

EXHIBIT A

ERS, Inc. FCC ID: N3H-ERS9000NB

STANDARD TEST CONDITIONS

Temperature, ambient, =	68°F 19.5°C
Humidity:	65%
E _{dc} :	27.5 Volts
I _{dc} High	5.5 amps
P _o High	11.0 Watts (nominal = 10 W.)
P _o Low	.50 Watts
I _{dc} Low	2.0 amps
I _{dc} Standby	1.3 amps
F _c	158.000 mHz
Modulation	2.5 kHz (50%+20dB)
Deviation	1.5 or 3.0 kHz

Note:

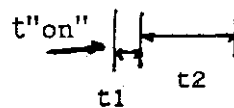
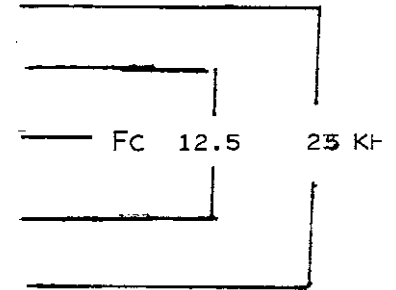
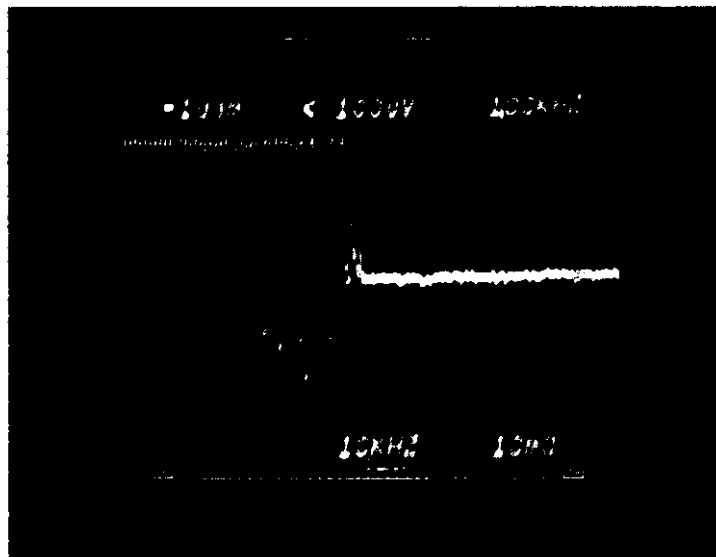
These measurements show compliance with 12.5 and 25 kHz channel spacing.
Modulation is switchable between 1.5 and 3.0 kHz frequency deviation.

Ex-A-ERS

Exhibit AA
ERS, Inc.

ERS96000NB

Transient Frequency Behavior
Fc = 156 mHz
TX "on"



SWEEP - 10 MS/DIV.

t1 = 5 ms

t2 = 20 ms

ERS-exAA-pg2

Amended 10/22/98

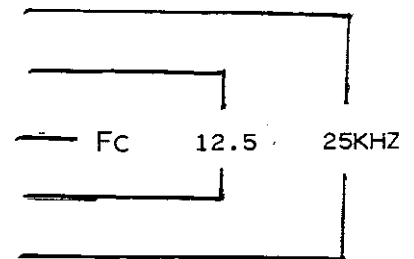
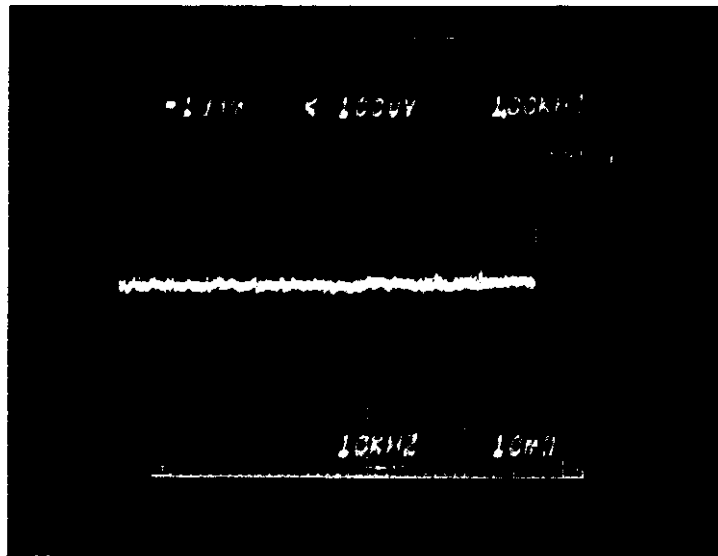
Exhibit AA
ERS, Inc.

ERS96000NB

Transient Frequency Behavior

Fc = 156 mHz

TX "off"



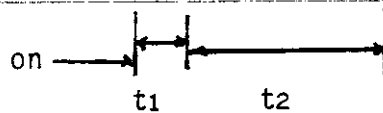
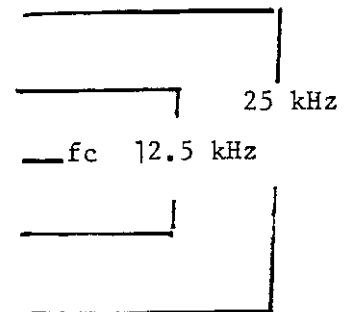
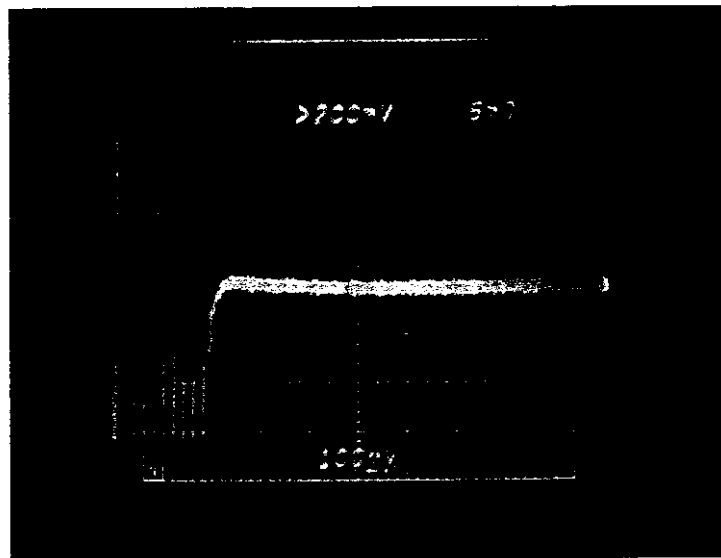
t_3 ← off.

$t_3 = 5 \text{ ms}$

Sweep = 10 ms/div.

ERS-exAA-pg3

Exhibit BB
ERS, Inc.
ERS96000NB
Transient Frequency Behavior
Fc = 151.000 mHz
TX "on"



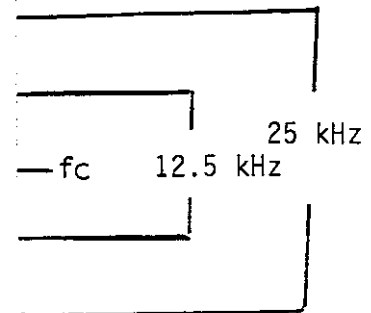
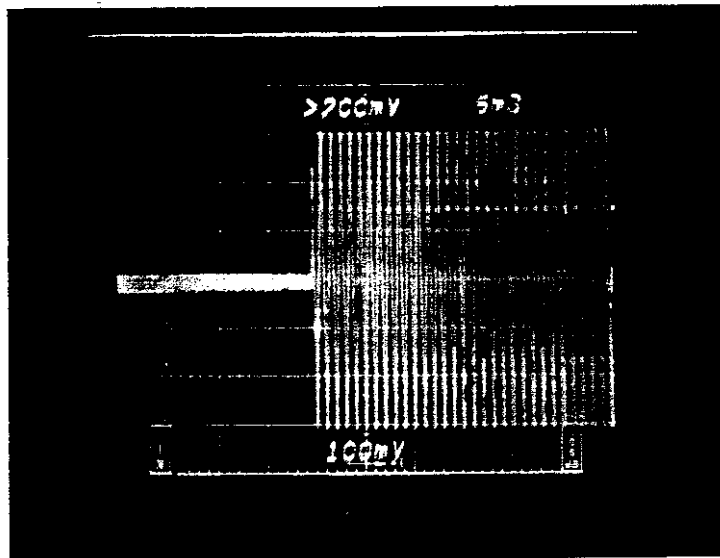
4.17 kHz/Div.
12.5 kHz = 3 div.
25 kHz = 6 div.

t1 = 5 ms

t2 = 20 ms

ERS-exBB-pgl

Exhibit BB
ERS, Inc.
ERS96000NB
Transient Frequency Behavior
Fc = 151.000 mHz
TX "off"

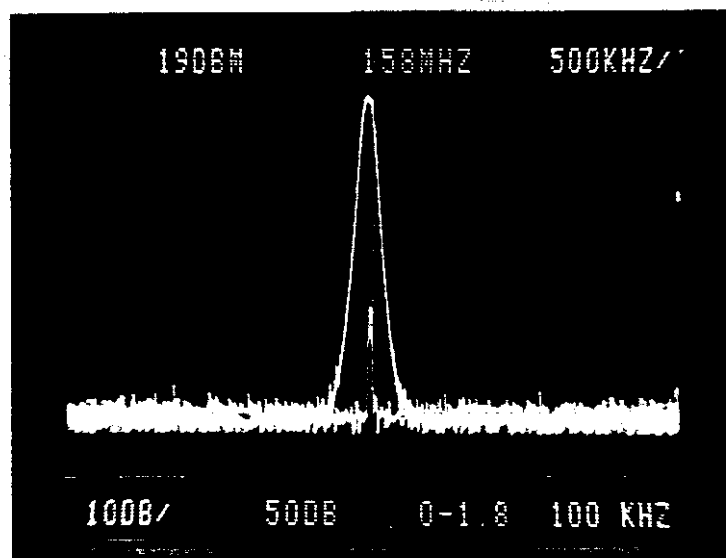


off

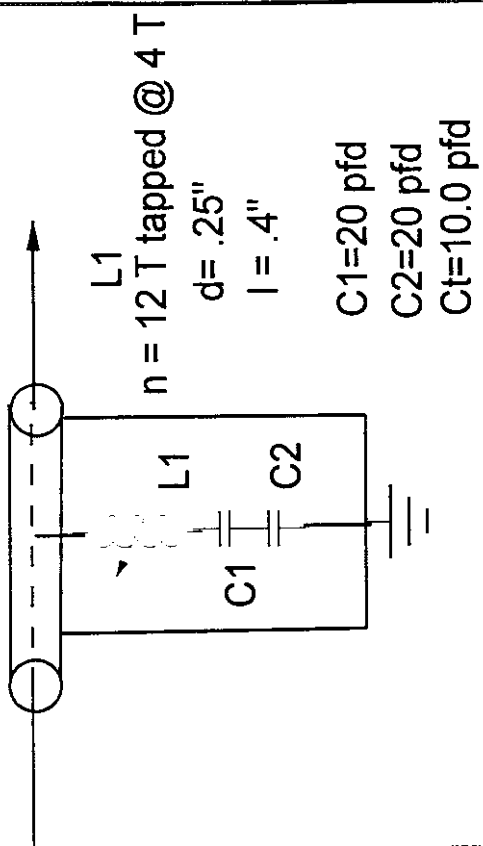
4.17 kHz/Div.
12.5 kHz = 3 div.
25 kHz = 6 div.
 $t_b = 5 \text{ ms}$

ERS-exBB-pg2

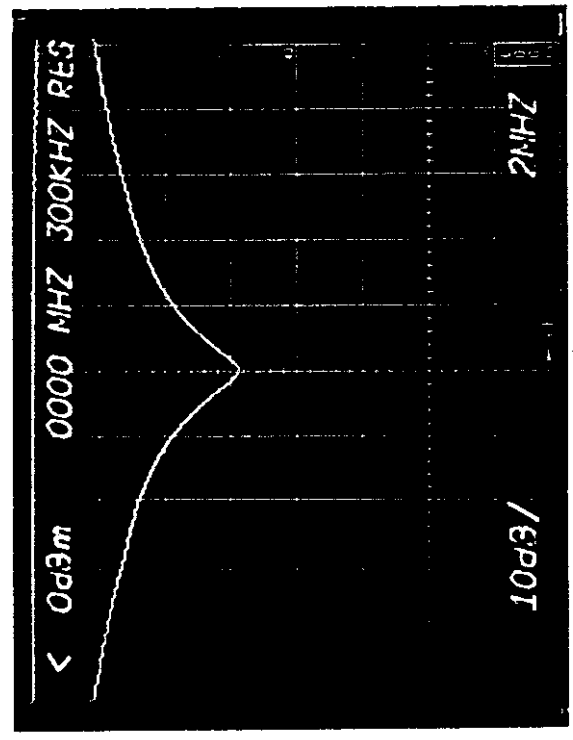
EXHIBIT A
ERS, Inc.
FCC ID: N3H-ERS9000NB
 $F_c = 158.000$ MHz
TRAP ATTENUATION
Type Series Resonant Att. = 32 dBc



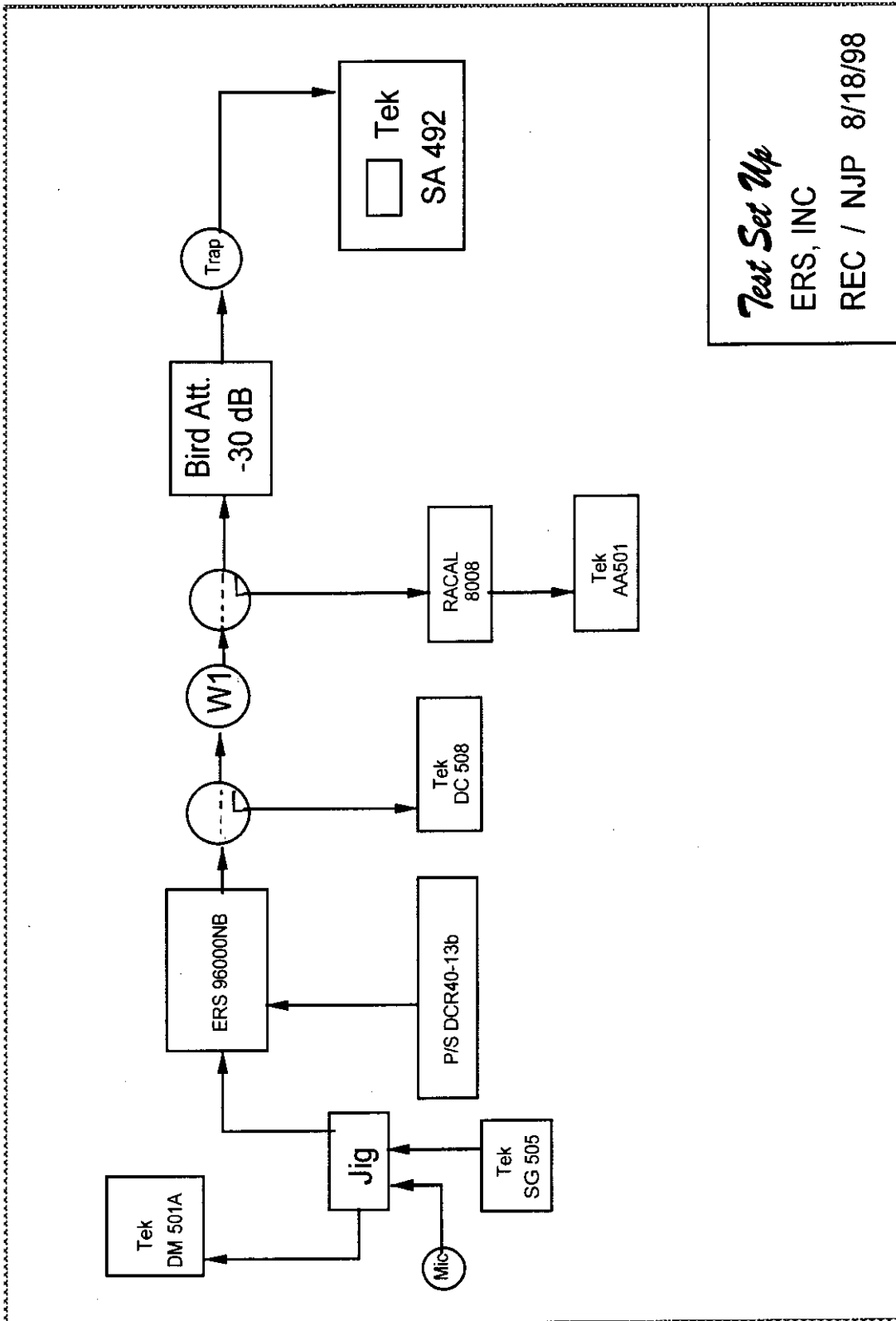
Ex-A2-ERS



Measured Attenuation = -32 dB @ 158.00 mHz



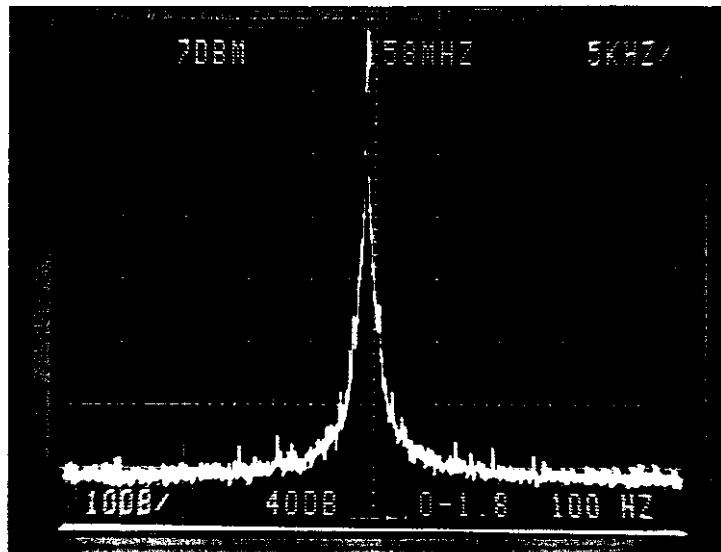
TRAP Series Resonate
 $F_c = 158.00 \text{ mHz}$
 ERS, Inc Harmonic Measurements
 REC / NJP 8/8/98



Test Set Up
 ERS, INC
 REC / NJP 8/18/98

EXHIBIT B
ERS, Inc.
FCC ID: N3H-ERS9000NB
 $F_c = 158.000$ MHz
OCCUPIED BAND

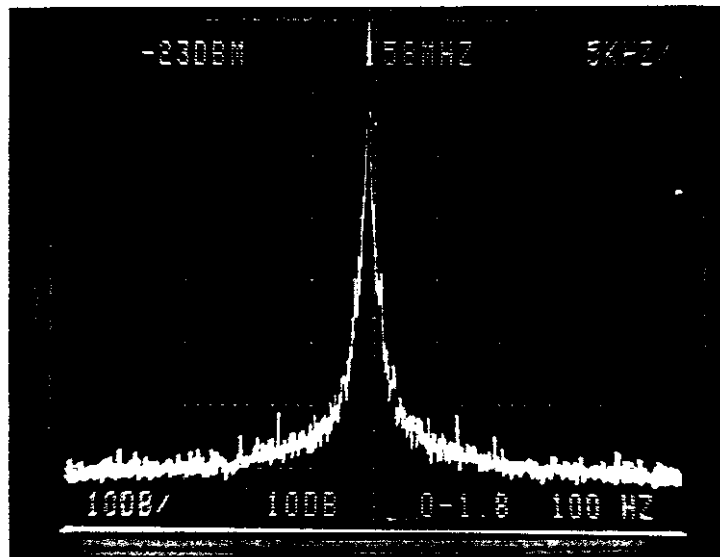
$P_o = 10$ Watts
Top Reference = +7 dBm (0 dBc)
No Modulation



Ex-B-ERS

EXHIBIT B
ERS, Inc.
FCC ID: N3H-ERS9000NB
 $F_c = 158.000$ MHz
OCCUPIED BAND

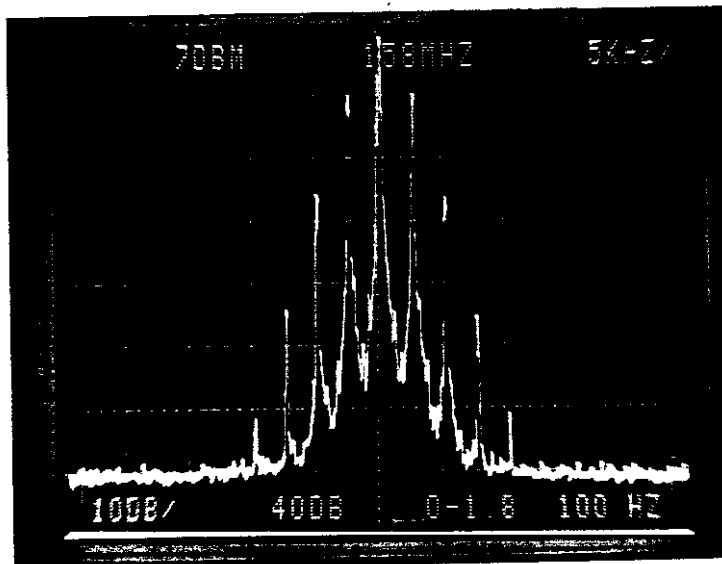
$P_o = 10$ Watts
Top Reference = -23 dBm (-30 dBc)
No Modulation



Ex-B-ERS

EXHIBIT B
ERS, Inc.
FCC ID: N3H-ERS9000NB
 $F_c = 158.000$ MHz
OCCUPIED BAND

$P_o = 10$ Watts
Modulation: 2.5 kHz (50%+20dB)
Deviation: 1.5 kHz (narrow band)
Channel Spacing: 12.5 kHz
Top Reference = +7dBm (0dBc)



Ex-B3-ERS

EXHIBIT B

ERS, Inc.

FCC ID: N3H-ERS9000NB

$$F_c = 158.000 \text{ mHz}$$

OCCUPIED BAND

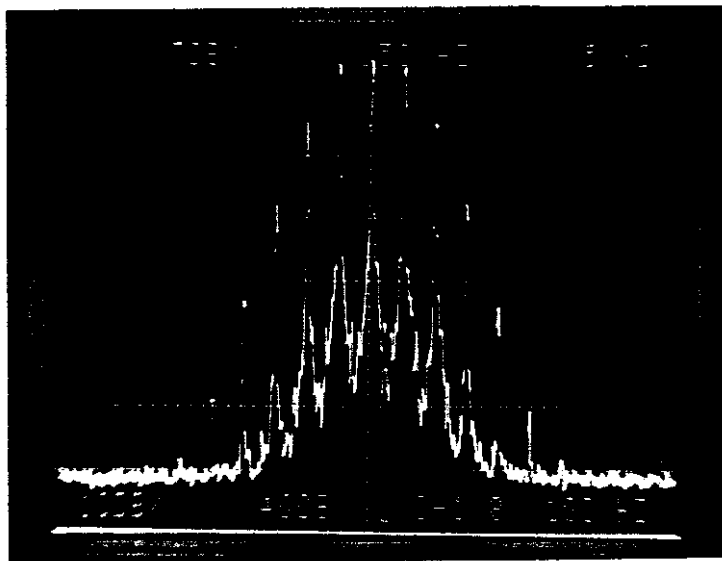
$P_0 = 10$ Watts

Modulation: 2.5 kHz (50%+20dB)

Deviation: 3.0 kHz

Channel Spacing: 25 kHz

Top Reference = +7 dBm (0 dBc)

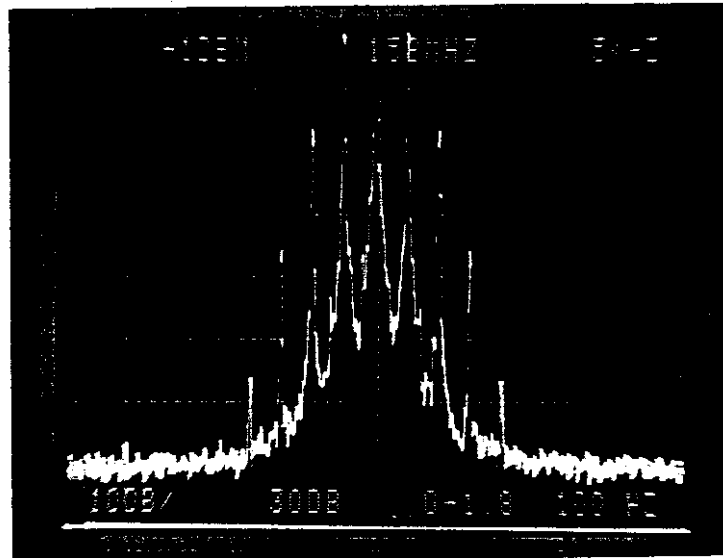


Ex-B4-ERS

EXHIBIT B
ERS, Inc.
FCC ID: N3H-ERS9000NB
 $F_c = 158.000$ MHz
OCCUPIED BAND

$P_o = 10$ Watts
Modulation: 2.5 kHz (50%+20dB)
Deviation: 1.5 kHz
Channel Spacing: 12.5 kHz

Top Reference = -1 dBm (-10 dBc)

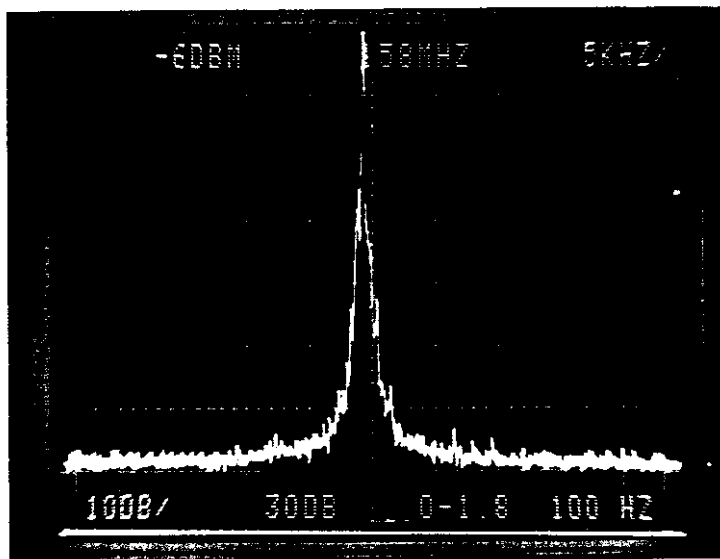


Ex-B5-ERS

EXHIBIT B
ERS, Inc.
FCC ID: N3H-ERS9000NB
 $F_c = 158.000$ MHz
OCCUPIED BAND

$P_o = .56$ Watts
Modulation: None

Top Reference = -6 dBm (0 dBc)

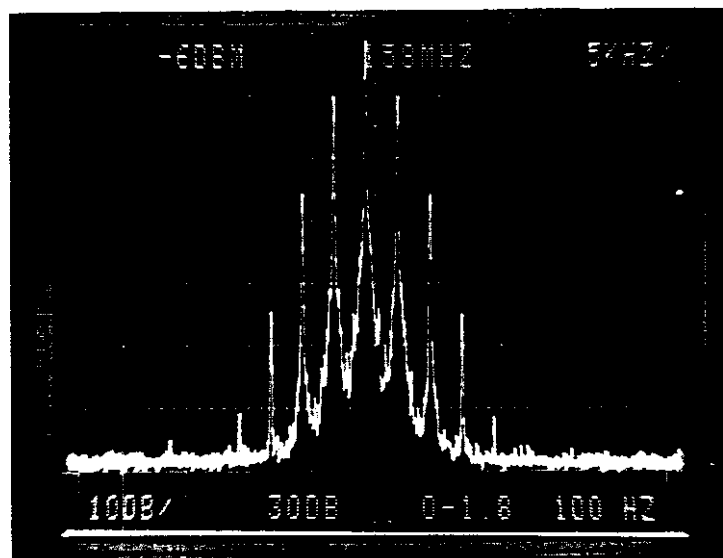


Ex-B6-ERS

EXHIBIT B
ERS, Inc.
FCC ID: N3H-ERS9000NB
 $F_c = 158.000$ MHz
OCCUPIED BAND

$P_o = .56$ Watts
Modulation: 2.5 kHz (50%+20dB)
Deviation: 1.5 kHz
Channel Spacing: 12.5 kHz

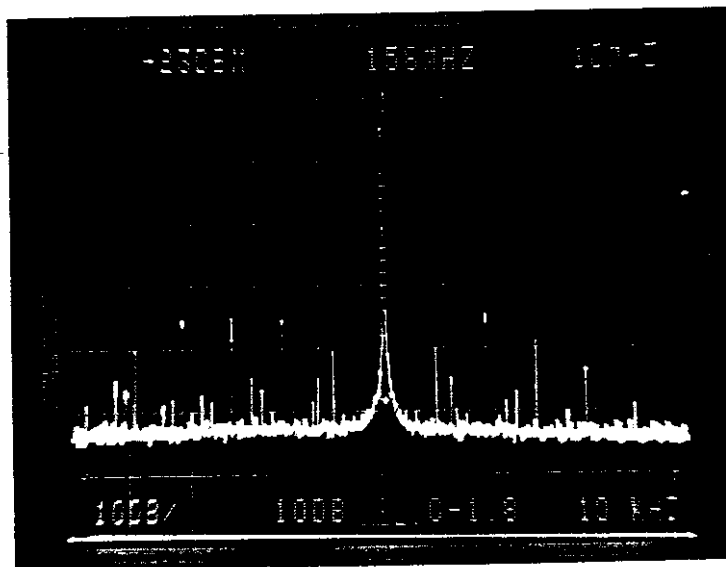
Top Reference = -6 dBm (0 dBc)



Ex-B7-ERS

EXHIBIT C
ERS, Inc.
FCC ID: N3H-ERS9000NB
F_c = 158.000 mHz
INBOUND SPURS

$P_0 = 10$ Watts
 Modulation: 2.5 kHz (50%+20dB)
 Deviation: 1.5 kHz
 Top Reference = -23 dBm (-30 dBc)

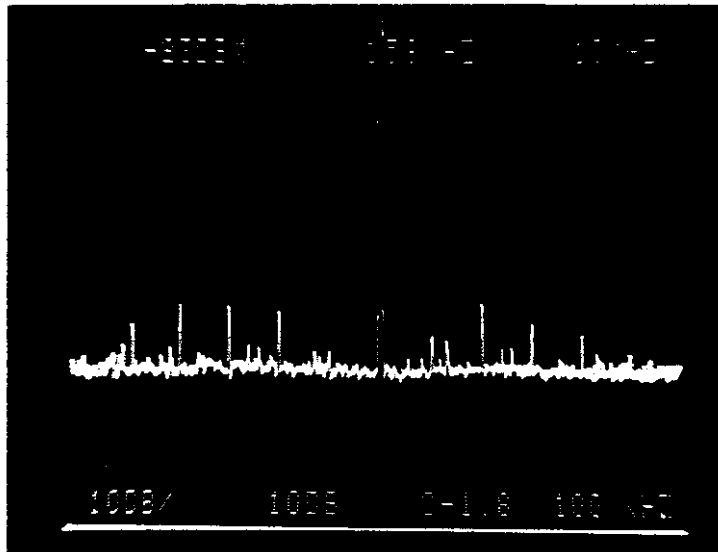


FCC LIMIT -70 dBc

Ex-C-ERS

EXHIBIT C
ERS, Inc.
FCC ID: N3H-ERS9000NB
F_c = 158.000 mHz
INBOUND SPURS

$P_o = 10$ Watts
 Modulation: 2.5 kHz (50%+20dB)
 Deviation: 3.0 kHz
 Trap: -32 dB @ 158 mHz
 Top Reference = -23 dBm (-30 dBc)

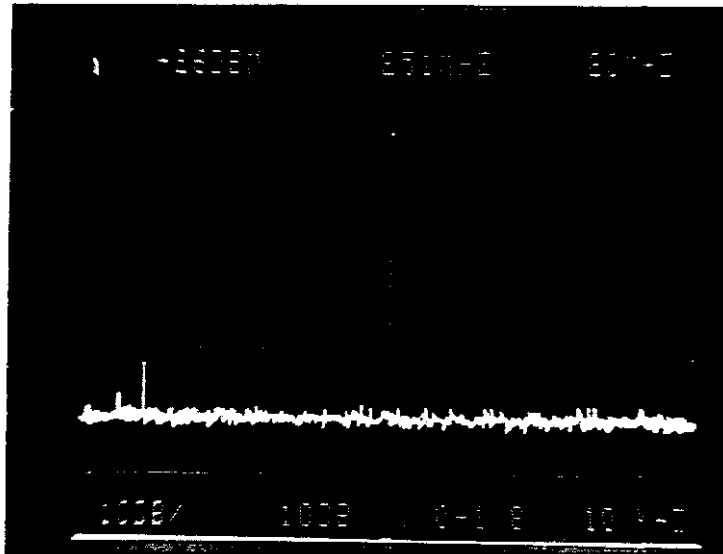


FCC LIMIT -70 dBc

Ex-C2-ERS

EXHIBIT C
ERS, Inc.
FCC ID: N3H-ERS9000NB
 $F_c = 158.000$ MHz
INBOUND SPURS

$P_o = .55$ Watts
Modulation: 2.5 kHz (50%+20dB)
Deviation: 1.5 kHz
Top Reference = -26 dBm (-20 dBc)



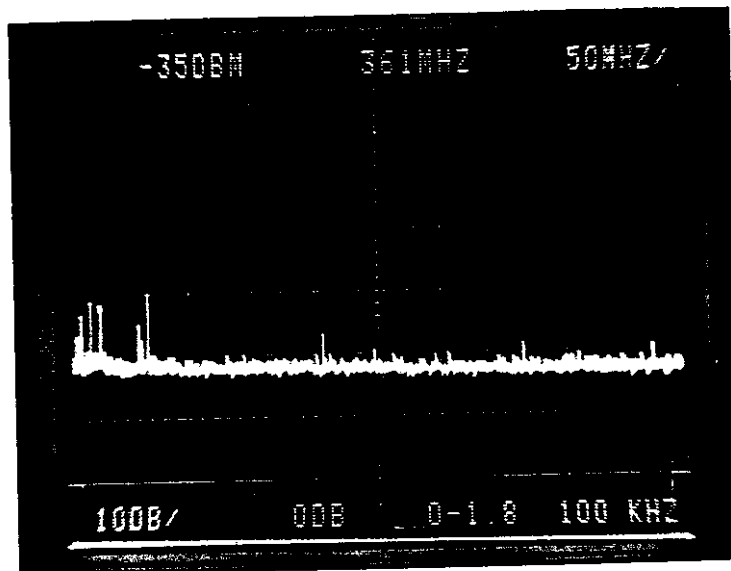
FCC LIMIT -70 dBc

Ex-C3-ERS

EXHIBIT C
ERS, Inc.
FCC ID: N3H-ERS9000NB
 $F_c = 158.000$ MHz
INBOUND SPURS

$P_o = .56$ Watts
Modulation: 2.5 kHz (50%+20dB)
Deviation: 3.0 kHz

Top Reference = -35 dBm (-40 dBc)

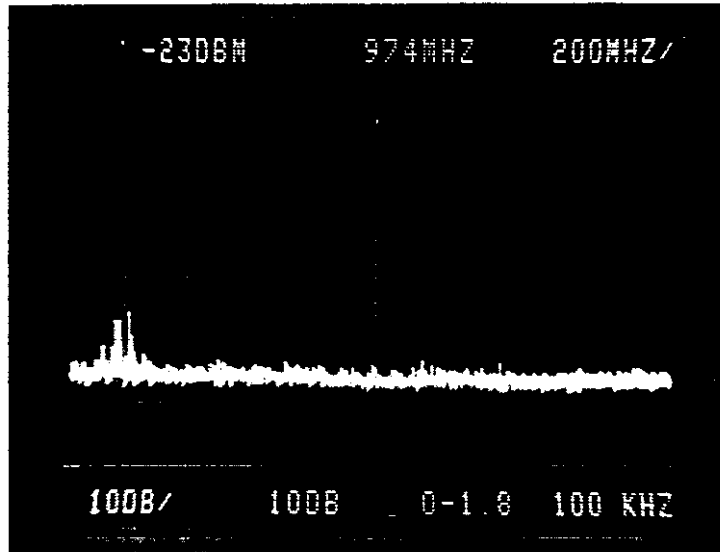


FCC LIMIT=-70dBc

Ex-C4-ERS

EXHIBIT D
ERS, Inc.
FCC ID: N3H-ERS9000NB
 $F_c = 158.000$ MHz
HARMONIC SPURS

$P_o = 10$ Watts
Modulation: 2.5 kHz (50%+20dB)
Deviation: 1.5 kHz
Top Reference = -23 dBm (-30 dBc)
Line = FCC Limit = -53 dBc
All Harmonic Spurs = <-80 dBc



FCC SEC. 90.2]0 (d)
FCC LIMIT= -60 dBc
Mesd.=>-80 dBc

Ex-D-ERS

EXHIBIT D

ERS, Inc.

FCC ID: N3H-ERS9000NB

$$F_c = 158.000 \text{ mHz}$$

HARMONIC SPURS

$P_0 = .55$ Watts

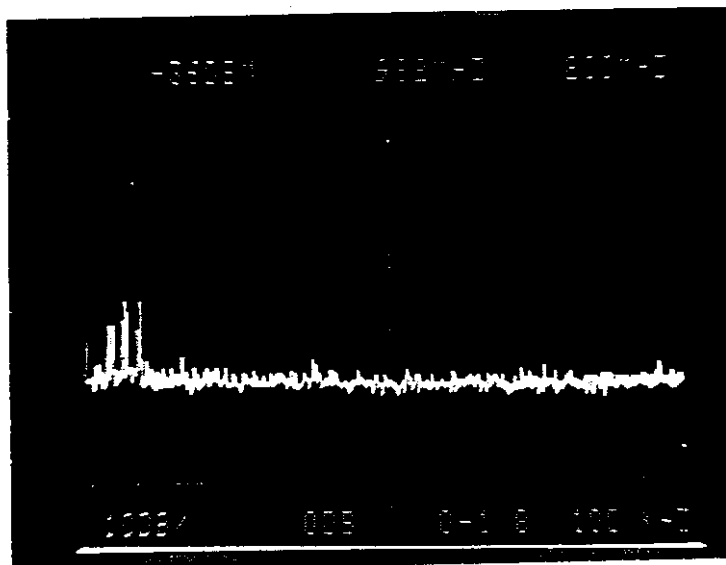
Modulation: 2.5 kHz (50%+20dB)

Deviation: 1.5 kHz

Top Reference = -3 dBm (-40 dBc)

Trap Att. @ 158 mHz = -34 dBc

All Harmonic Spurs = <-80 dBc



FCC LIMIT = -47 dBc

Ex-D2-ERS

EXHIBIT D
ERS, Inc.
FCC ID: N3H-ERS9000NB
F_c = 158.000 MHz
HARMONIC SPURS
RADIATED

P_o = 10 Watts

All Radiated Harmonics were below -80 dBc.

All inbound spurs = less than -70 dBc

Ex-D3-ERS

8/18/98

EQ-TST.DBM

EQUIPMENT TEST SUMMARY SHEET

Equipment: ERS96000NB

Name of Test: Radiated Spurious & Harmonic Emissions
FCC § 2.993

FCC Limit: $P_0 = 10$ WATTS FCC SEC. 90.210 (e) (d) mask D
LIMIT = $50 + \log_{10} P_0$ OR 70 DB
WHICHEVER IS LESS ATTENUATION

Test Procedure: EIA RA-152-B 15

Test Results: Within FCC Limits. All signals identified were below FCC report limit.

Test Conditions: Standard Conditions. Temp $\pm 25^\circ$ C

Test Equipment: NM30A, NM50A, NF112 w/Dipole & Discone Antennas
TEK SA 7L14 & 7L18 TEK 492

Performed By: Norwood J. Patterson Date: 8/16/98

Measurement Data WITHIN FCC LIMITS

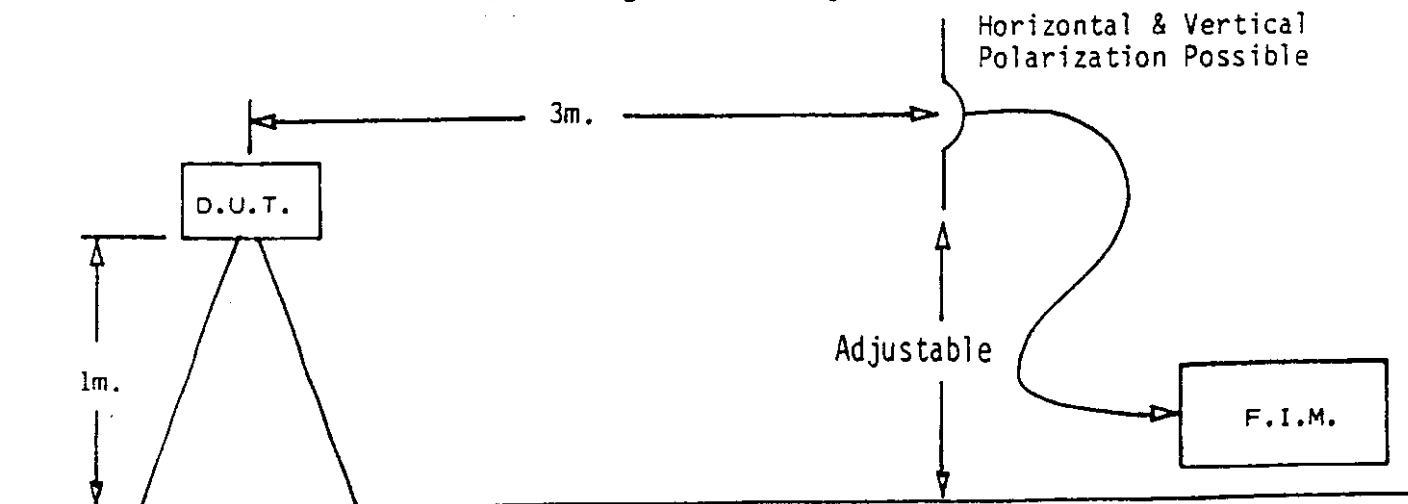
Block Diagram Test Setup

EXHIBIT E
ERS, Inc.
FCC ID: N3H-ERS9000NB
AUDIO LOW PASS FILTER

<u>Fc kHz</u>	<u>Signal dB</u>	<u>FCC Limit dB</u>
1.0	0.0	NA
1.5	1.5	NA
2.0	1.3	NA
2.5	- .2	NA
3.0	- 3.5	- 0-
3.5	- 8.7	- 2.7
4.0	-15.1	- 5.0
4.5	-21.7	- 7.0
5.0	-28.8	- 8.9
6.0	-36.9	-12.04
7.0	-38.2	-14.72
8.0	-38.3	-17.04
9.0	-38.3	-19.08
10.0	-38.2	-20.92
15.0	-38.2	-27.96
20.0	-38.1	-28.0
25.0	-38.2	-28.0
30.0	-38.3	-28.0
40.0	-38.2	-28.0
50.0	-38.2	-28.0
60.0	-38.2	-28.0

Ex-E-ERS

FREQUENCY RESPONSE
AUDIO LOW PASS FILTER

Client ERS, Inc.

Date 8/18/98

FCC form Sec. Pg.

FCC Limit
Measured

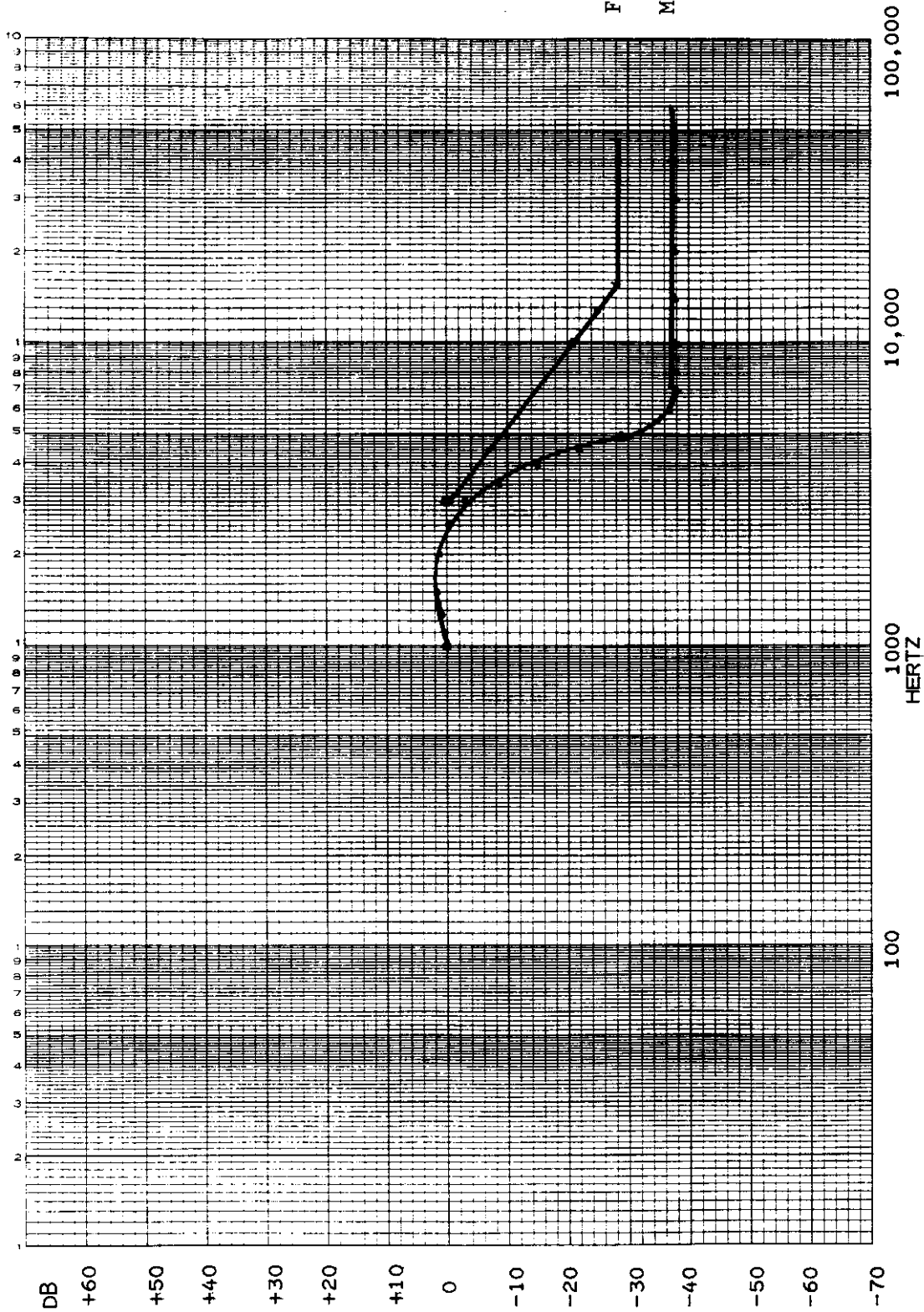


EXHIBIT F Audio Frequency response

No change to the Audio Frequency response circuit.
Same as previously TA/d.

EXHIBIT G Audio Limiter response

No change to the Audio Limiter response circuit.
Same as previously TA/d.

Exhibit H Page 1Client ERS, INC / RECDate 8/21/98FCC from Sec. Pg.

Monitor Products Inc.
502 Via Del Monte
Oceanside, California 92054
Code ID No. 54331

OSCILLATOR ENVIRONMENTAL

--- TEST DATA REPORT ---

Customer: Horizon

Serial No.:

Factory Part No.: 7500-05

Fnom. Frequency : 10.239 MHz

Stability: +/- 1

Oper Temp Range: 50 TO DEG C

Oper Voltage: 5

ID No. 6605.1

Build No. 0109

Run Date 21Aug98

*** RUN RESULTS ***

Temp deg. C	Output Freq (Hz)	Dev from Fnom (ppm)
50	10239003.70	+0.36
45	10239000.43	+0.04
40	10238999.20	-0.08
35	10238999.38	-0.06
30	10239000.16	+0.02
25	10239001.75	+0.17
20	10239002.85	+0.26
15	10239004.44	+0.43
10	10239005.19	+0.51
5	10239004.69	+0.46
0	10239003.54	+0.35
5	10239001.59	+0.16
10	10238999.71	-0.03
15	10238997.98	-0.20
20	10238997.28	-0.27
25	10238996.05	-0.31
30	10238999.44	-0.05

Total Spread = 0.81

1.0

Fnom

+1.0

EXHIBIT I
 ERS, Inc.
 FCC ID: N3H-ERS9000NB
 P_o & F_c P/S VOLTAGE
 MEASURING DATE: 8/6/98

Meas. No.	Time	$\Delta\%$	E_{dc}	F _c <u>158,000 W.</u>	P _o <u>Watts</u>
1.	0715	-20	22.23	.030	.56 & 10
2.	0717	-15	23.62	.030	.56 & 10
3.	0719	-10	25.01	.030	.56 & 10
4.	0721	- 5	26.40	.030	.56 & 10
5.	0723	0	27.79	.030	.56 & 10
6.	0725	+ 5	29.18	.030	.56 & 10
7.	0727	+10	30.57	.030	.56 & 10
8.	0730	+15	31.96	.030	.56 & 10
9.	0732	+20	33.35	.030	.56 & 10

Note:

No change of frequency or power output with power supply change $\pm 20\%$

No change with low power or high power output (.55 or 10 Watts).

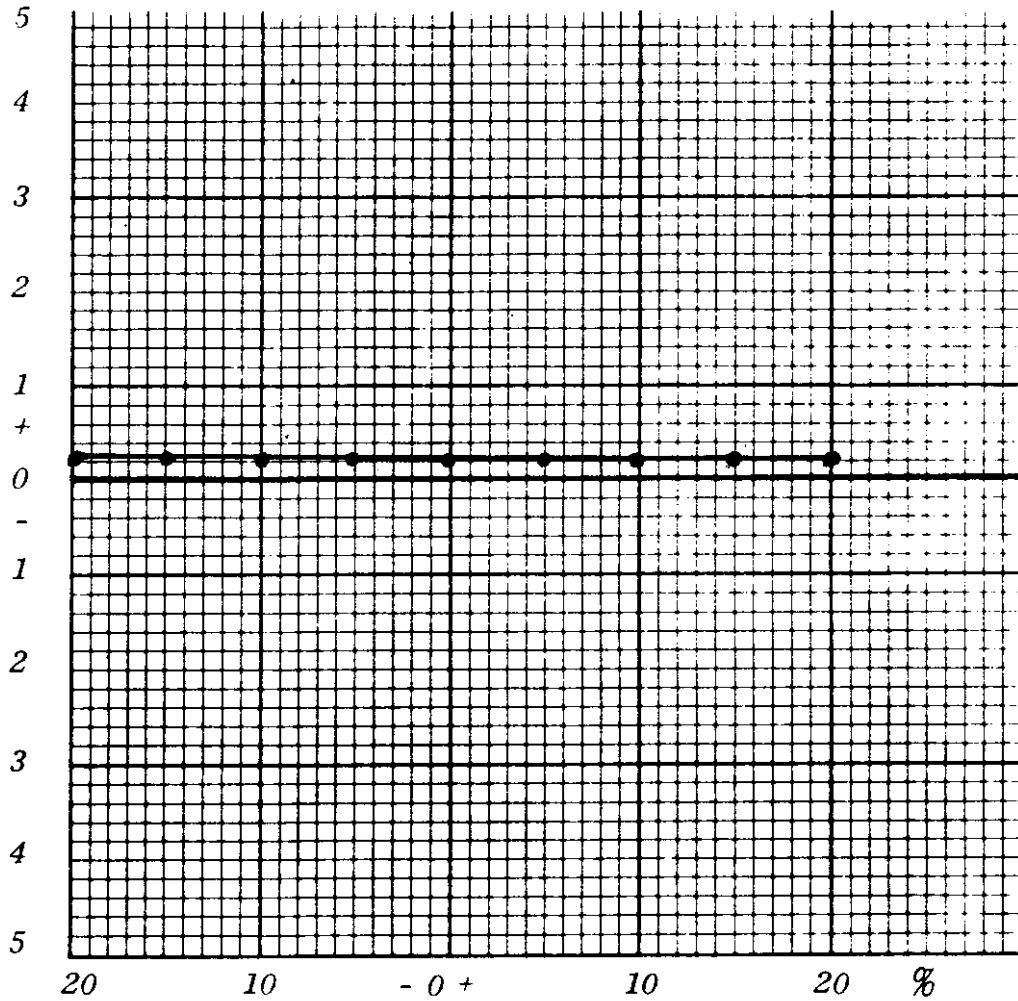
FCC Limit = 2.5 ppm
 @ 150 mHz: 375 Hz
 @ 174 mHz: 435 Hz
 @158 mHz: 395 Hz

Ex-I-ERS

GRAPH _____

FREQ.

x 1 PPM



Power Supply Voltage

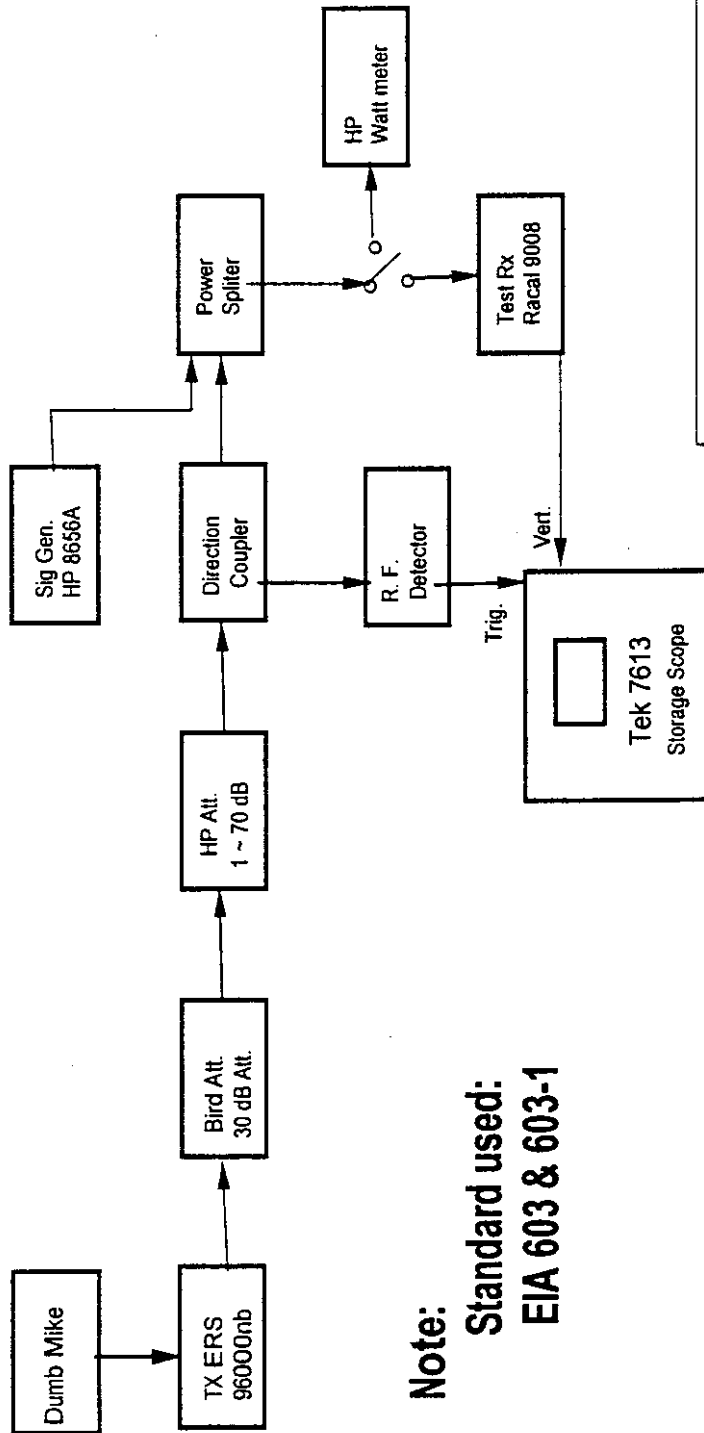
0 = 27.79 Volts DC

Limit FCC 2.5 PPM

Limit Mfg 1 PPM

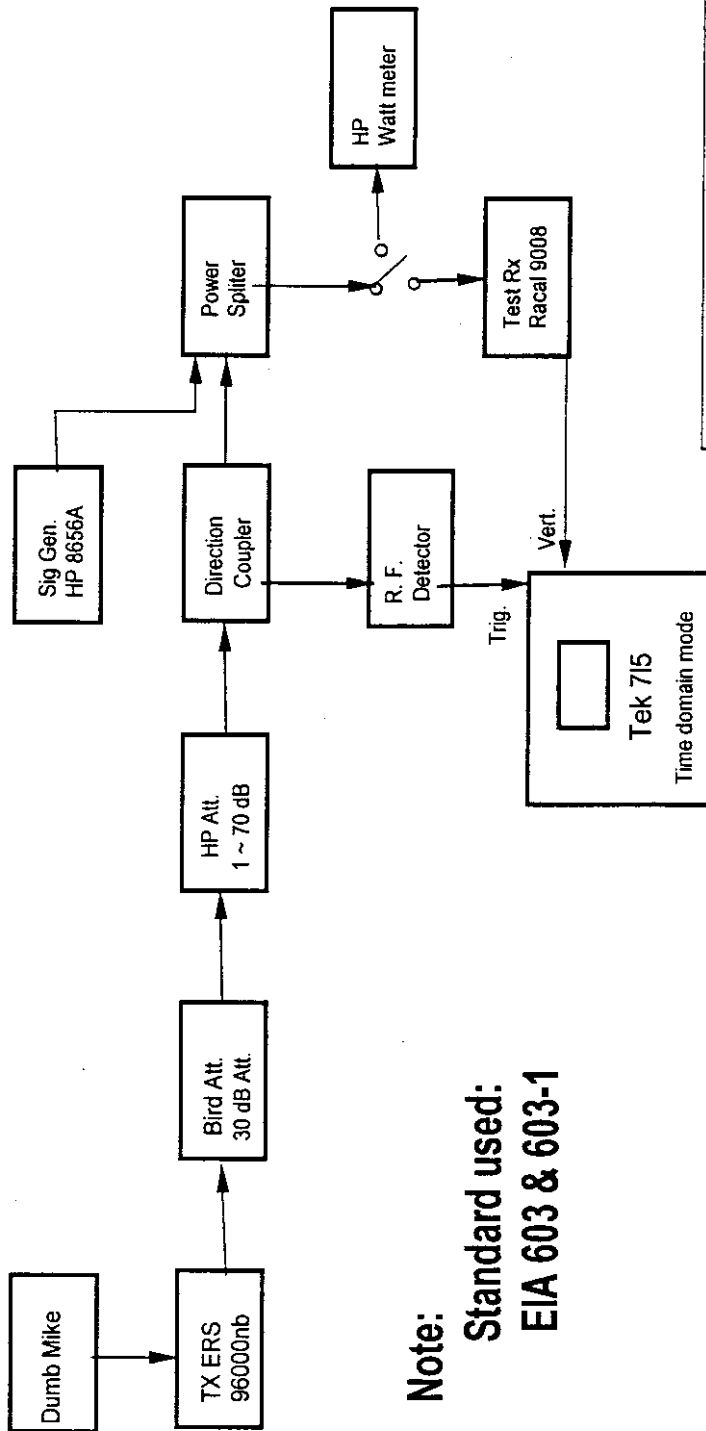
FREQ. STABILITY VS. P.S. VOLTAGE

Model ERS9600NB



Note:
Standard used:
EIA 603 & 603-1

Transient Behavior
ERS 96000NB
RADIO & TV ENGINEERING Co.
Norwood J. Patterson 10/23/98



Note:
Standard used:
EIA 603 & 603-1

Transient Behavior
ERS 96000NB
RADIO & TV ENGINEERING Co.
Norwood J. Patterson 10/22/98

Exhibits ALL Pages ALL
ERS, INC.
FCC ID: NH3-ERS96000NB

END OF REPORT