



## **RISK ASSESSMENT FOR:** ***PENDULUM WAVE MACHINE***

(Version 1.1 prepared by Andy Benfield, June 2015)

<b>General</b>		
<b>Significant Hazards</b>	<b>People at Risk</b>	<b>Safety Controls</b>
Anything unforeseen by this risk assessment (pre-show)	Performers Audience	Pre-show assessment of performance area to ensure that all risks are identified. A new risk assessment will be carried out if necessary.
Anything unforeseen by this risk assessment (during show)	Performers Audience	Continuous assessment of risks to be maintained during the performance

<b>Building the apparatus</b>		
<b>Significant Hazards</b>	<b>People at Risk</b>	<b>Safety Controls</b>
Injury / damage due to interference from member(s) of the public	Public Build crew	<p>Ideally, the working area will be secured from public access by physical barriers during the building phase. If physical barriers are not possible, the build crew will ensure that the structure, tools and ladders are left in a way that nothing can fall or topple.</p> <p>Build crew to monitor behaviour of public in proximity and will be prepared to take action should any member(s) of the public behave in a dangerous manner.</p>

Use of power tools outdoors	Build crew	<p>Only 110v tools or battery powered tools will be used.</p> <p>All 110v transformers will be PAT tested. A splashproof box will be kept at site, for storage of tools if it rains</p>
Working at height	Build crew	<p>Ladders and/or working platforms are to be used for any work where a crew member needs to be above ground level.</p> <p>All ladders and platforms will be inspected before use and appropriate safety instructions shall be adhered to.</p> <p>All ladders must be footed at all times when they are in use. Worker(s) on platforms should be accompanied by at least one crew member at ground level.</p>
Lifting and moving heavy and bulky items	Build crew	<p>Safe lifting practices to be used: bend the legs not the back!</p> <p>If, during a 2-person carry, a crew member needs to walk backwards to move an item, the route should be checked for hazards and their companion should act as the eyes for the pair.</p>
Working with local crew	Build crew Local crew	<p>One phase of the construction process involves the need for extra people to assist in lifting frames into place. The lead member of the build crew shall brief the crew clearly, and check that the instructions are understood before the frames are lifted.</p>
Using 12volt power supplies	Build crew	<p>12V battery terminals will be protected from moisture</p> <p>Ensure that no jewellery around the hands and wrists will touch the poles of the 12volt battery.</p>

		<p>Connections to electronic components will be made by IP55 rated(or greater) fixtures.</p> <p>A master power switch will be used, with double pole isolation. Switch will be OFF before changing battery</p>
Charging 12V battery	Build crew Performers	<p>A smart charger will be used, that auto-detects any faults within the batteries</p> <p>Ensure that no jewellery around the hands and wrists will touch the poles of the 12volt battery.</p> <p>Smart charger will be PAT tested</p>
Apparatus not constructed safely	Build crew Local crew Public Performers	<p>The relevant method statement shall be followed, with phases being signed-off before moving onto the next phase.</p> <p>Build crew to remain on site and available to work, until final sign-off has been completed</p>

<b>Performances</b>		
<b>Significant Hazards</b>	<b>People at Risk</b>	<b>Safety Controls</b>
Injury / damage due to interference from member(s) of the audience	Public Performers	<p>Performers to monitor audience and be prepared to take action should any member(s) of the public behave in a dangerous manner.</p> <p>The pendulum balls are not sufficiently heavy to cause serious damage</p>
Tripping hazards on floor	Performers	Performers to familiarise themselves with the location of all items on floor, and take sensible precautions to avoid them.