Belbruno*

cc: R. Mayerjak  
L. Pickett

#3-3 Flat Carbon (1 @ 45°) bloodhound holes (10.7"□")  
 tttt CHK 11/18/74

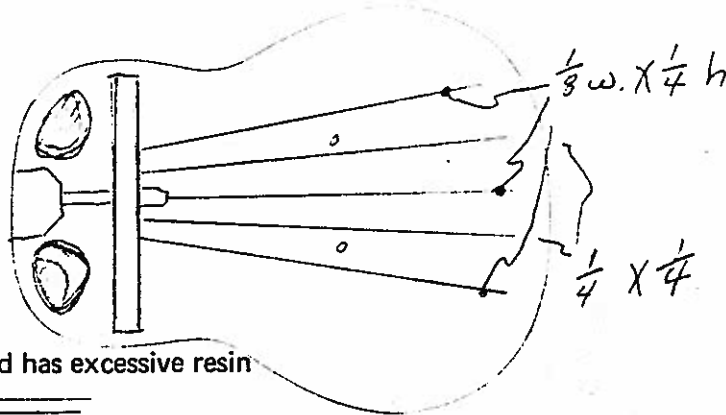
1st test 11/19/74 CMcD – bowl patch on?  
 #3-3 prior K – no changes made  
 #3-1 .....

RL	SN	K
.146/.142	.045/.047	.075 .080 .035/.031

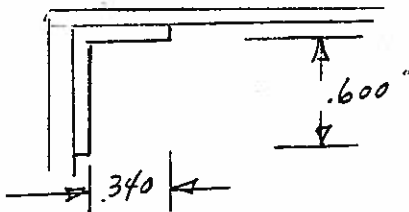
FF  
88~

11/20/74 5.35 x 2 = 10.7"□" □" of holes

- #3-3 flat 1-45° birch and carbon
- has fingerboard cut off at 14th fret
  - has bloodhound sound holes 10.7"□"
  - has five long fans below one heavy duty cross brace located just below the sound holes



- cut down neck block
- The shelf is heavy and has excessive resin



don't know gage but it must be at least 3 times heavier than we are currently using

- has large patch on back of bowl
- very heavy 3 or 4 ply bowl reinforcing for strap pin

Bridge is .080" left

### Carbon 3-3

"This guitar was checked mainly for triad which remains clear and brighter particularly in the upper region over Master #1. It therefore substantiates the original preference of Glen Campbell on treble brightness. The mid-range series D, C, B and A while clear are not as clear as #1 and #2. However, the bass response is very large and the total output of the guitar is great with emphasis on little tubbiness in the bass and high cut of the treble. Some modulation and equalization of the tonal properties of this guitar are essential."

Excerpt from 11/18/74 CHK report.

Carbon guitar #3-3 has a fairly wide display of fans. They are 1/8" and 1/4" staggered. All are 1/4" high.

Original top K = .063 and was 169 grams.

4/30/75

#3-4

This guitar had its braces removed and now has light lateral braces only. We have a tape.

K = .086 no strings, patch off

	R	L	S	N	FF
.25	.011	.011	.024	.019	88~
.50	.022	.022	.048	.038	?
1.0	.043	.044	.100	.079	

Fantastic bass and mid  
lacking treble

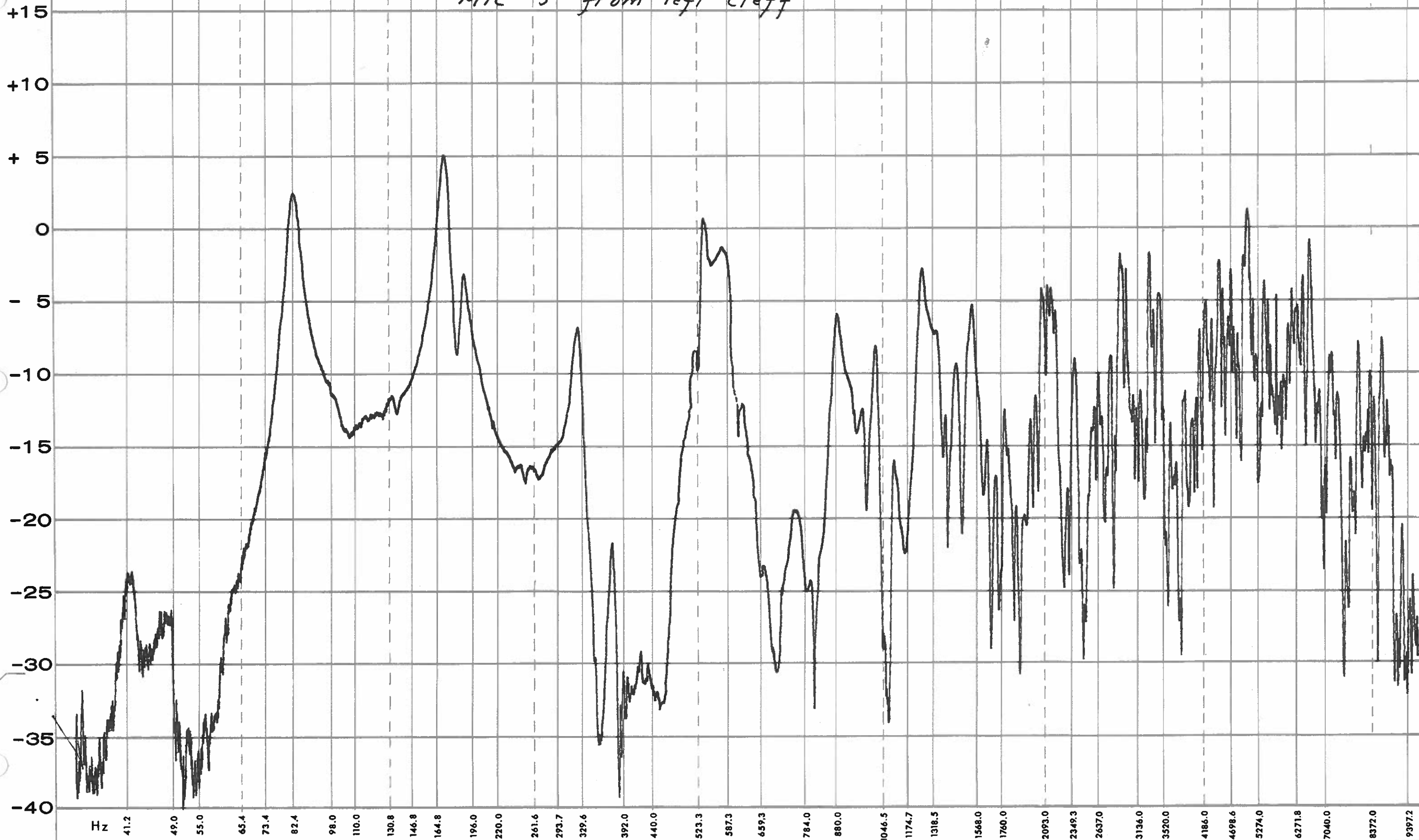
*Have tape of 3-4 4/30/75*

top #G-3 @ 169 grams

45°

E G A C D E G A C D E G A C D E G A C D E G A C D E G A C D E G A C D

*MIC 3" from left cleff*

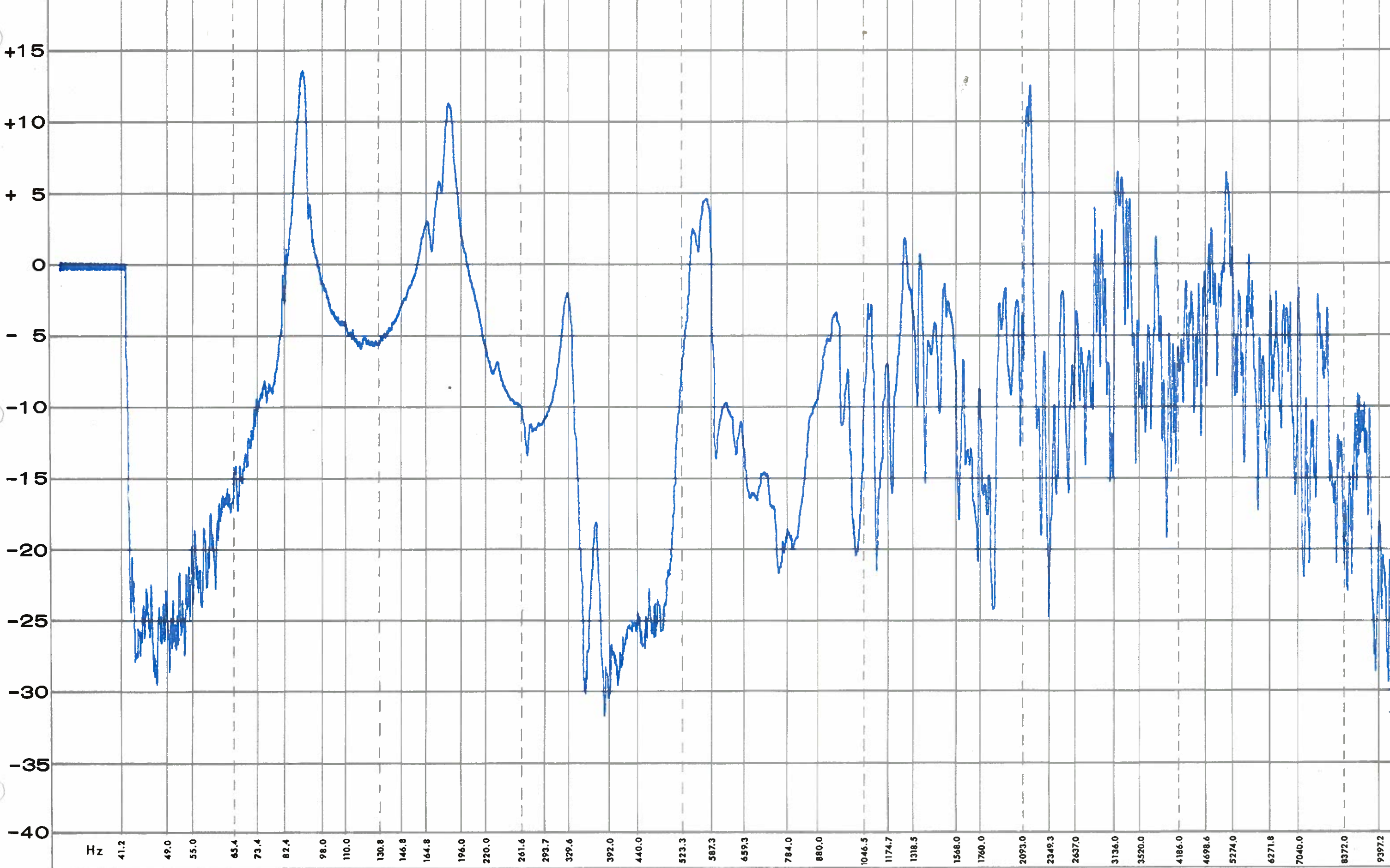


OPERATING TECHNICIAN

DATE *5-13-74*

**OWATION INSTRUMENTS**

E G A C D E G A C D E G A C D E G A C D E G A C D E G A C D



OPERATING TECHNICIAN *DR*

DATE *11/27/54*

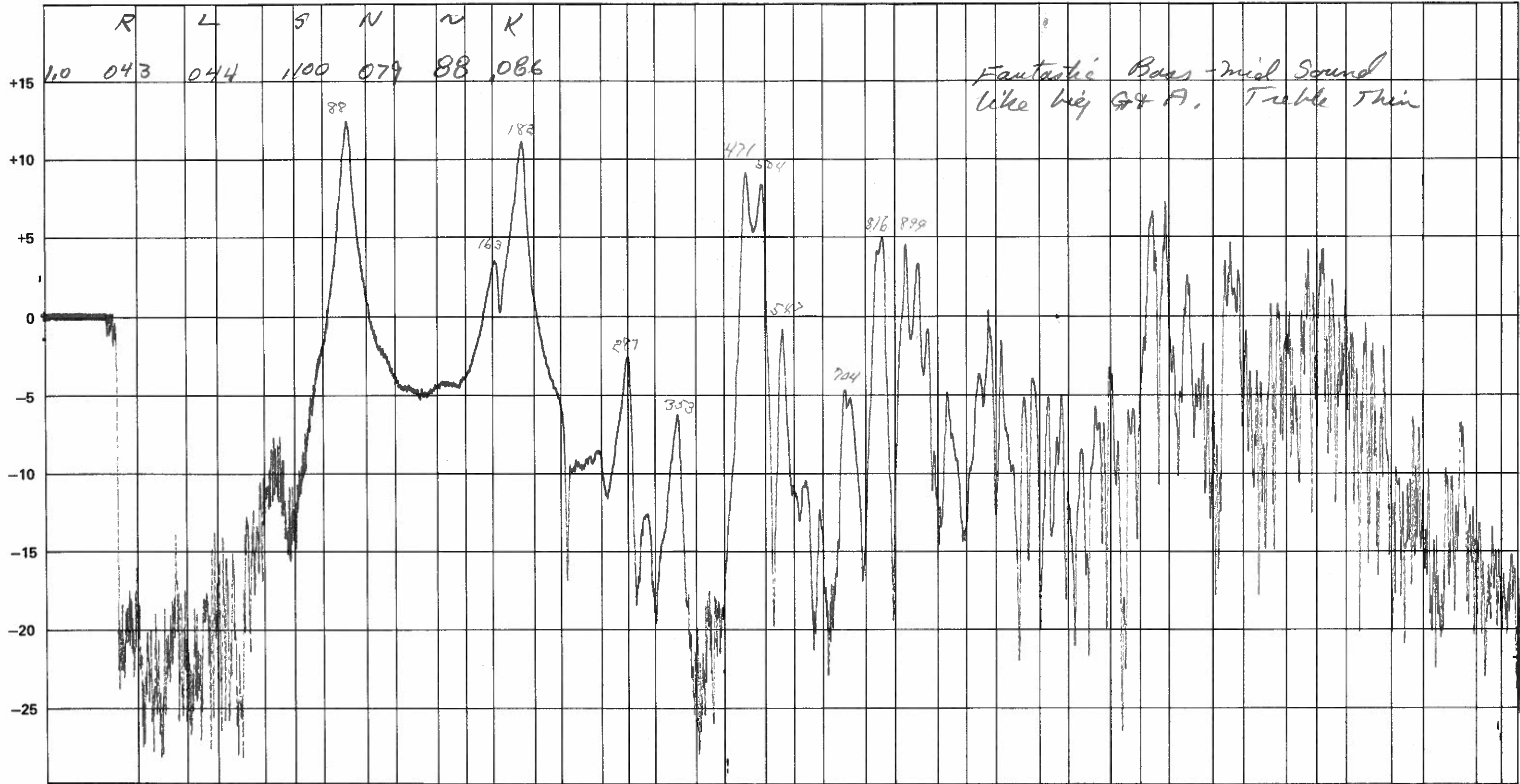
TECHNICIAN \_\_\_\_\_

DATE 4/30/75

DESCRIPTION Wire 4" in front of hole

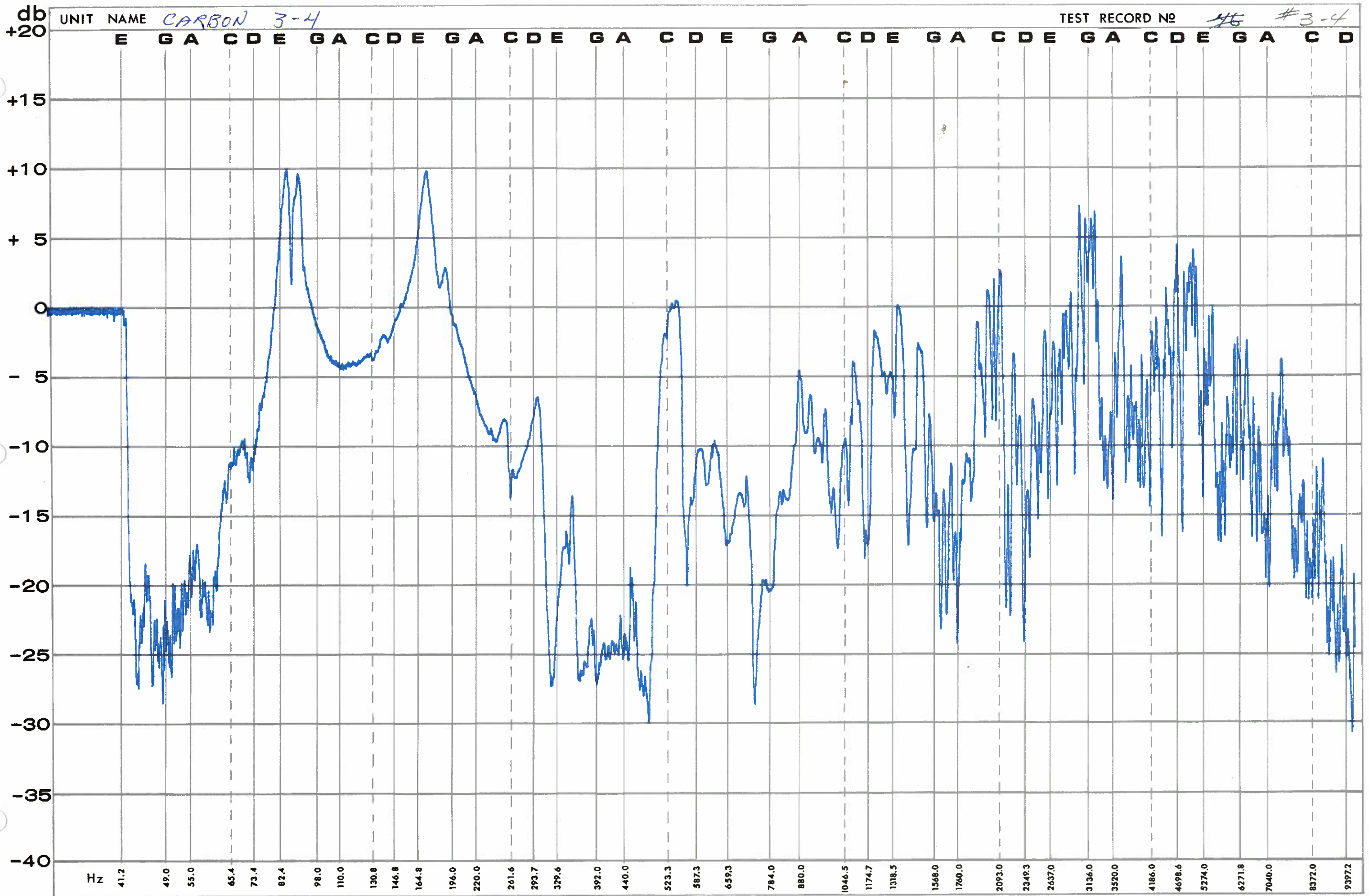
GUITAR NUMBER 3-4

db



Hz 30. REF

E	41.2	G	49.	A	55.	C	65.4	D	73.4	E	82.4	G	98.	A	110.	C	130.8	D	146.8	E	164.8	G	196.	A	220.	C	261.6	D	293.7	E	329.6	G	392.	A	440.	C	523.3	D	587.3	E	659.3	G	784.	A	880.	C	1046.5	D	1174.7	E	1318.5	G	1568.	A	1760.	C	2093.	D	2349.3	E	2637.	G	3136.	A	3520.	C	4186.	D	4698.6	E	5274.	G	6271.8	A	7040.	C	8372.	9000. REF	D	9372
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**OWATION INSTRUMENTS**