

# CONTENTS

	<i>Page</i>
Foreword	(i)
<b>1.0 Introduction</b>	<b>1</b>
1.2 Maximum and Minimum Swing Angles	1
1.3 Current Practices	1
<b>2.0 Mathematical Approach</b>	<b>5</b>
2.1 Introduction	5
2.2 Equations of Equilibrium	5
2.2.1 Undamped Case	5
2.2.2 Damped Case	8
2.3 Solution Procedure	8
2.4 Pattern of Wind Loading	8
2.5 Numerical Results	9
<b>3.0 Modelling and Fabrication</b>	<b>12</b>
3.1 Modelling Aspects	12
3.2 Model Fabrication	12
<b>4.0 Wind Tunnel Experiments</b>	<b>14</b>
4.1 Introduction	14
4.2 Drag Coefficient Evaluation	14
4.2.1 Model Preparation	14
4.2.2 Experimental Set up	14
4.2.3 Drag Force Measurements	14
4.2.4 Concept of Equivalent Flat Plate Area	15
4.2.5 Results	15
4.3 Drag Force Simulation	15
4.3.1 Parachute Model	19
4.4 Swing Angle Experiments	19
4.4.1 Model Preparation	19
4.4.2 Experimental Set Up	19
4.4.3 Test Procedure	22

<b>5.0</b>	<b>Analysis of Results</b>	<b>30</b>
5.1	Suspension String Assembly	30
5.2	V-String Assembly	30
5.3	Jumper Assembly	30
<b>6.0</b>	<b>Conclusion</b>	<b>40</b>
	References	40
	Appendix-1: Calculation of Parachute Area Required for Simulating Drag of Conductors	41
	Appendix-2: Calculation of Vertical Load of Conductors	41
	List of Symbols	42