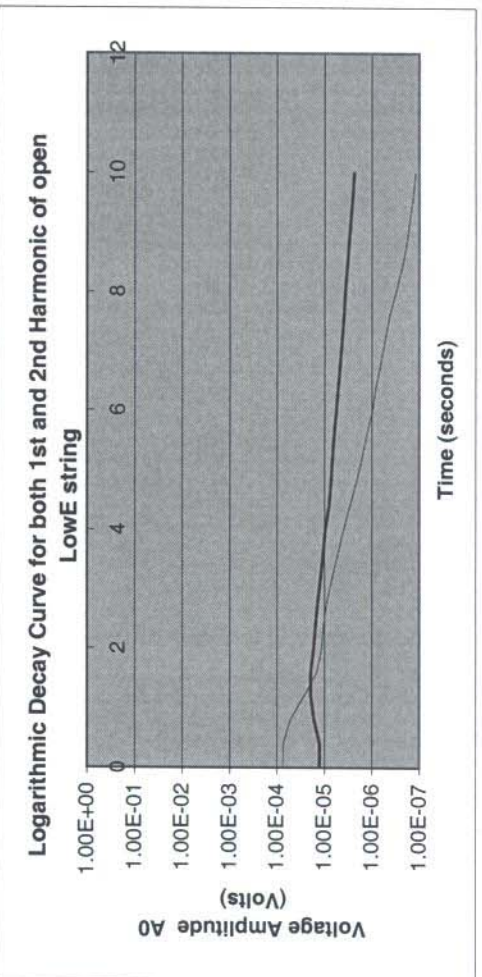
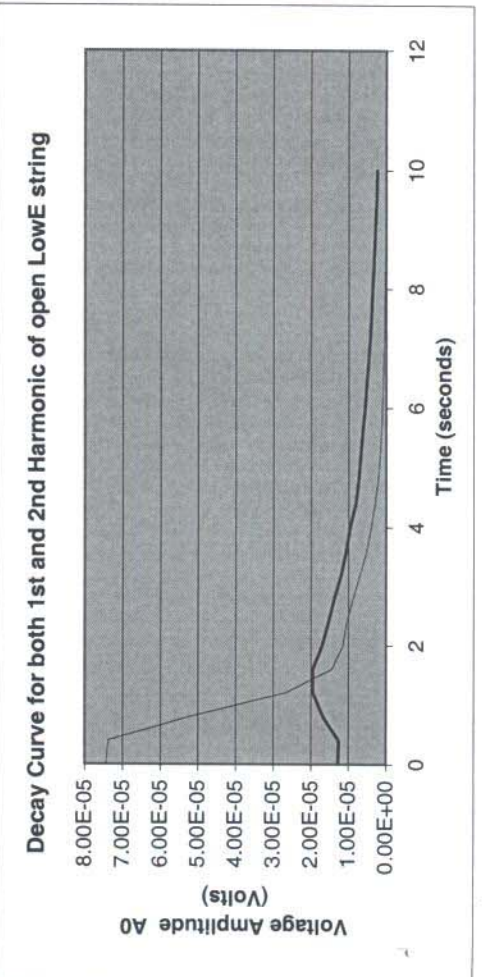
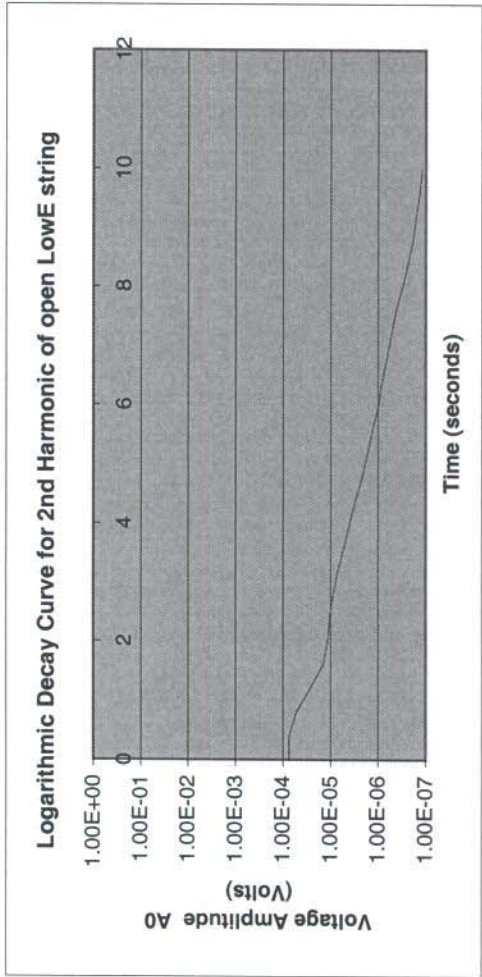
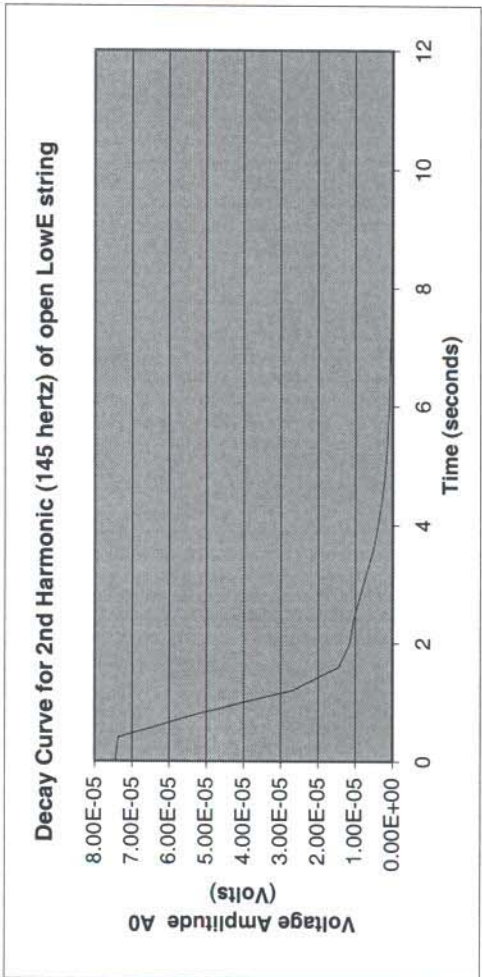
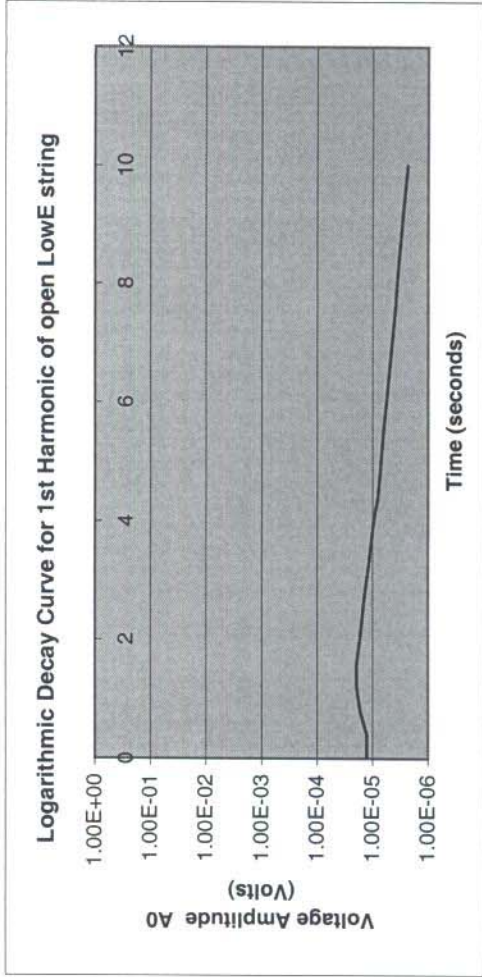
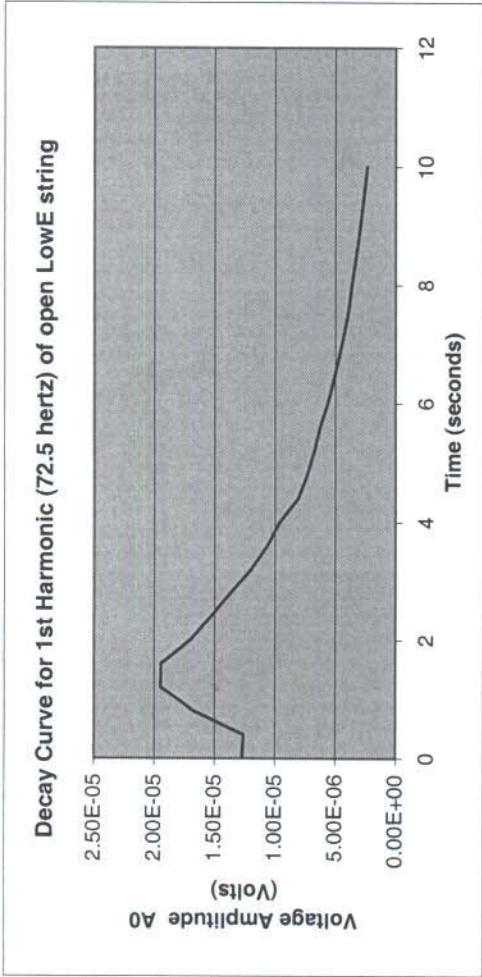
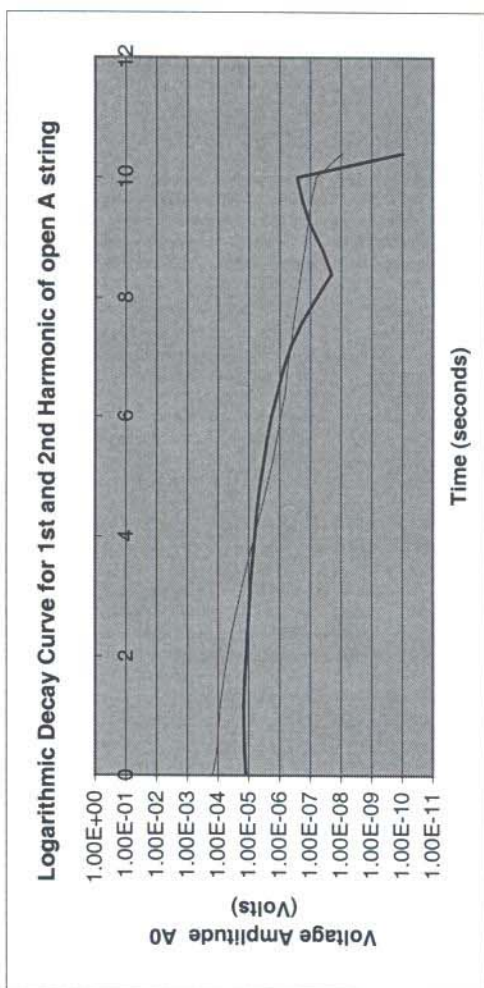
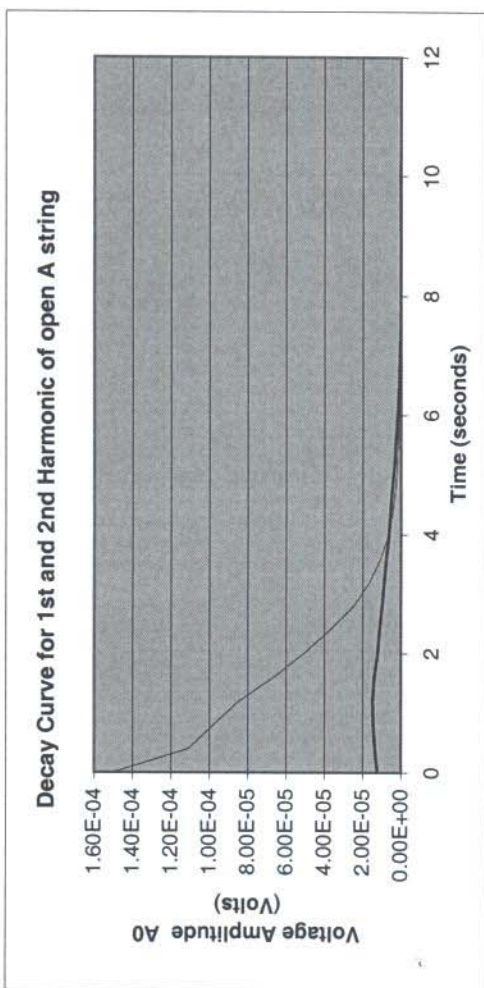
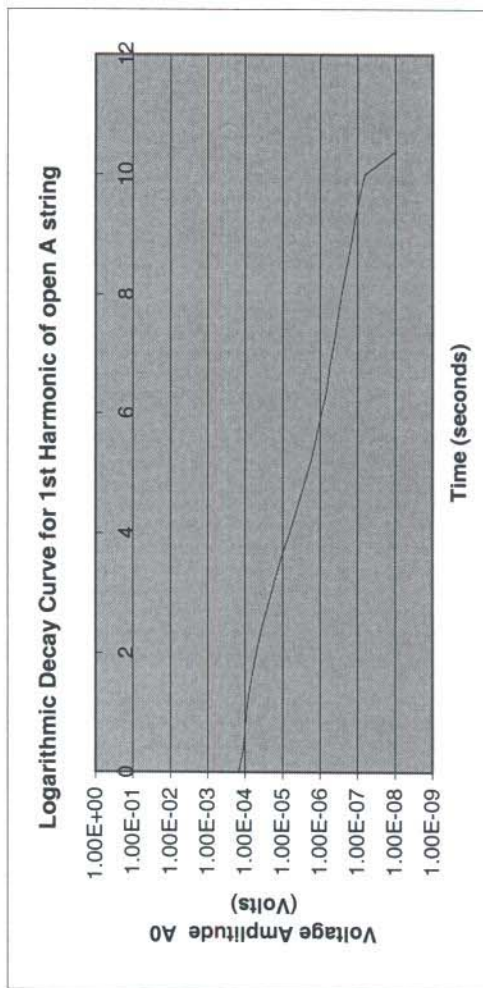
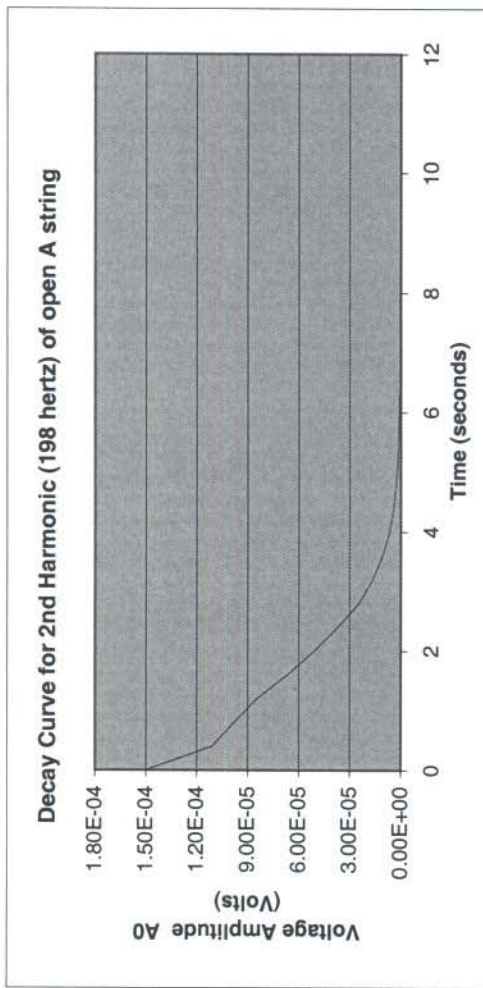
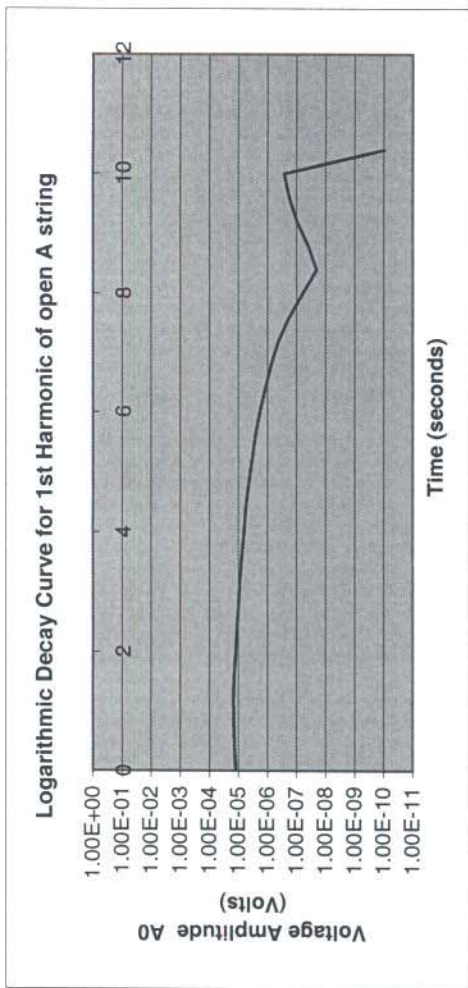
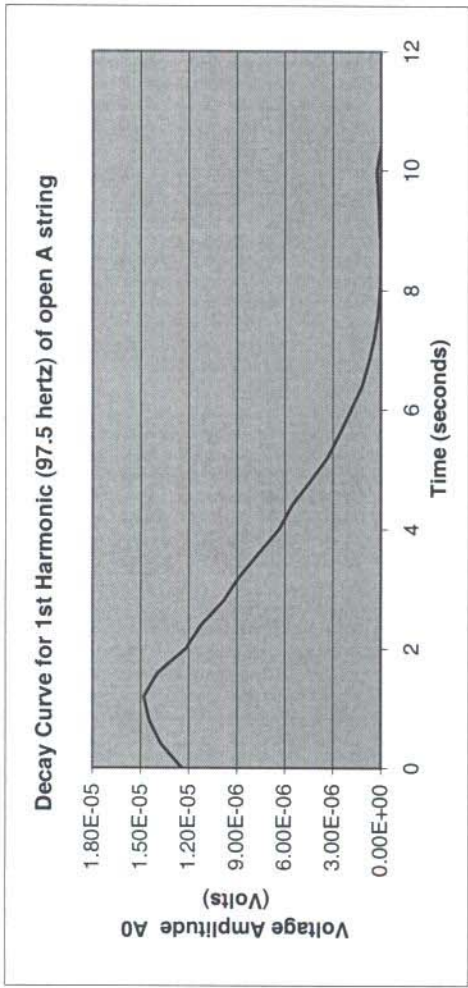


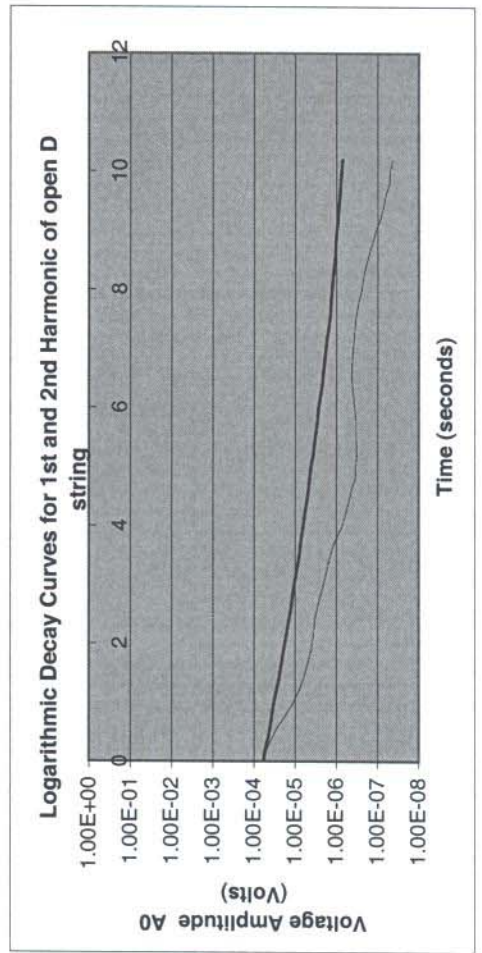
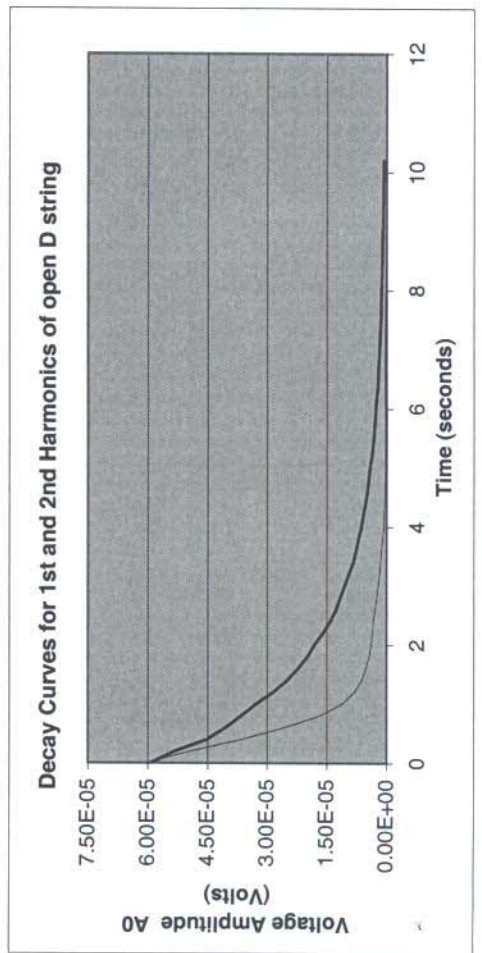
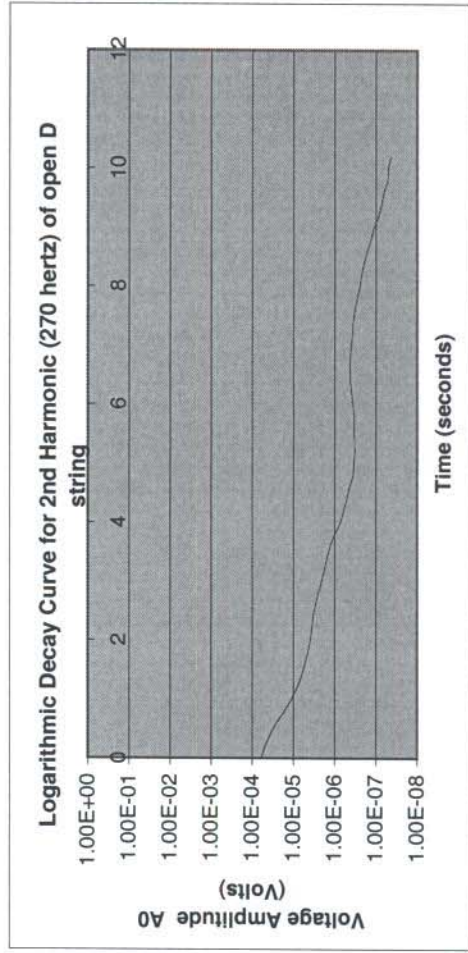
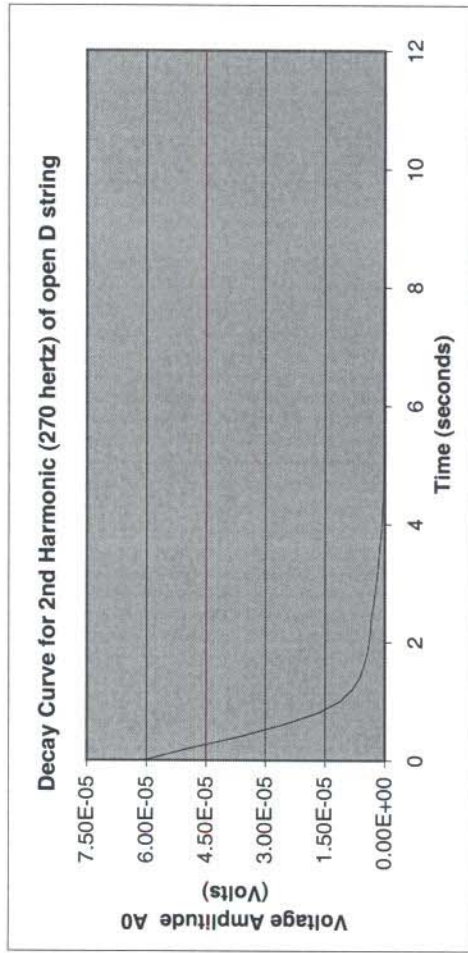
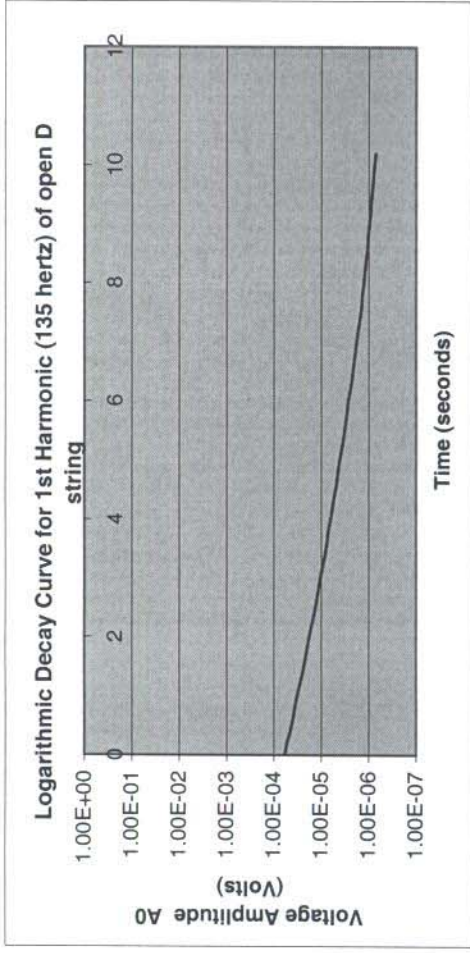
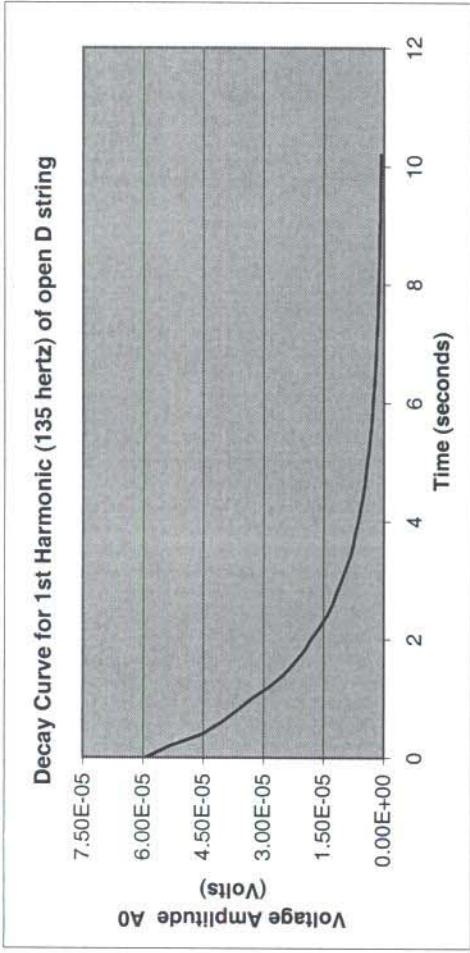
Appendix A1



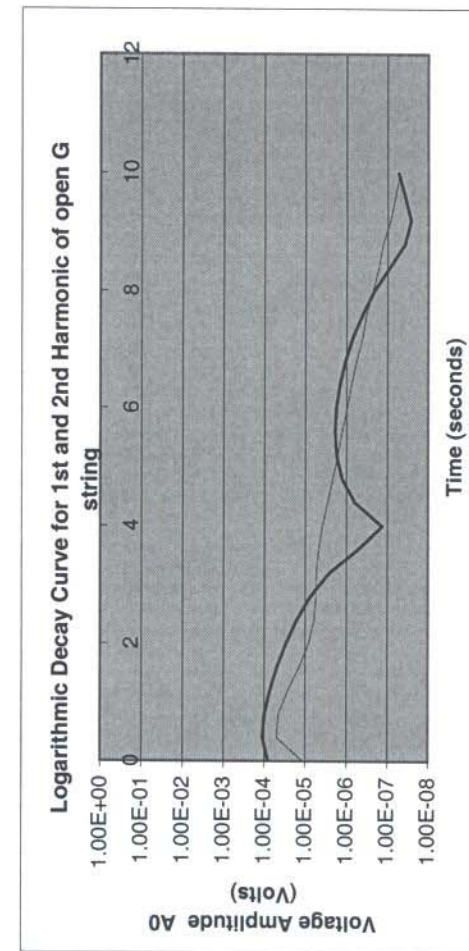
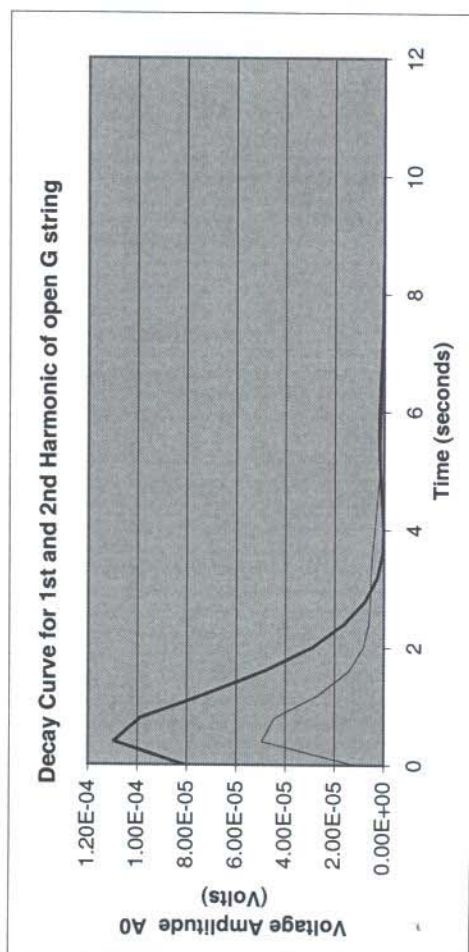
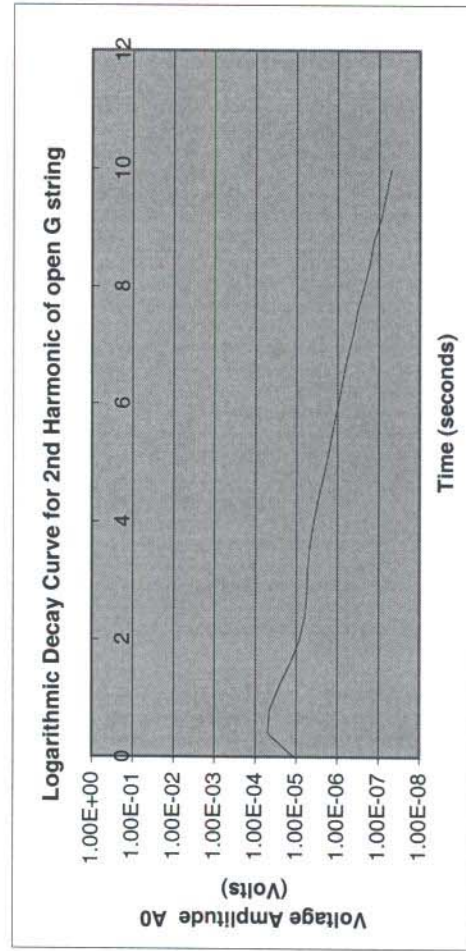
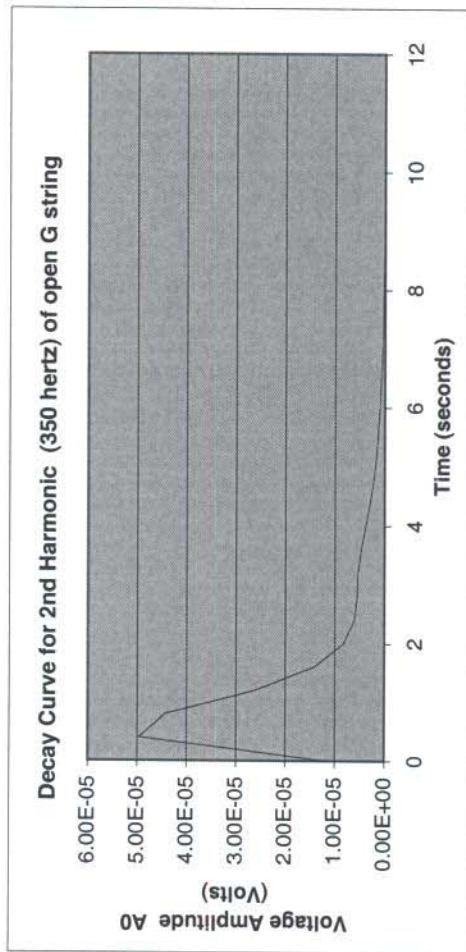
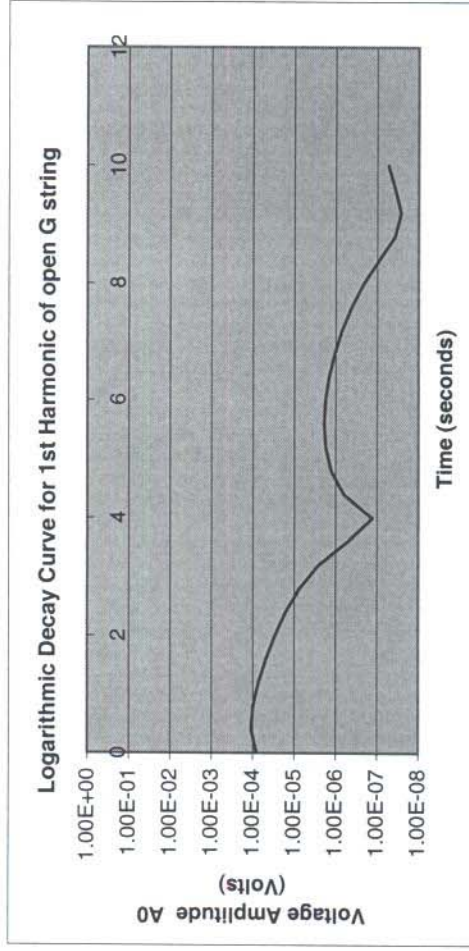
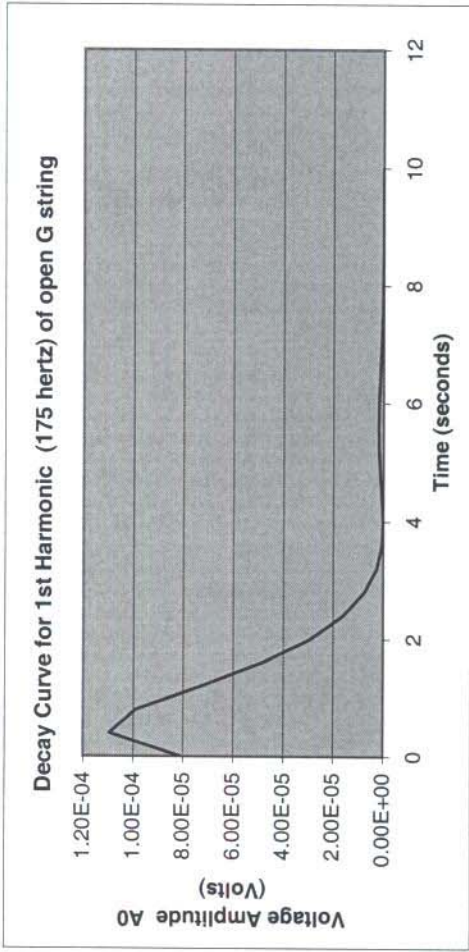
Appendix A2



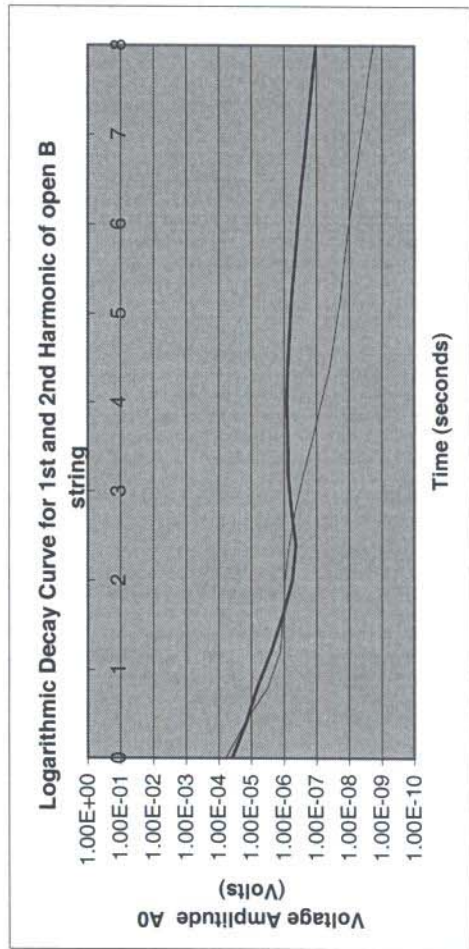
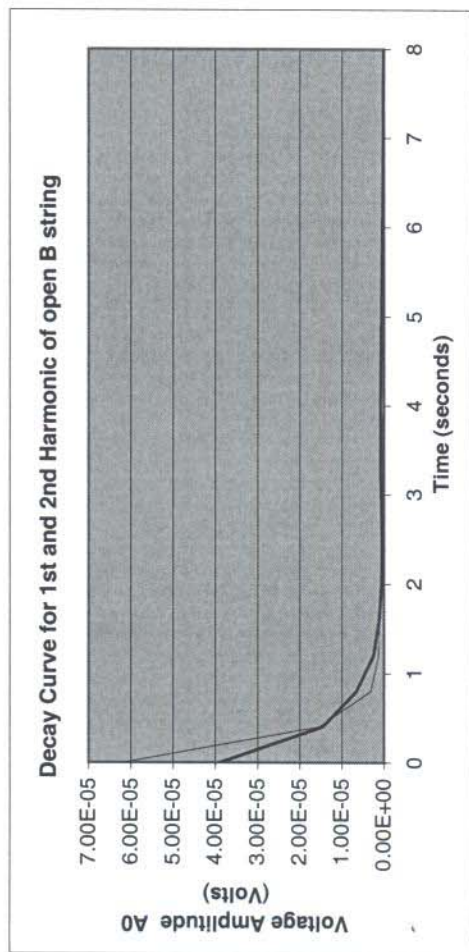
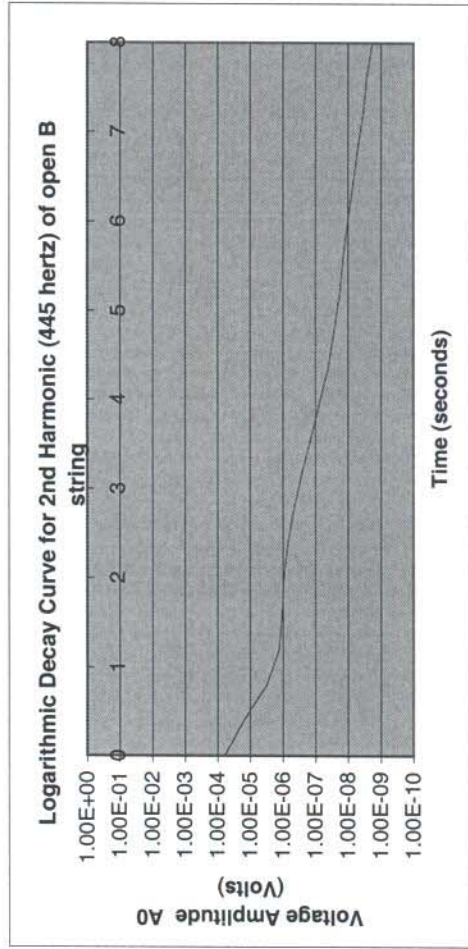
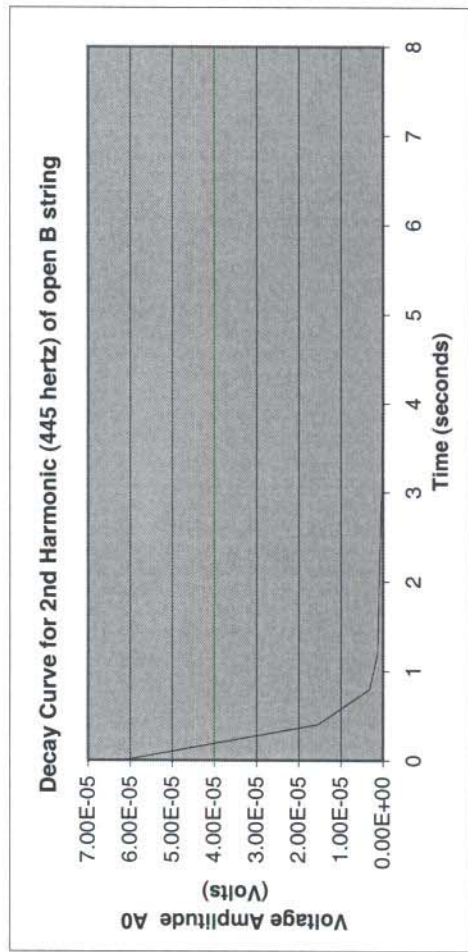
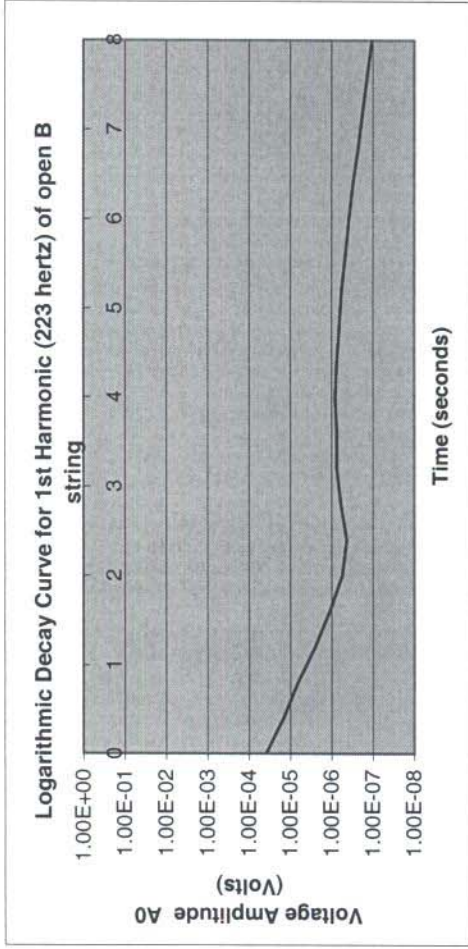
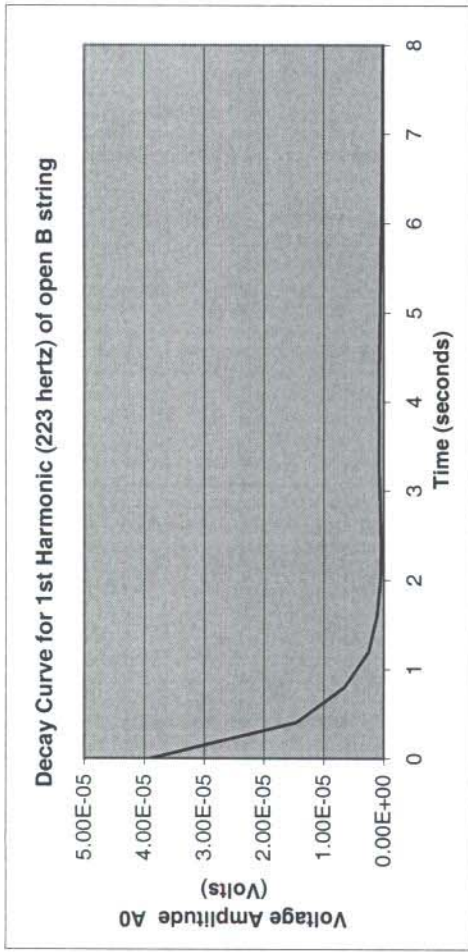
Appendix A3



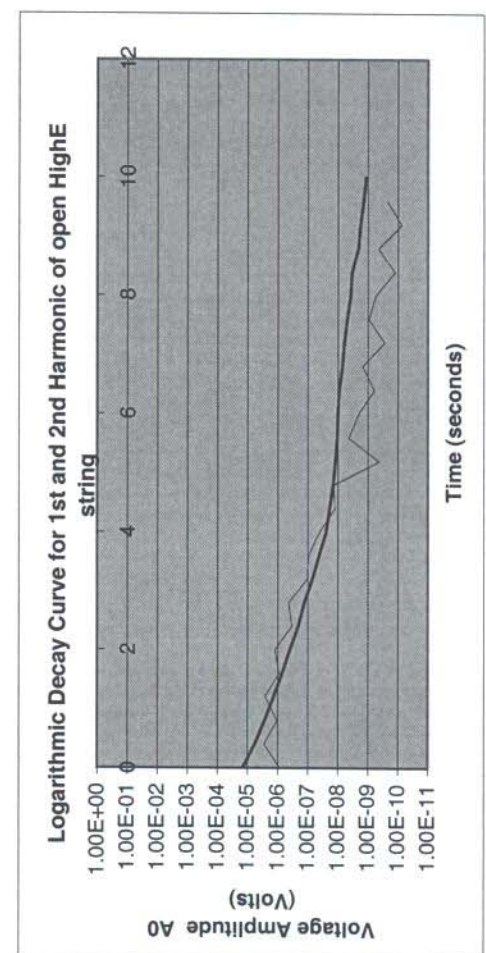
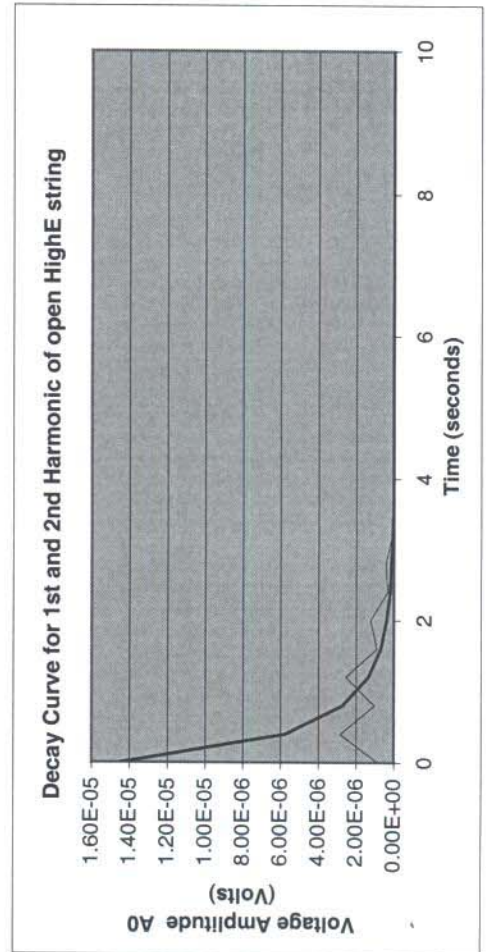
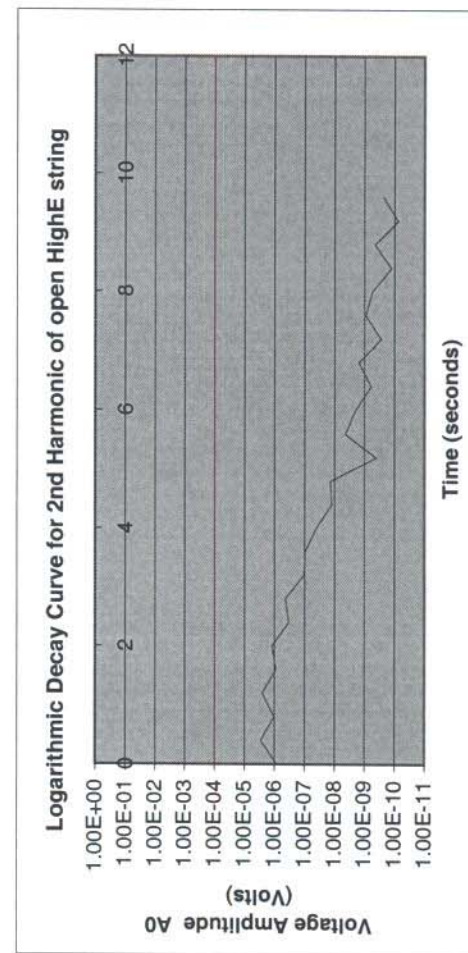
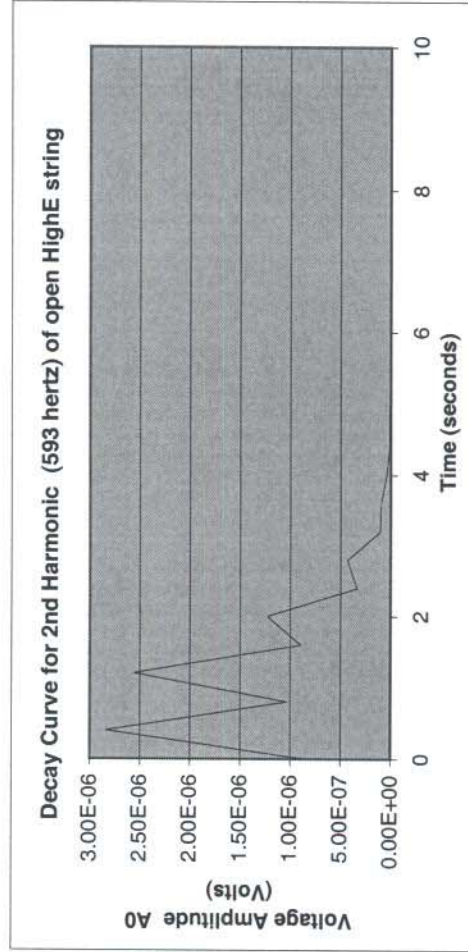
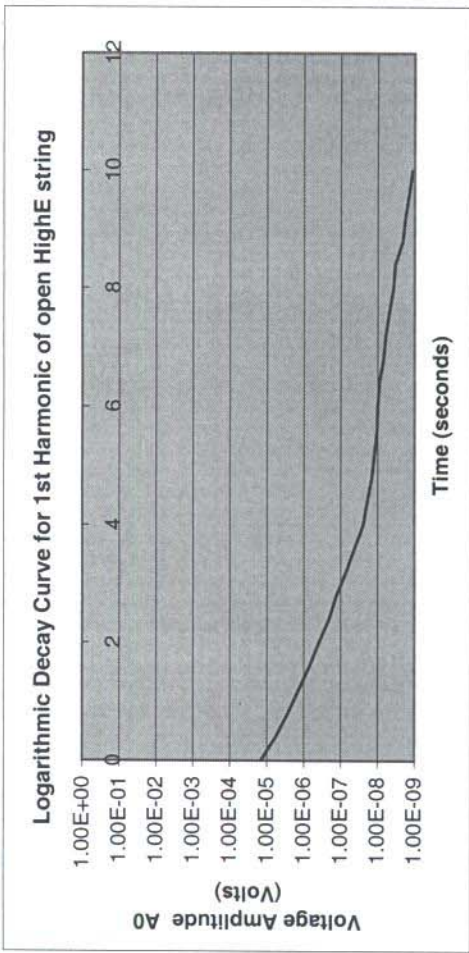
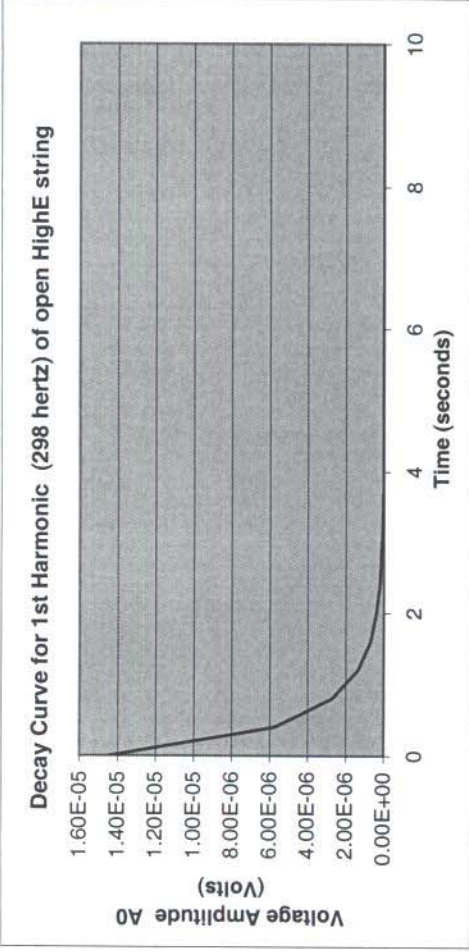
Appendix A4



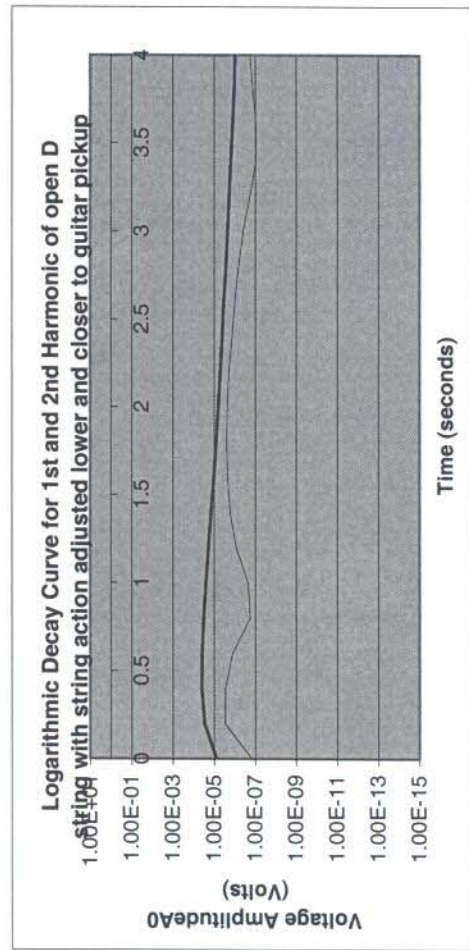
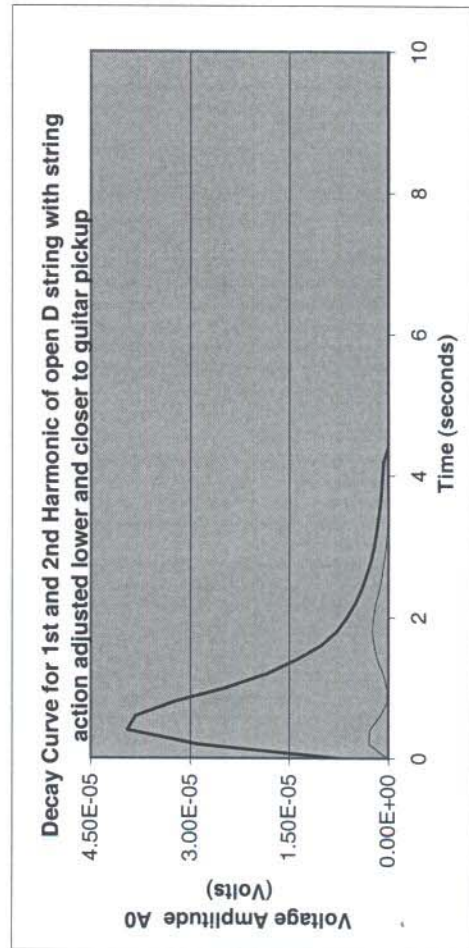
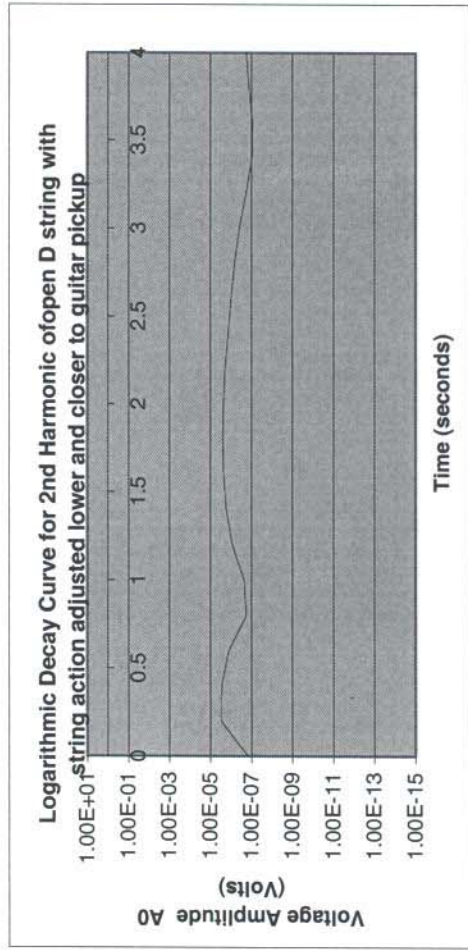
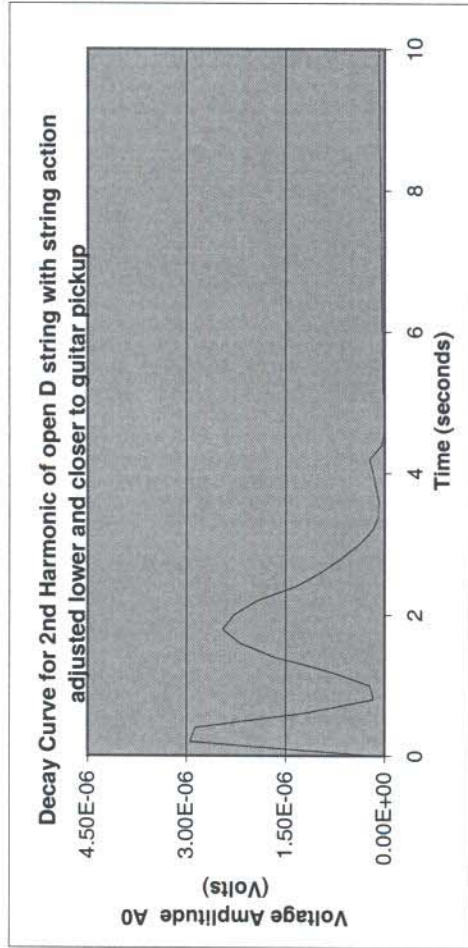
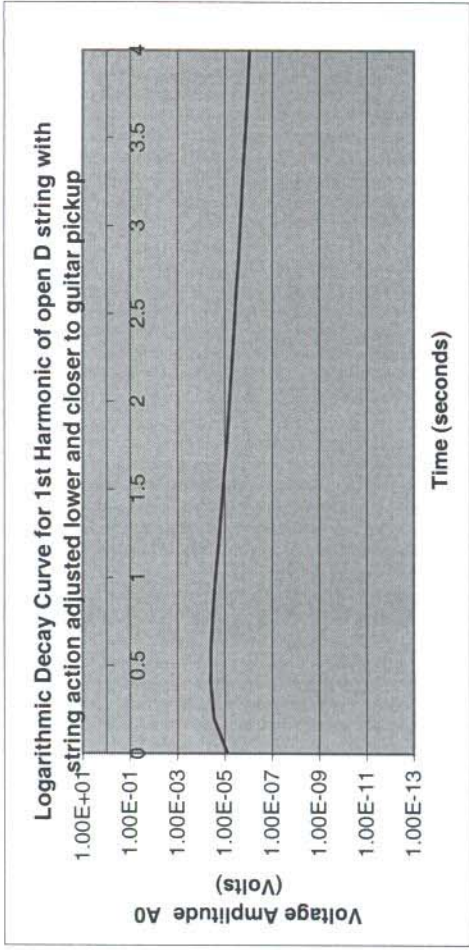
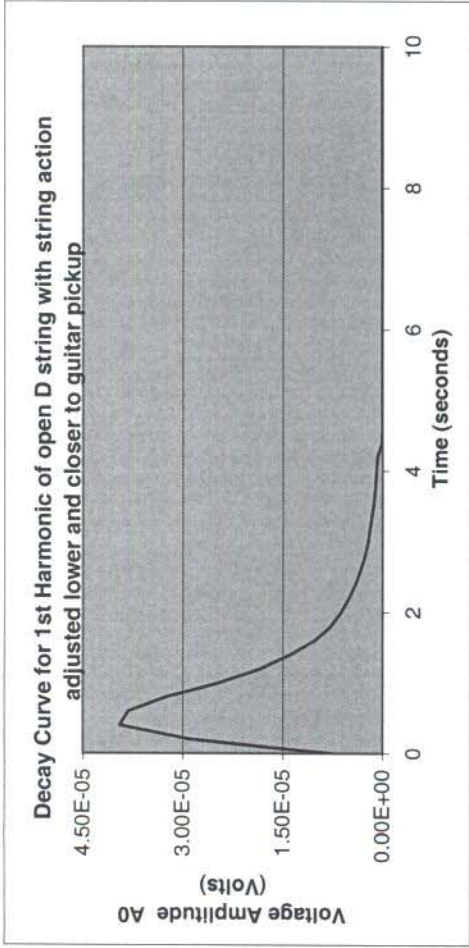
Appendix A5



Appendix A6

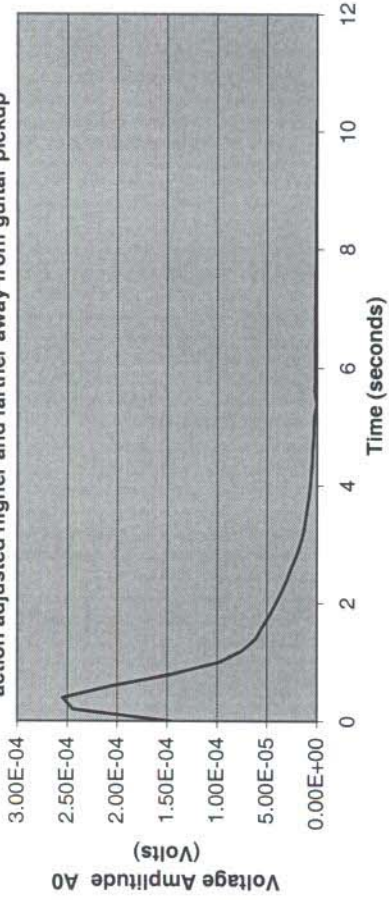


Appendix A7

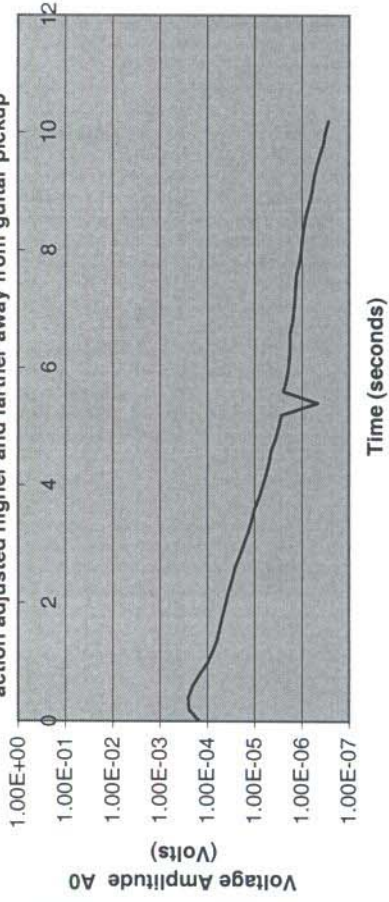


Appendix A8

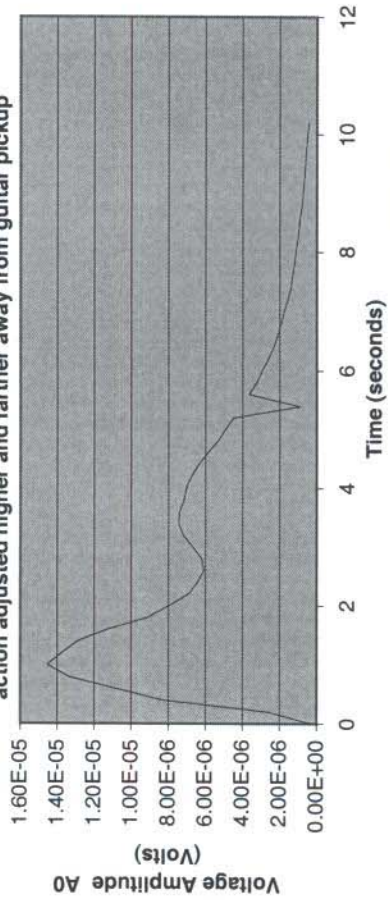
Decay Curve for 1st Harmonic of open D string (135 hertz) with string action adjusted higher and farther away from guitar pickup



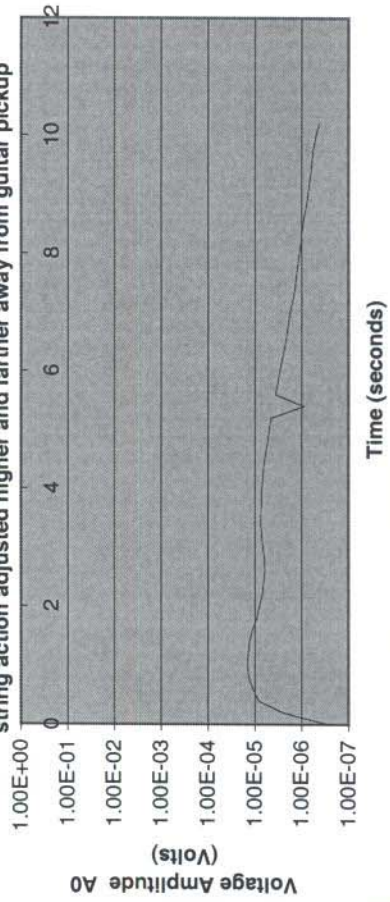
Logarithmic Decay Curve for 1st Harmonic of open D string with string action adjusted higher and farther away from guitar pickup



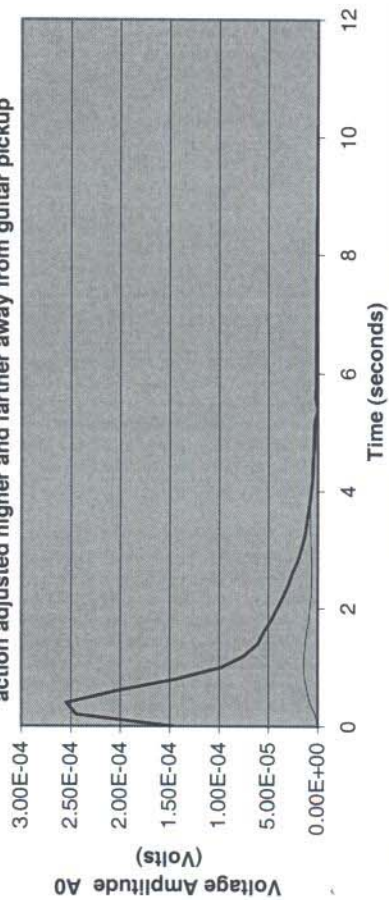
Decay Curve for 2nd Harmonic of open D string (270 hertz) with string action adjusted higher and farther away from guitar pickup



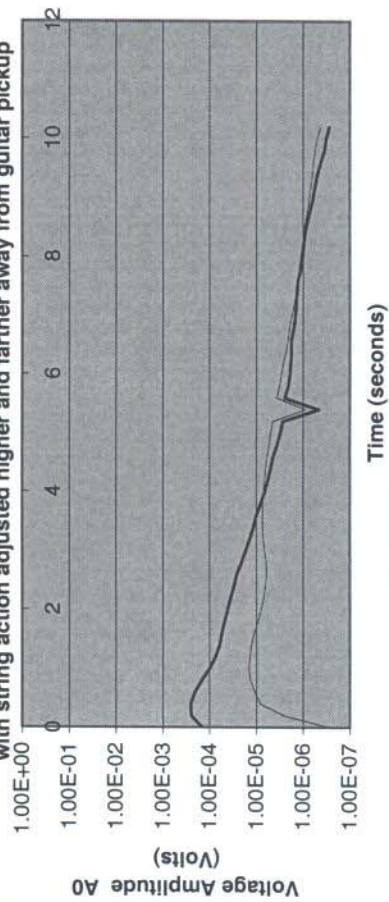
Logarithmic Decay Curve for 2nd Harmonic of open D string with string action adjusted higher and farther away from guitar pickup



Decay Curve for 1st and 2nd Harmonic of open D string with string action adjusted higher and farther away from guitar pickup

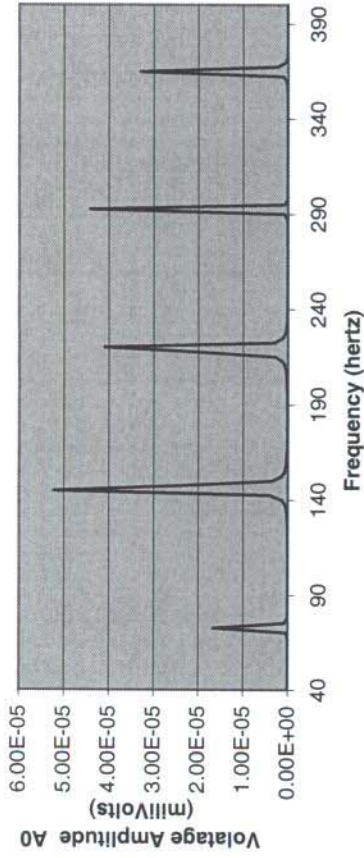


Logarithmic Decay Curve for 1st and 2nd Harmonic of open D string with string action adjusted higher and farther away from guitar pickup

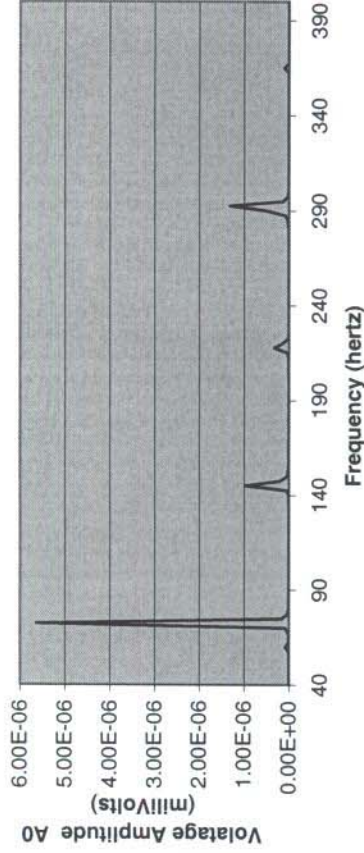


Appendix B1

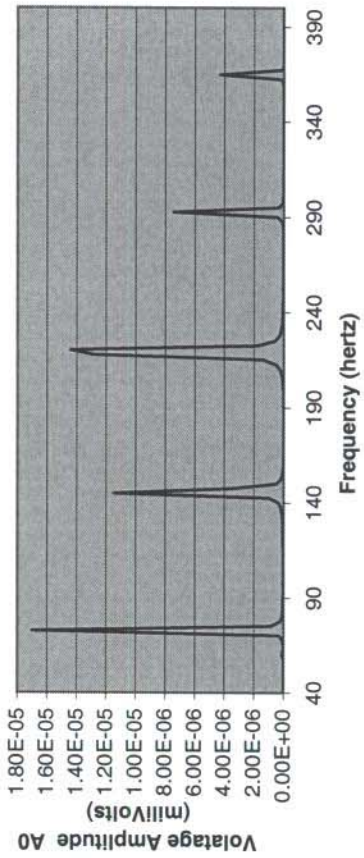
Relative Magnitudes of Harmonics 1-5 for open LowE string
at t = 0.8 seconds



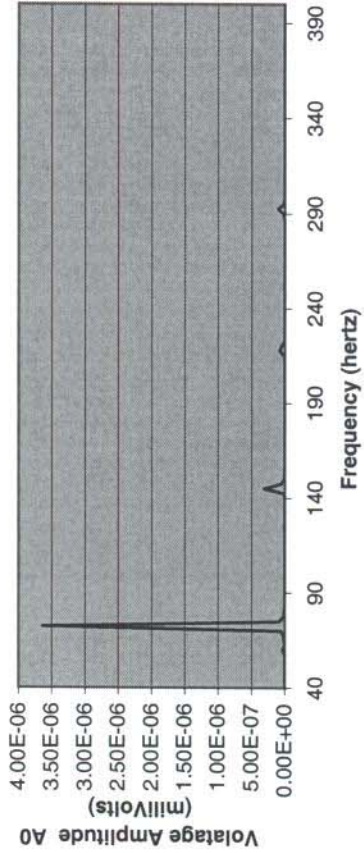
Relative Magnitudes of Harmonics 1-5 for open LowE string
at t = 6.0 seconds



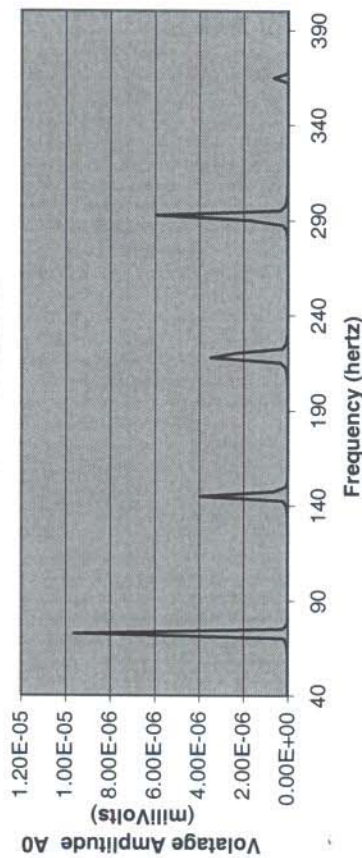
Relative Magnitudes of Harmonics 1-5 for open LowE string
at t = 2.0 seconds



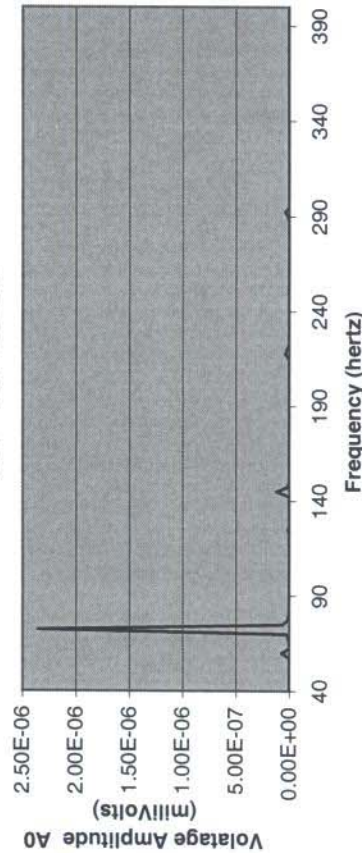
Relative Magnitudes of Harmonics 1-5 for open LowE string
at t = 8.0 seconds



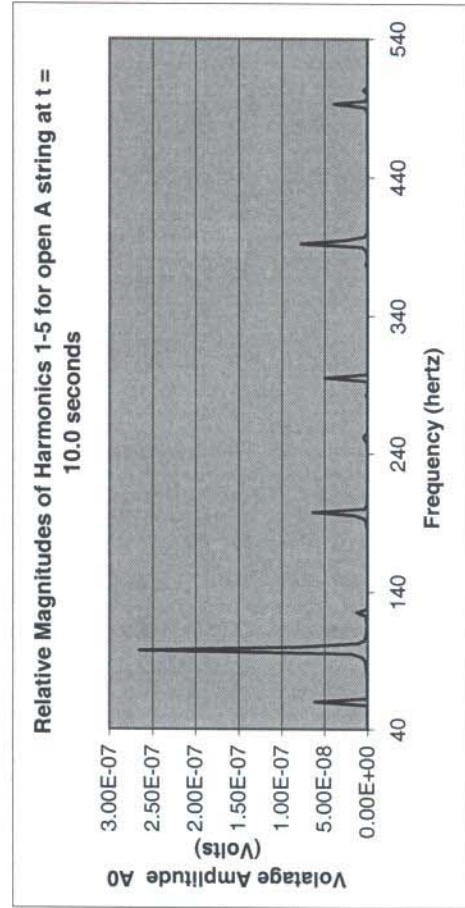
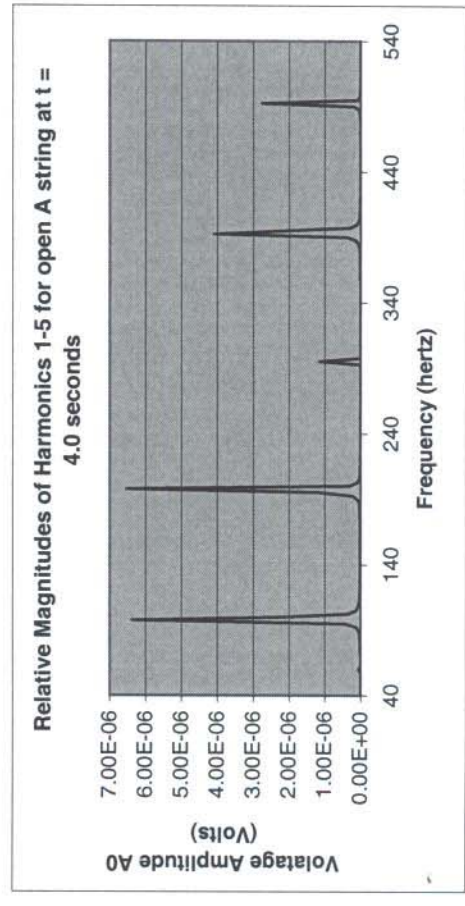
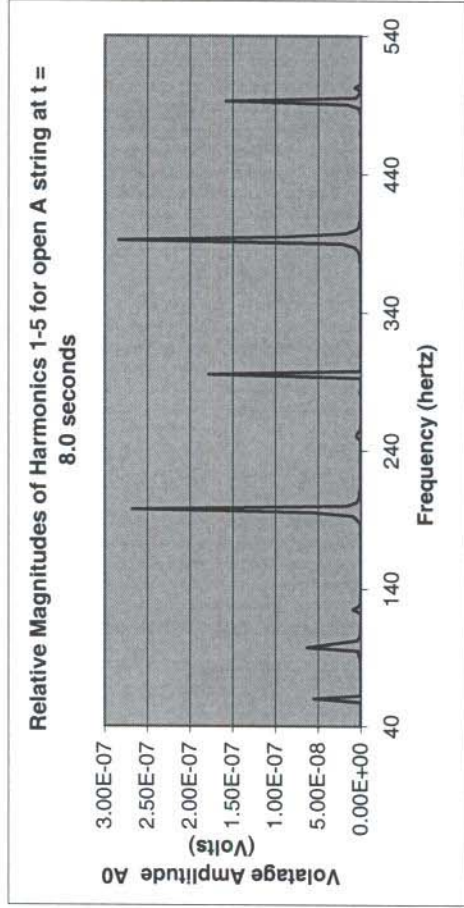
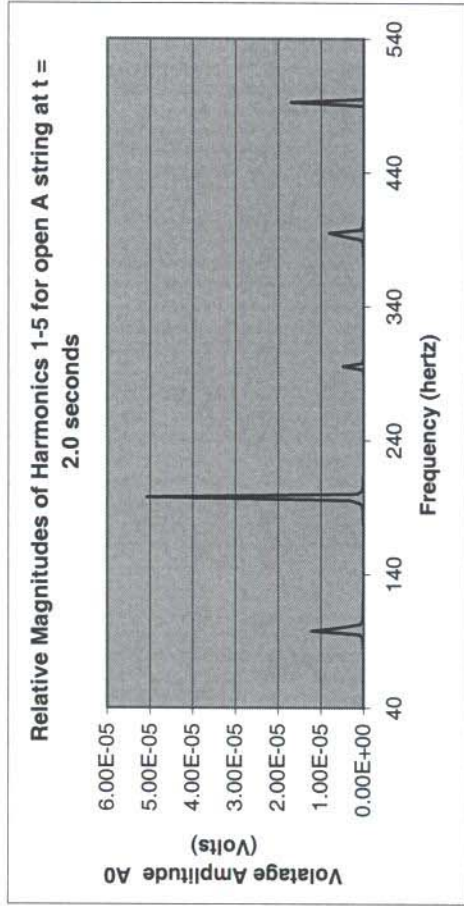
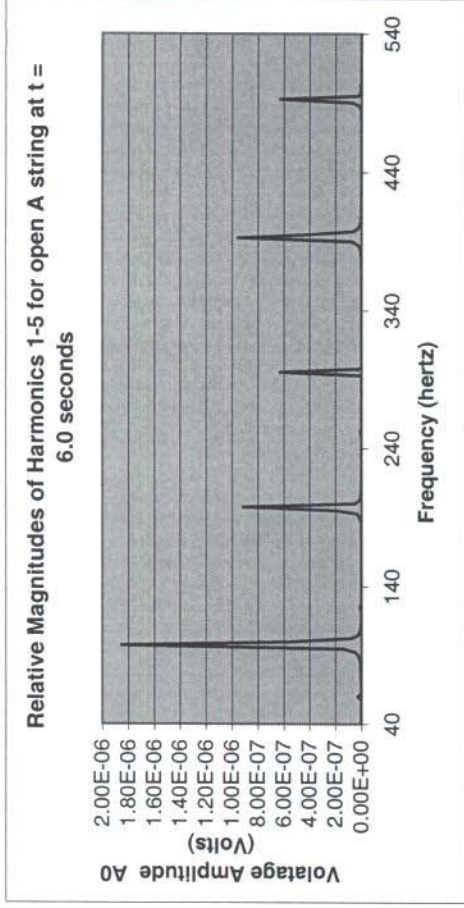
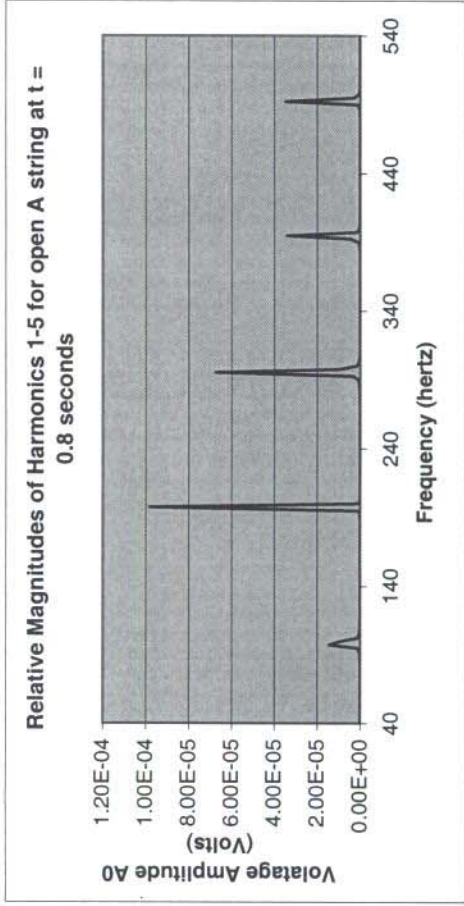
Relative Magnitudes of Harmonics 1-5 for open LowE string
at t = 4.0 seconds



Relative Magnitudes of Harmonics 1-5 for open LowE string
at t = 10.0 seconds

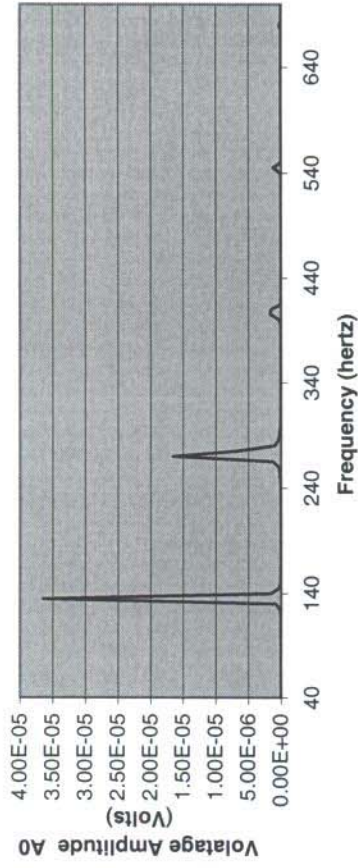


Appendix B2

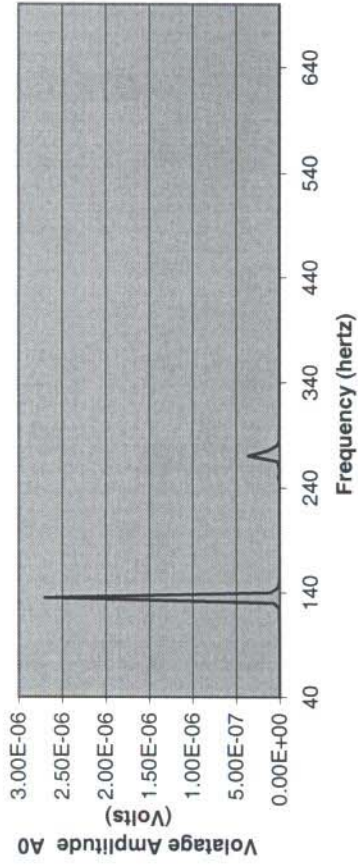


Appendix B3

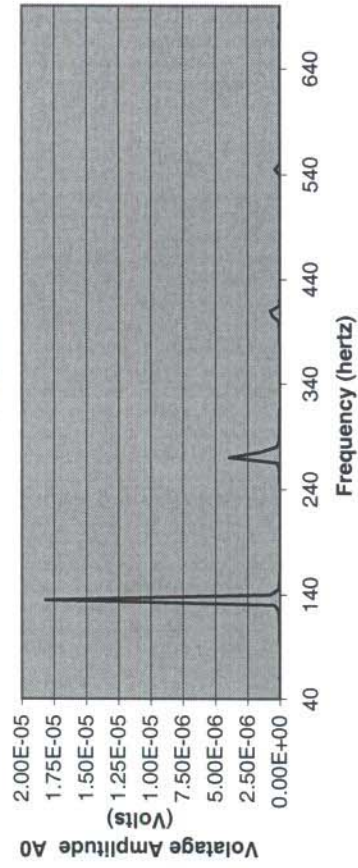
Relative Magnitudes of Harmonics 1-5 for open D string at t = 0.8 seconds



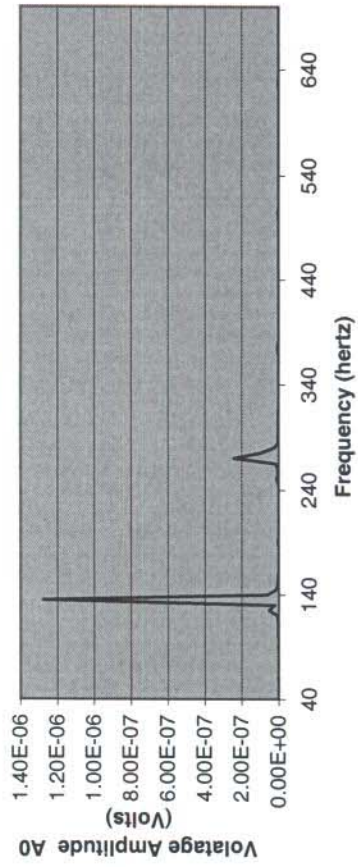
Relative Magnitudes of Harmonics 1-5 for open D string at t = 6.0 seconds



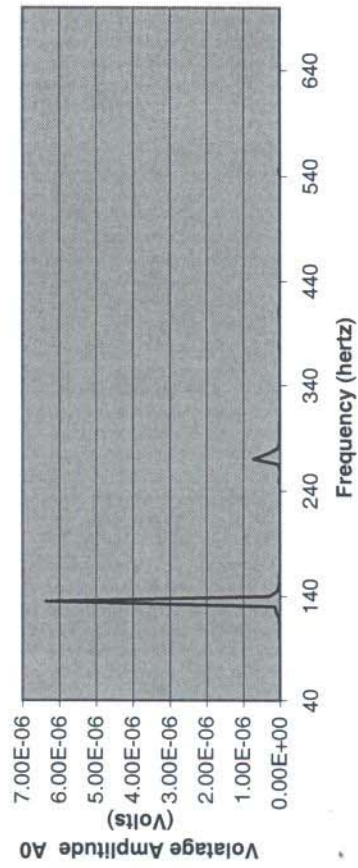
Relative Magnitudes of Harmonics 1-5 for open D string at t = 2.0 seconds



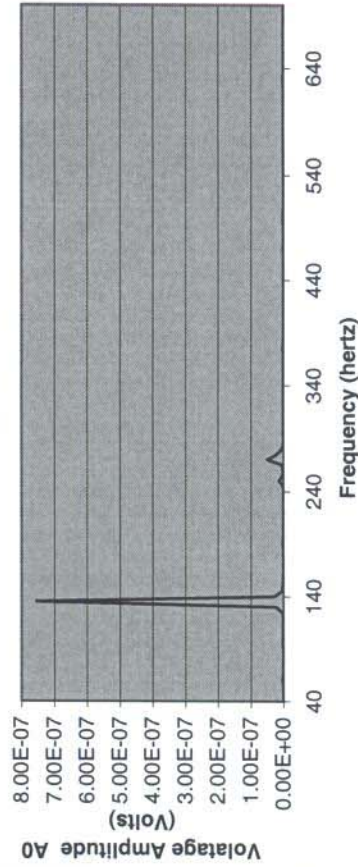
Relative Magnitudes of Harmonics 1-5 for open D string at t = 8.0 seconds



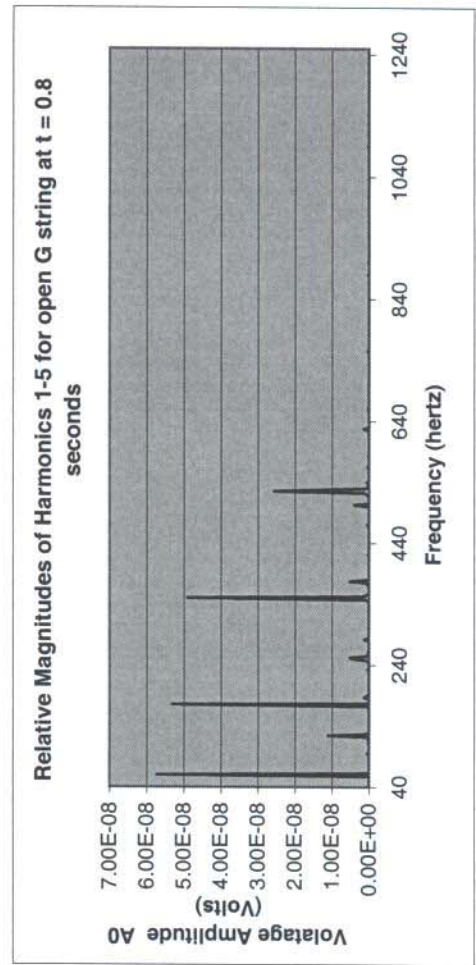
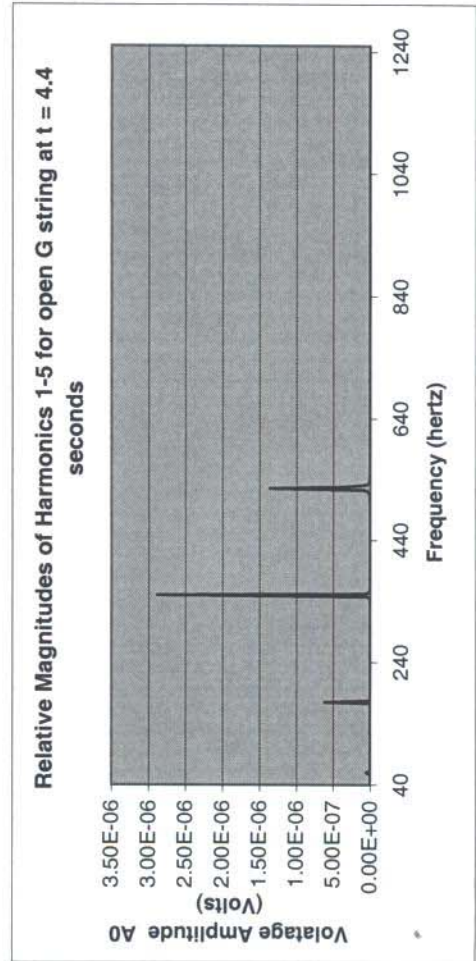
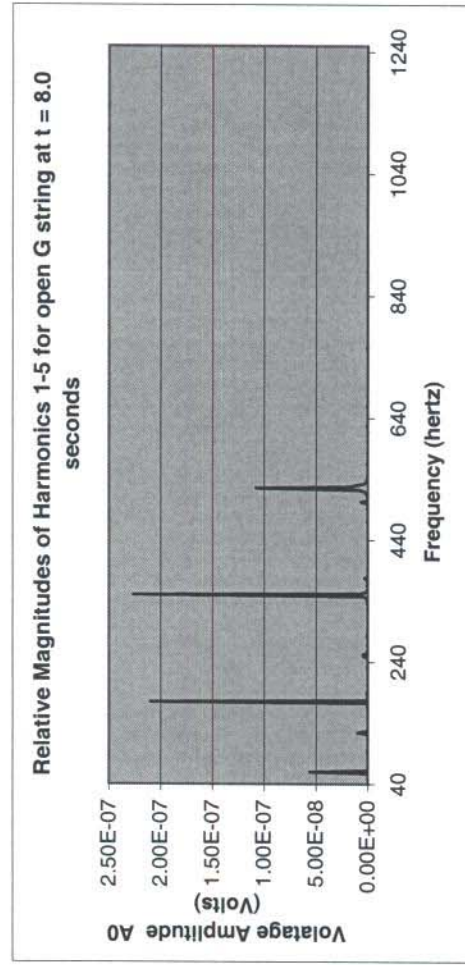
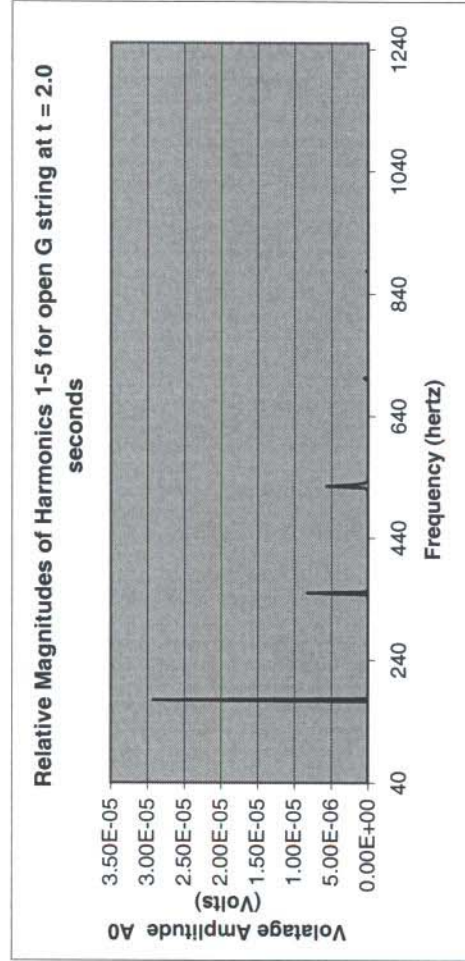
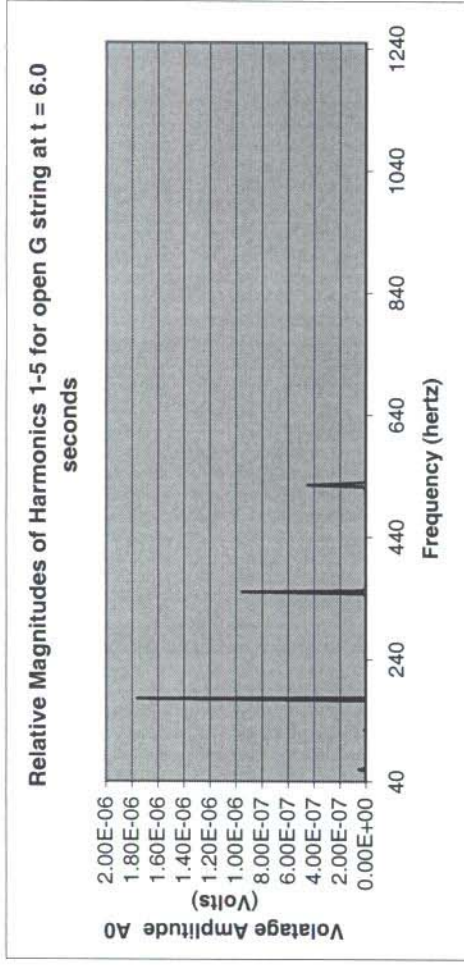
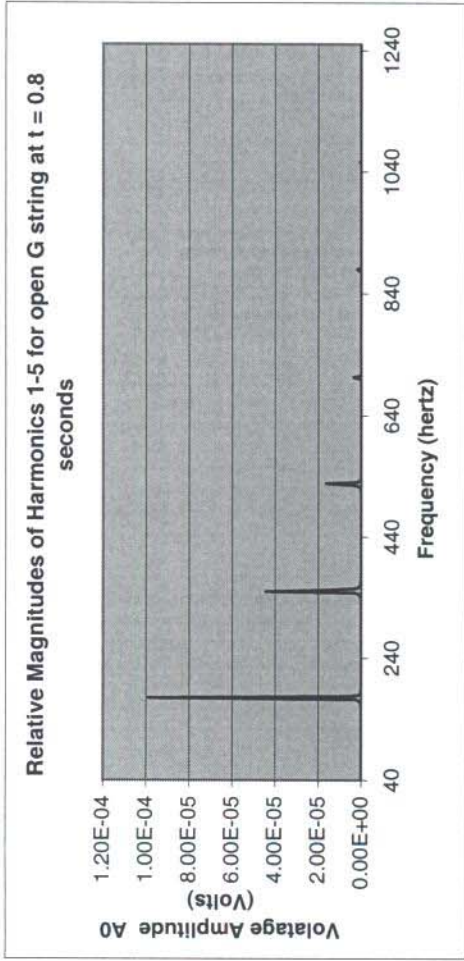
Relative Magnitudes of Harmonics 1-5 for open D string at t = 4.0 seconds



Relative Magnitudes of Harmonics 1-5 for open A string at t = 10.0 seconds

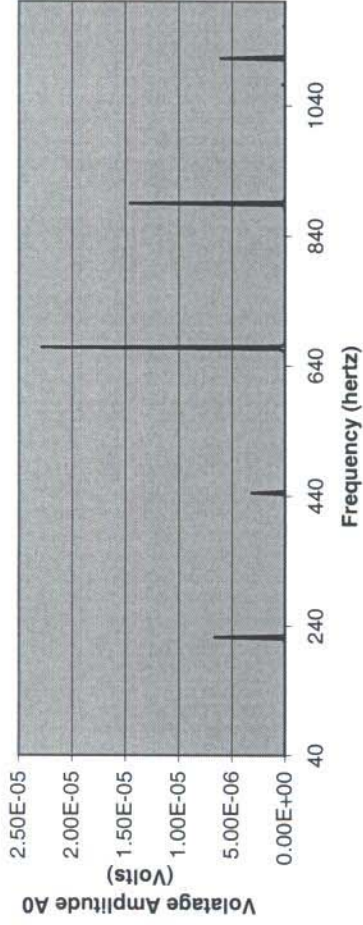


Appendix B4

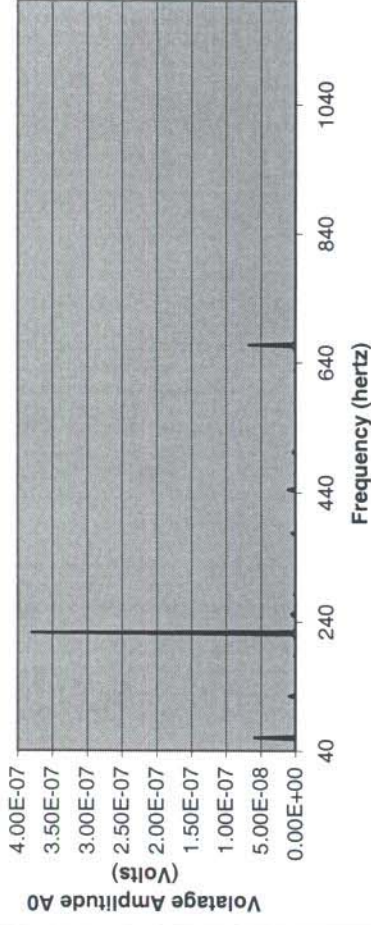


Appendix B5

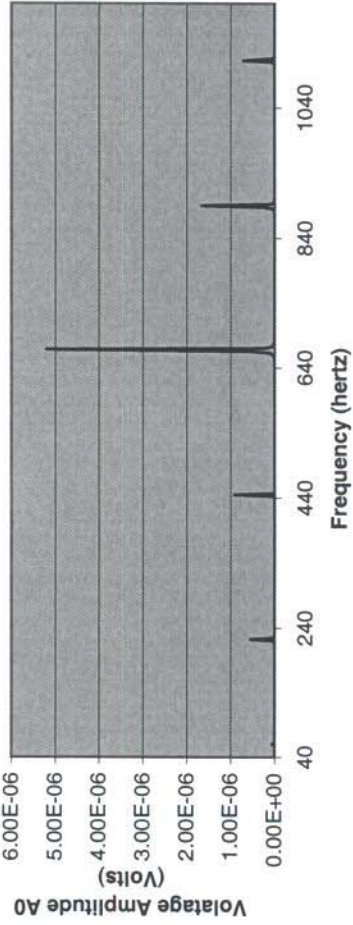
Relative Magnitudes of Harmonics 1-5 for open B string at t = 0.8 seconds



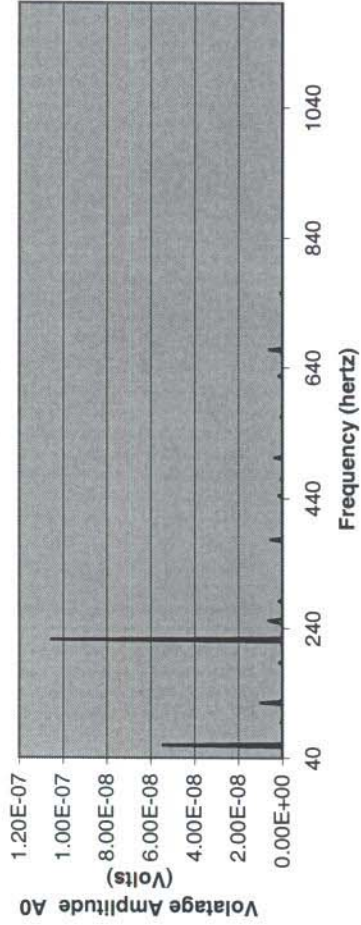
Relative Magnitudes of Harmonics 1-5 for open B string at t = 6.0 seconds



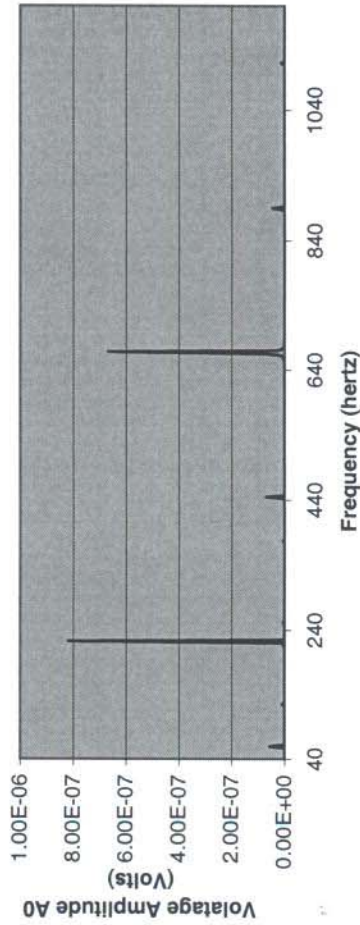
Relative Magnitudes of Harmonics 1-5 for open B string at t = 2.0 seconds



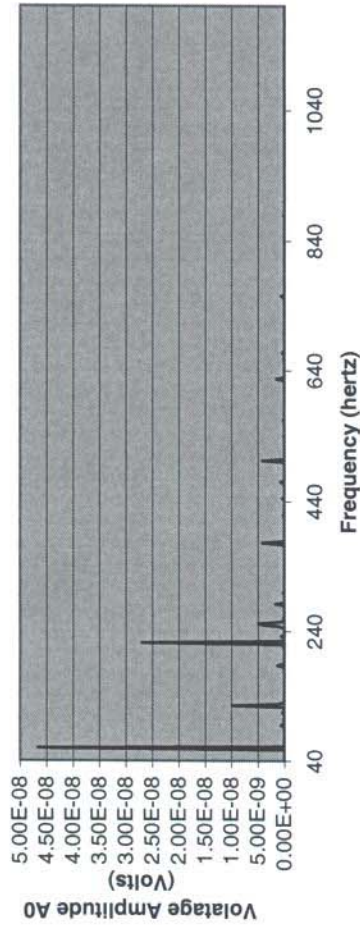
Relative Magnitudes of Harmonics 1-5 for open B string at t = 8.0 seconds



Relative Magnitudes of Harmonics 1-5 for open B string at t = 4.0 seconds

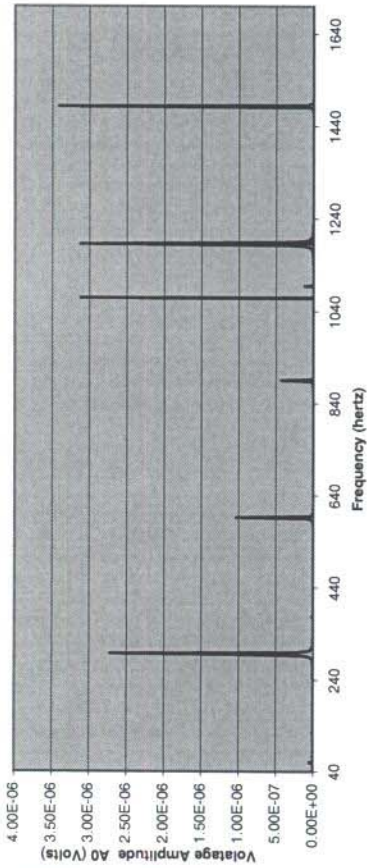


Relative Magnitudes of Harmonics 1-5 for open B string at t = 10.0 seconds

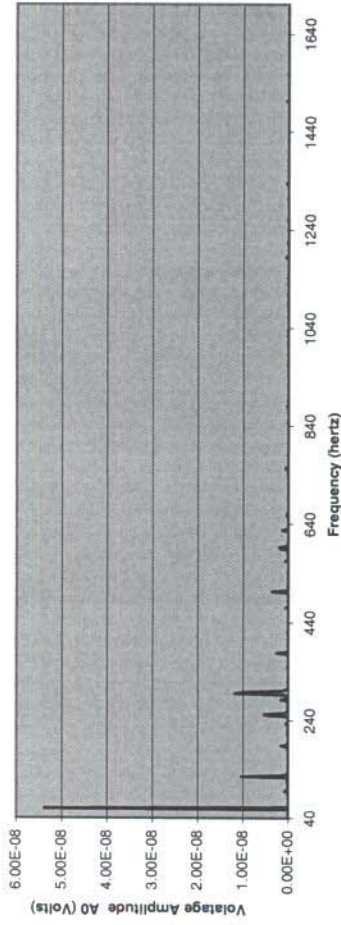


Appendix B6

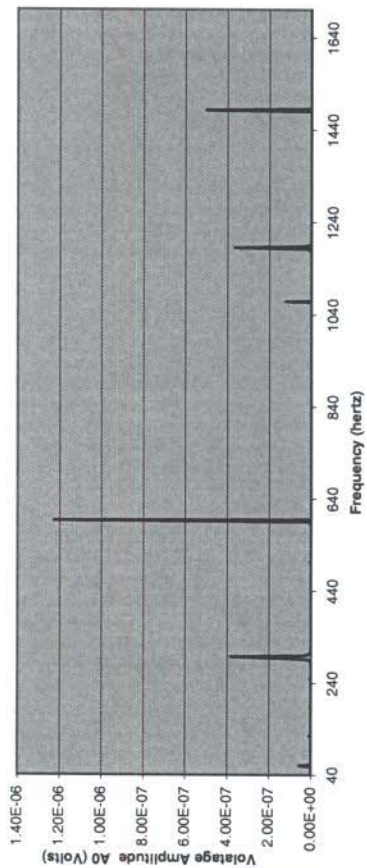
Relative Magnitudes of Harmonics 1-5 for open HighE string at t = 0.8 seconds



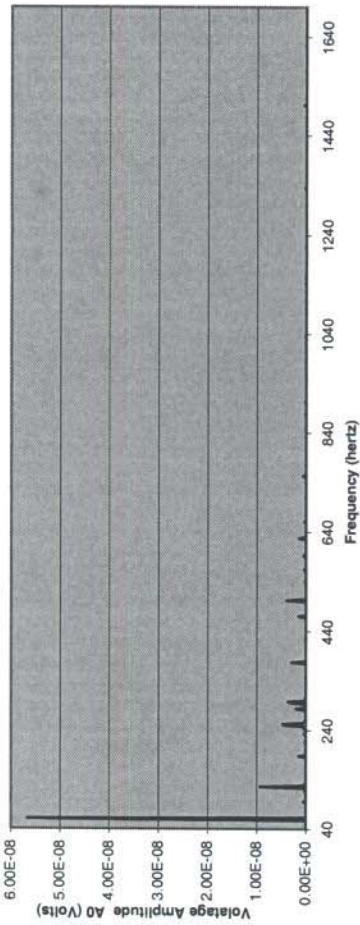
Relative Magnitudes of Harmonics 1-5 for open A string at t = 6.0 seconds



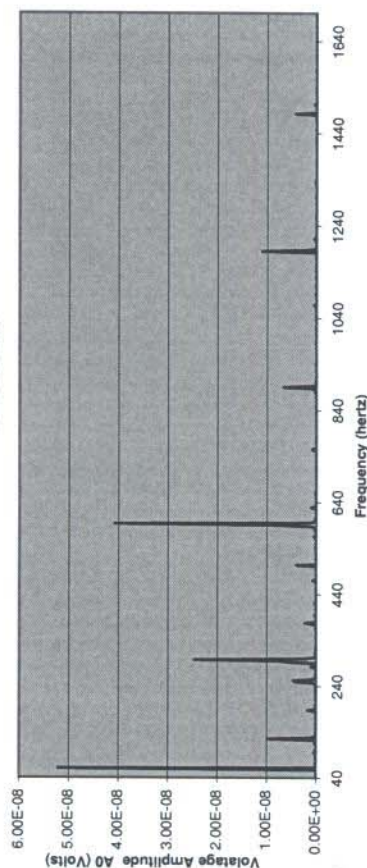
Relative Magnitudes of Harmonics 1-5 for open HighE string at t = 2.0 seconds



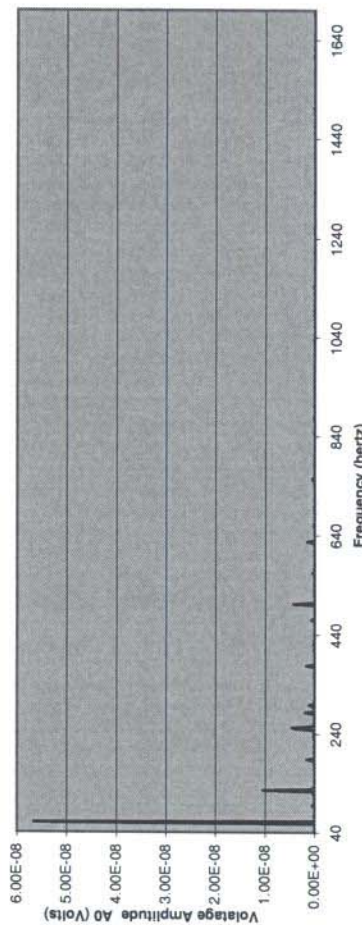
Relative Magnitudes of Harmonics 1-5 for open High E string at t = 8.0 seconds



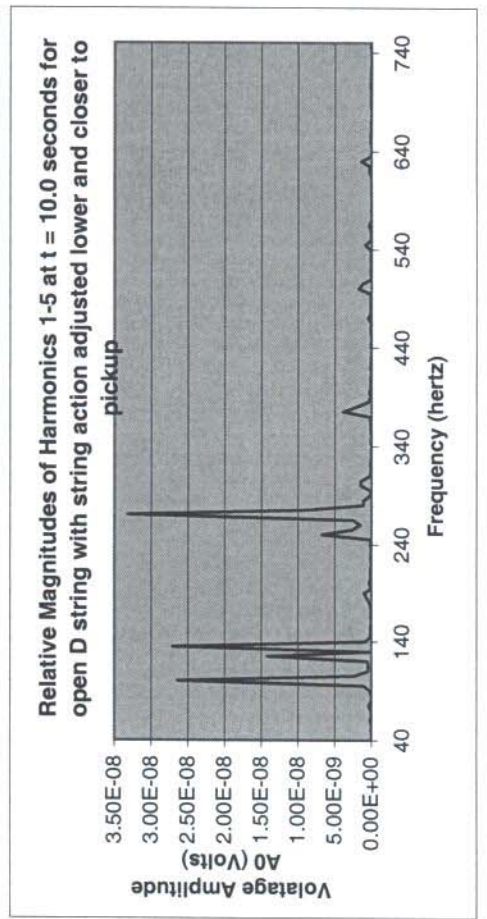
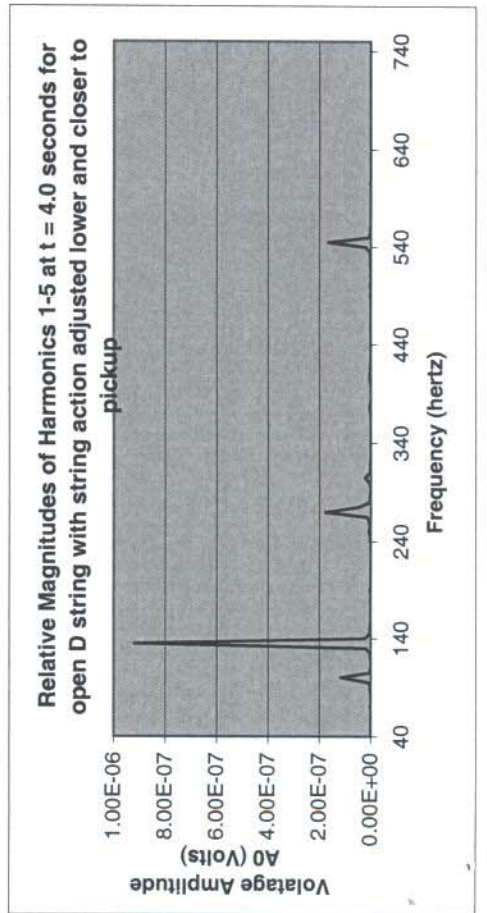
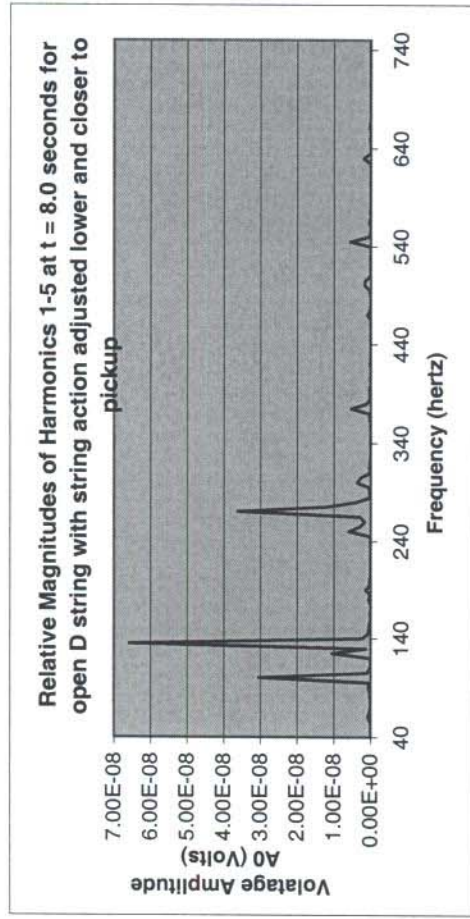
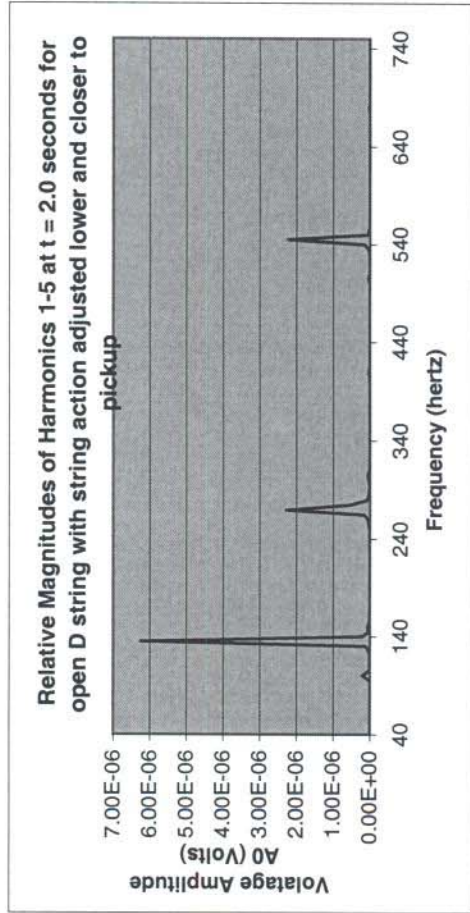
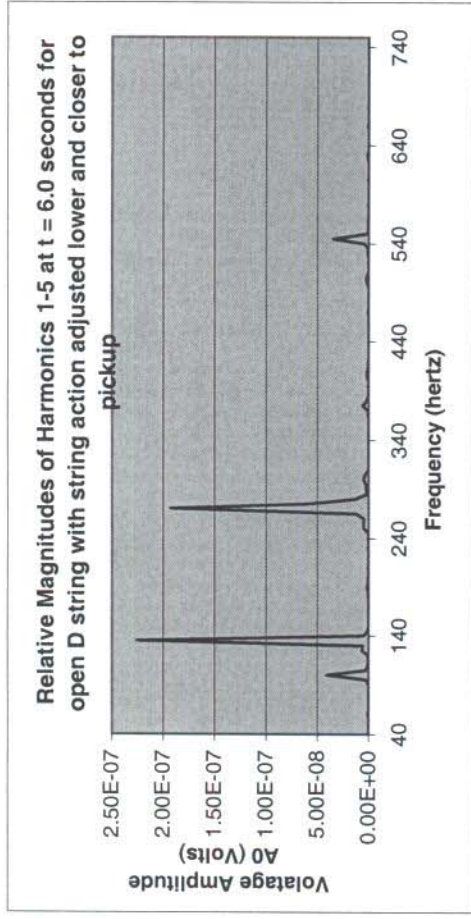
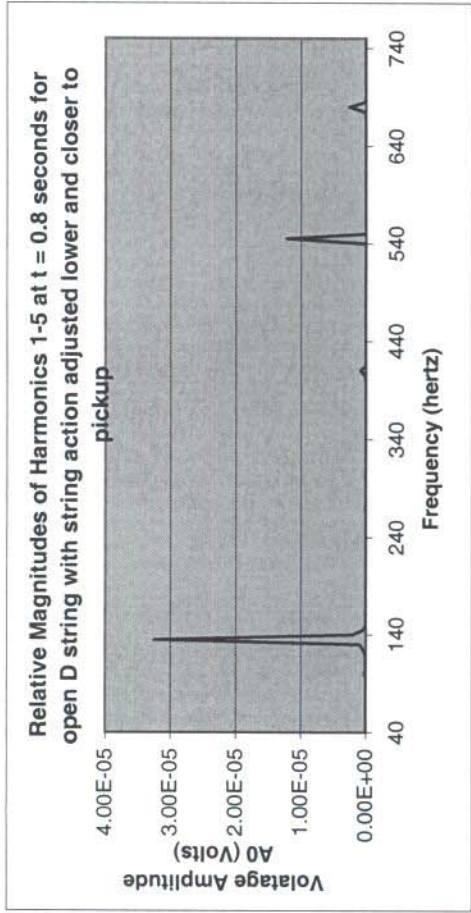
Relative Magnitudes of Harmonics 1-5 for open HighE string at t = 4.0 seconds



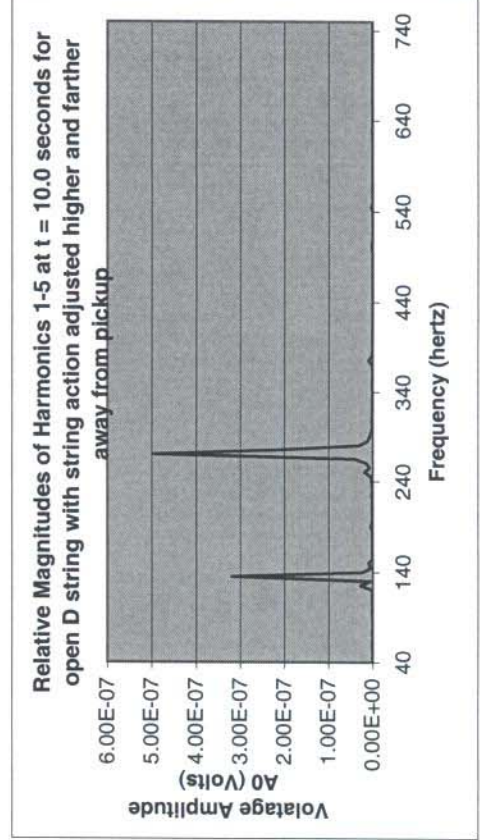
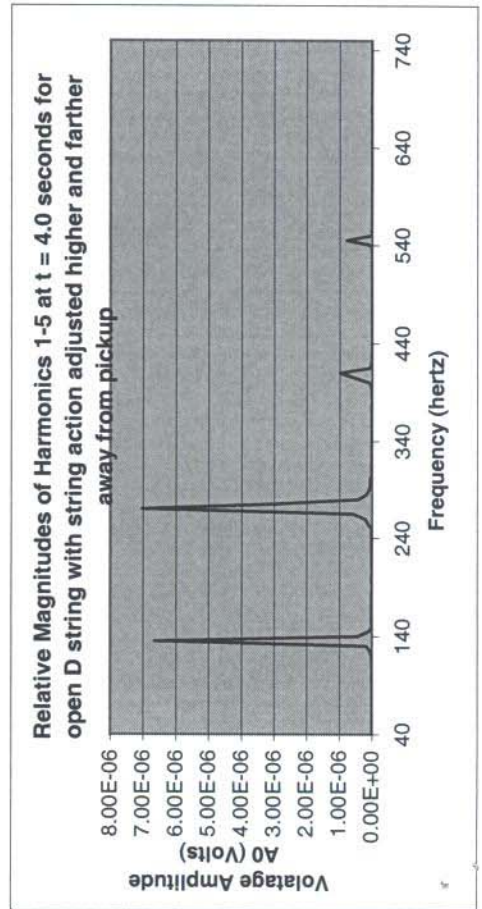
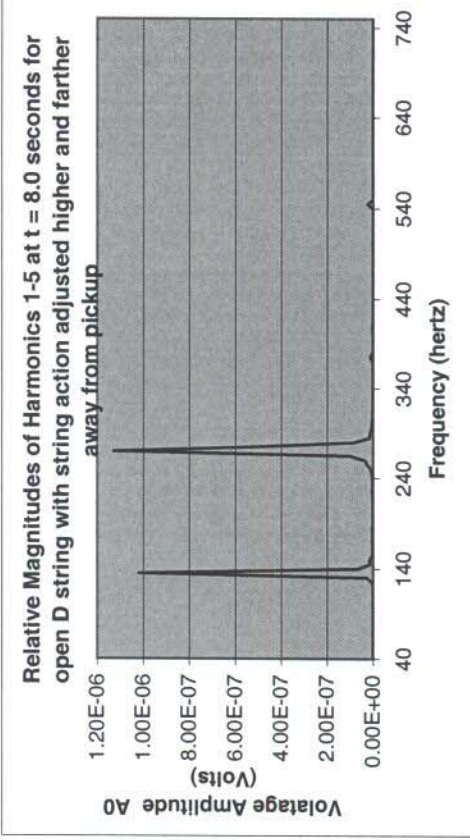
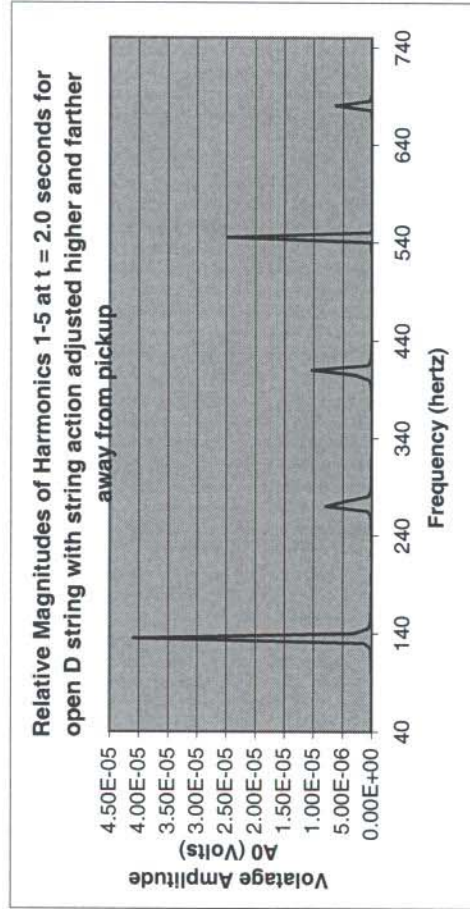
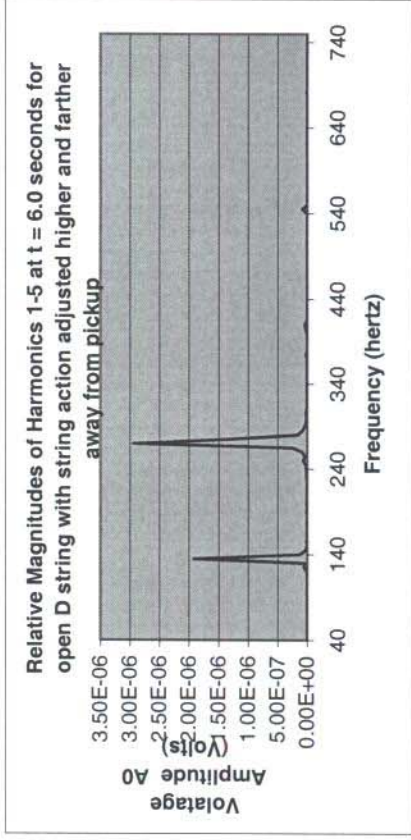
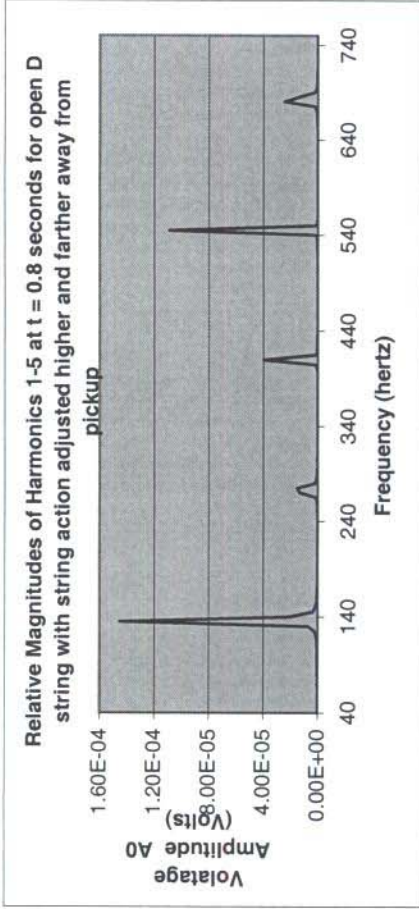
Relative Magnitudes of Harmonics 1-5 for open High E string at t = 10.0 seconds



Appendix B7



Appendix B8



Zoomed in Plot for open A string showing wider base of spike for 2nd Harmonic compared to 1st Harmonic (need to integrate over narrow range of frequencies for each harmonic to find overall magnitude of harmonic oscillation)

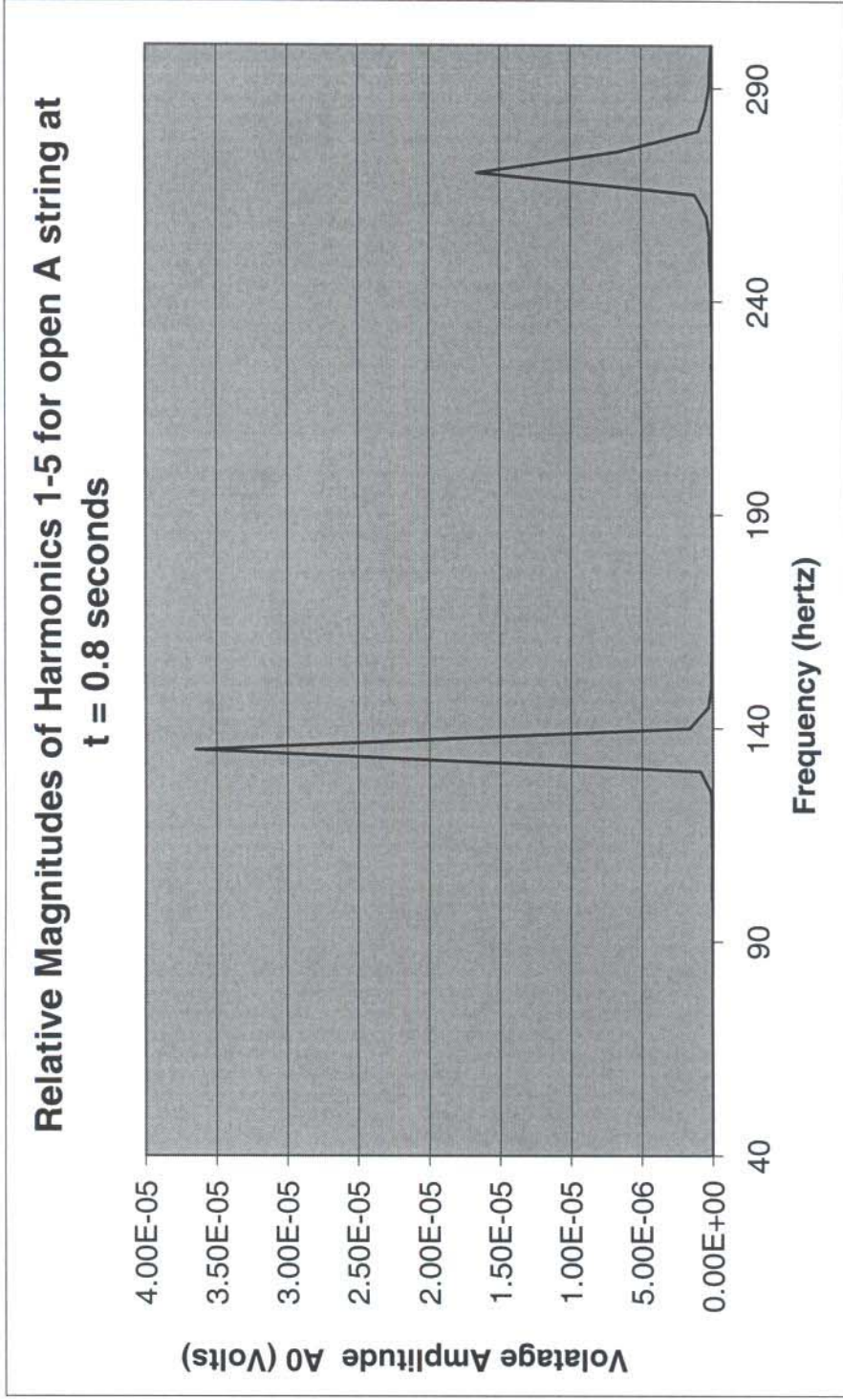


Table 1: Time Constants (all Tau's given in seconds)

Open Low E String		
<i>time elapsed</i>	<i>1st HarmonicDecayTau</i>	<i>2nd HarmonicDecayTau</i>
0.8 to 3.2 sec	7.209	1.188
2 to 6 sec	3.616	1.626
6 to 8.8sec	4.583	1.682

Open G String		
<i>time elapsed</i>	<i>1st HarmonicDecayTau</i>	<i>2nd HarmonicDecayTau</i>
0.8 to 3.2s	0.661	1.135
2 to 6 sec	1.423	1.852
6 to 8.8sec	0.727	1.409

Open A String		
<i>time elapsed</i>	<i>1st HarmonicDecayTau</i>	<i>2nd HarmonicDecayTau</i>
0.8 to 3.2s	4.926	1.346
2 to 6 sec	2.125	0.997
6 to 8.8sec	0.730	1.563

Open B String		
<i>time elapsed</i>	<i>1st HarmonicDecayTau</i>	<i>2nd HarmonicDecayTau</i>
0.8 to 3.2s	1.102	0.952
2 to 6 sec	10.513	0.892
6 to 8.8sec	1.529	1.186

Open D String		
<i>time elapsed</i>	<i>1st HarmonicDecayTau</i>	<i>2nd HarmonicDecayTau</i>
0.8 to 3.2s	1.779	1.074
2 to 6 sec	2.098	1.677
6 to 8.8sec	2.904	2.793

Open High E String		
<i>time elapsed</i>	<i>1st HarmonicDecayTau</i>	<i>2nd HarmonicDecayTau</i>
0.8 to 3.2s	0.656	1.045
2 to 6 sec	1.094	0.624
6 to 8.8sec	1.791	1.855

Varying Pickup Heights for Open D string				
<i>High Action</i>				
<i>Low Action</i>	<i>1st HarmonicDecayTau</i>	<i>2nd HarmonicDecayTau</i>	<i>1st HarmonicDecayTau</i>	<i>2nd HarmonicDecayTau</i>
0.8 to 3.2s	0.839	-38.584	1.014	3.876
2 to 6 sec	1.204	1.620	1.306	4.026
6 to 8.8sec	1.794	2.105	2.761	2.143