N

DTV Channel 6 Interference to FM Band Reception

Laboratory Test Report

Test Results Based on Proposed -60dBr Emissions C5

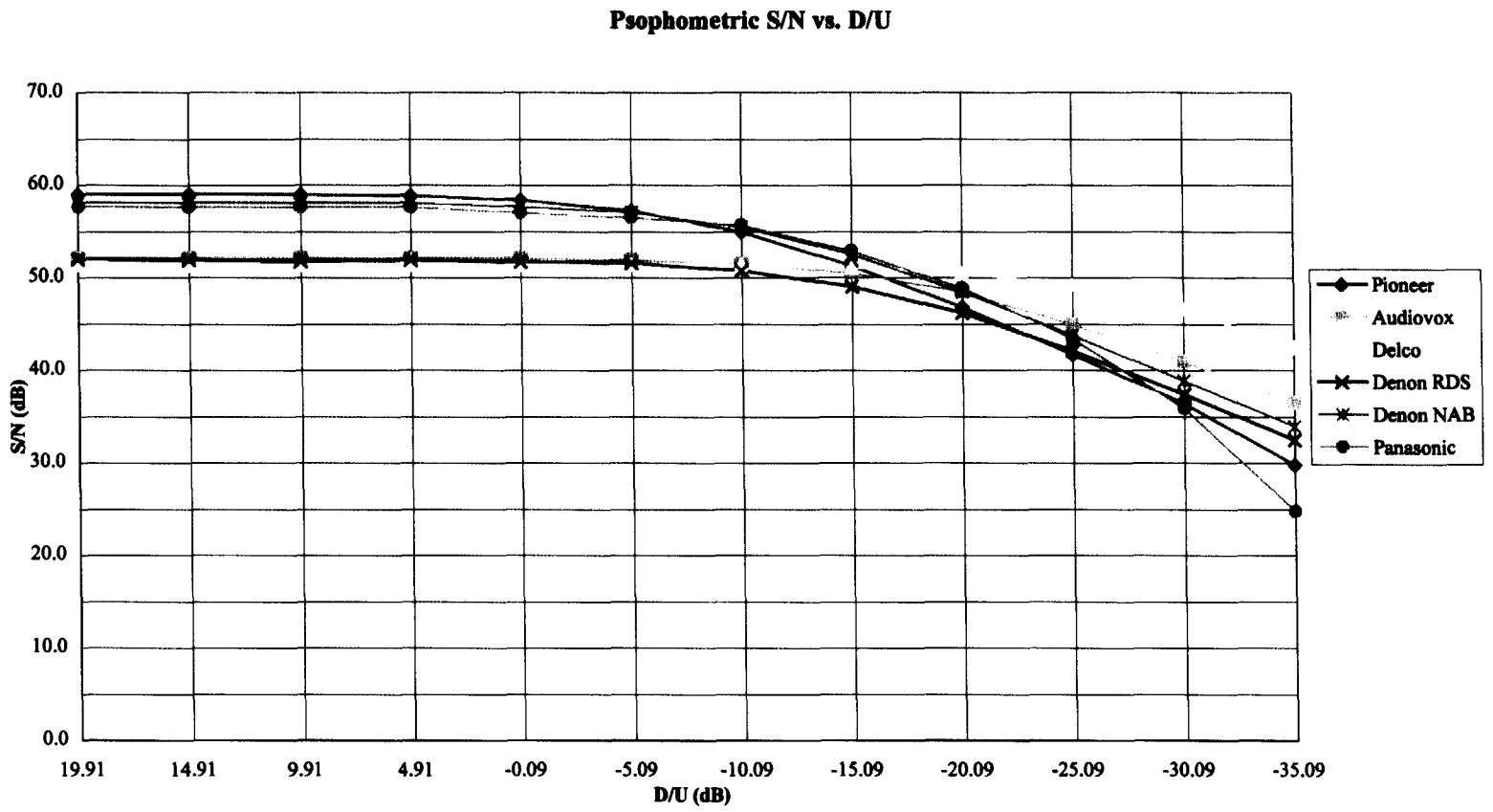
Section: 4.5.1
Engr(s): DML
Date: 4/16/98

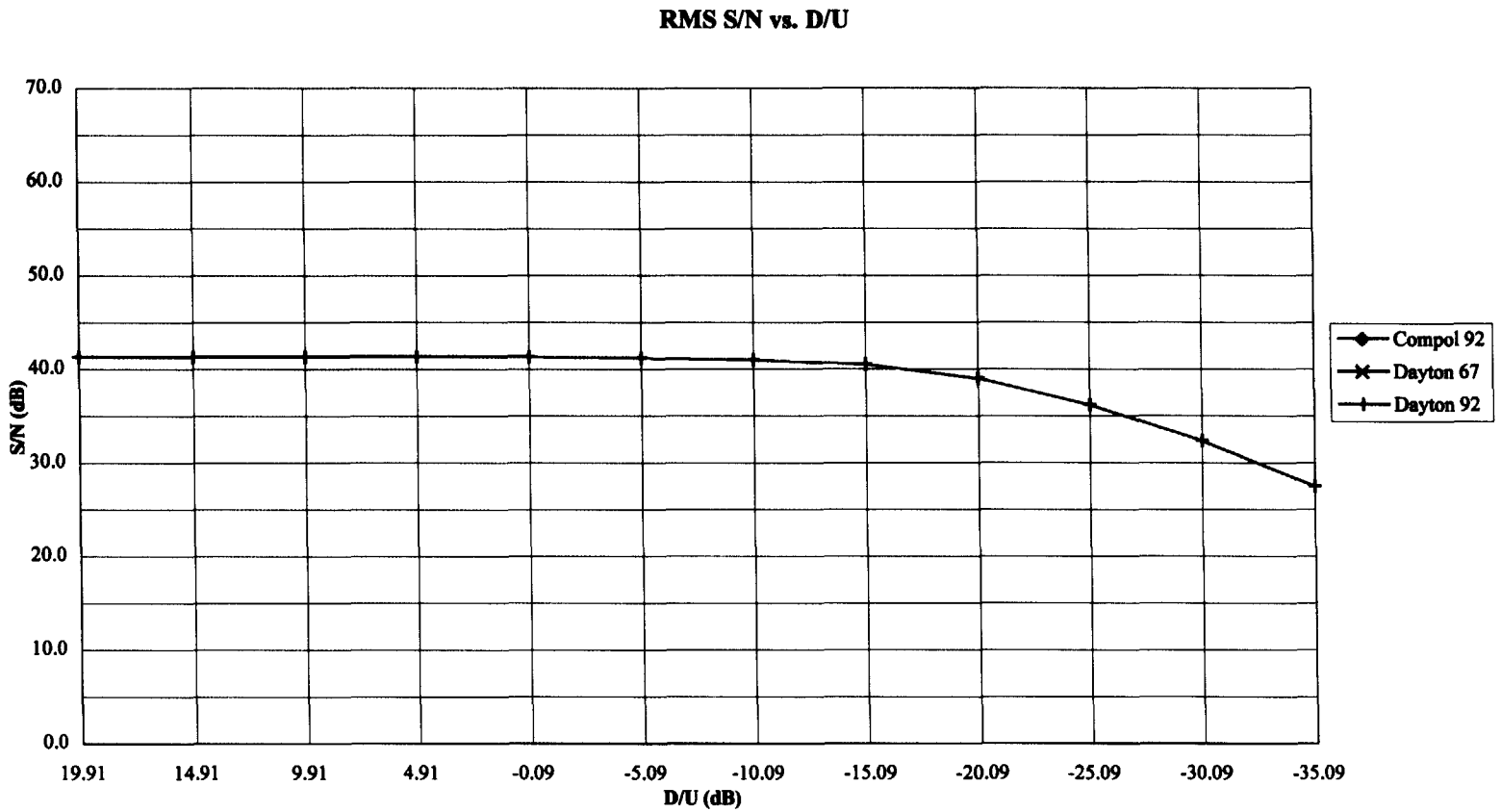
Signal Level: -56 dBm
Corrector Setting: 5

3 Way Combiner Levels	
Desired (dBm)	Undesired (dBm)
-37.87	-2.78

0 dB D/U =	-35.09

Attn (dB)	D/U (dB)	Pioneer S/N (dB)	Audiovox S/N (dB)	Delco S/N (dB)	Denon RDS S/N (dB)	Denon NAB S/N (dB)	Pansonic S/N (dB)	Dayton 92 kHz S/N (dB)	Dayton 67 kHz S/N (dB)	Compol 92 kHz S/N (dB)
		59.0	52.1	51.4	52.0	58.1	57.6	41.3		
55.0	19.91	59.0	52.1	51.4	52.0	58.1	57.6	41.3		
50.0	14.91	59.0	52.1	51.4	51.9	58.1	57.6	41.3		
45.0	9.91	59.0	52.1	51.4	51.8	58.1	57.6	41.3		
40.0	4.91	58.9	52.1	51.4	51.9	58.1	57.6	41.3		
35.0	-0.09	58.4	52.1	51.4	51.7	57.7	57.0	41.3		
30.0	-5.09	57.3	51.9	51.4	51.6	57.1	56.5	41.2		
25.0	-10.09	55.0	51.5	51.4	50.8	55.5	55.7	41.0		
20.0	-15.09	51.3	50.5	51.1	49.1	52.5	52.9	40.5		
15.0	-20.09	46.8	48.5	50.5	46.2	48.5	48.9	39.0		
10.0	-25.09	41.7	45.0	49.3	42.1	43.8	43.4	36.2		
5.0	-30.09	36.4	41.0	46.6	37.4	38.9	35.9	32.4		
0.0	-35.09	29.8	36.5	42.5	32.5	34.0	24.8	27.5		
		Psophometric						RMS		


Psophometric S/N vs. D/U
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
S/N (dB)
19.91
14.91
9.91
4.91
-0.09
-5.09
-10.09
-15.09
-20.09
-25.09
-30.09
-35.09
D/U (dB)
Pioneer
Audiovox
Delco
Denon RDS
Denon NAB
Panasonic


RMS S/N vs. D/U
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
S/N (dB)
19.91
14.91
9.91
4.91
-0.09
-5.09
-10.09
-15.09
-20.09
-25.09
-30.09
-35.09
D/U (dB)
Compol 92
Dayton 67
Dayton 92

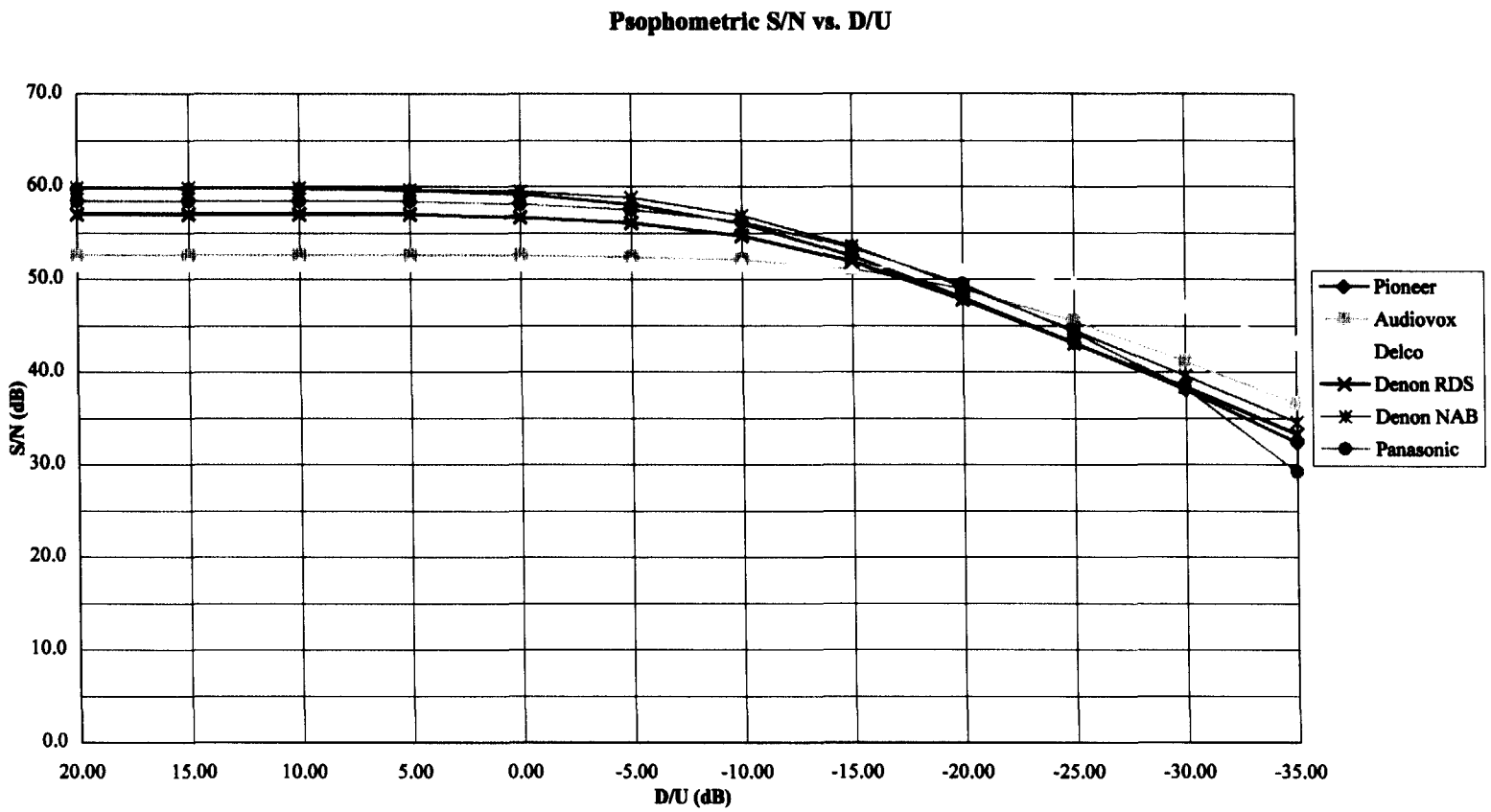
Section: 4.5.2
Engr(s): DML
Date: 4/16/98

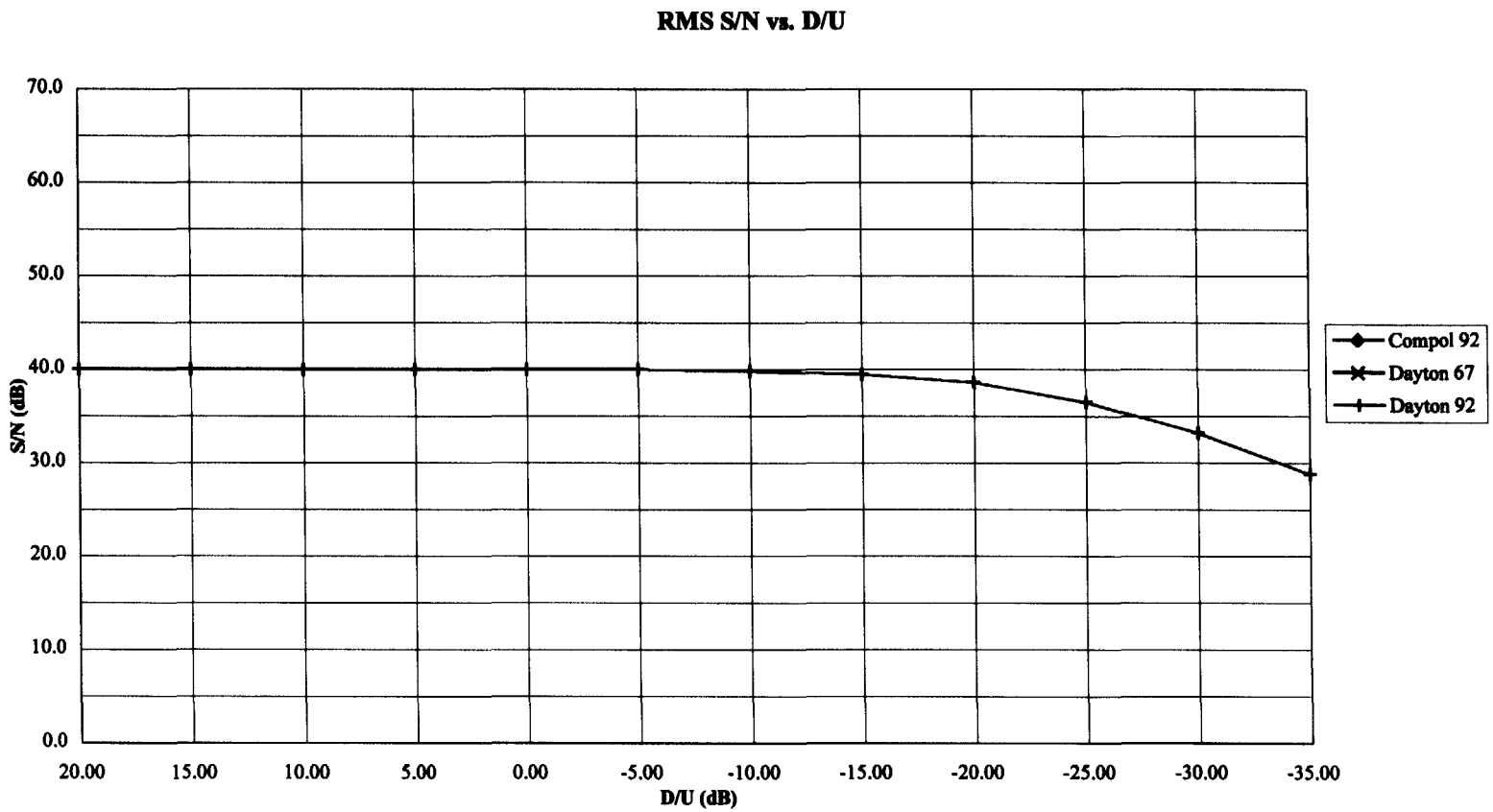
Signal Level: -56 dBm
Corrector Setting: 5

3 Way Combiner Levels	
Desired (dBm)	Undesired (dBm)
-37.67	-2.67

0 dB D/U =	-35.00

Attn (dB)	D/U (dB)	Pioneer S/N (dB)	Audiovox S/N (dB)	Delco S/N (dB)	Denon RDS S/N (dB)	Denon NAB S/N (dB)	Pansonic S/N (dB)	Dayton 92 kHz S/N (dB)	Dayton 67 kHz S/N (dB)	Compol 92 kHz S/N (dB)
		59.8	52.6	51.6	57.0	59.9	58.4	40.0		
55.0	20.00	59.8	52.6	51.6	57.0	59.9	58.4	40.0		
50.0	15.00	59.8	52.6	51.6	57.0	59.9	58.4	40.0		
45.0	10.00	59.8	52.6	51.6	57.0	59.9	58.4	40.0		
40.0	5.00	59.6	52.6	51.6	57.0	59.7	58.4	40.0		
35.0	0.00	59.2	52.6	51.6	56.7	59.5	58.1	40.0		
30.0	-5.00	58.1	52.4	51.6	56.1	58.8	57.5	40.0		
25.0	-10.00	56.0	52.1	51.6	54.7	56.9	56.2	39.8		
20.0	-15.00	52.5	51.1	51.4	51.9	53.6	53.4	39.5		
15.0	-20.00	48.0	49.0	51.0	47.8	49.2	49.5	38.6		
10.0	-25.00	43.2	45.5	49.7	43.1	44.5	44.3	36.5		
5.0	-30.00	38.1	41.2	47.1	38.4	39.6	38.2	33.2		
0.0	-35.00	32.4	36.6	43.2	33.3	34.6	29.2	28.8		
		Psophometric						RMS		


Psophometric S/N vs. D/U
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
S/N (dB)
20.00
15.00
10.00
5.00
0.00
-5.00
-10.00
-15.00
-20.00
-25.00
-30.00
-35.00
D/U (dB)
Pioneer
Audiovox
Delco
Denon RDS
Denon NAB
Panasonic

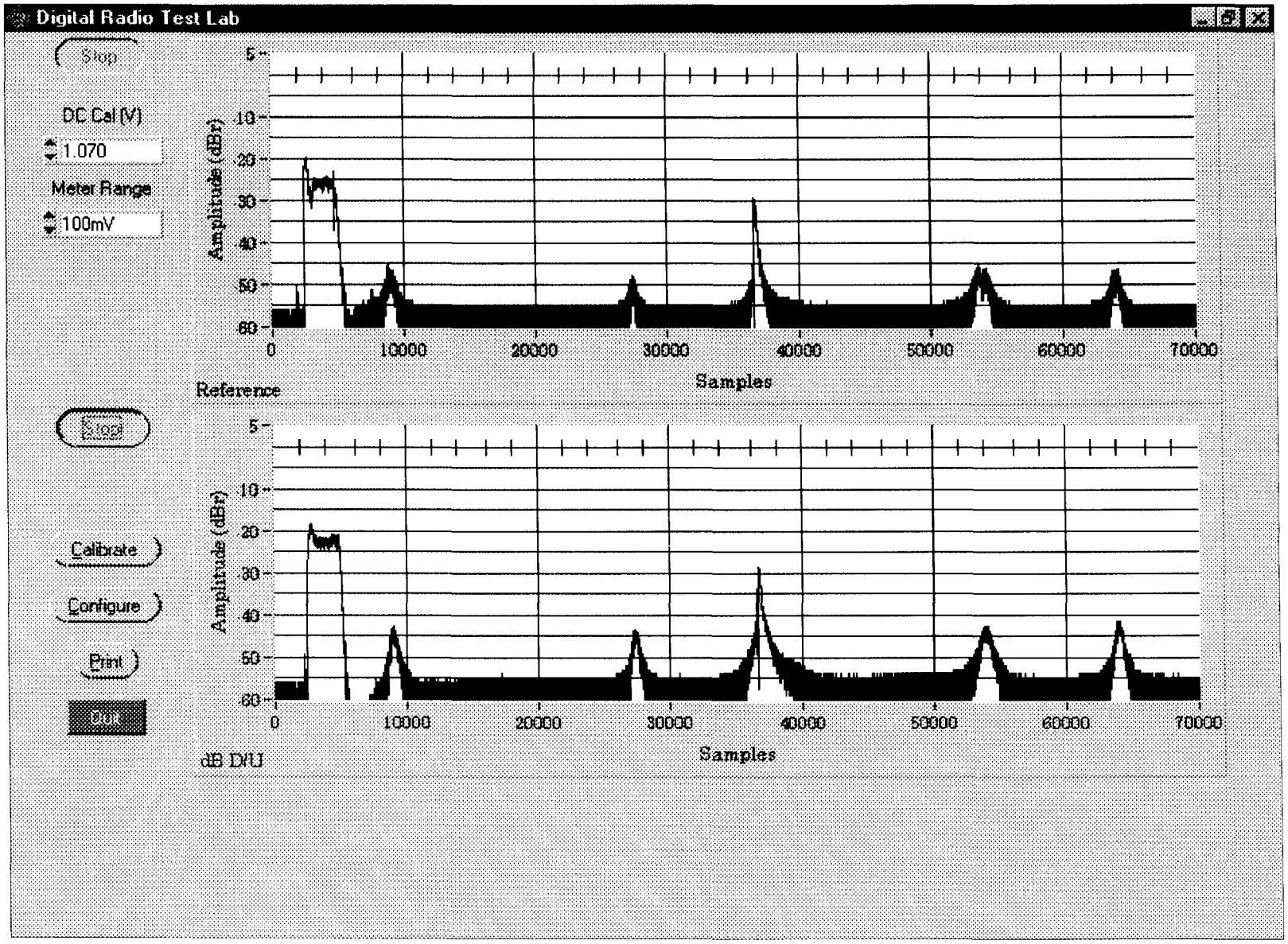

RMS S/N vs. D/U
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
S/N (dB)
20.00
15.00
10.00
5.00
0.00
-5.00
-10.00
-15.00
-20.00
-25.00
-30.00
-35.00
D/U (dB)
Compol 92
Dayton 67
Dayton 92

O

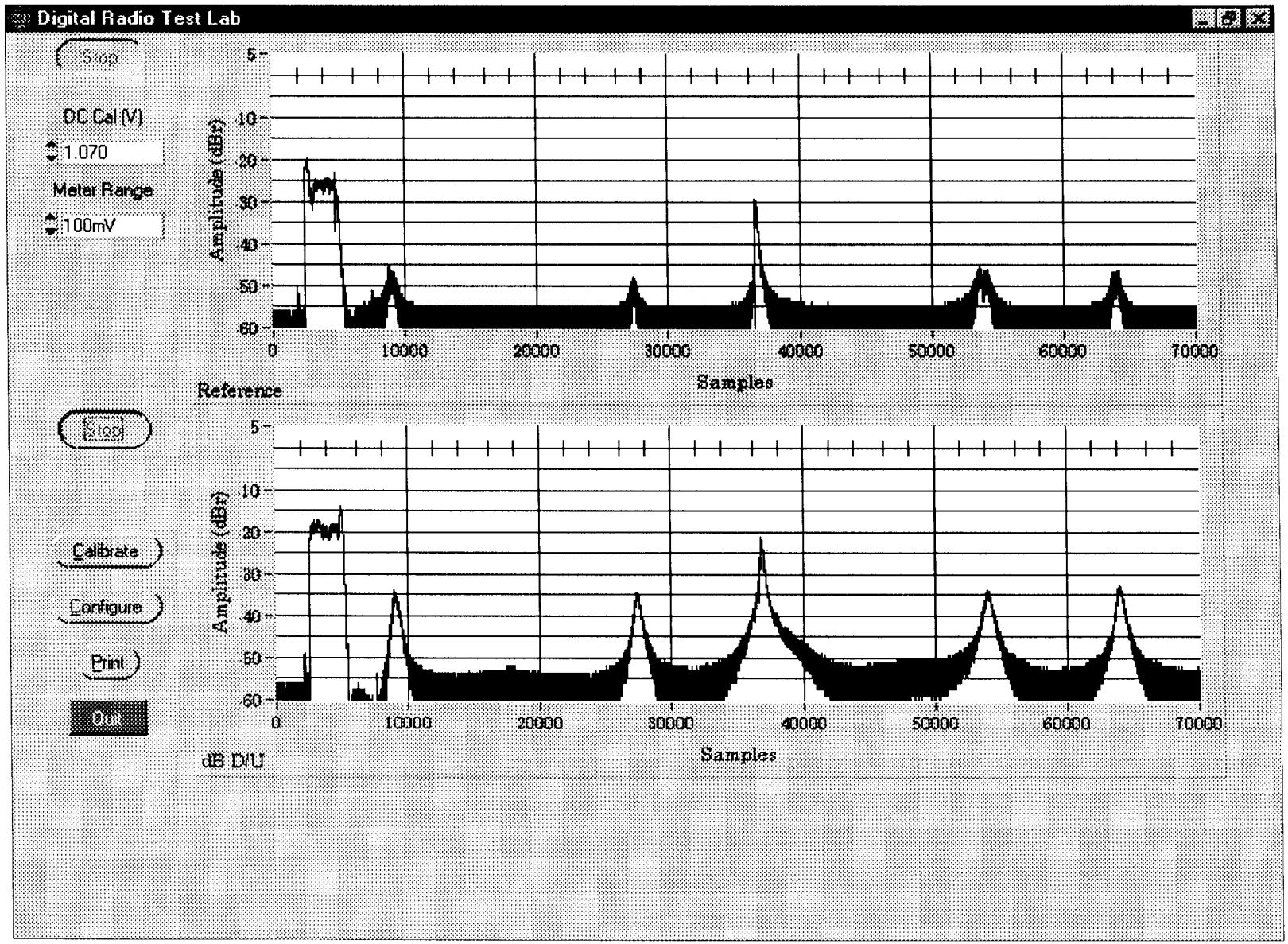
DTV Channel 6 Interference to FM Band Reception

Laboratory Test Report

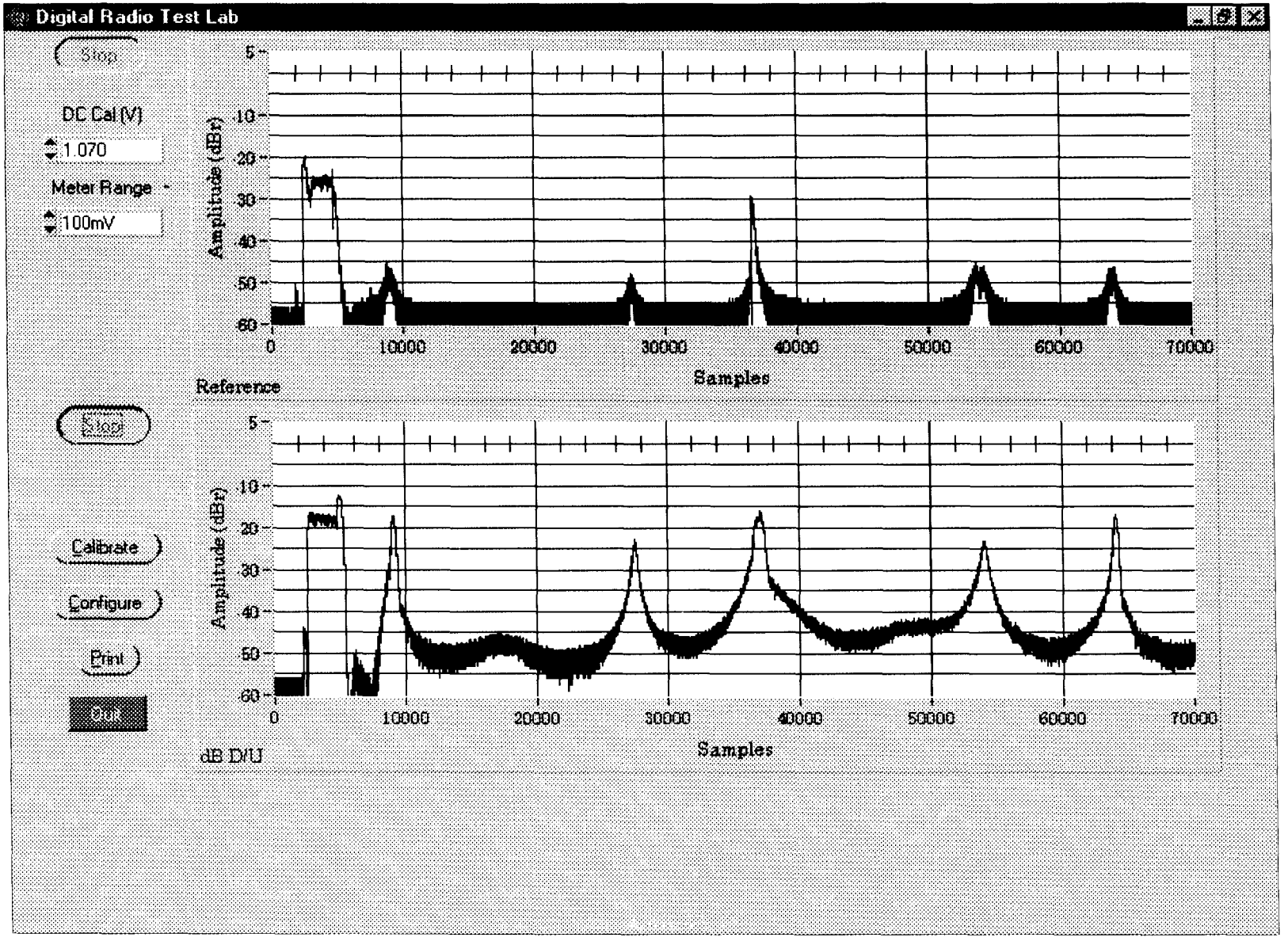
Audiovox Multipath Noise Floor at 88.5 MHz and C4 Emissions



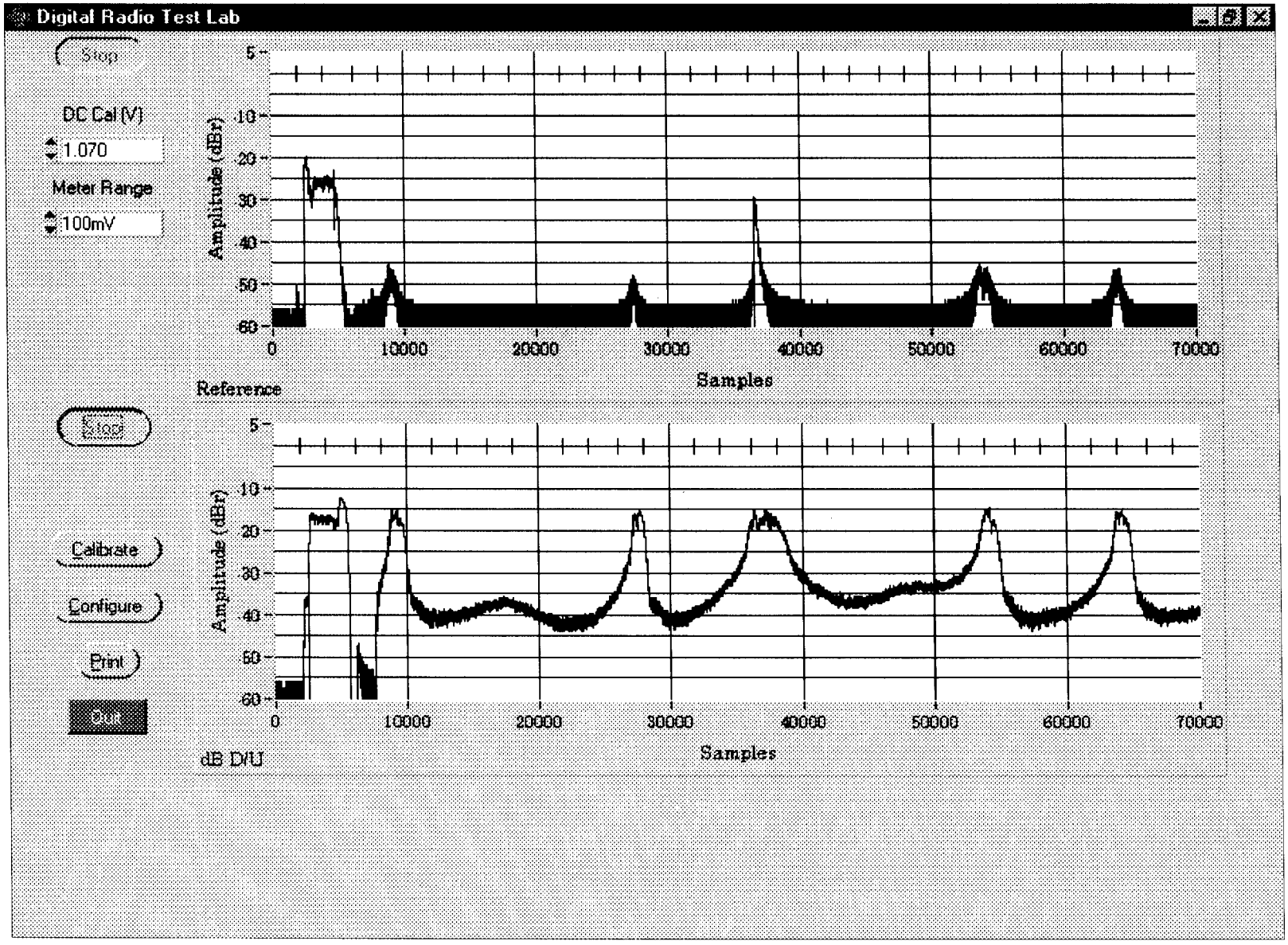
Multipath:	Urban Slow	Radio:	Audiovox	Engineer(s):	DML
D/U:	0 dB	Frequency:	88.5 MHz		
Corrector:	-47 dB	Date:	4/13/98		



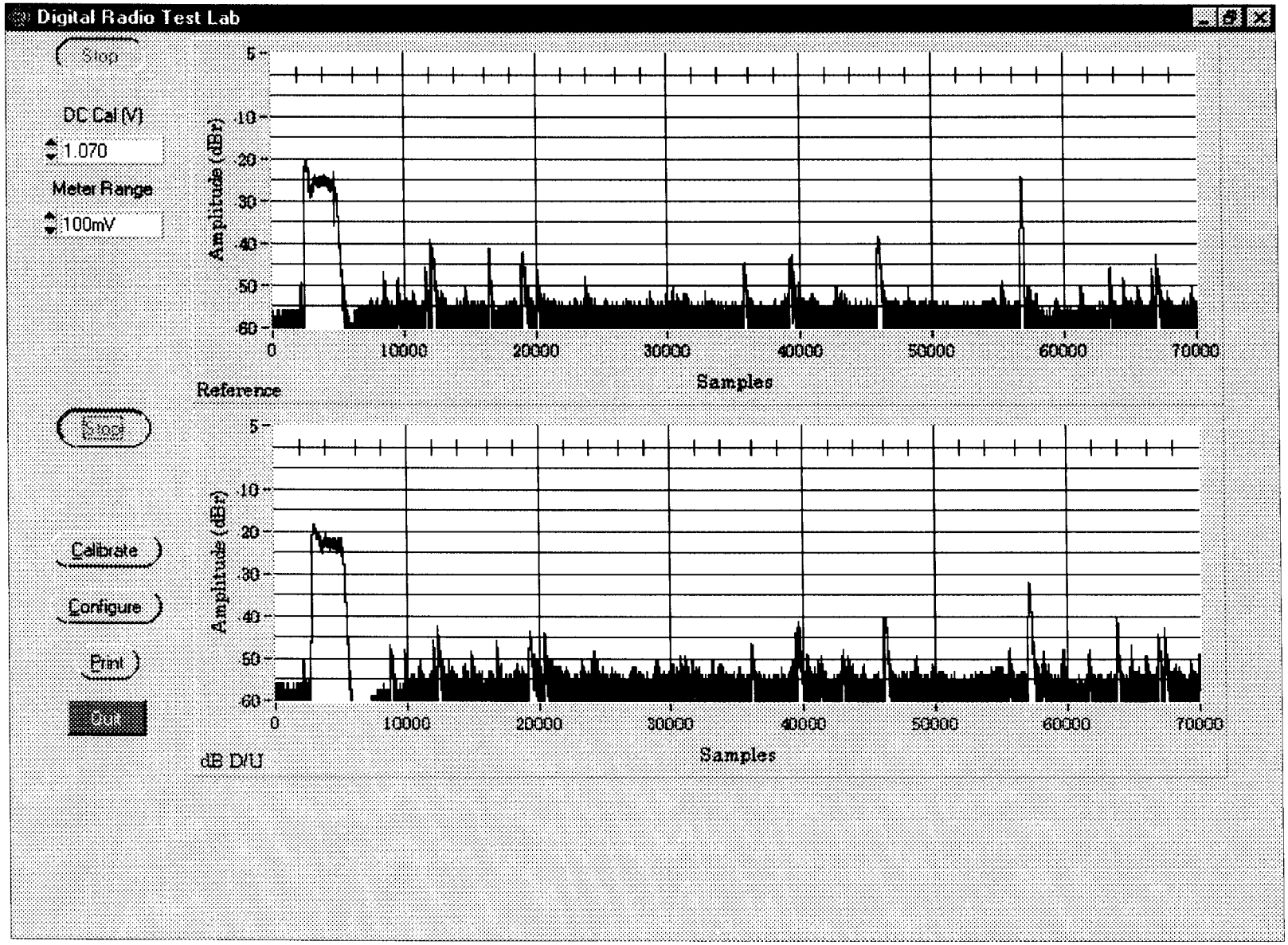
Multipath:	Urban Slow	Radio:	Audiovox	Engineer(s):	DML
D/U:	-10 dB	Frequency:	88.5 MHz		
Corrector:	-47 dB	Date:	4/13/98		



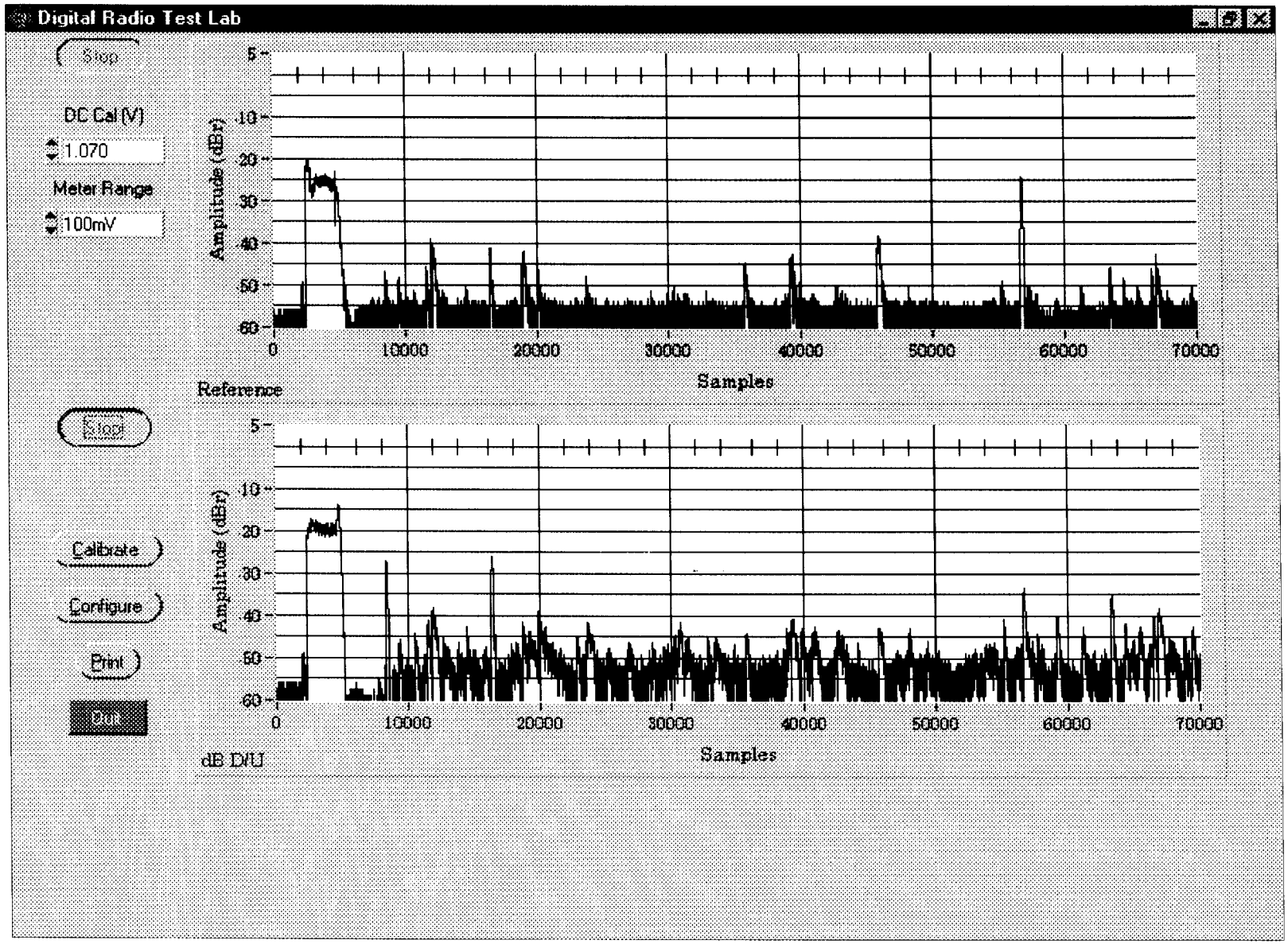
Multipath:	Urban Slow	Radio:	Audiovox	Engineer(s):	DML
D/U:	-20 dB	Frequency:	88.5 MHz		
Corrector:	-47 dB	Date:	4/13/98		



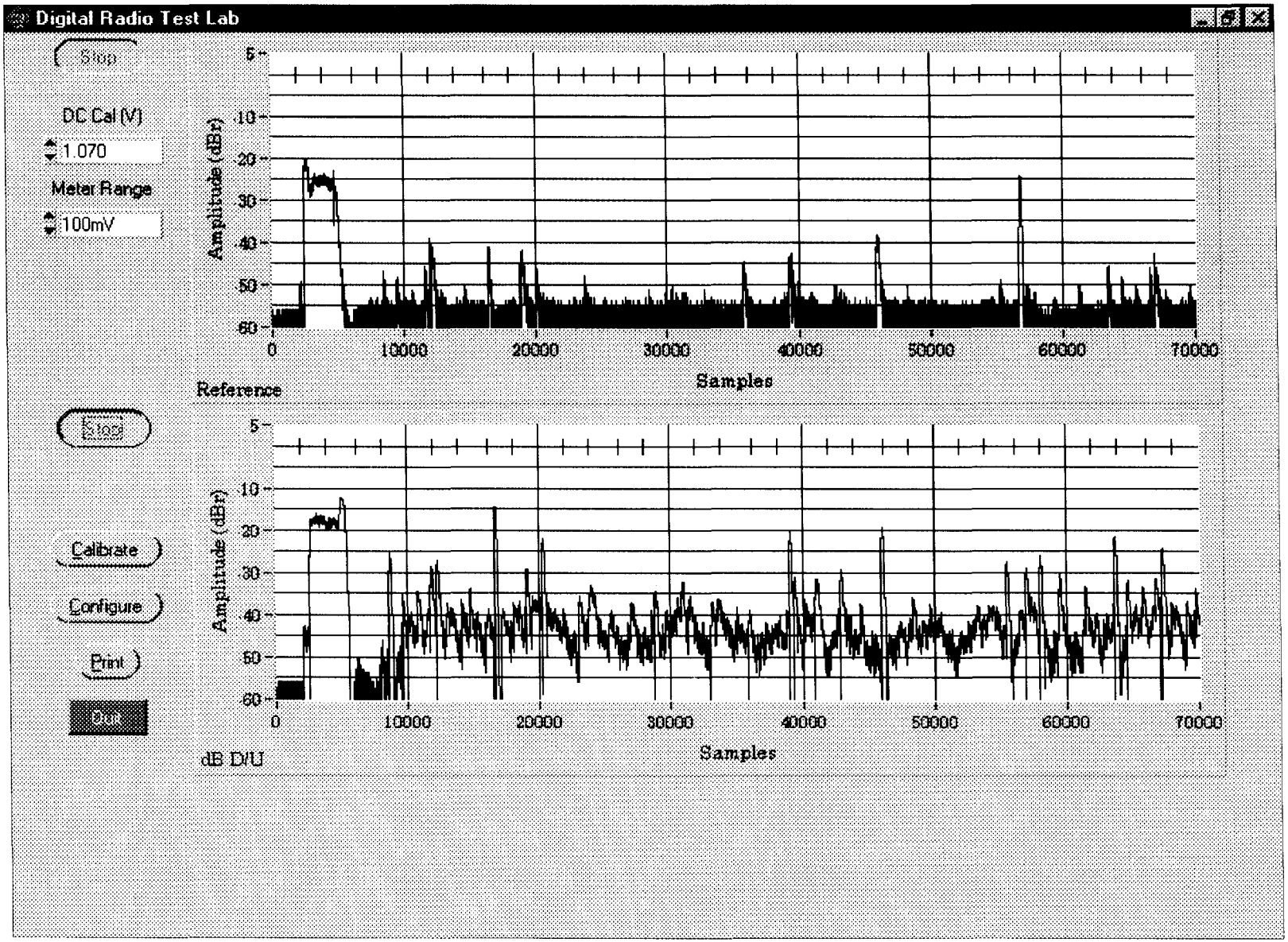
Multipath:	Urban Slow	Radio:	Audiovox	Engineer(s):	DML
D/U:	-30 dB	Frequency:	88.5 MHz		
Corrector:	-47 dB	Date:	4/13/98		



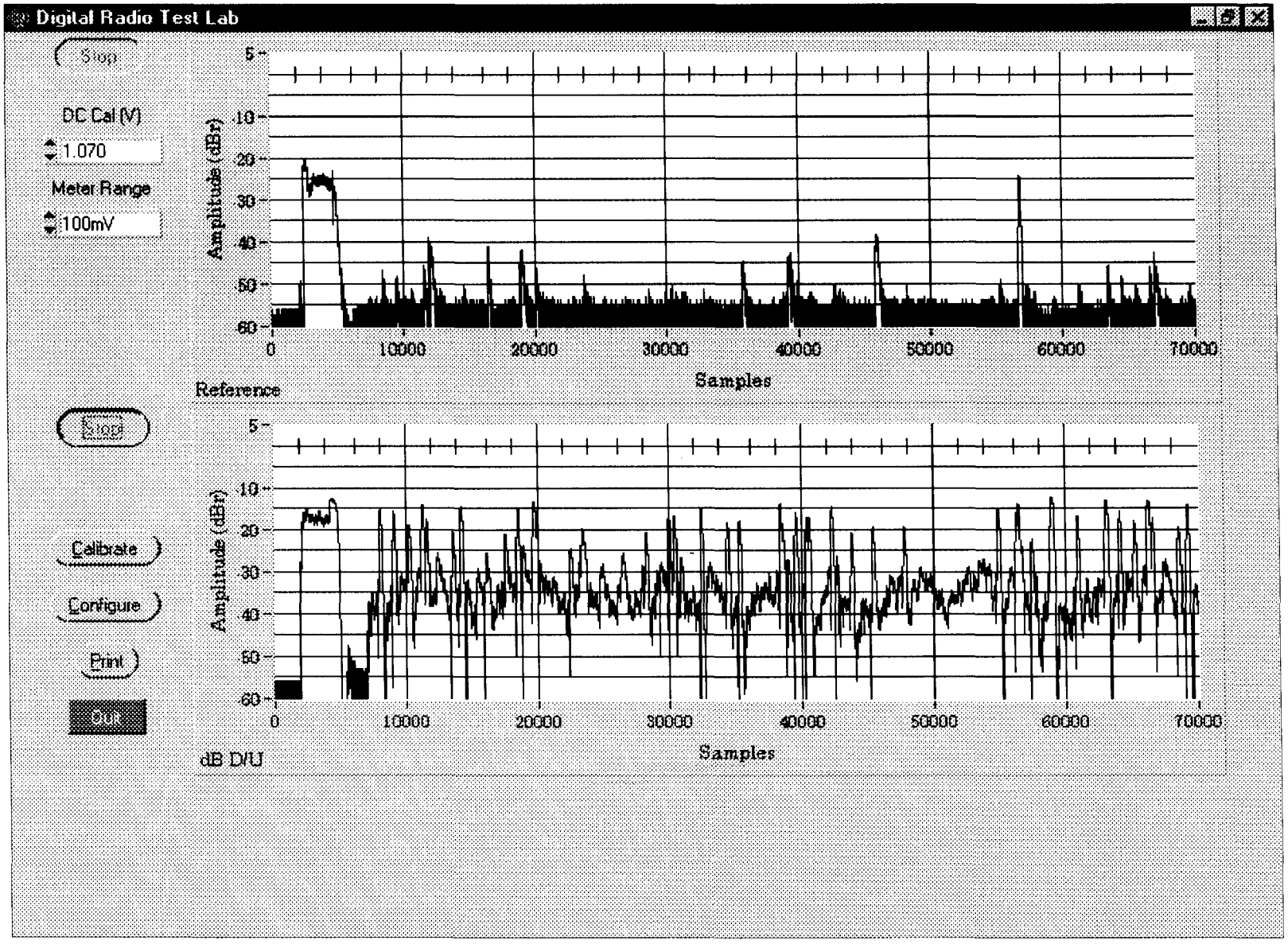
Multipath:	Urban Fast	Radio:	Audiovox	Engineer(s):	DML
D/U:	0 dB	Frequency:	88.5 MHz		
Corrector:	-47 dB	Date:	4/13/98		



Multipath:	Urban Fast	Radio:	Audiovox	Engineer(s):	DML
D/U:	-10 dB	Frequency:	88.5 MHz		
Corrector:	-47 dB	Date:	4/13/98		



Multipath:	Urban Fast	Radio:	Audiovox	Engineer(s):	DML
D/U:	-20 dB	Frequency:	88.5 MHz		
Corrector:	-47 dB	Date:	4/13/98		



Multipath:	Urban Fast	Radio:	Audiovox	Engineer(s):	DML
D/U:	-30 dB	Frequency:	88.5 MHz		
Corrector:	-47 dB	Date:	4/13/98		

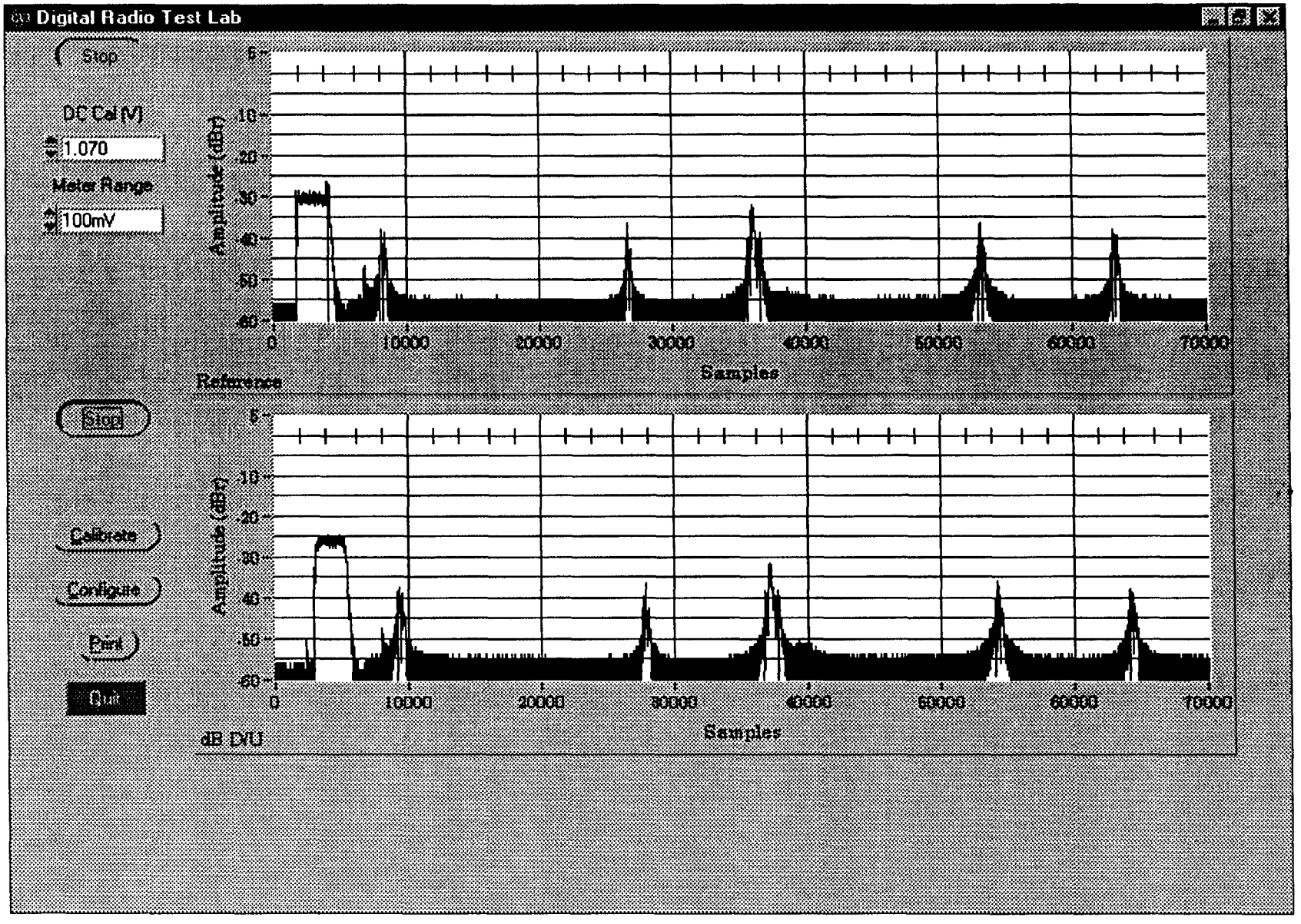
P

DTV Channel 6 Interference to FM Band Reception

Laboratory Test Report

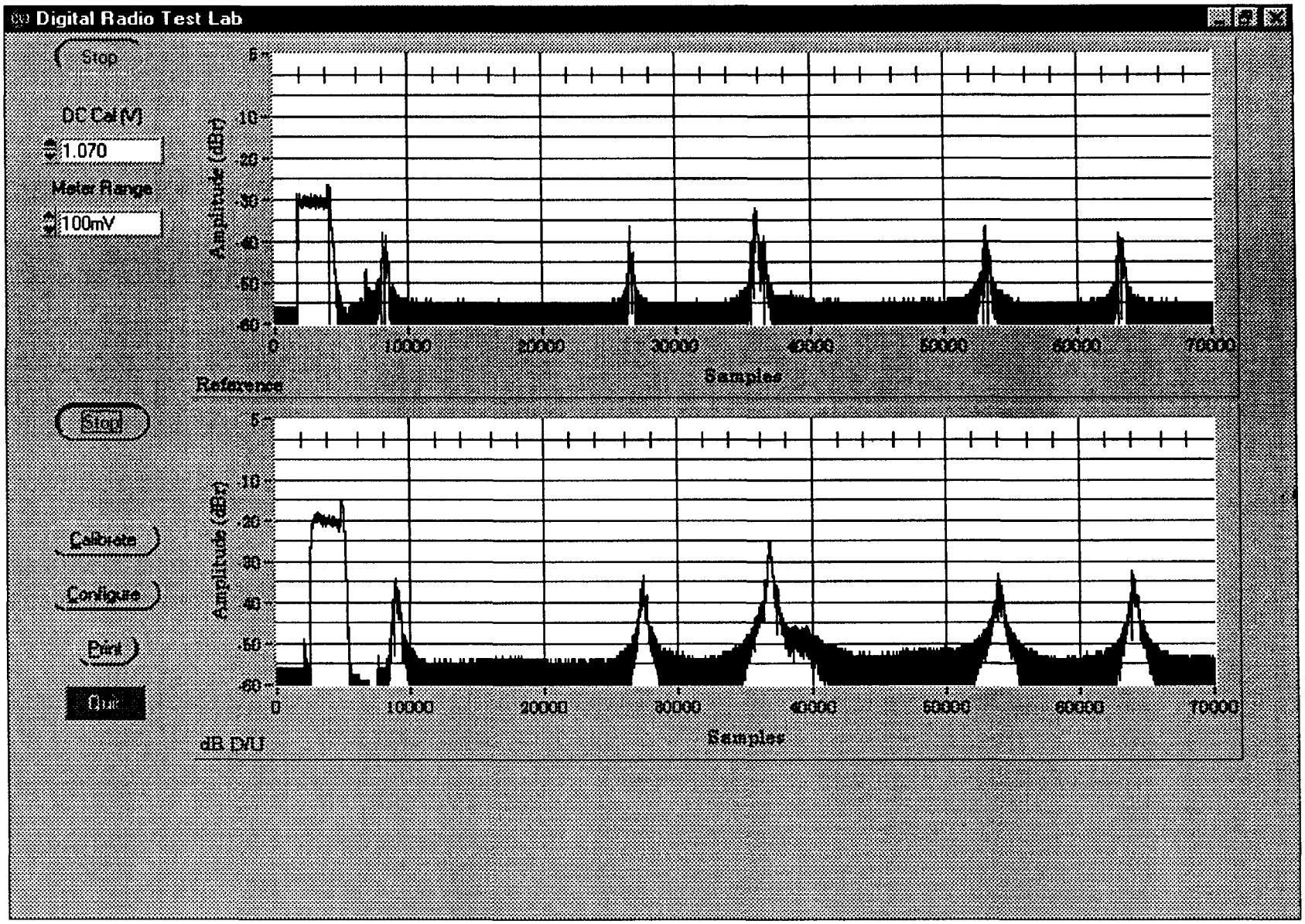
Delco Multipath Noise Floor at 88.5 MHz and C4 Emissions

Digital Radio Test Laboratory

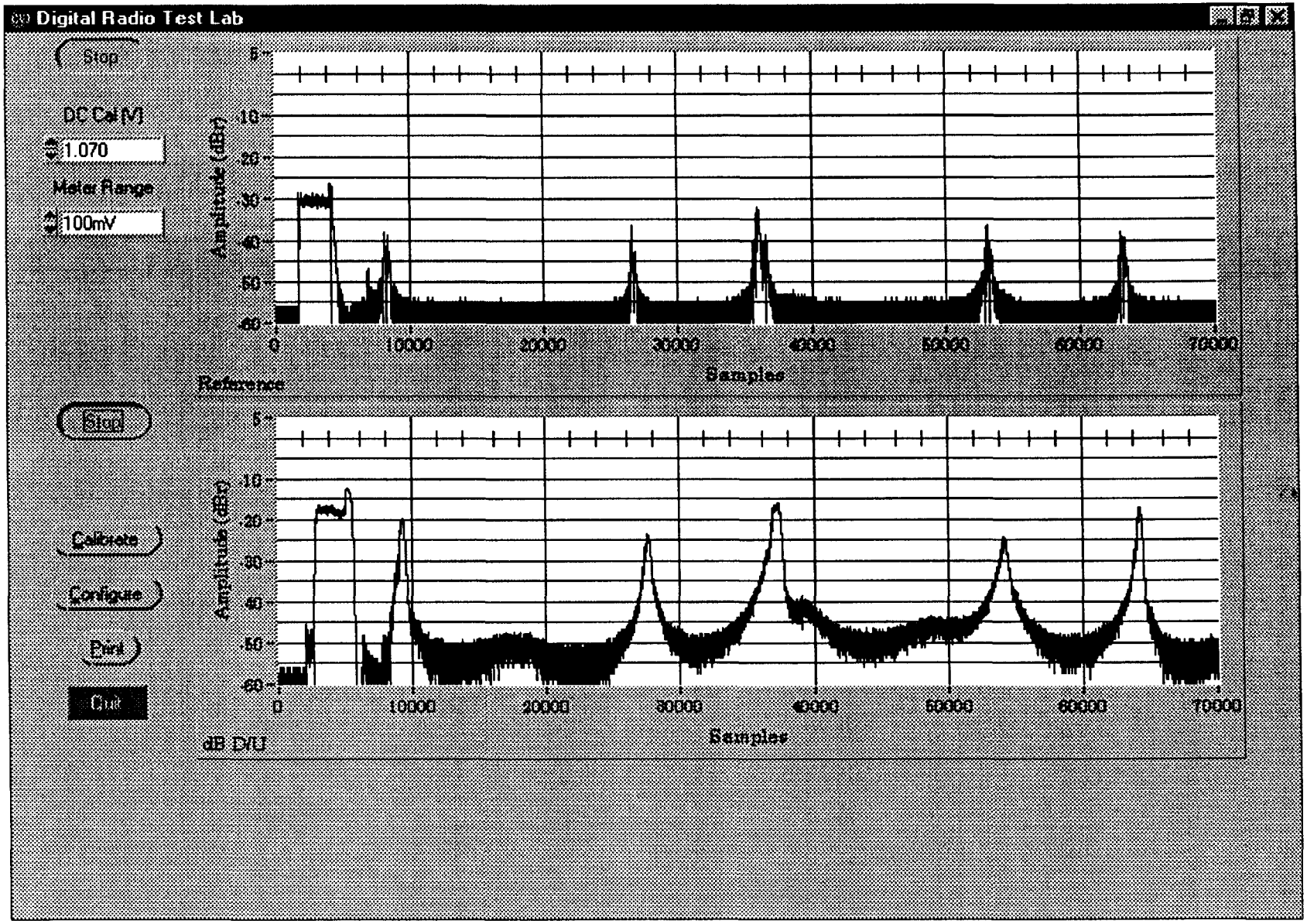


Multipath:	Urban Slow	Radio:	Delco	Engineer(s):	DML
D/U:	0 dB	Frequency:	88.5 MHz		
Corrector:	-47 dB	Date:	4/13/98		

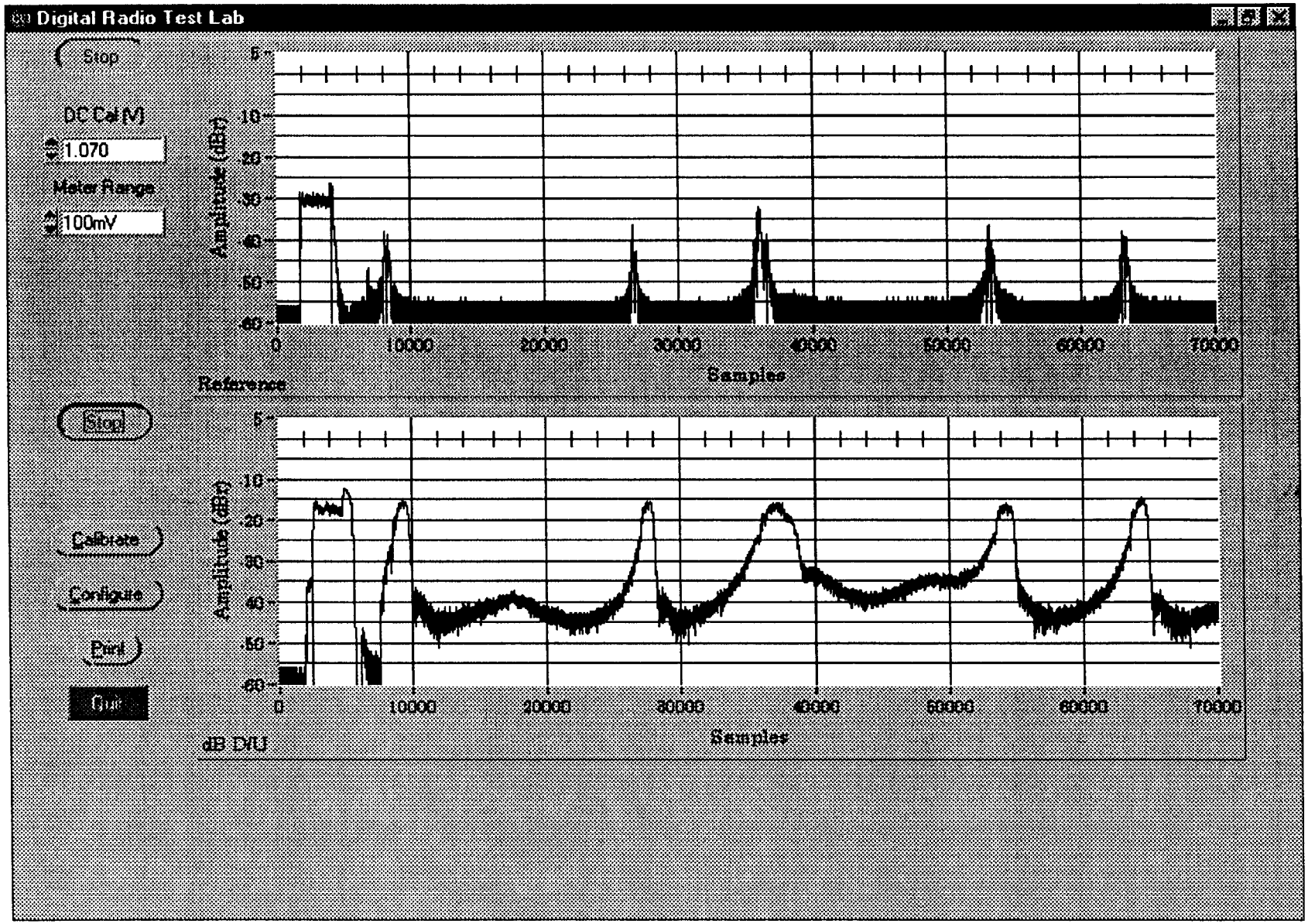
US 0 dB



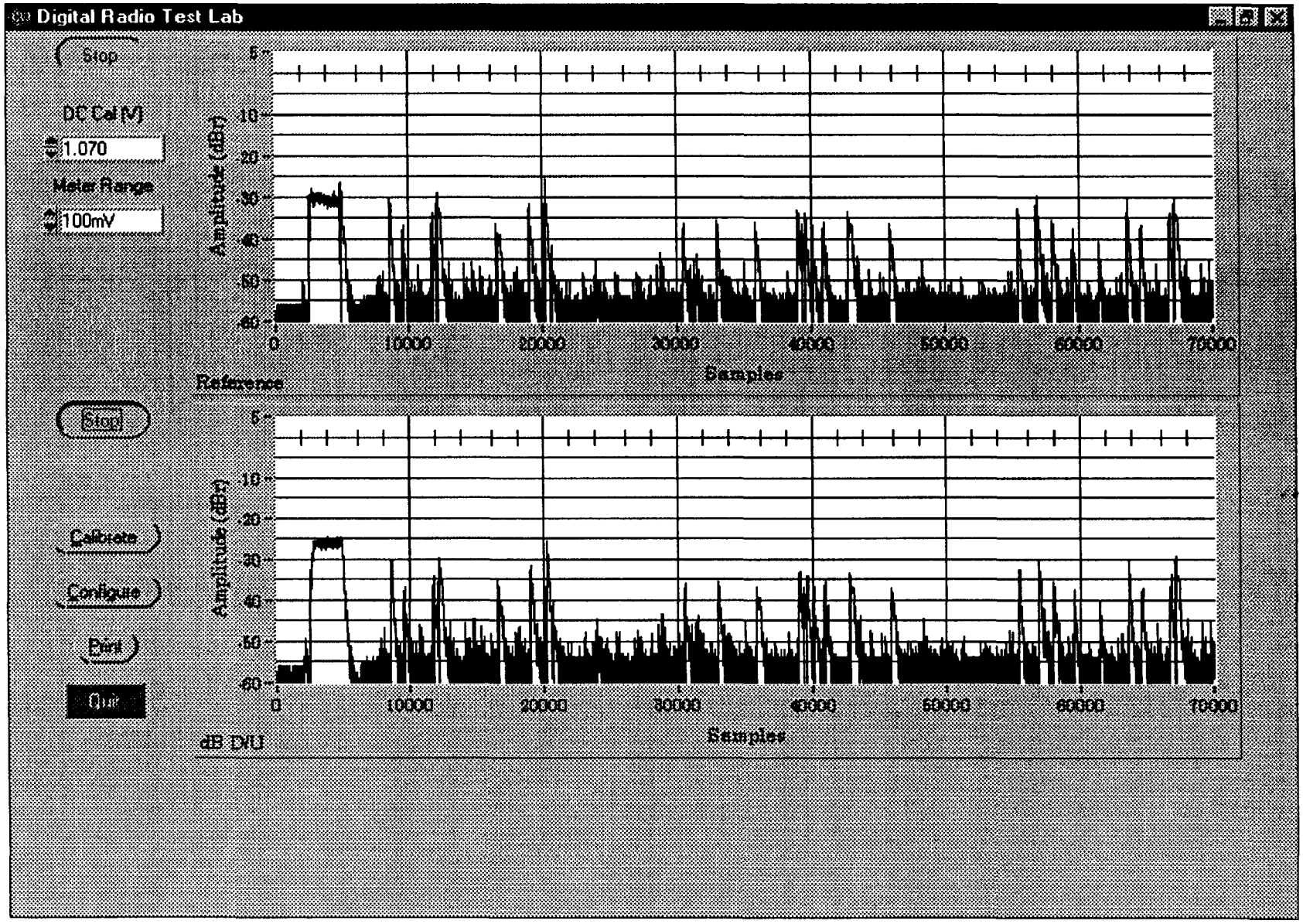
Multipath:	Urban Slow	Radio:	Delco	Engineer(s):	DML
D/U:	-10 dB	Frequency:	88.5 MHz		
Corrector:	-47 dB	Date:	4/13/98		



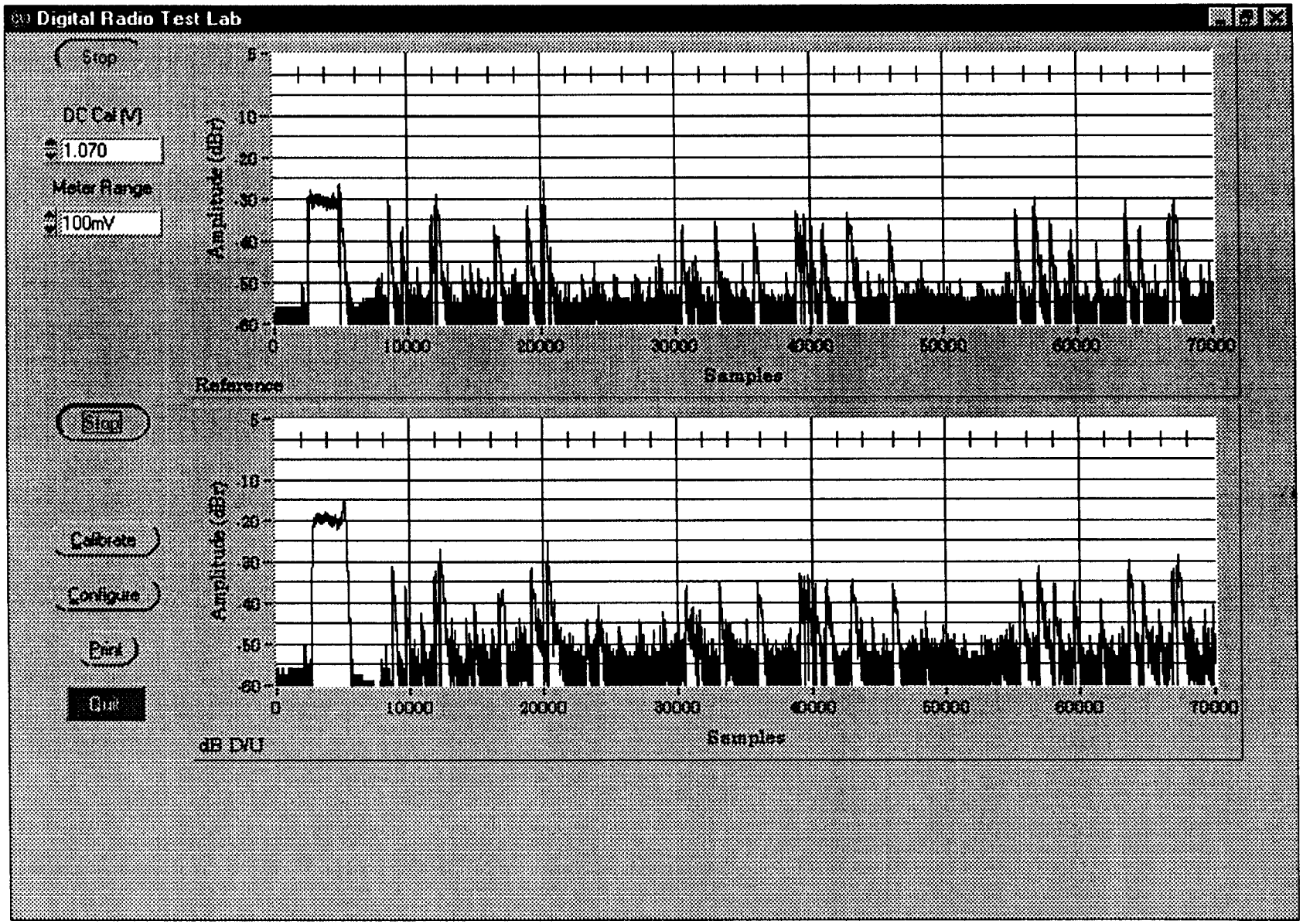
Multipath:	Urban Slow	Radio:	Delco	Engineer(s):	DML
D/U:	-20 dB	Frequency:	88.5 MHz		
Corrector:	-47 dB	Date:	4/13/98		



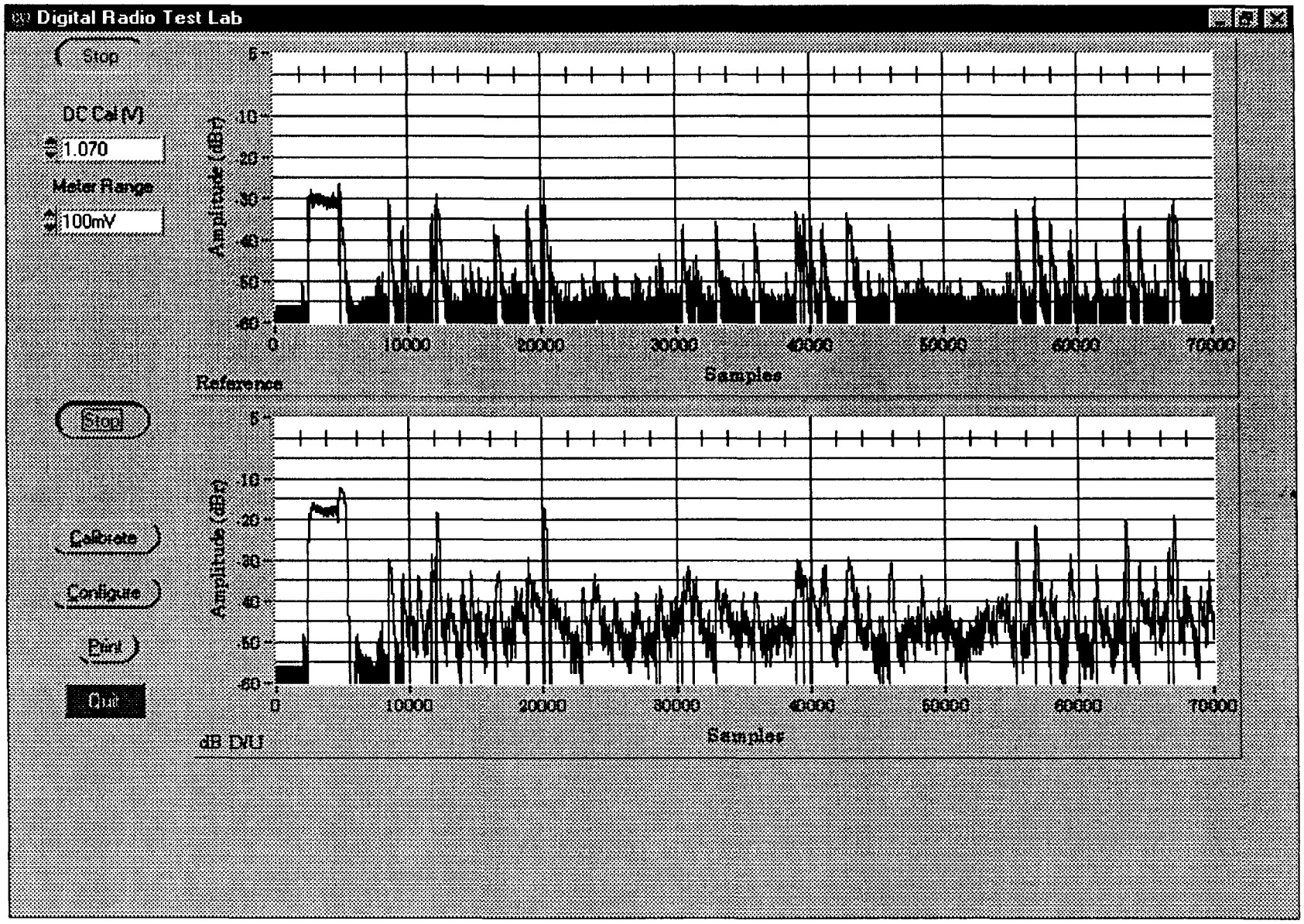
Multipath:	Urban Slow	Radio:	Delco	Engineer(s):	DML
D/U:	-30 dB	Frequency:	88.5 MHz		
Corrector:	-47 dB	Date:	4/13/98		



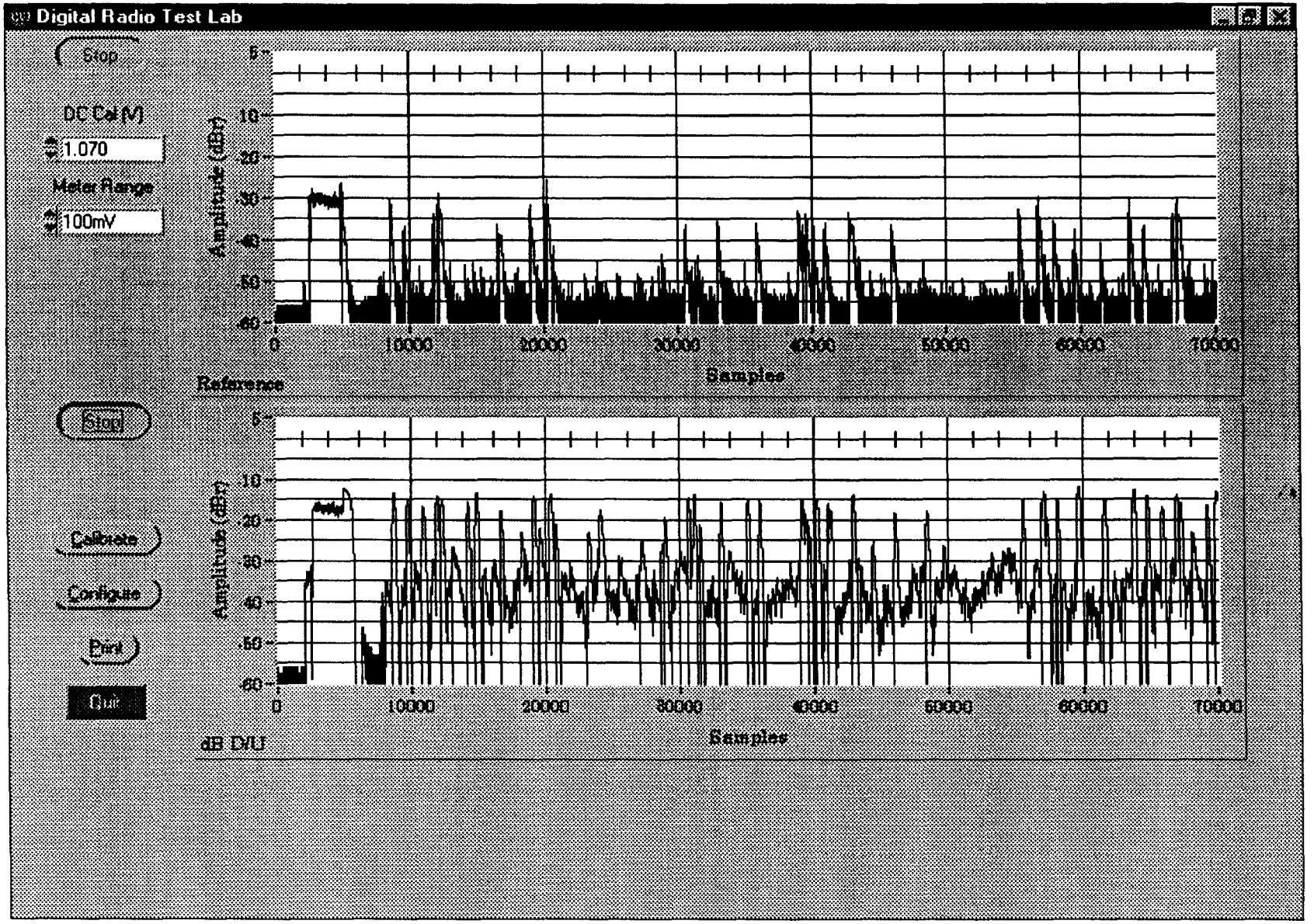
Multipath:	Urban Fast	Radio:	Delco	Engineer(s):	DML
D/U:	0 dB	Frequency:	88.5 MHz		
Corrector:	-47 dB	Date:	4/13/98		



Multipath:	Urban Fast	Radio:	Delco	Engineer(s):	DML
D/U:	-10 dB	Frequency:	88.5 MHz		
Corrector:	-47 dB	Date:	4/13/98		



Multipath:	Urban Fast	Radio:	Delco	Engineer(s):	DML
D/U:	-20 dB	Frequency:	88.5 MHz		
Corrector:	-47 dB	Date:	4/13/98		



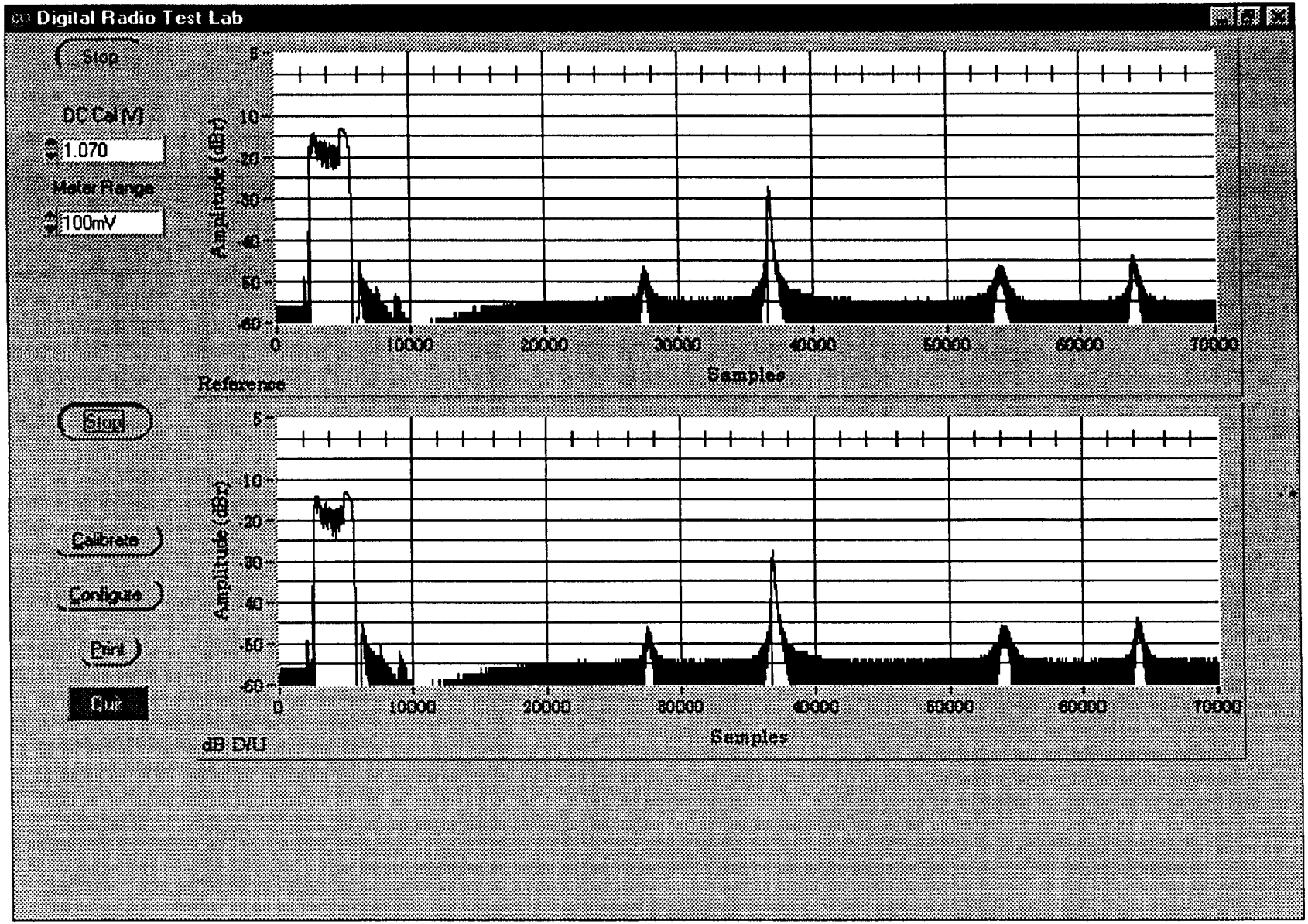
Multipath:	Urban Fast	Radio:	Delco	Engineer(s):	DML
D/U:	-30 dB	Frequency:	88.5 MHz		
Corrector:	-47 dB	Date:	4/13/98		

Q

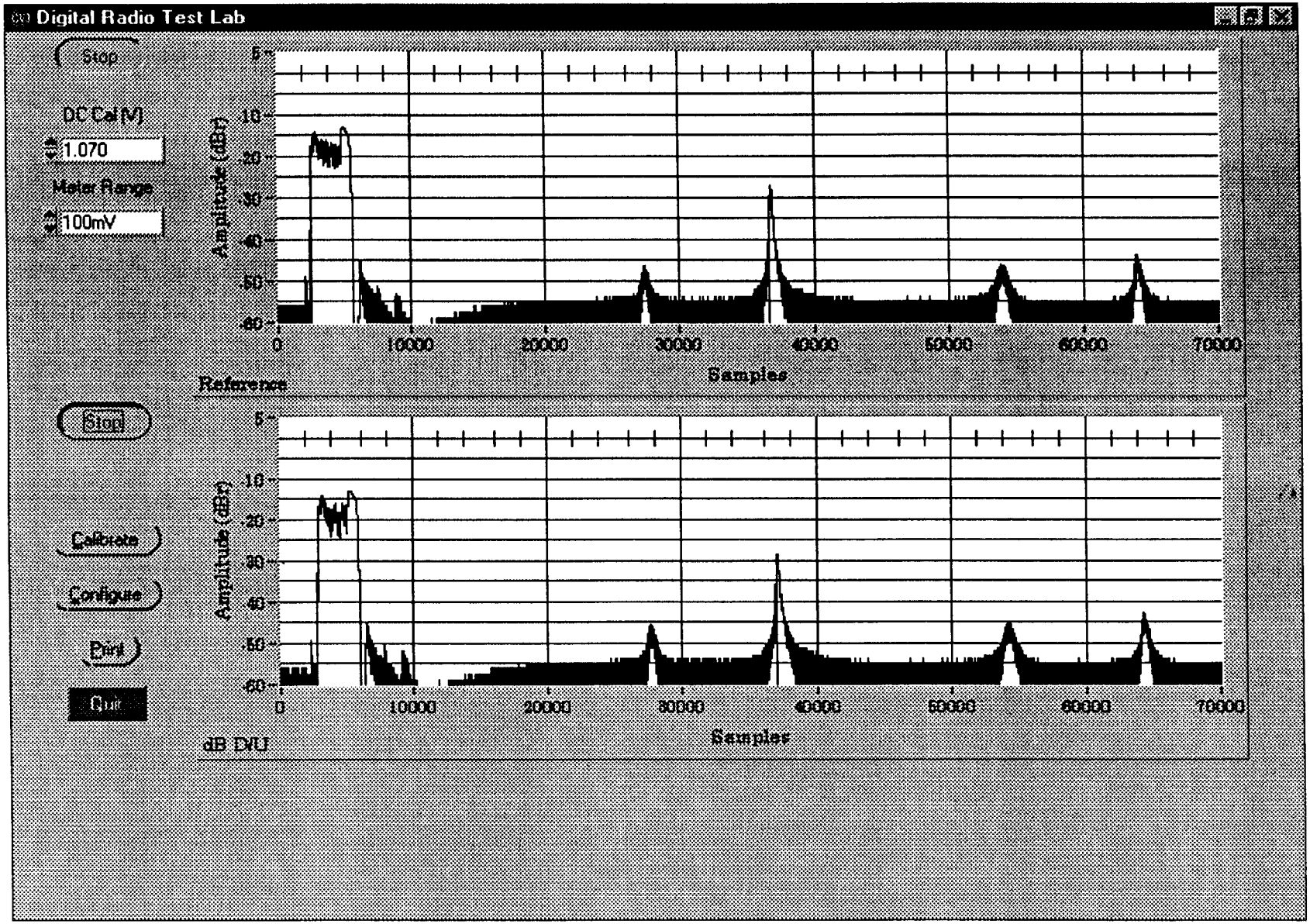
DTV Channel 6 Interference to FM Band Reception

Laboratory Test Report

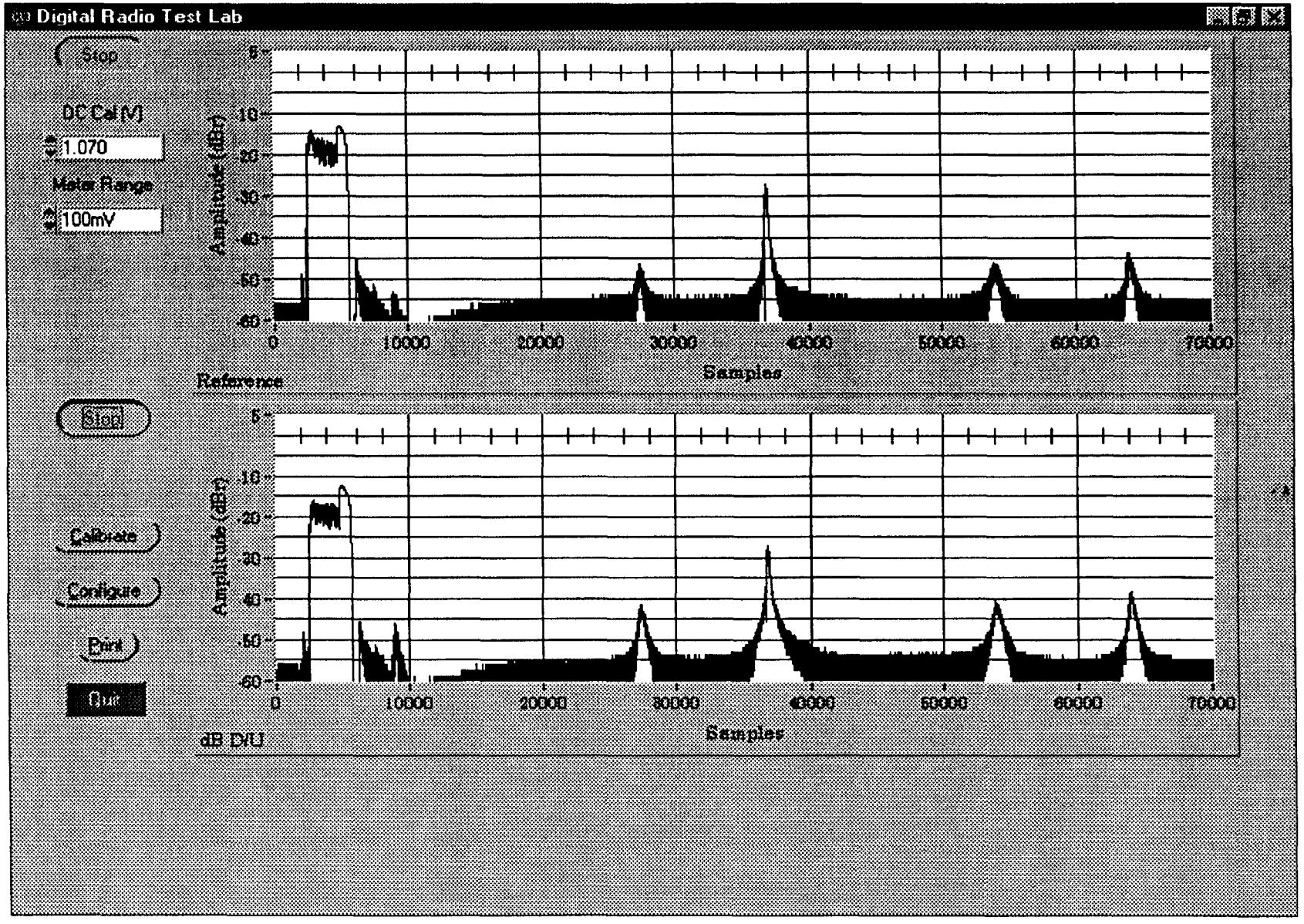
Audiovox Multipath Noise Floor at 90.1 MHz and C4 Emissions



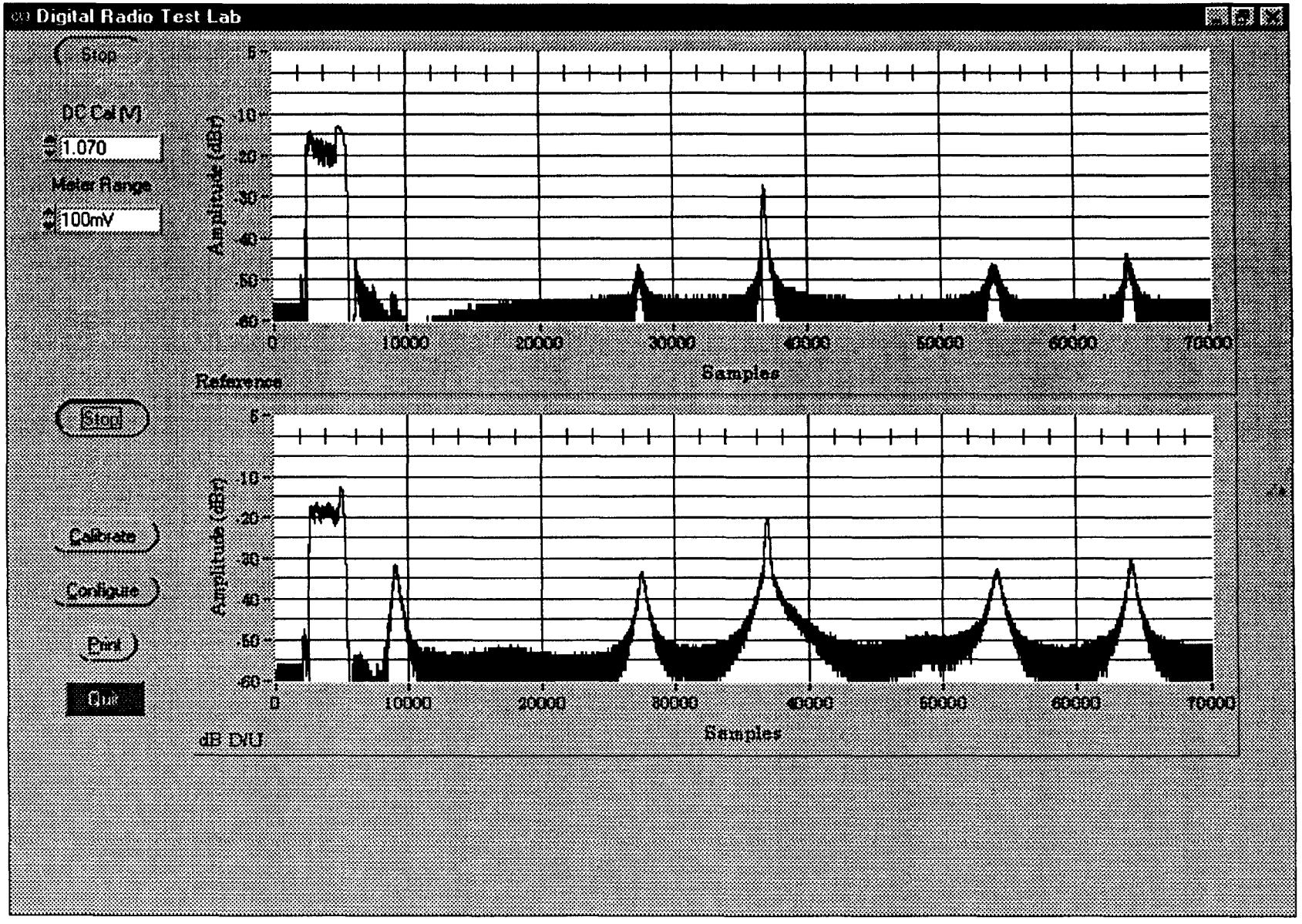
Multipath:	Urban Slow	Radio:	Audiovox	Engineer(s):	DML
D/U:	0 dB	Frequency:	90.1 MHz		
Corrector:	-65.5 dB	Date:	4/7/98		



Multipath:	Urban Slow	Radio:	Audiovox	Engineer(s):	DML
D/U:	-10 dB	Frequency:	90.1 MHz		
Corrector:	-65.5 dB	Date:	4/7/98		



Multipath:	Urban Slow	Radio:	Audiovox	Engineer(s):	DML
D/U:	-20 dB	Frequency:	90.1 MHz		
Corrector:	-65.5 dB	Date:	4/7/98		



Multipath:	Urban Slow	Radio:	Audiovox	Engineer(s):	DML
D/U:	-30 dB	Frequency:	90.1 MHz		
Corrector:	-65.5 dB	Date:	4/7/98		

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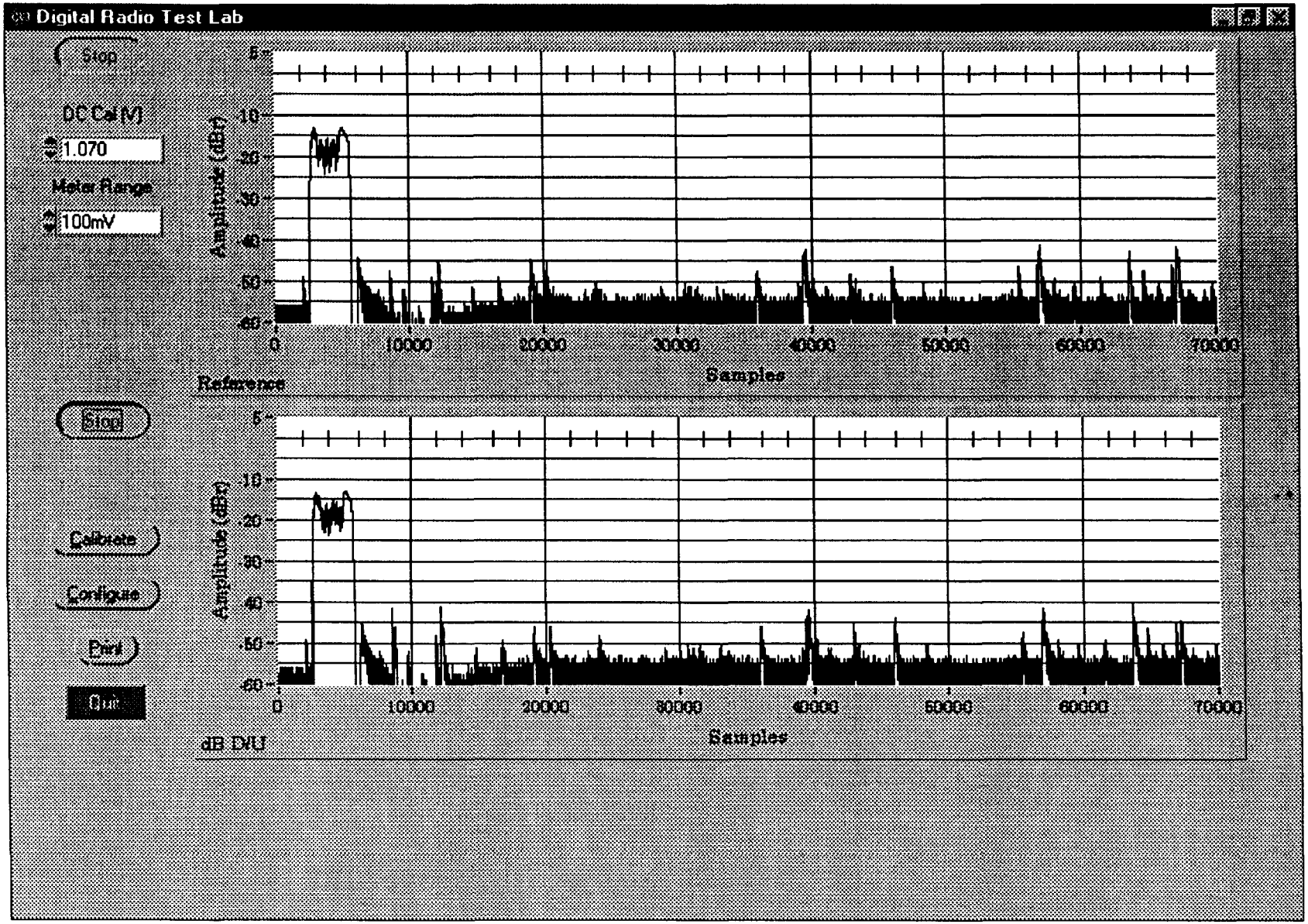
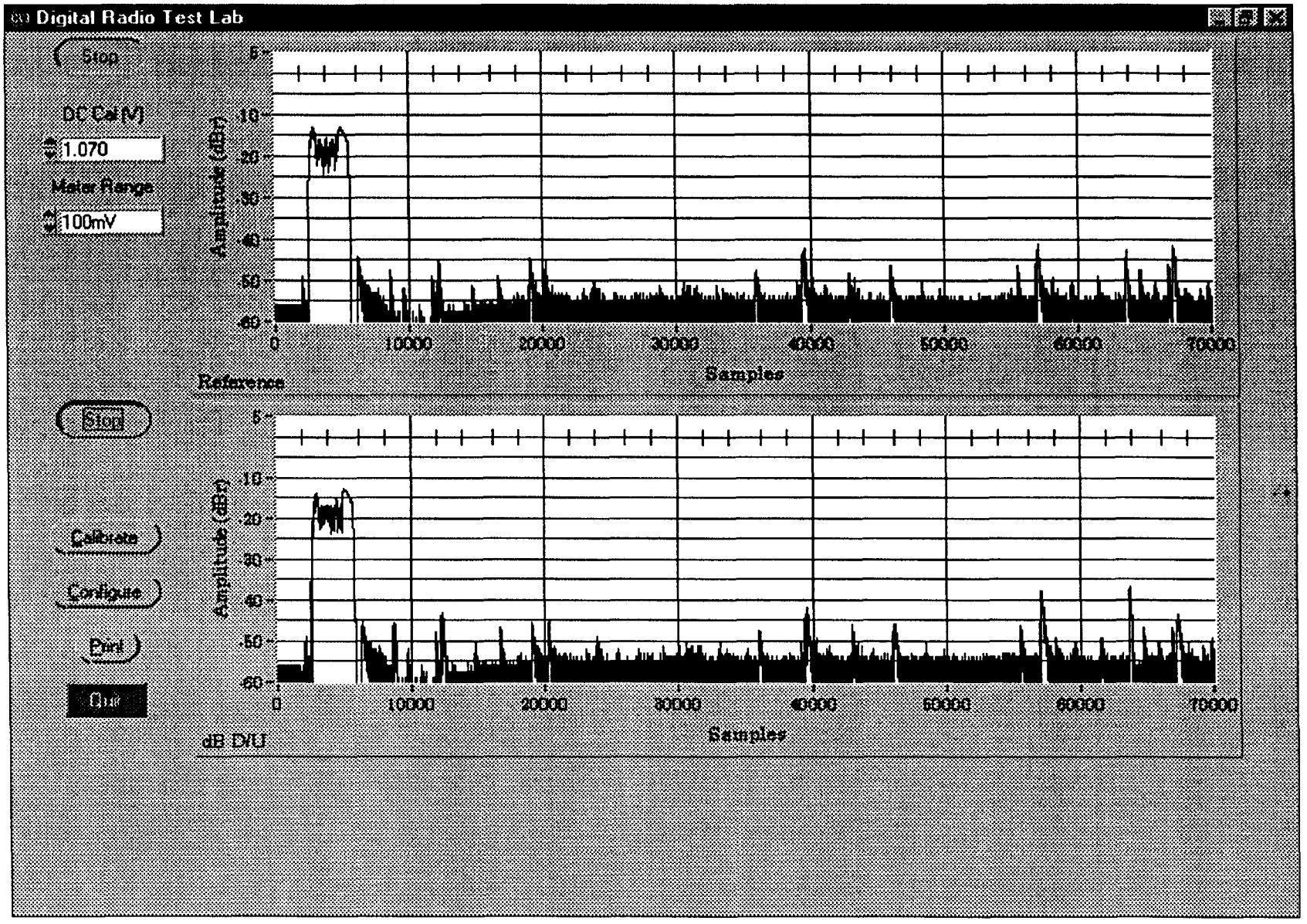
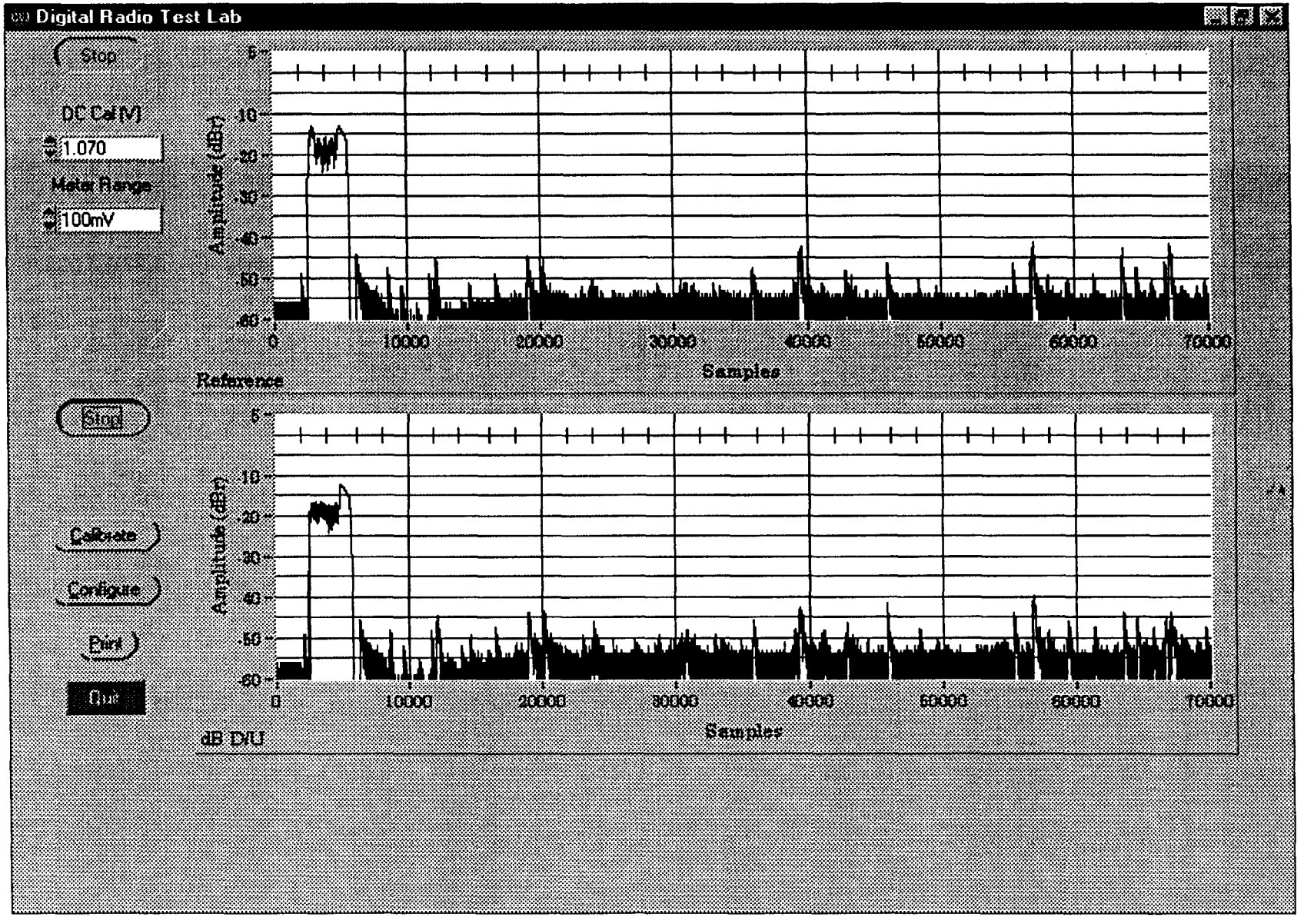


Multipath:	Urban Fast	Radio:	Audiovox	Engineer(s):	DML
D/U:	0 dB	Frequency:	90.1 MHz		
Corrector:	-65.5 dB	Date:	4/7/98		

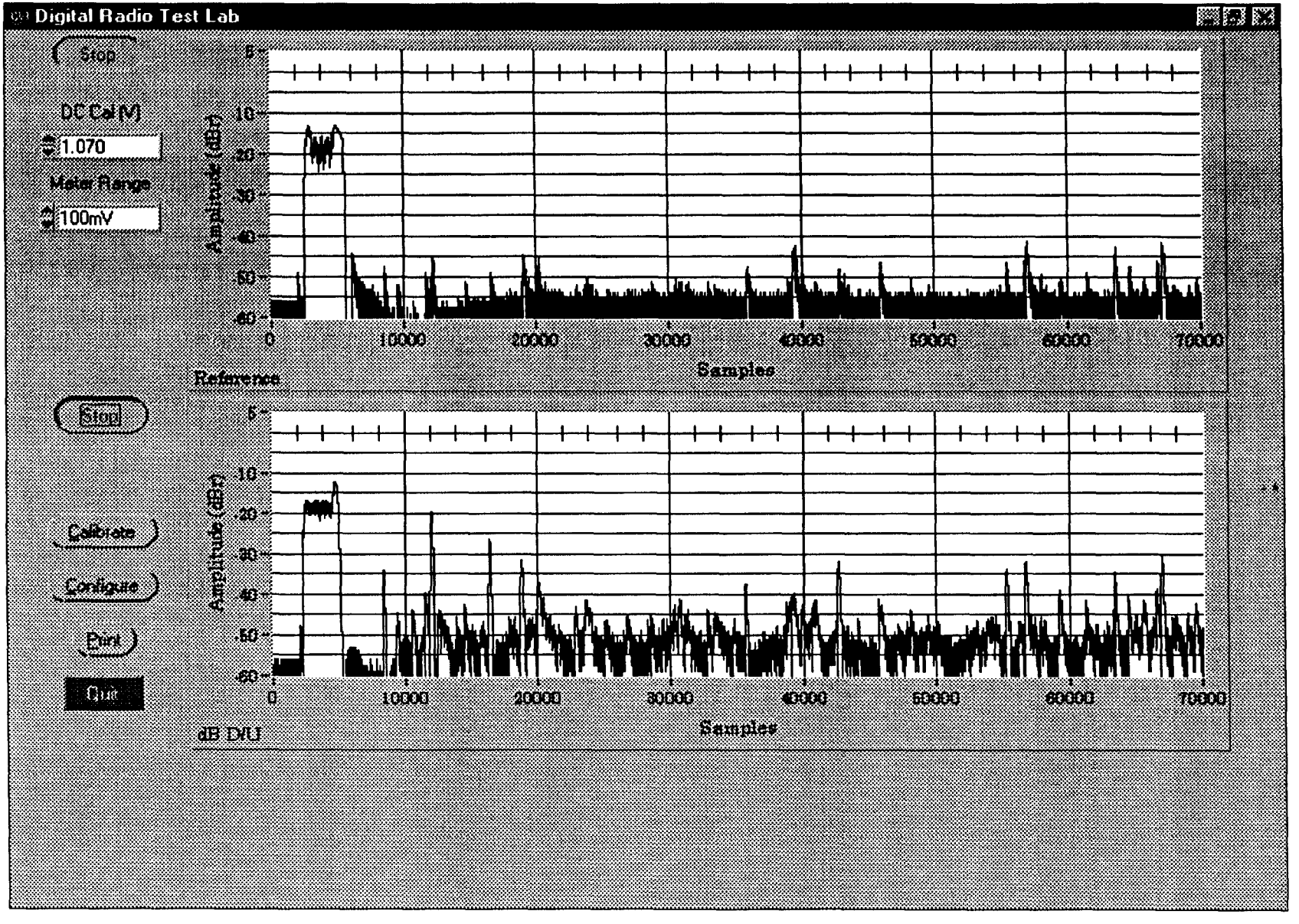
UF 0 dB



Multipath:	Urban Fast	Radio:	Audiovox	Engineer(s):	DML
D/U:	-10 dB	Frequency:	90.1 MHz		
Corrector:	-65.5 dB	Date:	4/7/98		



Multipath:	Urban Fast	Radio:	Audiovox	Engineer(s):	DML
D/U:	-20 dB	Frequency:	90.1 MHz		
Corrector:	-65.5 dB	Date:	4/7/98		



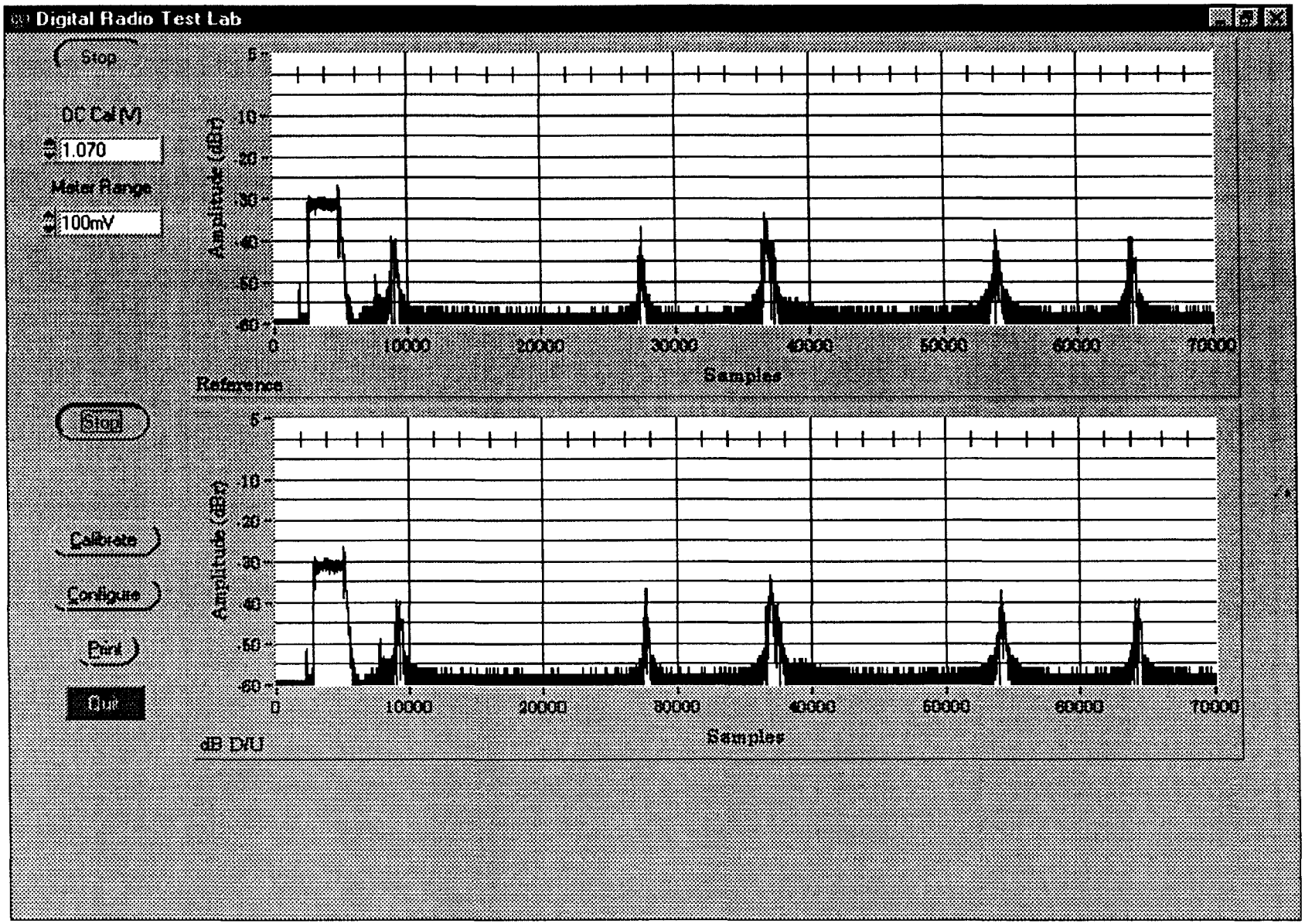
Multipath:	Urban Fast	Radio:	Audiovox	Engineer(s):	DML
D/U:	-30 dB	Frequency:	90.1 MHz		
Corrector:	-65.5 dB	Date:	4/7/98		

R

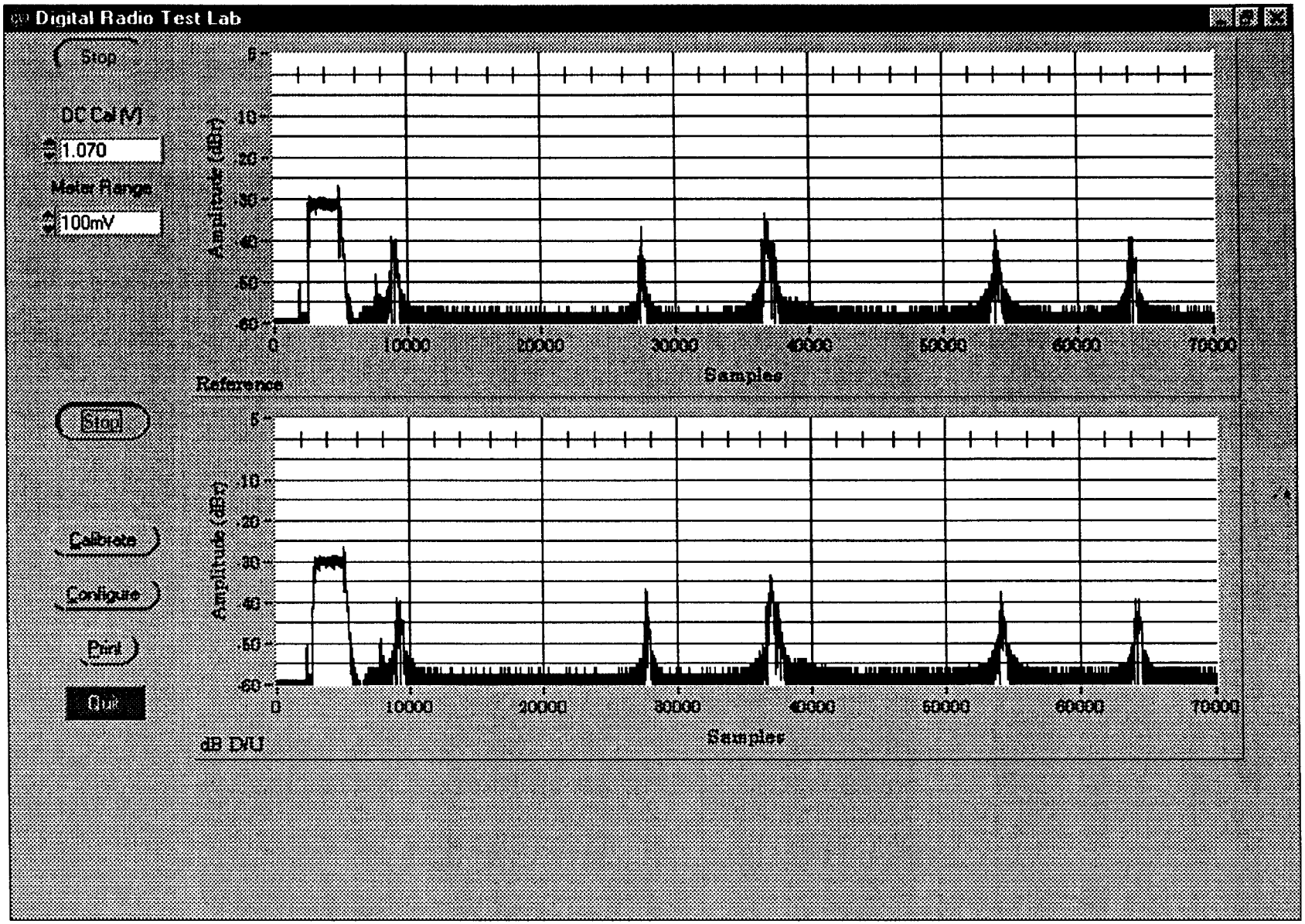
DTV Channel 6 Interference to FM Band Reception

Laboratory Test Report

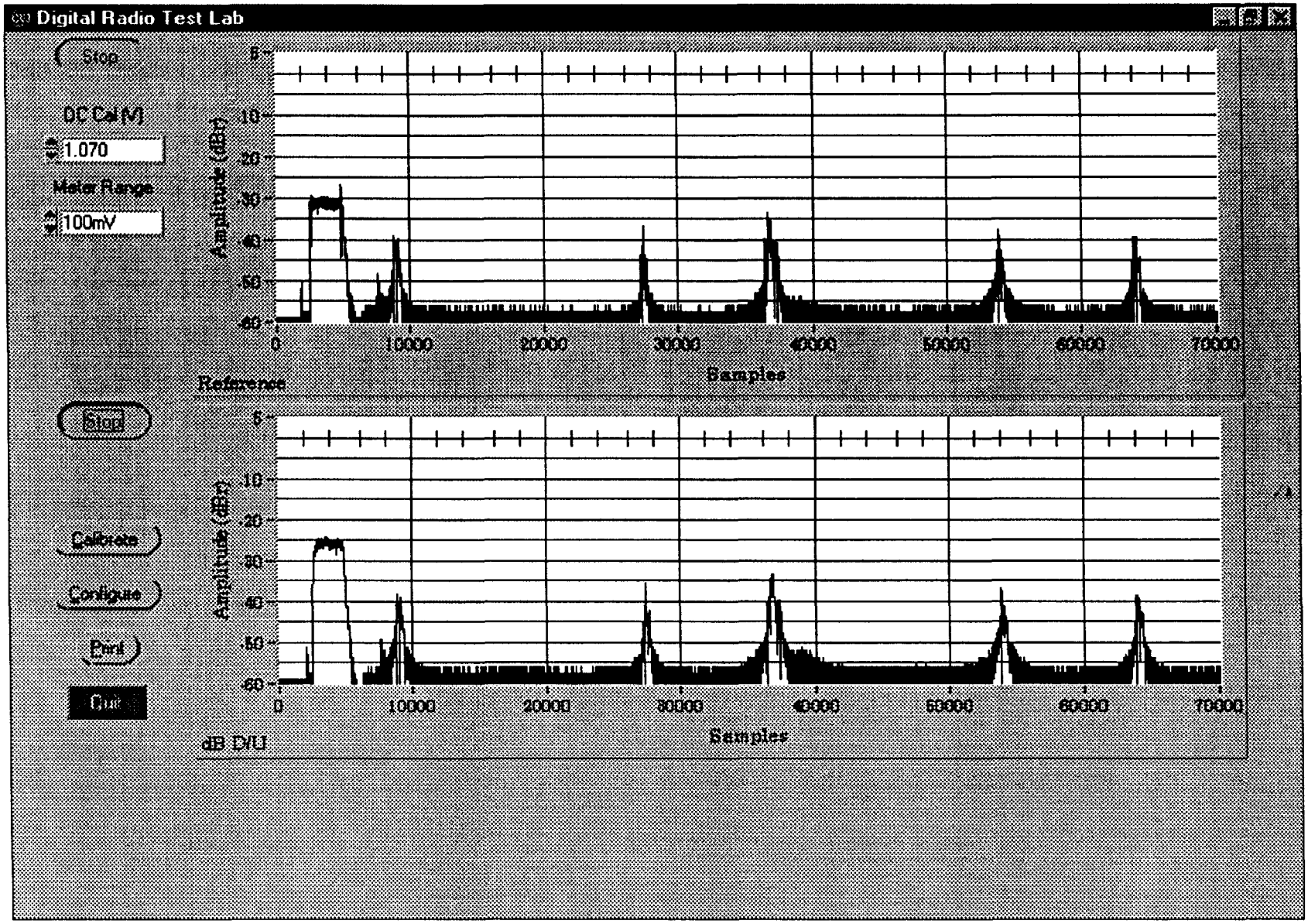
Delco Multipath Noise Floor at 90.1 MHz and C4 Emissions



Multipath:	Urban Slow	Radio:	Delco	Engineer(s):	DML
D/U:	0 dB	Frequency:	90.1 MHz		RMc
Corrector:	-65.5 dB	Date:	3/30/98		

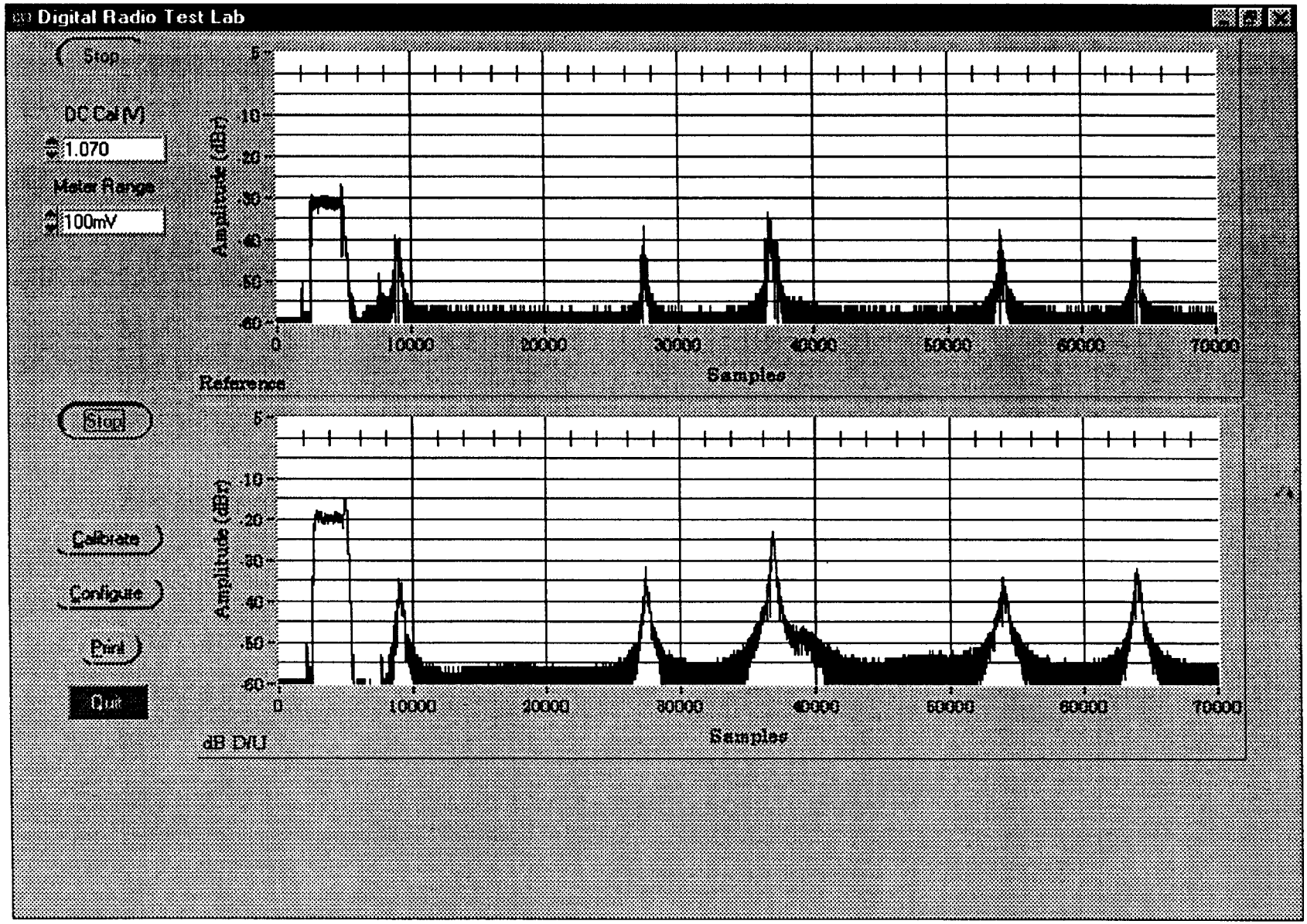


Multipath:	Urban Slow	Radio:	Delco	Engineer(s):	DML
D/U:	-10 dB	Frequency:	90.1 MHz		RMc
Corrector:	-65.5 dB	Date:	3/30/98		



Multipath:	Urban Slow	Radio:	Delco	Engineer(s):	DML
D/U:	-20 dB	Frequency:	90.1 MHz		RMc
Corrector:	-65.5 dB	Date:	3/30/98		

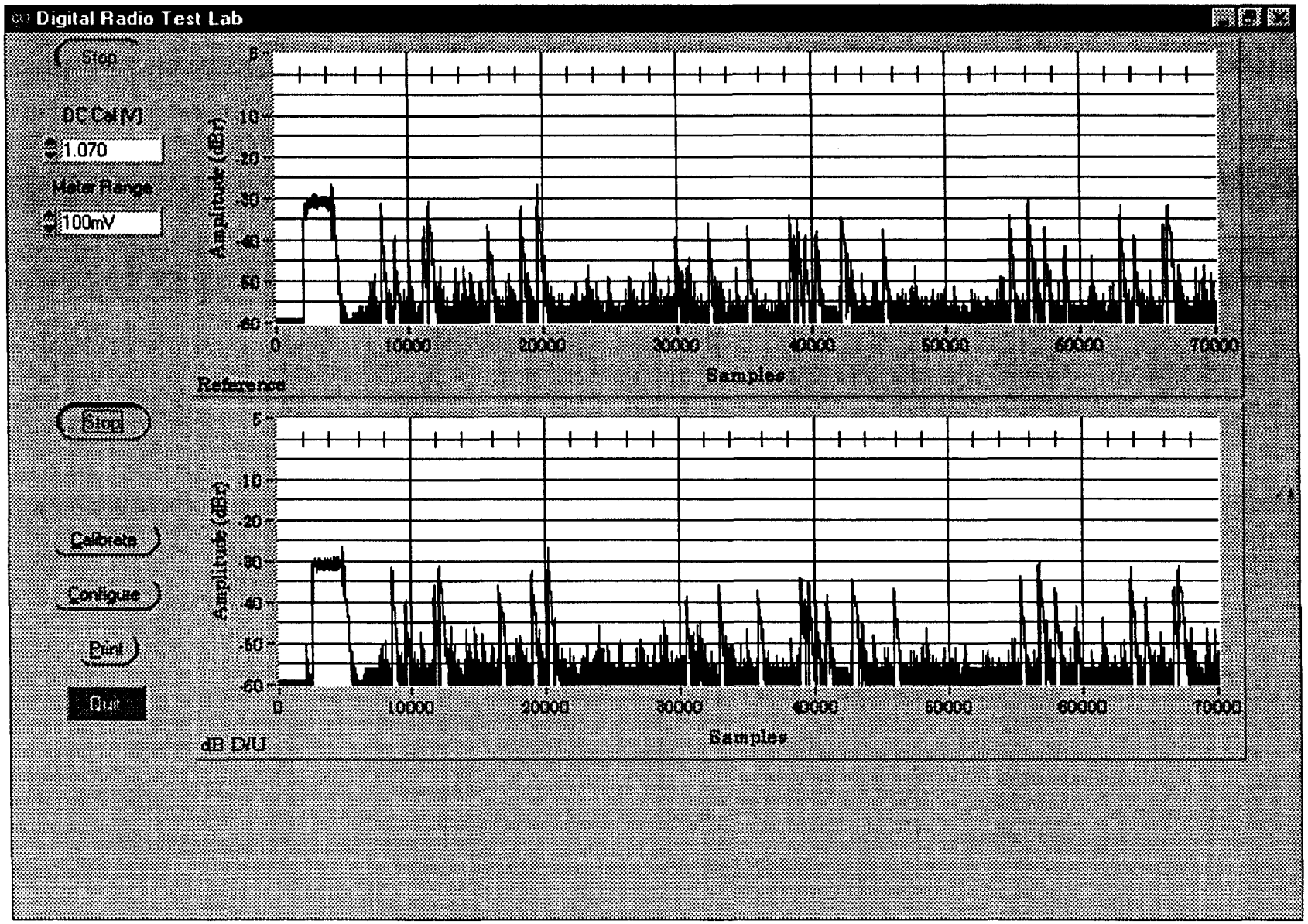
Digital Radio Test Laboratory



Multipath:	Urban Slow	Radio:	Delco	Engineer(s):	DML
D/U:	-30 dB	Frequency:	90.1 MHz		RMc
Corrector:	-65.5 dB	Date:	3/30/98		

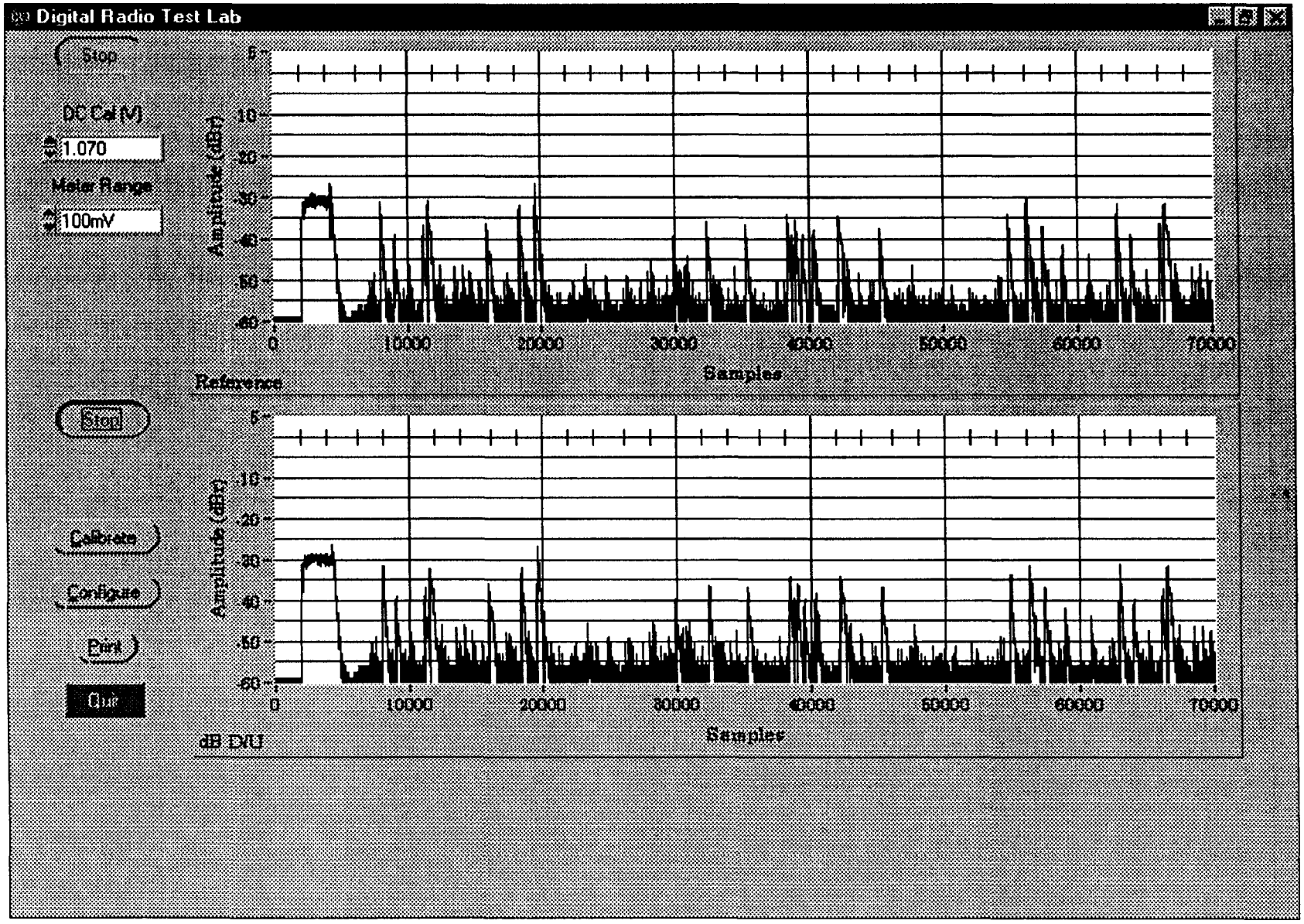
US -30 dB

Digital Radio Test Laboratory

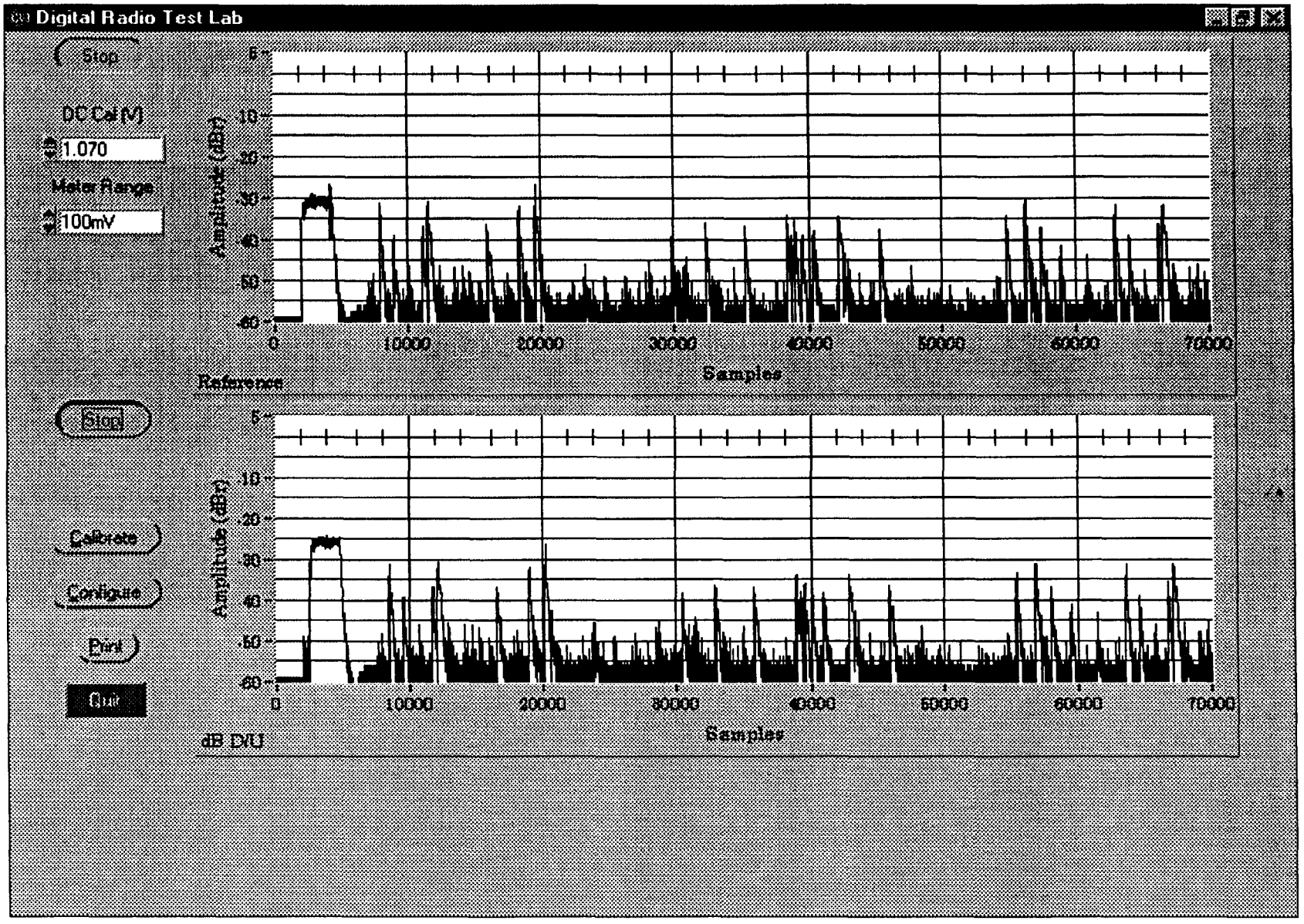


Multipath:	Urban Fast	Radio:	Delco	Engineer(s):	DML
D/U:	0 dB	Frequency:	90.1 MHz		RMc
Corrector:	-65.5 dB	Date:	3/30/98		

UF 0 dB

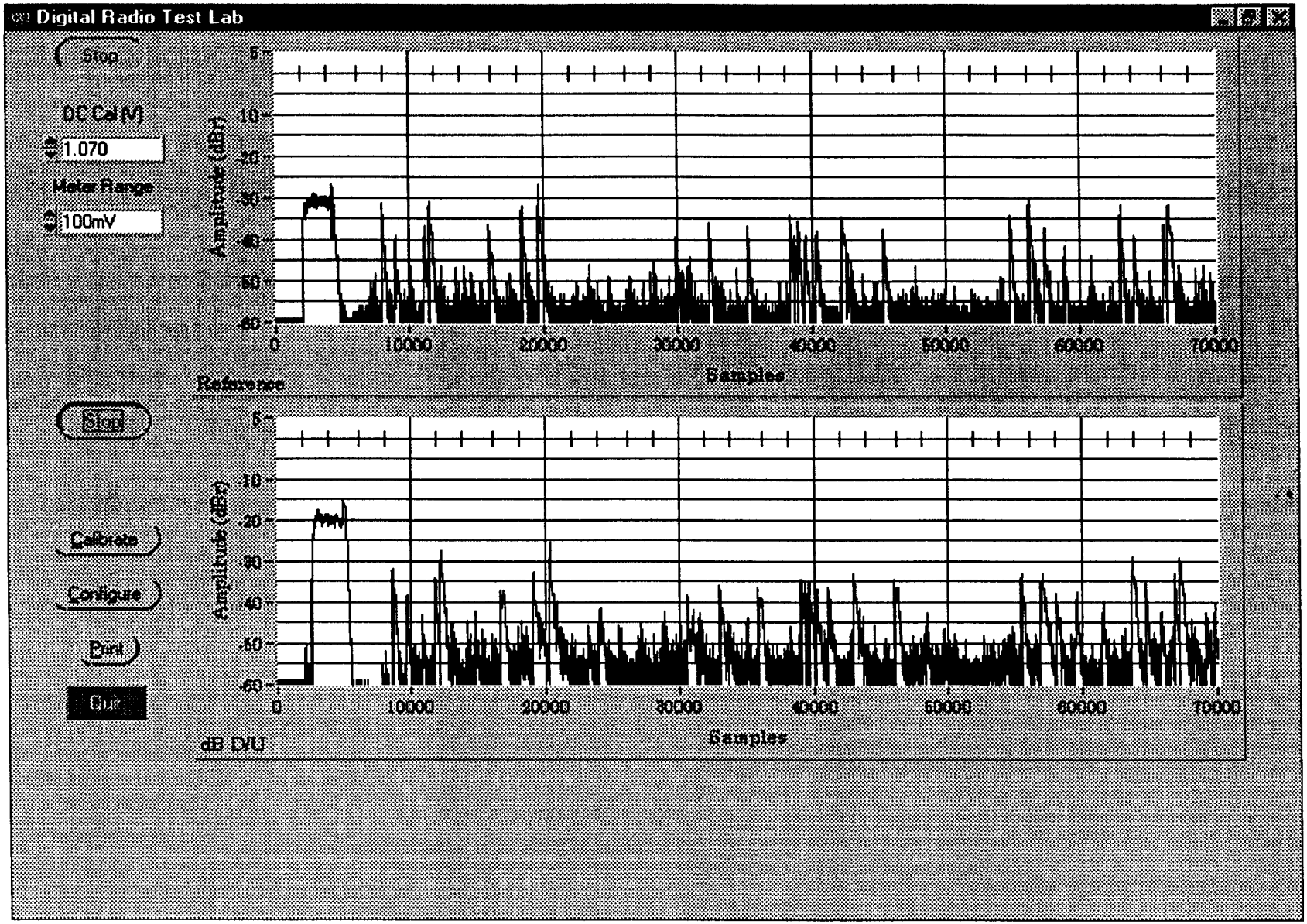


Multipath:	Urban Fast	Radio:	Delco	Engineer(s):	DML
D/U:	-10 dB	Frequency:	90.1 MHz		RMc
Corrector:	-65.5 dB	Date:	3/30/98		



Multipath:	Urban Fast	Radio:	Delco	Engineer(s):	DML
D/U:	-20 dB	Frequency:	90.1 MHz		RMc
Corrector:	-65.5 dB	Date:	3/30/98		

Digital Radio Test Laboratory



Multipath:	Urban Fast	Radio:	Delco	Engineer(s):	DML
D/U:	-30 dB	Frequency:	90.1 MHz		RMc
Corrector:	-65.5 dB	Date:	3/30/98		

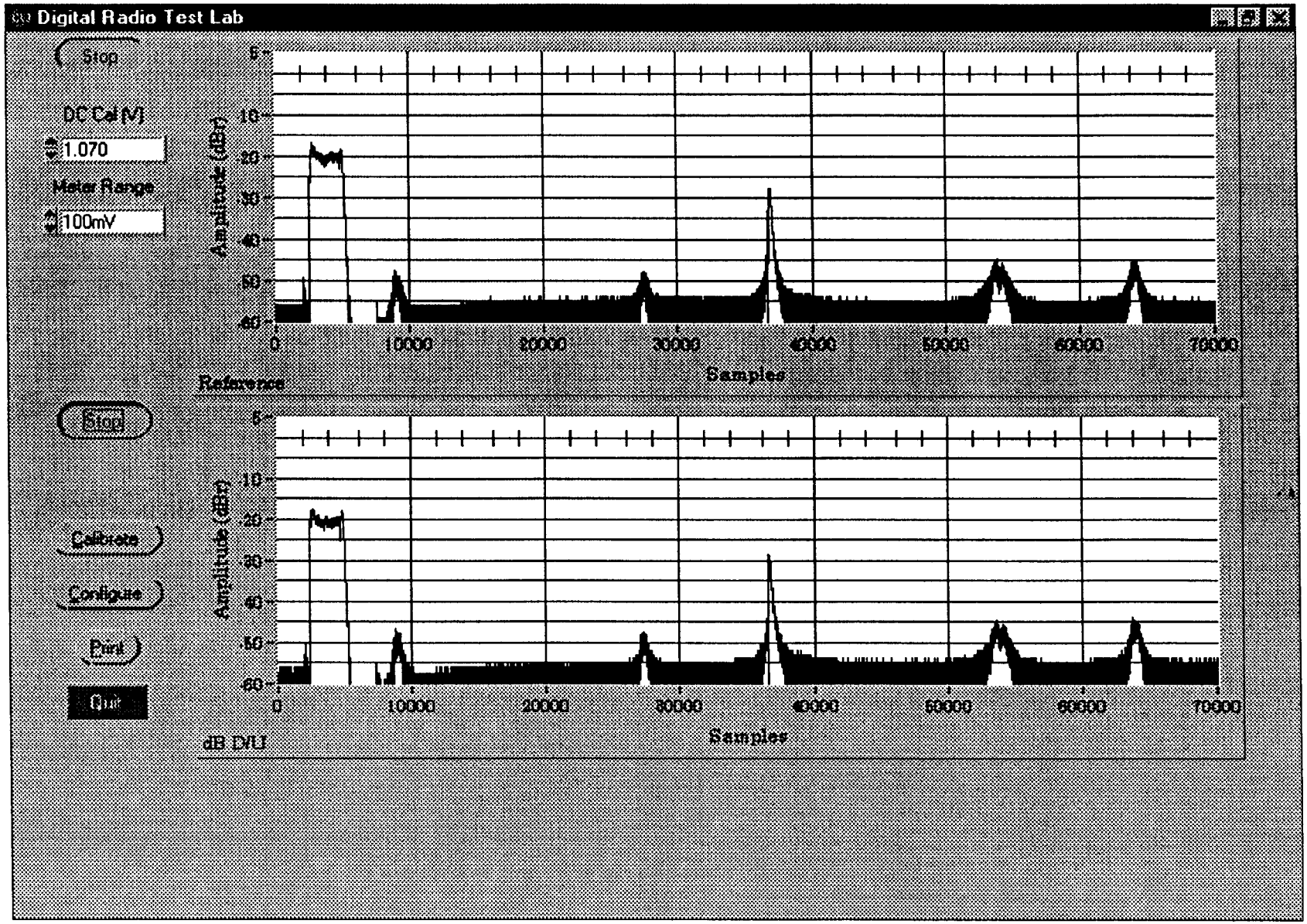
UF -30 dB

S

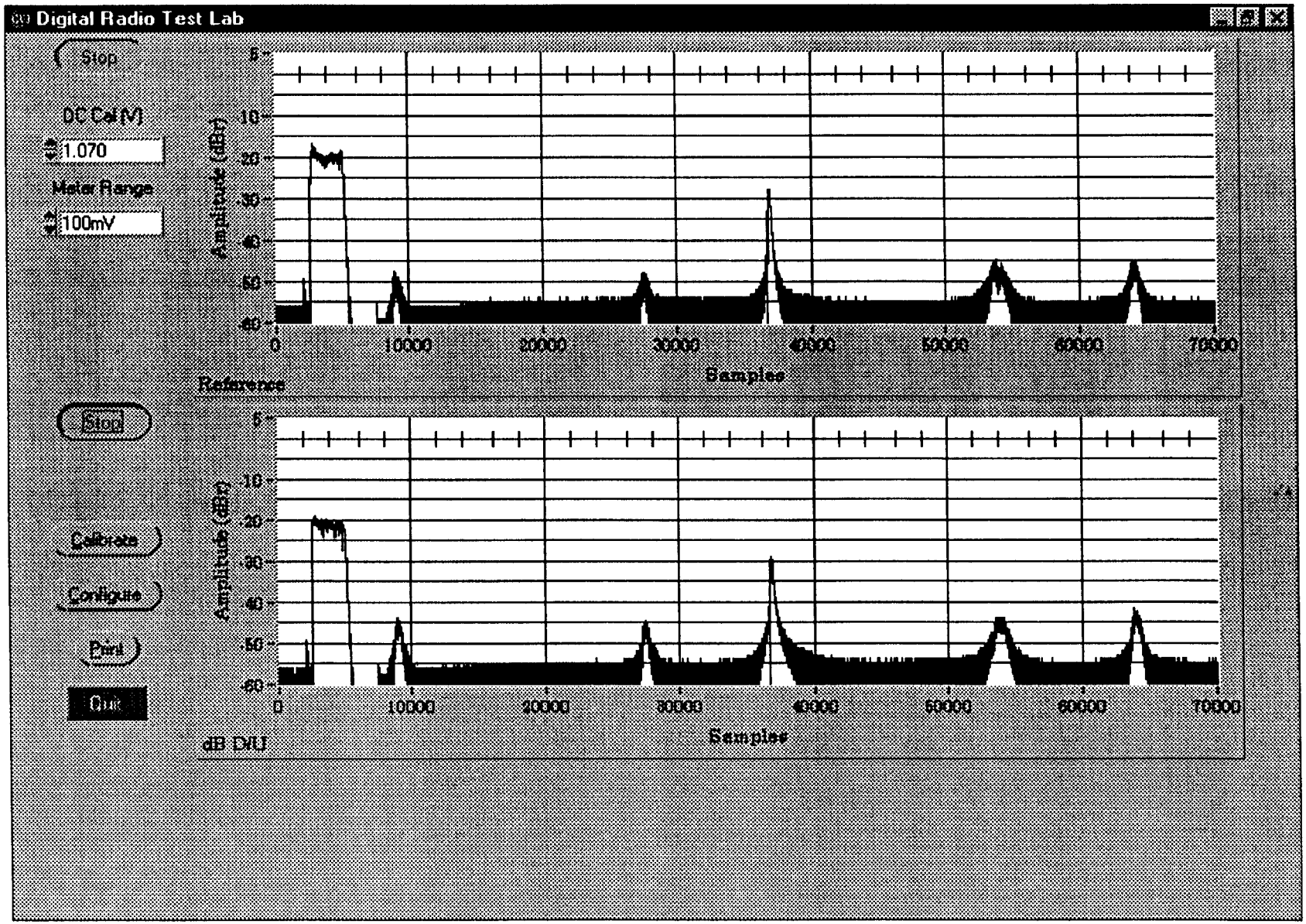
DTV Channel 6 Interference to FM Band Reception

Laboratory Test Report

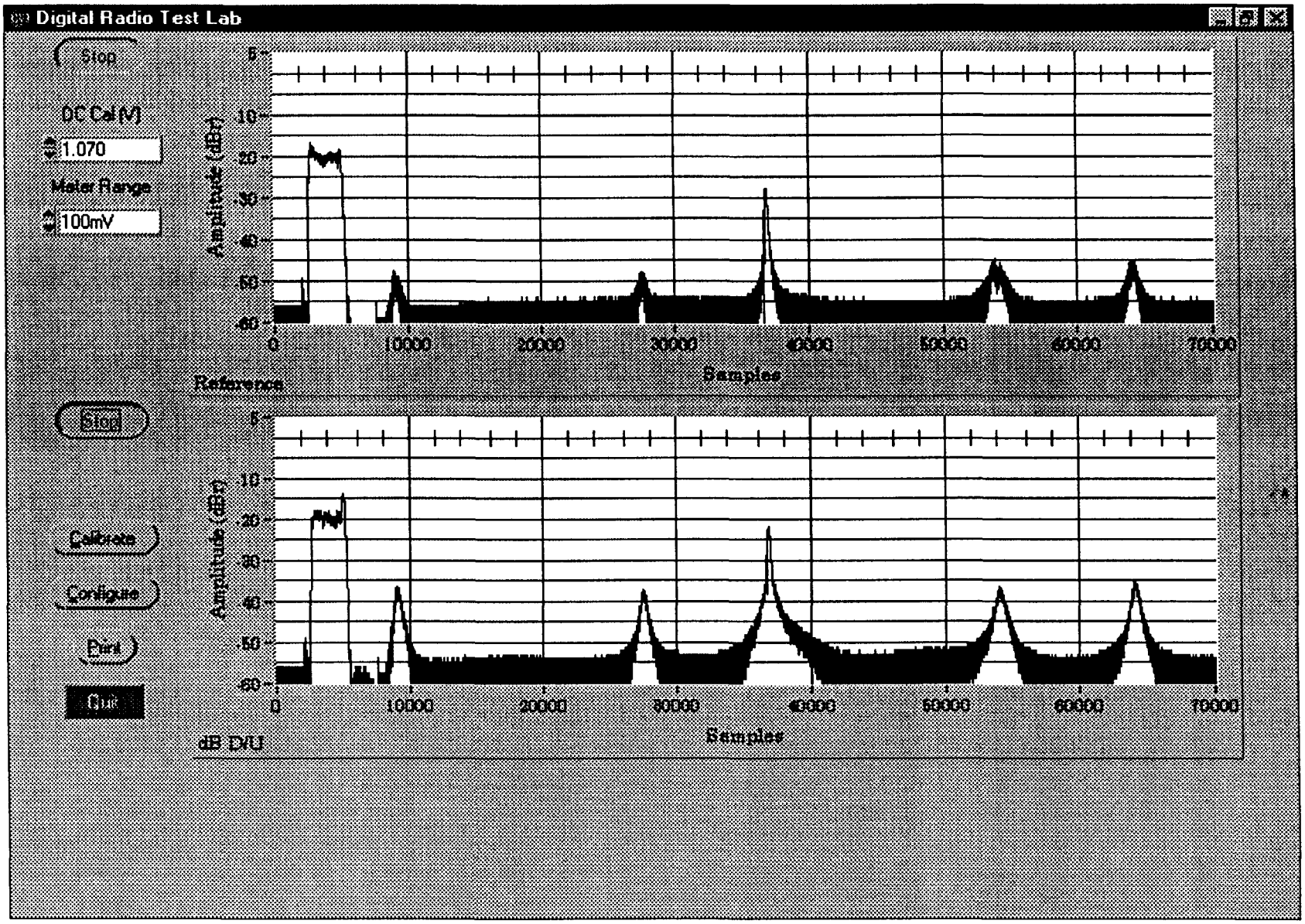
Audiovox Multipath Noise Floor at 90.9 MHz and C5 Emissions



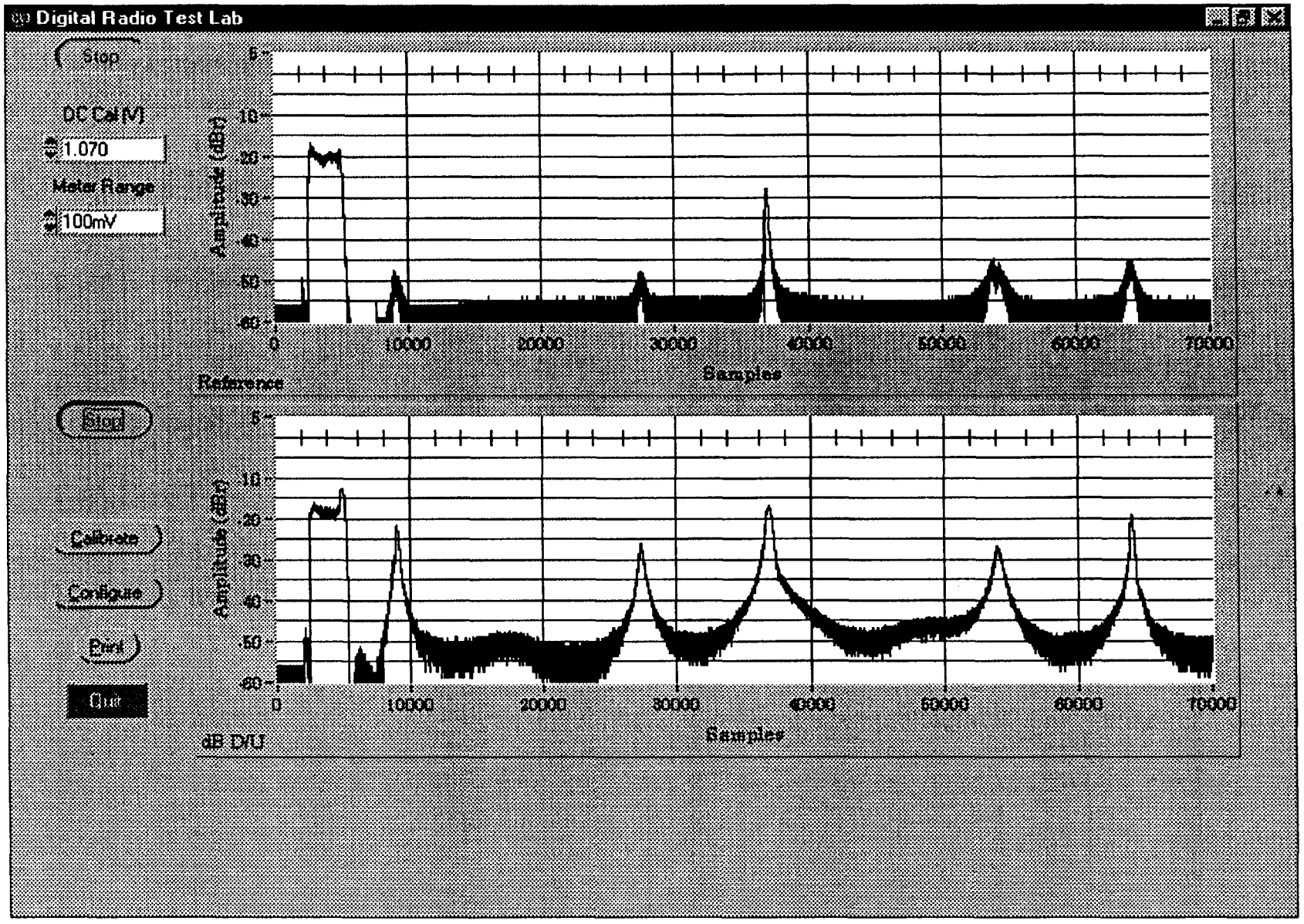
Multipath:	Urban Slow	Radio:	Audiovox	Engineer(s):	DML
D/U:	0 dB	Frequency:	90.9 MHz		
Corrector:	-60 dB	Date:	4/8/98		



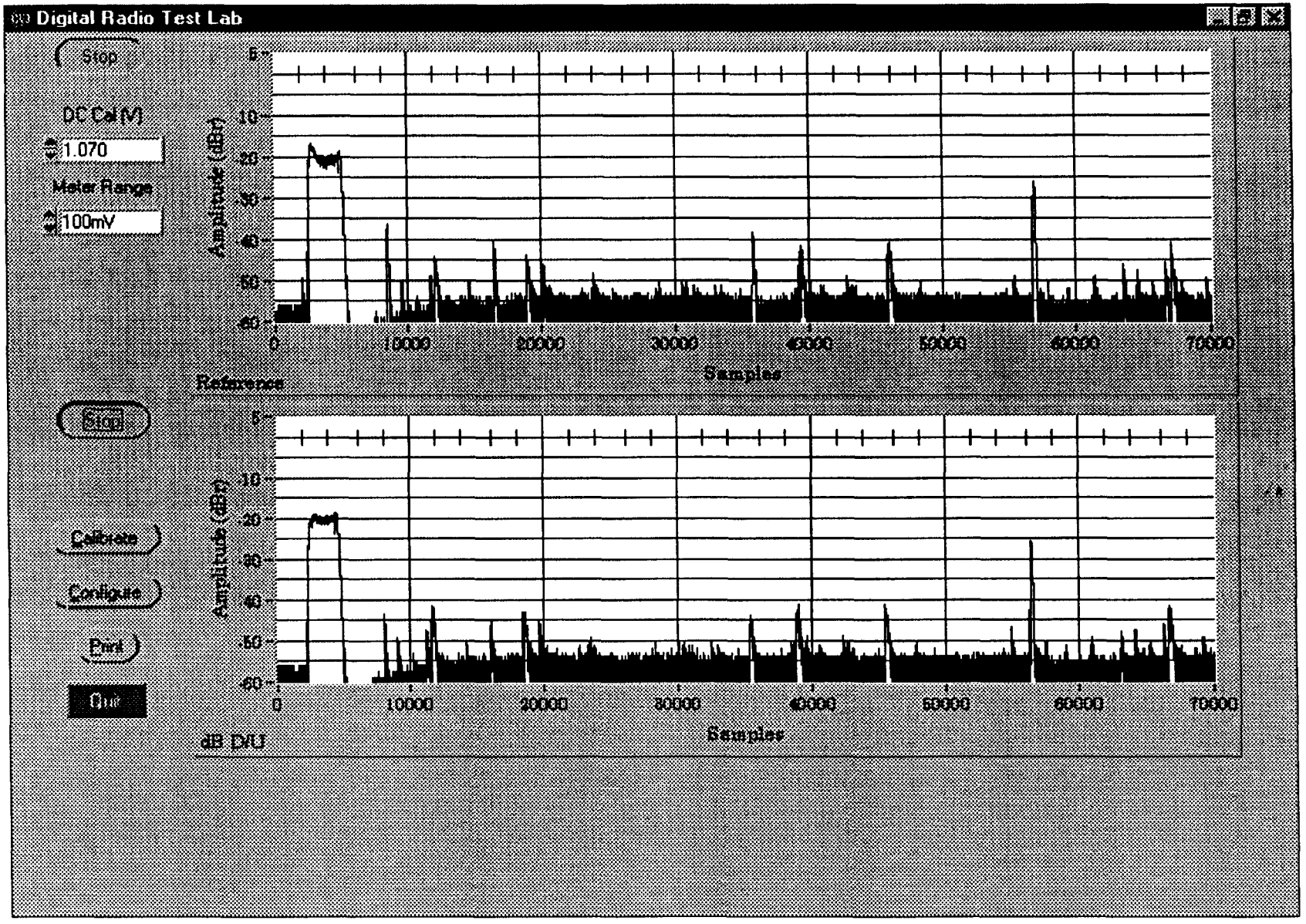
Multipath:	Urban Slow	Radio:	Audiovox	Engineer(s):	DML
D/U:	-10 dB	Frequency:	90.9 MHz		
Corrector:	-60 dB	Date:	4/8/98		



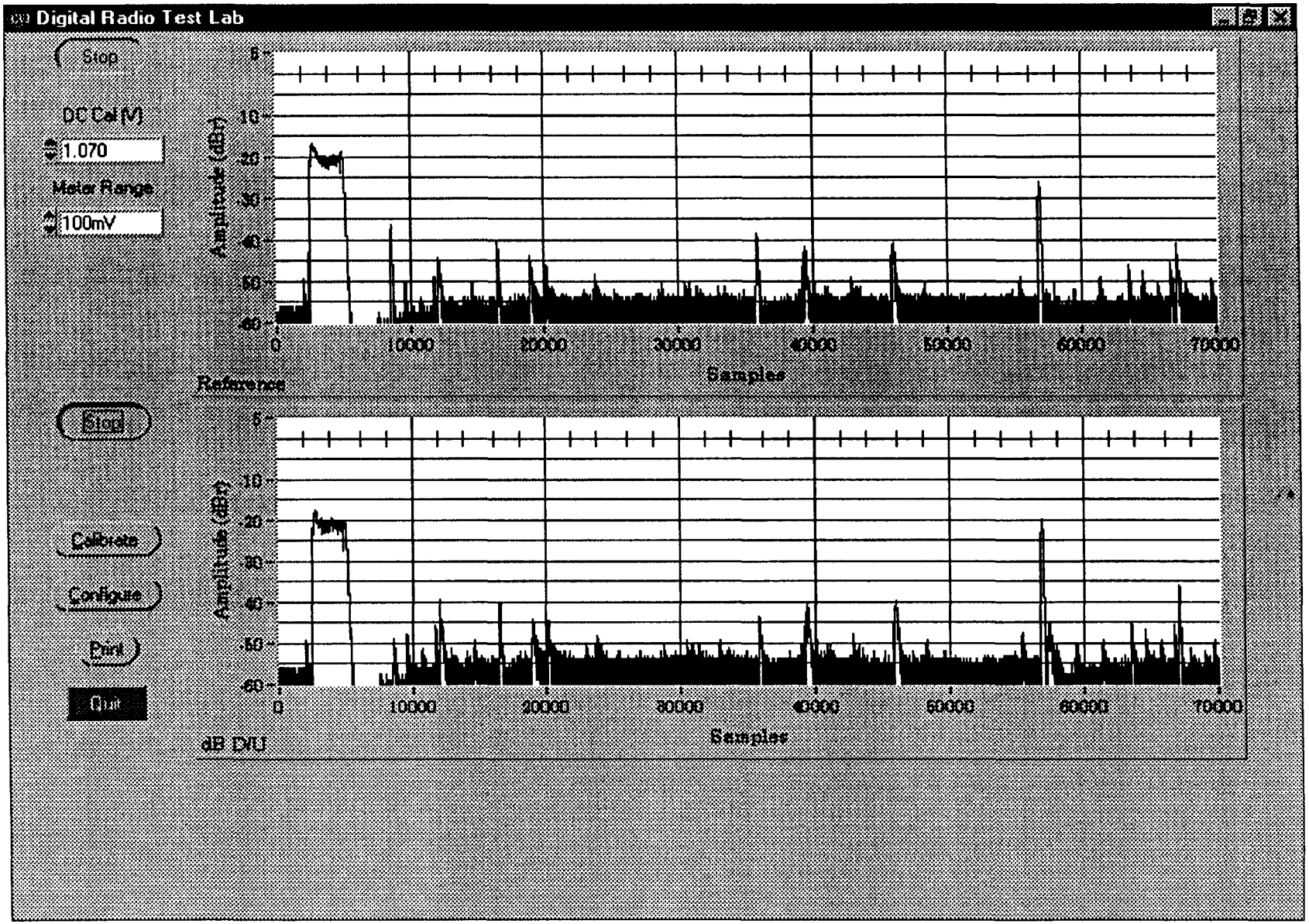
Multipath:	Urban Slow	Radio:	Audiovox	Engineer(s):	DML
D/U:	-20 dB	Frequency:	90.9 MHz		
Corrector:	-60 dB	Date:	4/8/98		



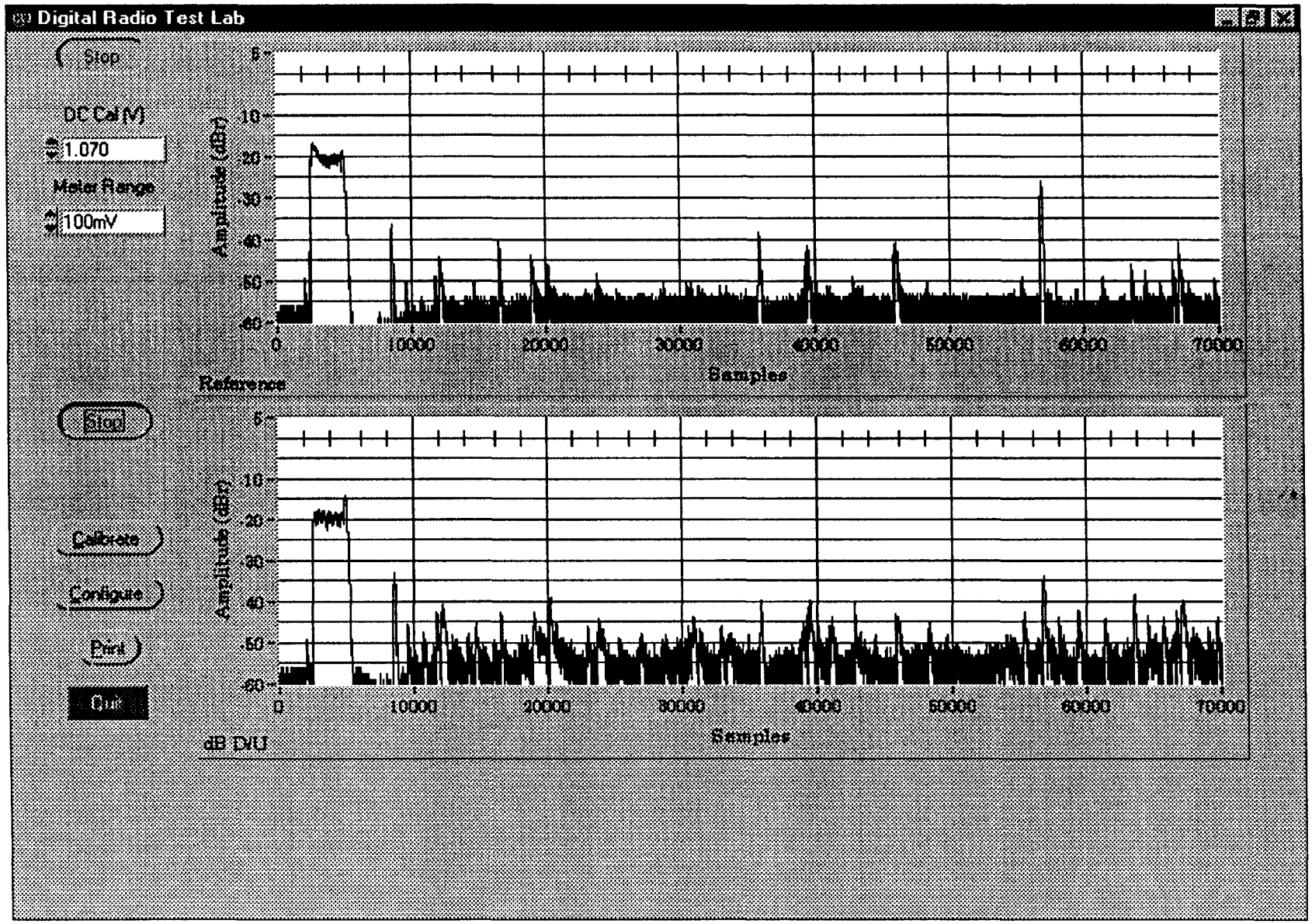
Multipath:	Urban Slow	Radio:	Audiovox	Engineer(s):	DML
D/U:	-30 dB	Frequency:	90.9 MHz		
Corrector:	-60 dB	Date:	4/8/98		



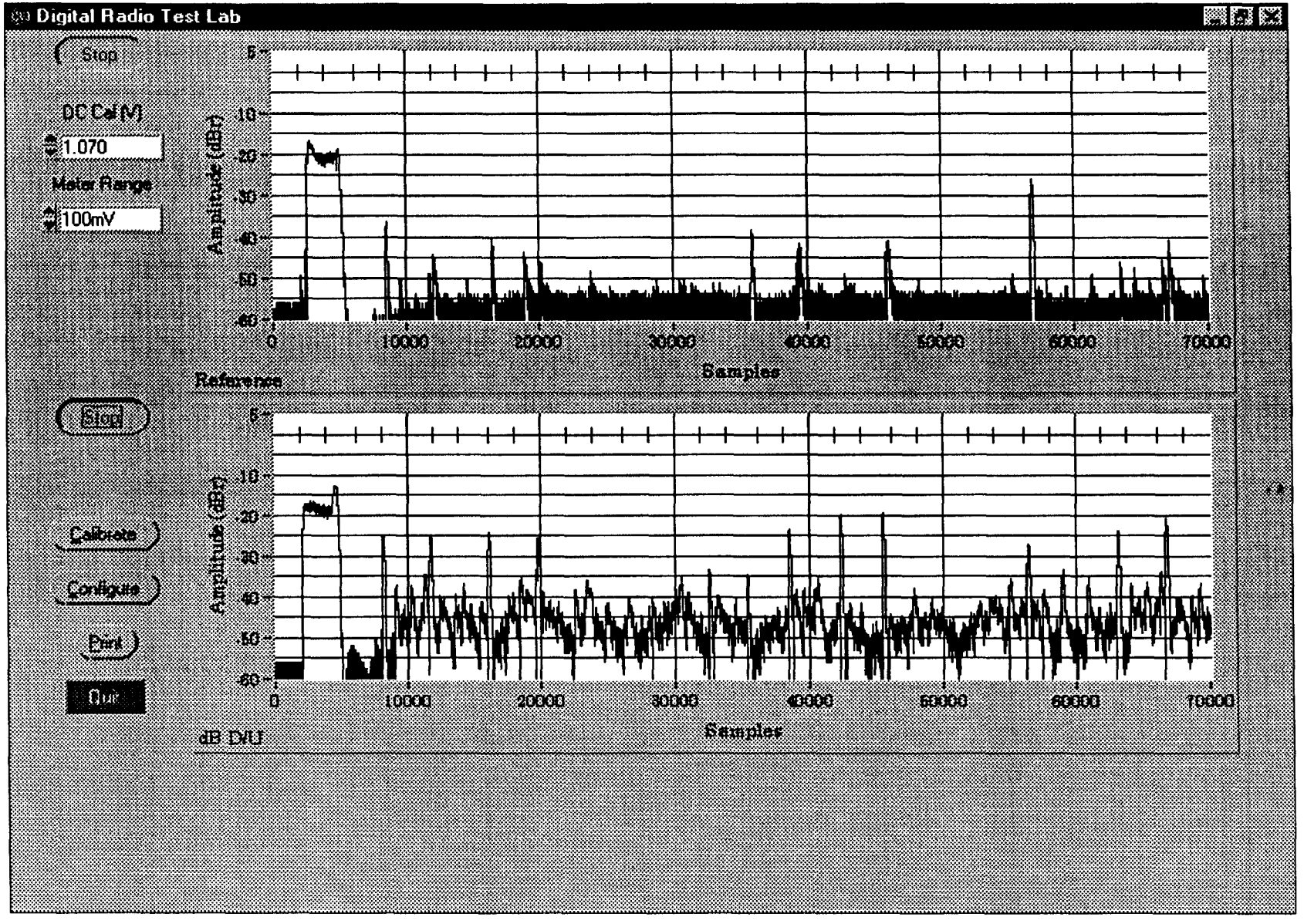
Multipath:	Urban Fast	Radio:	Audiovox	Engineer(s):	DML
D/U:	0 dB	Frequency:	90.9 MHz		
Corrector:	-60 dB	Date:	4/8/98		



Multipath:	Urban Fast	Radio:	Audiovox	Engineer(s):	DML
D/U:	-10 dB	Frequency:	90.9 MHz		
Corrector:	-60 dB	Date:	4/8/98		



Multipath:	Urban Fast	Radio:	Audiovox	Engineer(s):	DML
D/U:	-20 dB	Frequency:	90.9 MHz		
Corrector:	-60 dB	Date:	4/8/98		



Multipath:	Urban Fast	Radio:	Audiovox	Engineer(s):	DML
D/U:	-30 dB	Frequency:	90.9 MHz		
Corrector:	-60 dB	Date:	4/8/98		

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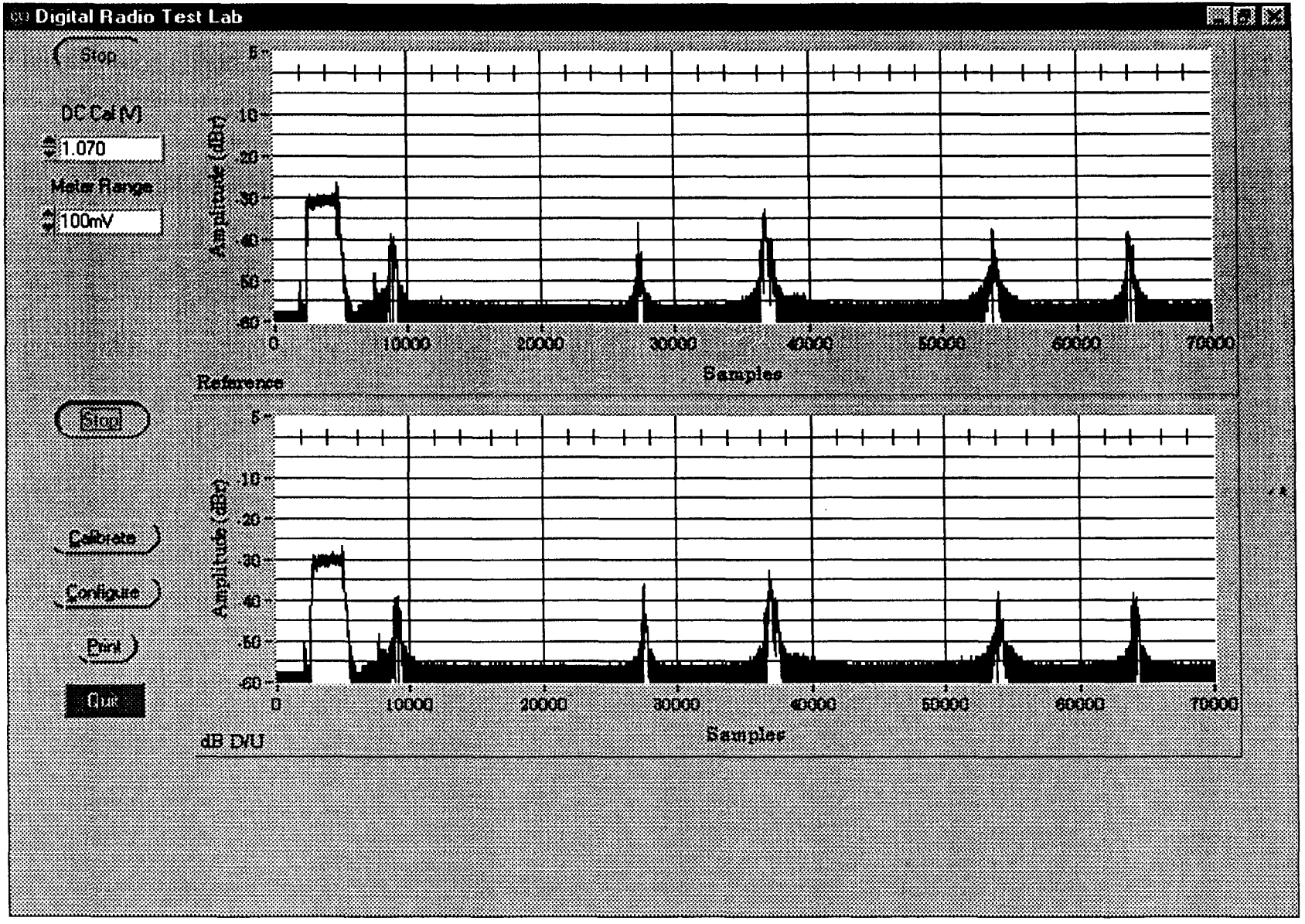
DTV Channel 6 Interference to FM Band Reception

Laboratory Test Report

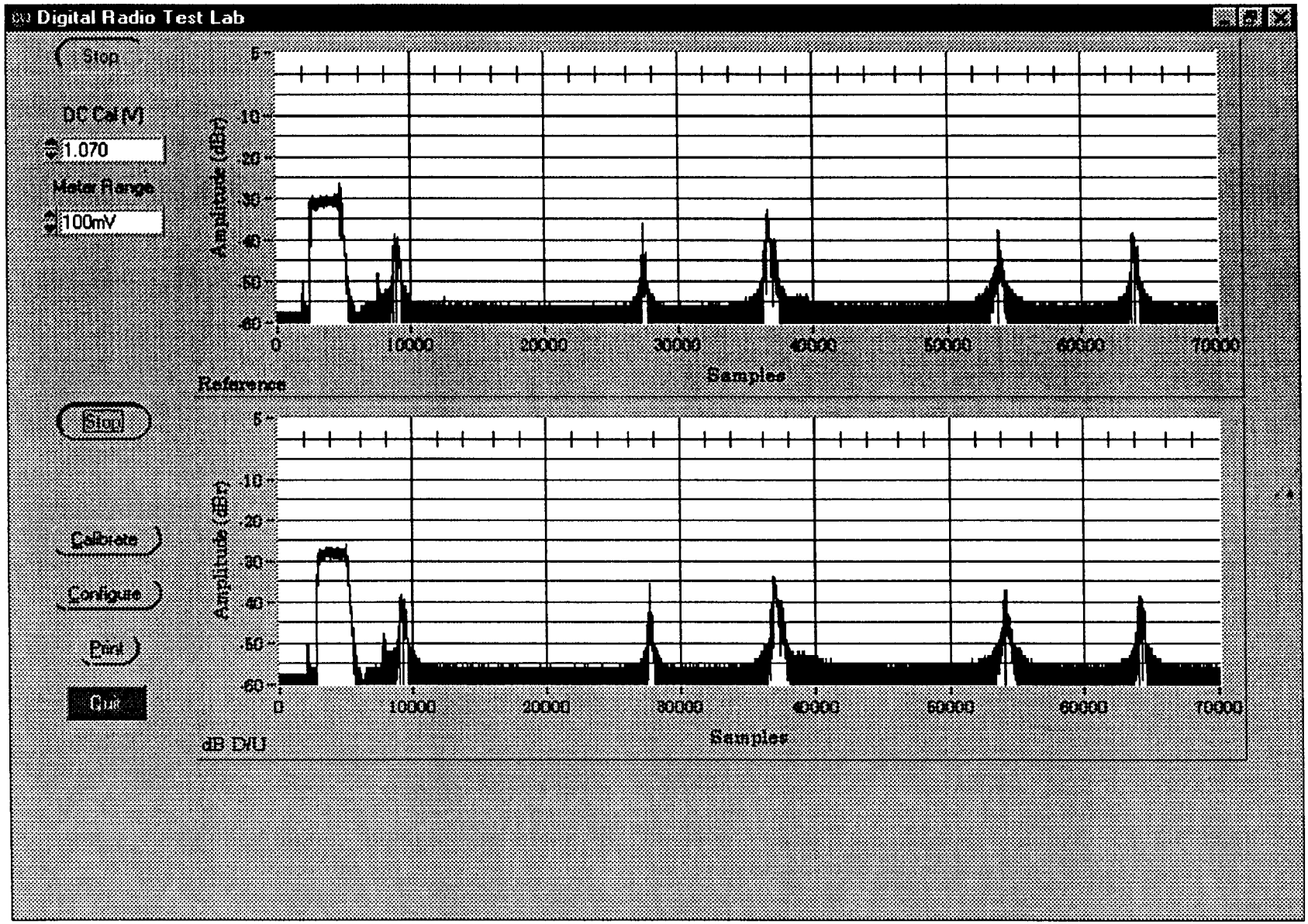
Delco Multipath Noise Floor at 90.9 MHz and C5 Emissions

Digital Radio Test Laboratory

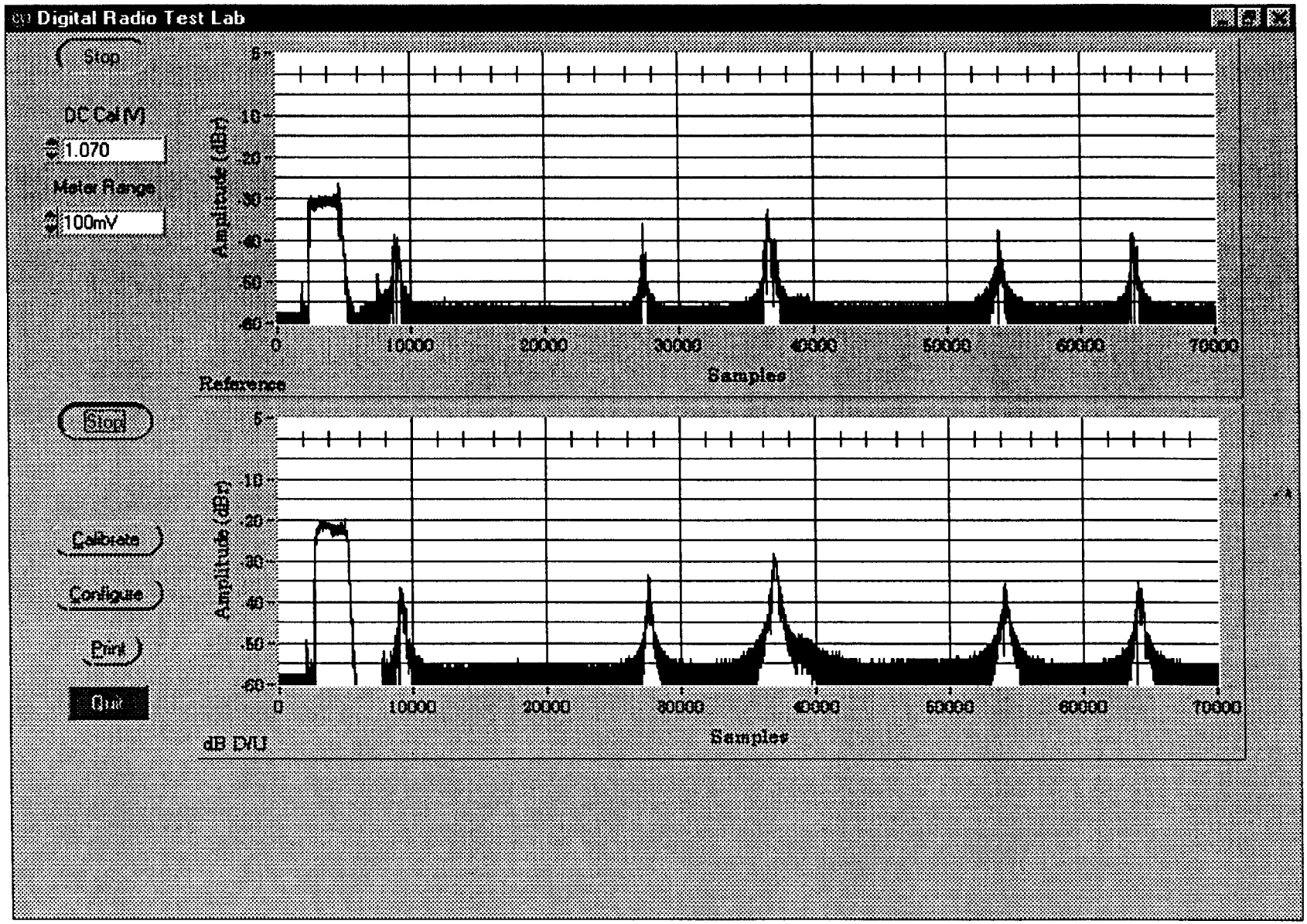


Multipath:	Urban Slow	Radio:	Delco	Engineer(s):	DML
D/U:	0 dB	Frequency:	90.9 MHz		
Corrector:	-60 dB	Date:	4/8/98		

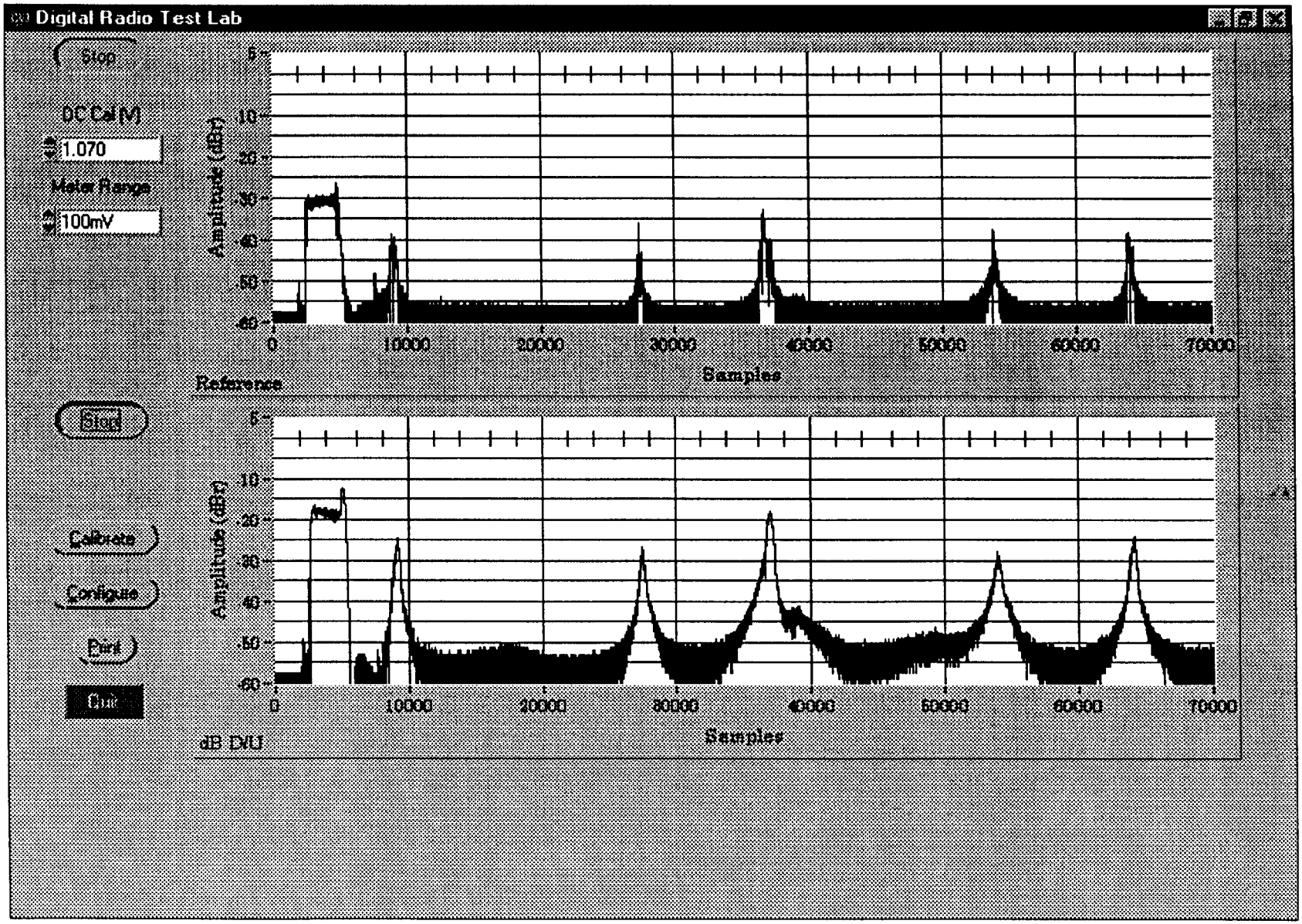
US 0 dB



Multipath:	Urban Slow	Radio:	Delco	Engineer(s):	DML
D/U:	-10 dB	Frequency:	90.9 MHz		
Corrector:	-60 dB	Date:	4/8/98		

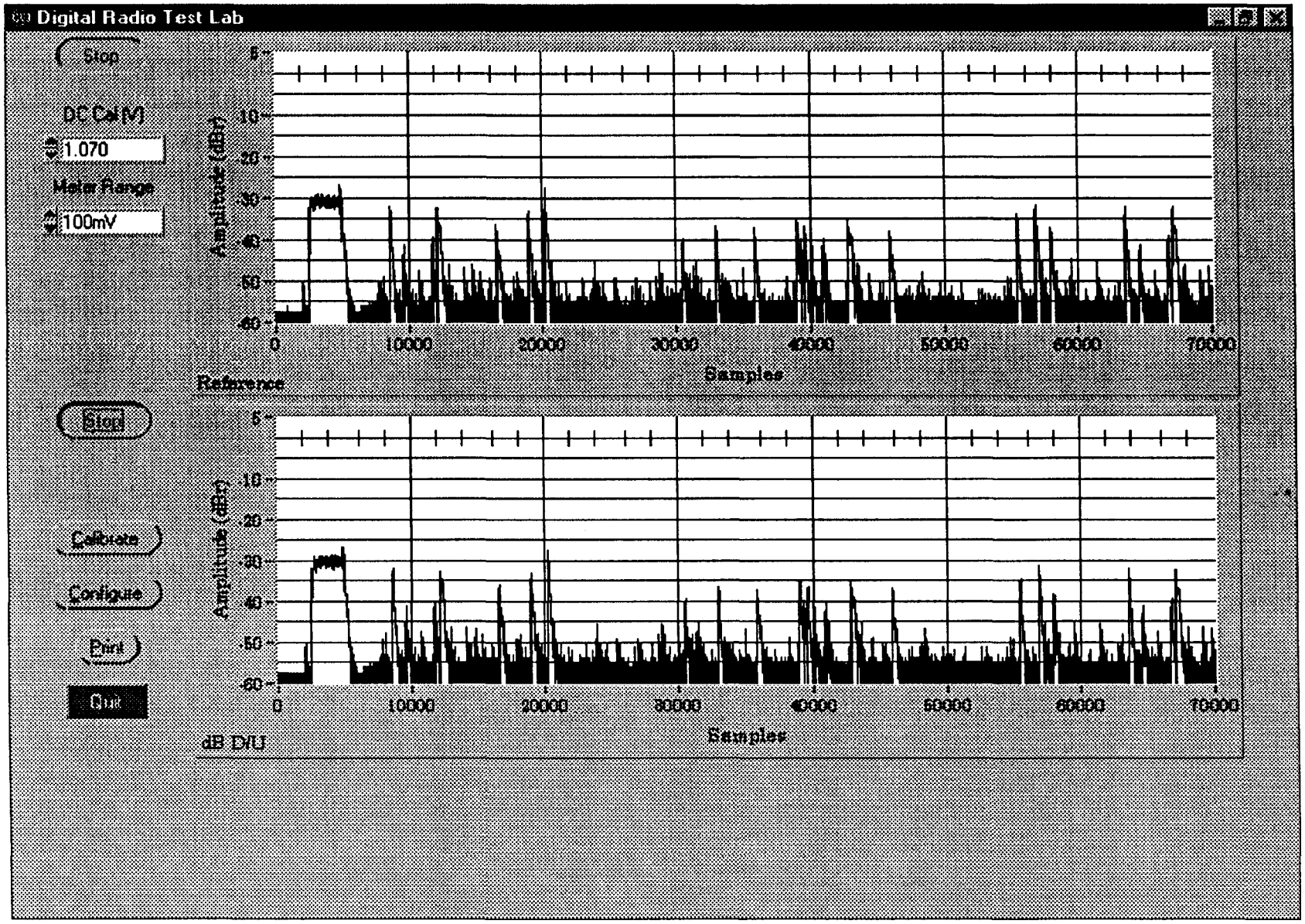


Multipath:	Urban Slow	Radio:	Delco	Engineer(s):	DML
D/U:	-20 dB	Frequency:	90.9 MHz		
Corrector:	-60 dB	Date:	4/8/98		



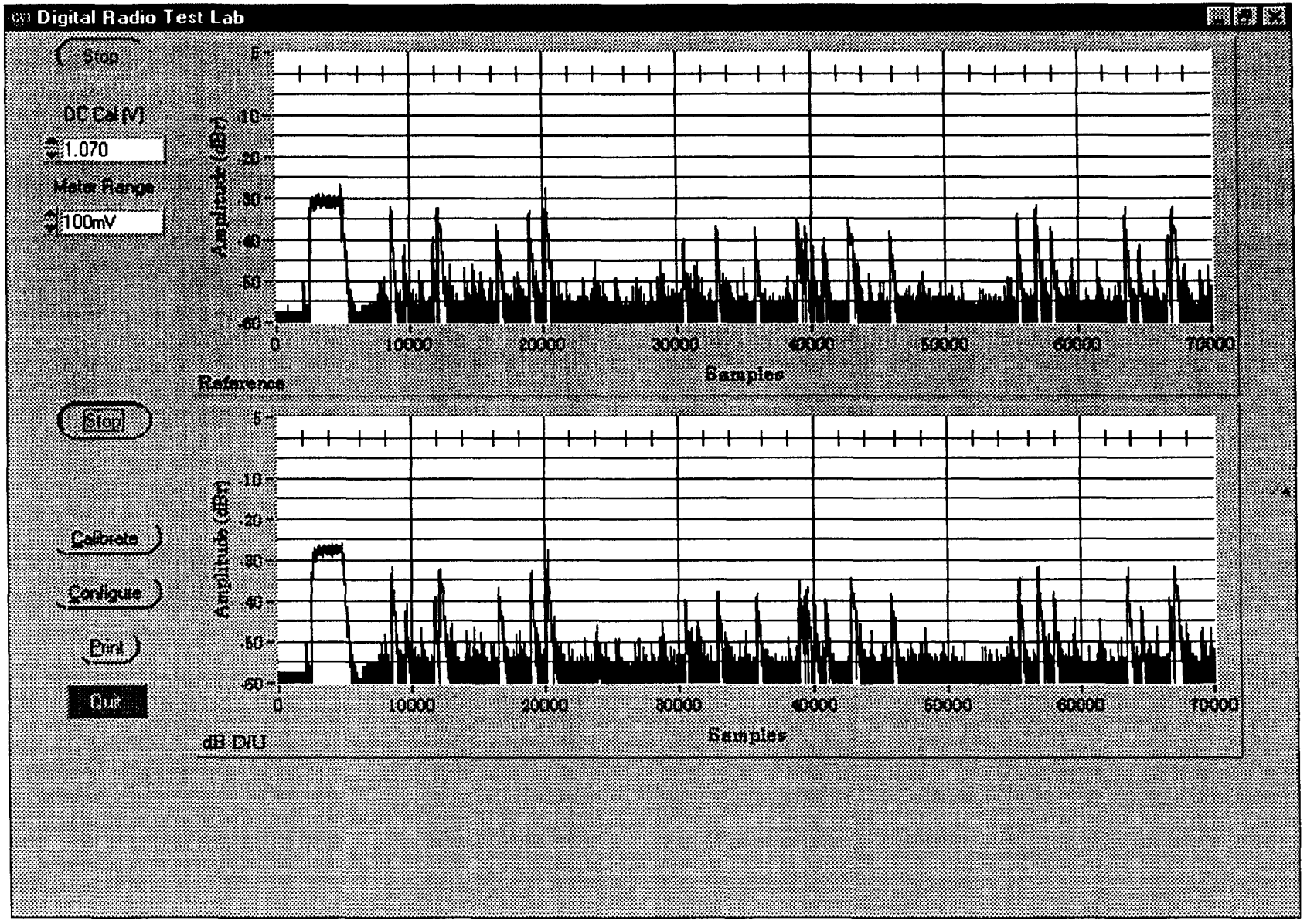
Multipath:	Urban Slow	Radio:	Delco	Engineer(s):	DML
D/U:	-30 dB	Frequency:	90.9 MHz		
Corrector:	-60 dB	Date:	4/8/98		

Digital Radio Test Laboratory

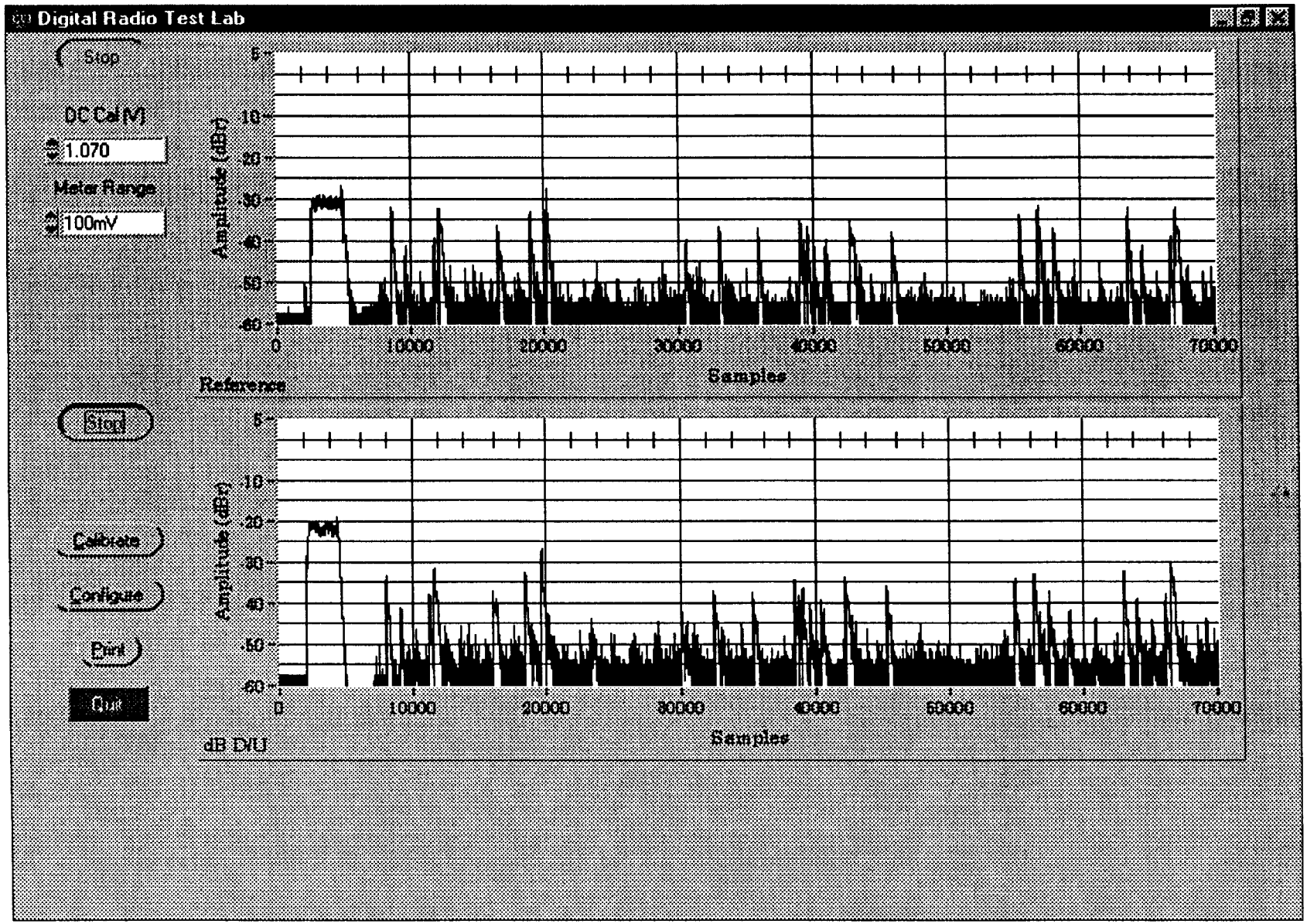


Multipath:	Urban Fast	Radio:	Delco	Engineer(s):	DML
D/U:	0 dB	Frequency:	90.9 MHz		
Corrector:	-60 dB	Date:	4/8/98		

UF 0 dB

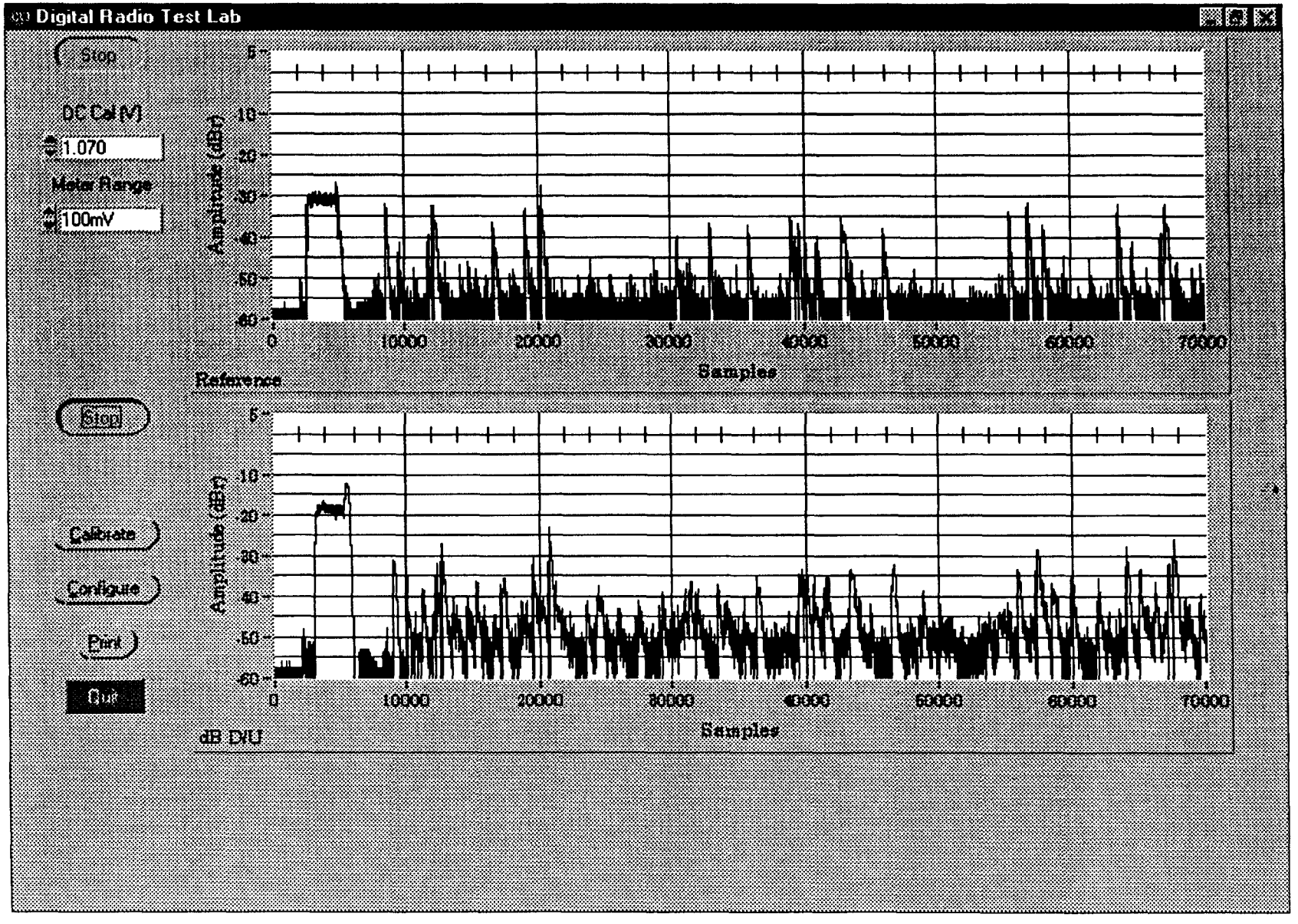


Multipath:	Urban Fast	Radio:	Delco	Engineer(s):	DML
D/U:	-10 dB	Frequency:	90.9 MHz		
Corrector:	-60 dB	Date:	4/8/98		



Multipath:	Urban Fast	Radio:	Delco	Engineer(s):	DML
D/U:	-20 dB	Frequency:	90.9 MHz		
Corrector:	-60 dB	Date:	4/8/98		

Digital Radio Test Laboratory



Multipath:	Urban Fast	Radio:	Delco	Engineer(s):	DML
D/U:	-30 dB	Frequency:	90.9 MHz		
Corrector:	-60 dB	Date:	4/8/98		

UF -30 dB

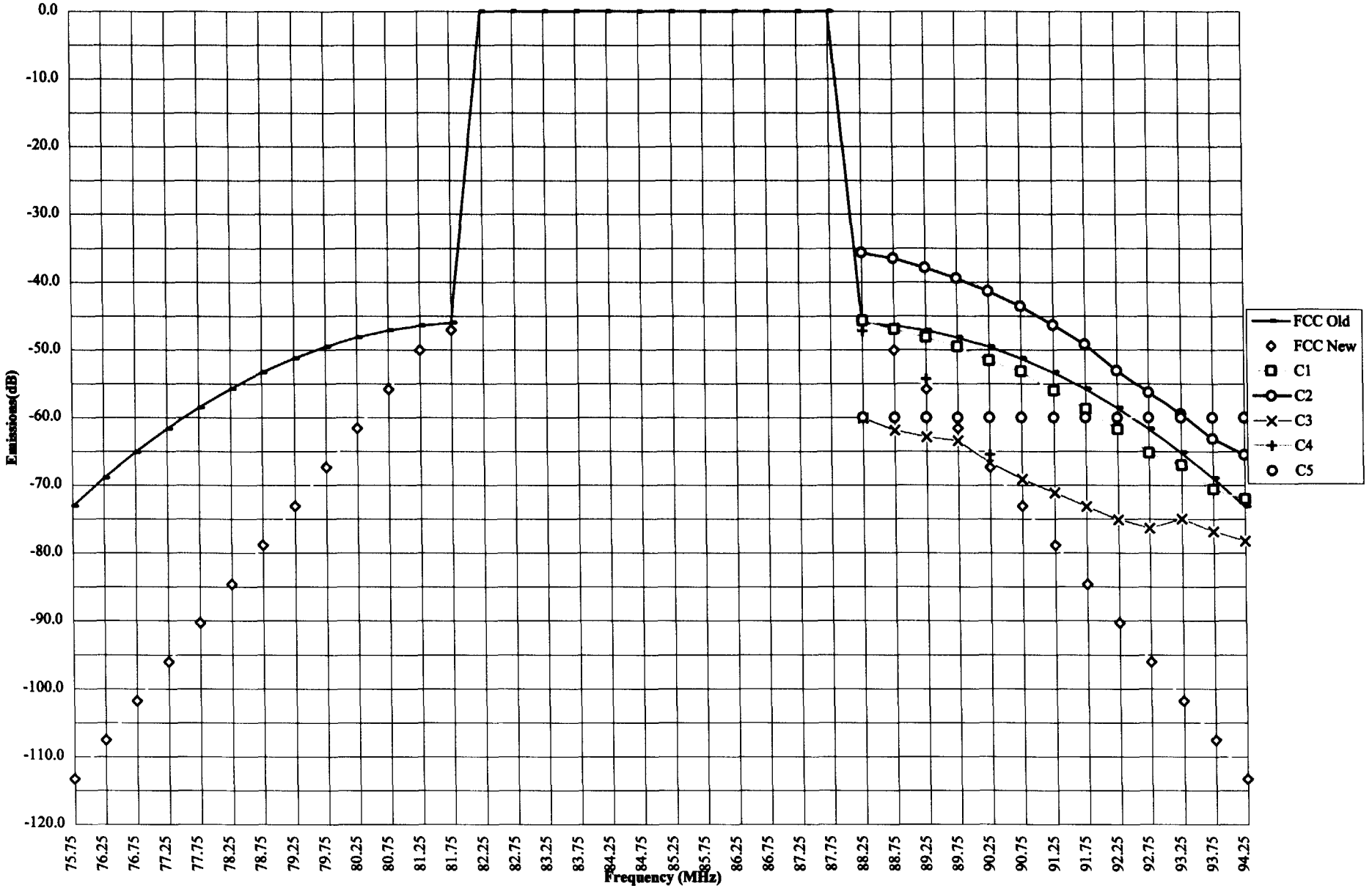
U

DTV Channel 6 Interference to FM Band Reception

Laboratory Test Report

Emission Level Measurements

Frequency (MHz)	FCC Old (dBr) Calculated	FCC New (dBr) Calculated	C1 (dBr) FCC Old	C2 (dBr) FCC Old+10	C3 (dBr) 8VSBNF	C4 (dBr) FCC New	C5 (dBr) Proposed
75.75	-73.1	-113.3					
76.25	-69.0	-107.5					
76.75	-65.1	-101.8					
77.25	-61.7	-96.0					
77.75	-58.5	-90.3					
78.25	-55.8	-84.5					
78.75	-53.3	-78.8					
79.25	-51.3	-73.0					
79.75	-49.5	-67.3					
80.25	-48.1	-61.5					
80.75	-47.1	-55.8					
81.25	-46.4	-50.0					
81.75	-46.0	-47.0					
82.25	0.0						
82.75	0.0						
83.25	0.0						
83.75	0.0						
84.25	0.0						
84.75	0.0						
85.25	0.0						
85.75	0.0						
86.25	0.0						
86.75	0.0						
87.25	0.0						
87.75	0.0						
88.25	-46.0	-47.0	-45.7	-35.6	-60.1	-47.2	-60.0
88.75	-46.4	-50.0	-46.9	-36.5	-61.9		-60.0
89.25	-47.1	-55.8	-48.1	-37.9	-62.8	-54.3	-60.0
89.75	-48.1	-61.5	-49.5	-39.4	-63.4		-60.0
90.25	-49.5	-67.3	-51.6	-41.4	-66.6	-65.5	-60.0
90.75	-51.3	-73.0	-53.2	-43.6	-69.1		-60.0
91.25	-53.3	-78.8	-56.0	-46.4	-71.1		-60.0
91.75	-55.8	-84.5	-58.7	-49.2	-73.1		-60.0
92.25	-58.5	-90.3	-61.7	-53.1	-75.0		-60.0
92.75	-61.7	-96.0	-65.2	-56.2	-76.3		-60.0
93.25	-65.1	-101.8	-67.0	-59.5	-74.9		-60.0
93.75	-69.0	-107.5	-70.6	-63.1	-76.8		-60.0
94.25	-73.1	-113.3	-72.0	-65.5	-78.2		-60.0


0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100.0
-110.0
-120.0
Emissions(dB)
75.75
76.25
76.75
77.25
77.75
78.25
78.75
79.25
79.75
80.25
80.75
81.25
81.75
82.25
82.75
83.25
83.75
84.25
84.75
85.25
85.75
86.25
86.75
87.25
87.75
88.25
88.75
89.25
89.75
90.25
90.75
91.25
91.75
92.25
92.75
93.25
93.75
94.25
Frequency (MHz)
FCC Old
FCC New
C1
C2
C3
C4
C5

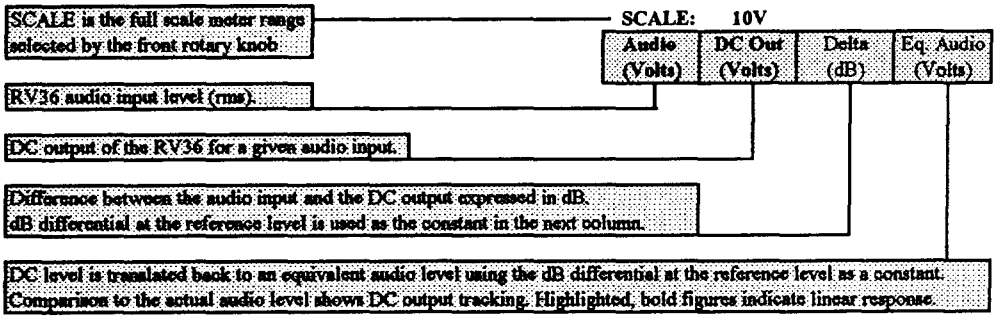
DTV Channel 6 Interference to FM Band Reception

Laboratory Test Report

RMS Meter and Analog to Digital Converter Calibration

Objective: To provide a fast responding DC signal from a true rms detector to the A/D converter card for quantization of the test radio noise floor.
Meter: RV36 AF Millivoltmeter - rms detector DC output characterization
Date: 29-Mar
By: RMc

Chart 1
For a given range, the DC output is recorded as the audio level is changed.
Calculations and comparisons are made.



	SCALE:	10V			3V			1V		
	Audio (Volts)	DC Out (Volts)	Delta (dB)	Eq. Audio (Volts)	DC Out (Volts)	Delta (dB)	Eq. Audio (Volts)	DC Out (Volts)	Delta (dB)	Eq. Audio (Volts)
Ref	**10**	0.532	25.482	**10.000**	1.357	17.348	8.078	1.722	15.279	3.255
	9	0.480	25.460	**9.023**	1.297	16.826	7.720	1.700	14.476	3.214
	8	0.427	25.453	**8.027**	1.227	16.285	7.304	1.680	13.556	3.176
	7	0.374	25.445	**7.030**	1.138	15.779	6.774	1.647	12.568	3.113
	6	0.321	25.433	**6.034**	1.010	15.477	**6.012**	1.610	11.427	3.044
	5	0.267	25.449	**5.019**	0.843	15.463	**5.018**	1.558	10.128	2.945
	4	0.212	25.523	**3.981**	0.670	15.520	**3.988**	1.463	8.736	2.766
Ref	**3**	0.158	25.569	**2.970**	0.504	15.494	**3.000**	1.325	7.098	2.505
	2	0.107	25.457	**2.006**	0.339	15.417	**2.018**	1.065	5.474	**2.013**
Ref	**1**	0.051	25.849	**0.959**	0.166	15.598	**0.988**	0.529	5.531	**1.000**
	0.9	0.047	25.588	**0.889**	0.151	15.505	**0.899**	0.482	5.433	**0.910**
	0.8	0.042	25.597	**0.789**	0.134	15.520	**0.798**	0.428	5.433	**0.809**
	0.7	0.036	25.776	**0.677**	0.117	15.538	**0.696**	0.374	5.445	**0.707**
	0.6	0.031	25.652	**0.588**	0.100	15.563	**0.595**	0.321	5.433	**0.607**
	0.5	0.026	25.580	**0.494**	0.084	15.494	**0.500**	0.268	5.417	**0.507**
	0.4	0.021	25.638	**0.393**	0.067	15.572	**0.396**	0.213	5.494	**0.402**
	0.3	0.016	25.736	**0.291**	0.049	15.703	**0.293**	0.158	5.569	**0.299**
	0.2	0.0109	25.2721	**0.2049**	0.0323	15.837	**0.192**	0.1047	5.622	**0.198**
	0.1	0.0069	23.2230	0.1297	0.0162	15.810	**0.096**	0.0514	5.781	**0.097**
	0.09	0.0066	22.6940	0.1241	0.0148	15.680	**0.088**	0.0469	5.661	**0.089**
	0.08	0.0063	22.0750	0.1184	0.0134	15.520	**0.080**	0.0419	5.618	**0.079**
	0.07	0.0061	21.1954	0.1147	0.0118	15.464	**0.070**	0.0366	5.632	**0.069**
	0.06	0.0058	20.2945	0.1090	0.0103	15.306	**0.061**	0.0312	5.680	**0.059**
	0.05	0.0056	19.0156	0.1053	0.0090	14.895	**0.054**	0.0261	5.647	**0.049**
	0.04	0.0055	17.2339	0.1034	0.0077	14.311	0.046	0.0207	5.722	**0.039**
	0.03	0.0054	14.8945	0.1015	0.0067	13.021	0.040	0.0156	5.680	**0.029**
	0.02	0.0053	11.5351	0.0996	0.0059	10.604	0.035	0.0108	5.352	**0.020**
	0.01	0.0520	-14.3201	0.9775	0.0540	-14.648	0.321	0.0068	3.350	0.013

A comparison of Audio (dBV) Vs DC Output (dBV) at the 1V range where 1Vrms = 0dB

DC dBV	Audio dBV	Audio (Volts)
10.25	20.00	**10**
10.14	19.08	**9**
10.04	18.06	**8**
9.86	16.90	**7**
9.67	15.56	**6**
9.38	13.98	**5**
8.84	12.04	**4**
7.98	9.54	**3**
6.08	6.02	**2**
0.00	0.00	**1**
-0.82	-0.92	**0.9**
-1.84	-1.94	**0.8**
-3.01	-3.10	**0.7**
-4.34	-4.44	**0.6**
-5.91	-6.02	**0.5**
-7.92	-7.96	**0.4**
-10.50	-10.46	**0.3**
-14.07	-13.98	**0.2**
-20.25	-20.00	**0.1**
-21.05	-20.92	**0.09**
-22.02	-21.94	**0.08**
-23.20	-23.10	**0.07**
-24.59	-24.44	**0.06**
-26.14	-26.02	**0.05**
-28.15	-27.96	**0.04**
-30.61	-30.46	**0.03**
-33.80	-33.98	**0.02**
-37.82	-40.00	**0.01**

Calibration Notes

Chart 1 was generated to determine the linear range of the RV 36 Millivoltmeter DC output for a given meter range.
The difference between the audio input and the DC output is calculated (in dB) and is displayed in the Delta (dB) column.
This dB Delta figure (at the reference level) is then used in the next column to convert the DC level back to an equivalent audio level figure.
The reference level is equal to the full scale voltage of the selected range. (1V is the Reference level when the 1V scale is selected)
Comparison of the "Equivalent Audio Lev" figure and the actual audio input level may be made to check the linearity of the DC Output.
Enough data was taken to show that there is a 40dB linear range to work with in any one scale of the RV36.
Checks at the 300mV and 100mV ranges agreed with the response shown in Chart 1.

Calibration of the RV36 to the measurement system (A/D card and CVI software) was then performed in the following manner;

* The test radio (Delco auto radio) was set to give 2Vrms audio output as 0dB (standard output) with 100% stereo modulation (1kHz @ 91%, L=R, Pilot @ 9%)
* The RV36 was set to the 1V range. (1.065Vdc resultant output)
* The CVI software was then calibrated for 1.07Vdc = 0dB.
* For noise measurements the RV36 was set to the 100mV range (+20dB amplification) for better resolution of the noise floor.
* The analog to digital converter has 12 bit resolution and the sample rate was programmed at 2 kHz.
* Data was taken at a 10 kHz sample rate and compared to the 2 kHz data with no significant differences detected.

W

DTV Channel 6 Interference to FM Band Reception

Laboratory Test Report

Averaged Test Results based on February 23, 1998 FCC Specifications

FCC February 23, 1998 Out-of-Channel Mask
Audio S/N 55.0 dB RMS

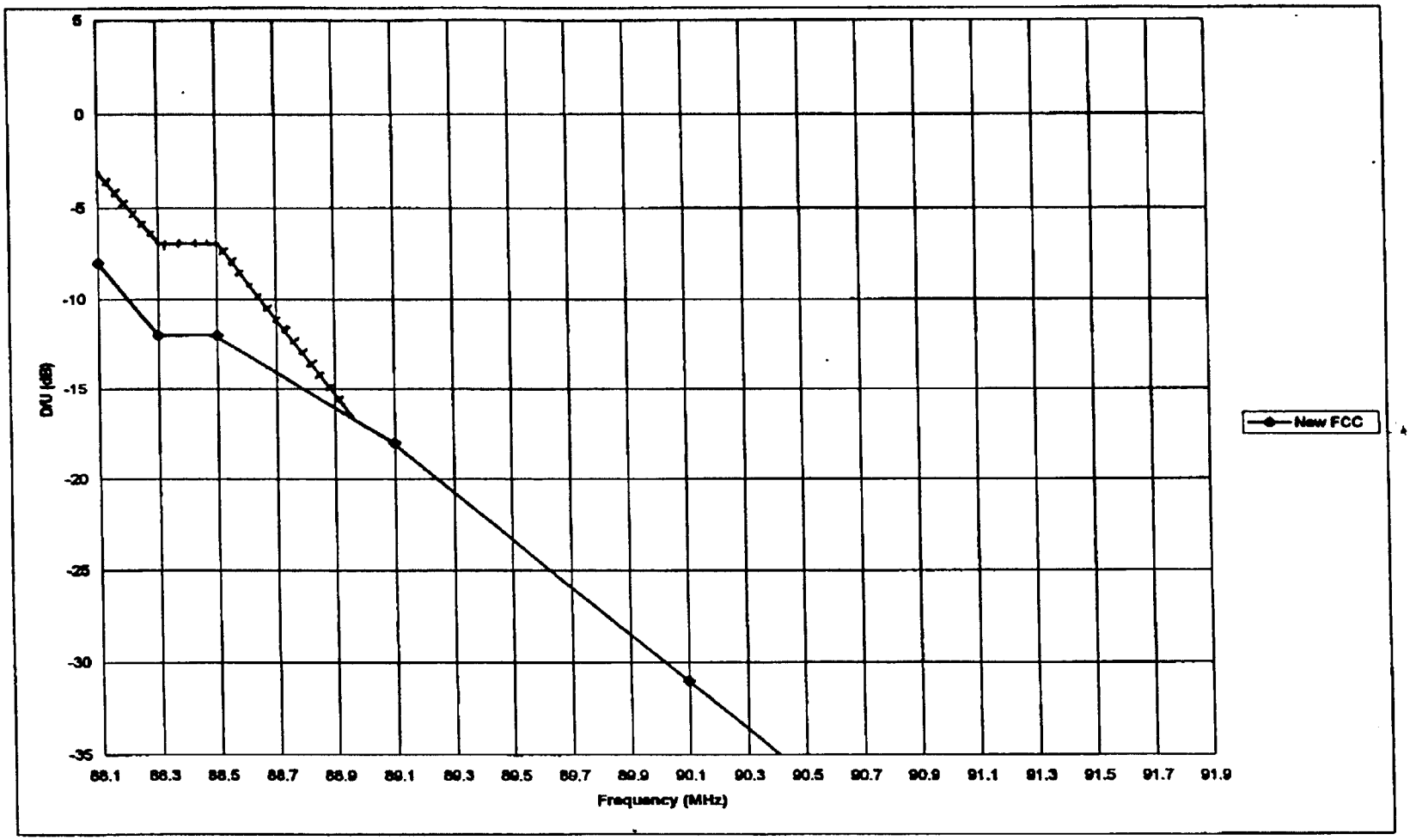


Figure 1.

DTV Channel 6 Interference to FM Band Reception

Laboratory Test Report

Averaged Test Results based on Simulated New Technology

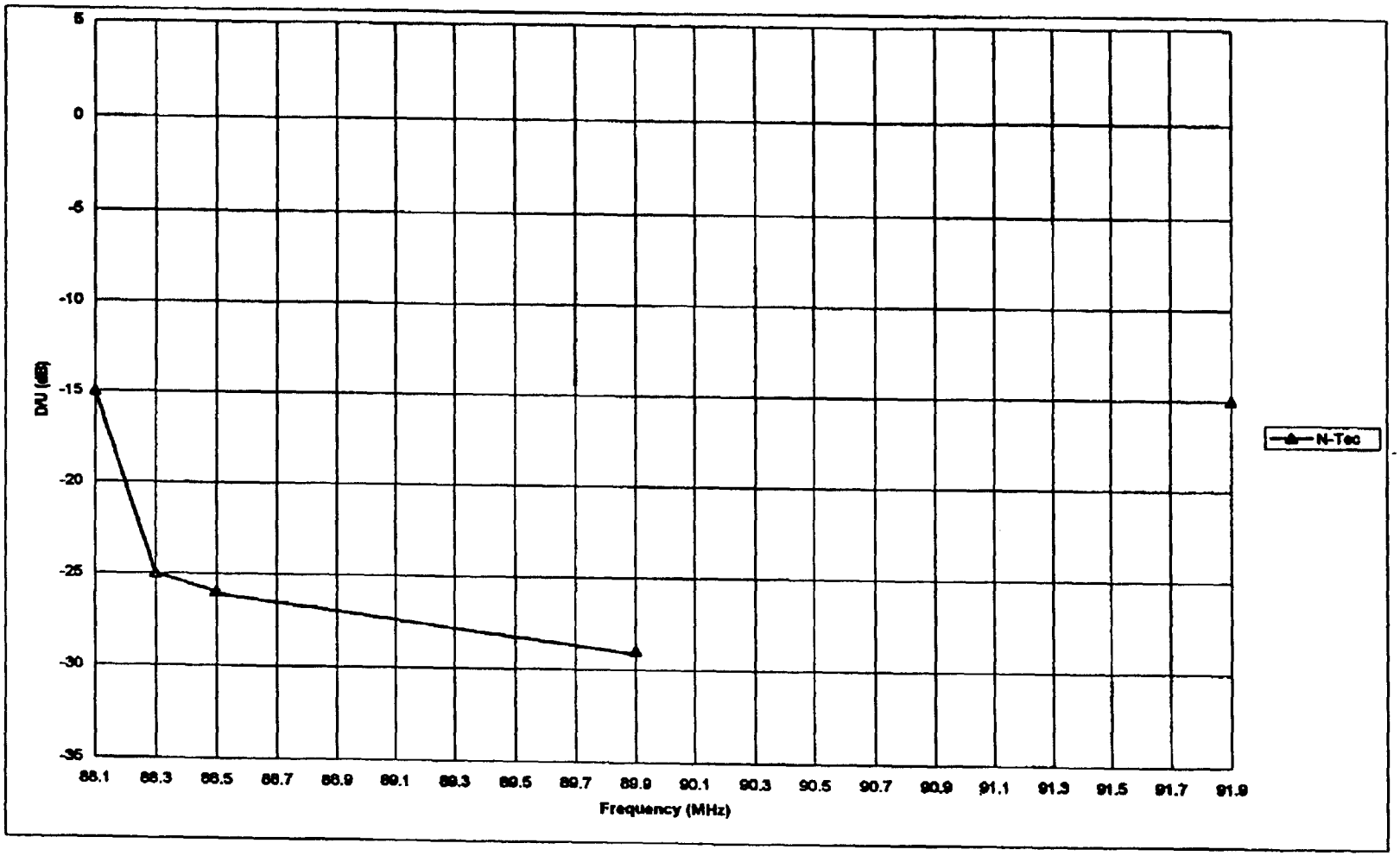

New Technology Mask
Audio S/N 55.0 dB RMS
DNU (dB)
5
0
-5
-10
-15
-20
-25
-30
-35
88.1
88.3
88.5
88.7
88.9
89.1
89.3
89.5
89.7
89.9
90.1
90.3
90.5
90.7
90.9
91.1
91.3
91.5
91.7
91.9
Frequency (MHz)
N-Tec

Figure 2.

Y

DTV Channel 6 Interference to FM Band Reception

Laboratory Test Report

Averaged Test Results based on Defective Transmitter

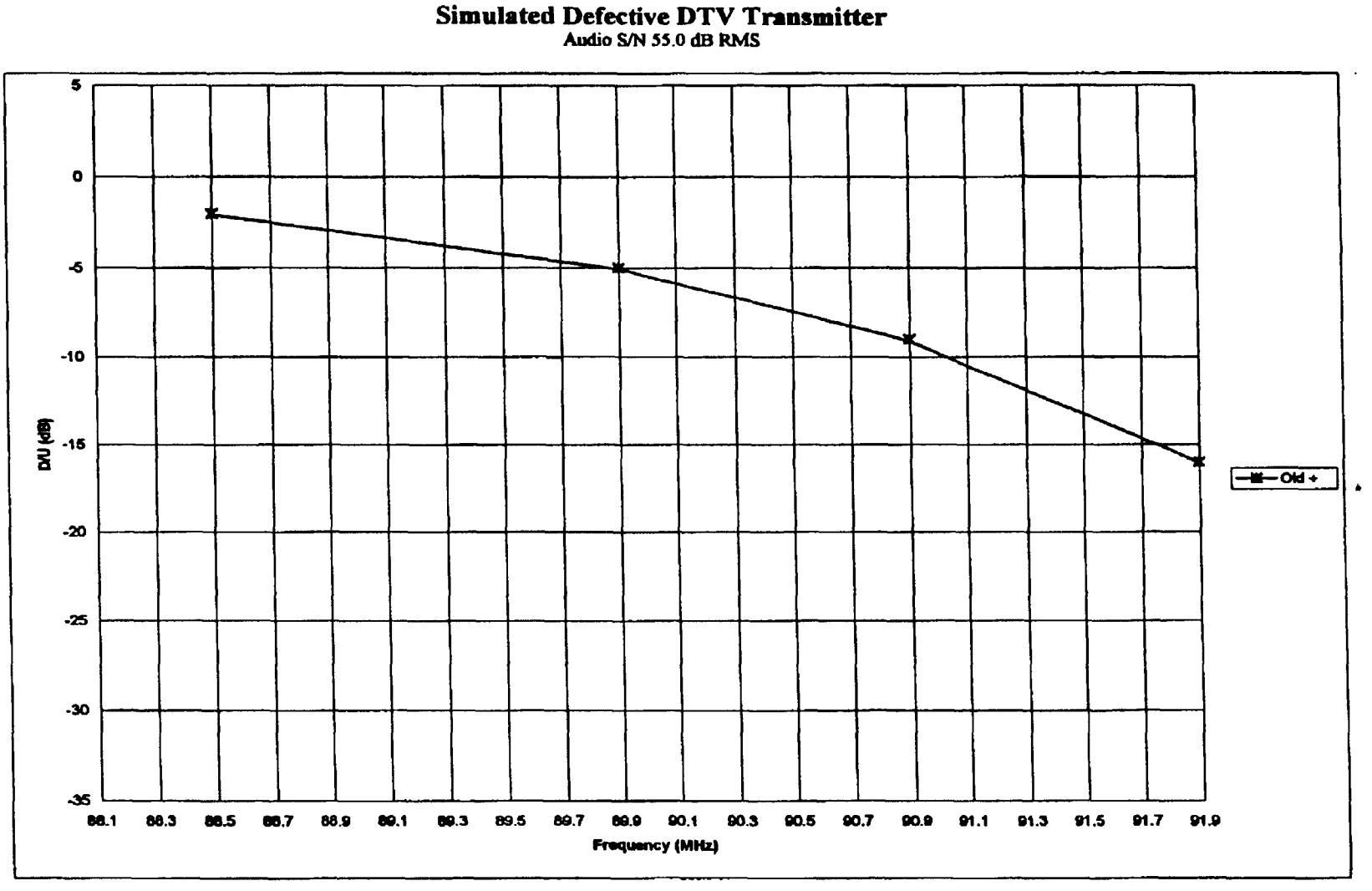

Simulated Defective DTV Transmitter
Audio S/N 55.0 dB RMS
D/U (dB)
5
0
-5
-10
-15
-20
-25
-30
-35
88.1
88.3
88.5
88.7
88.9
89.1
89.3
89.5
89.7
89.9
90.1
90.3
90.5
90.7
90.9
91.1
91.3
91.5
91.7
91.9
Frequency (MHz)
Old

Figure 3.

Z

DTV Channel 6 Interference to FM Band Reception

Laboratory Test Report

Averaged Test Results based on FCC Specifications prior to February 23, 1998

FCC Mask Prior to February 23, 1998
Audi S/N 55.0 dB RMS

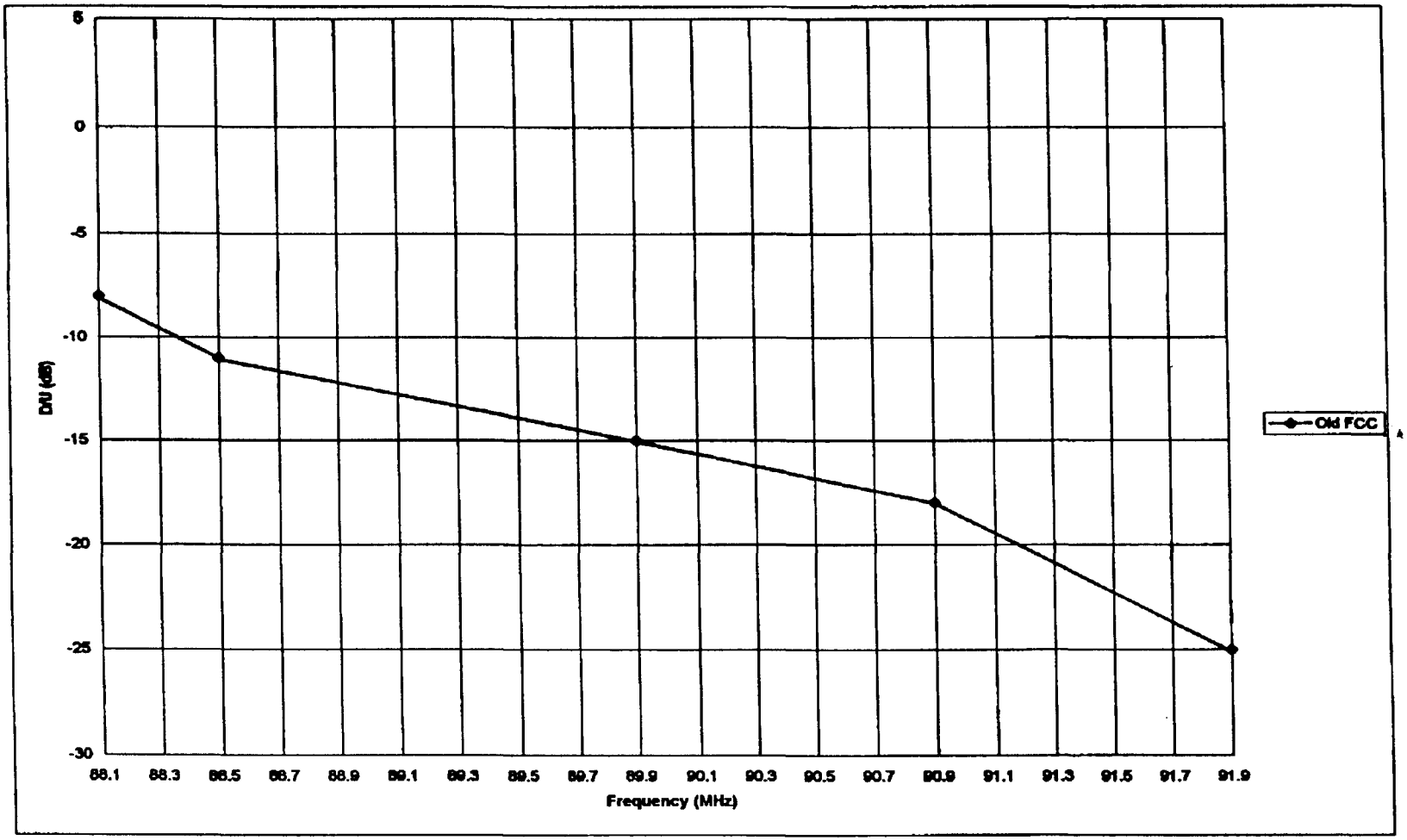


Figure 4.