



Risk Assessment For Interactive Game

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Interactive Game Risk Assessment

The following documentation has been prepared to compile a risk assessment on the **Bulb** and identify any potential risks/hazards to equipment or users.

In order to carry out this Risk Assessment I have assessed the level of risk for each particular hazard, risk or action.

There are three Levels of Harm and three levels of Likelihood of Harm occurring. A combination of these gives the Level of Risk from a particular hazard and thus the type of Action/Control Measure necessary to reduce the risk to an acceptable level. No activity can be made completely free of risk, but the level of that risk can usually be controlled.

The simple matrix illustrated can be used to assess the level of risk by a particular hazard.

LEVELS OF HARM

1. **Slightly harmful** – The injured party requires First Aid treatment eg superficial injuries (bumps and knocks), minor cuts and bruises, ill health leading to temporary discomfort. This level of injury is unlikely to result in absence from school or work.
2. **Harmful** – The injured party requires more than First Aid treatment eg visit to Hospital A & E or General Practitioner. Injuries might include lacerations, burns, concussion, serious sprains or minor fractures. Such injuries are likely to result in absence from work or school.
3. **Extremely Harmful** – Injuries including amputations, major fractures, poisoning, multiple of fatal injuries. Such injuries are likely to result in absence from work or school for extended periods.

LIKELIHOOD OF HARM

1. **Likely** – Only one event – one thing going wrong resulting in harm or the potential for harm arising.
2. **Unlikely** – More than one event must occur at the same time to cause harm or the potential for harm arising.
3. **Highly Unlikely** – More than two events must occur at the same time to cause harm or the potential for harm arising.



RISK ASSESSMENT MATRIX

	Slightly Harmful	Harmful	Extremely Harmful
Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate	Substantial Risk	Intolerable Risk

ACTION / CONTROL MEASURE

1. **Trivial Risk** – No action required
2. **Tolerable Risk** – No action required but monitor and review
3. **Moderate Risk** – Efforts should be made to reduce the risk. When moderate risk is associated with Extremely Harmful then additional control measures must be put in place to reduce the risk.
4. **Substantial Risk** – The activity must not commence until the risk is reduced.
5. **Intolerable Risk** - The activity must not commence until the risk is reduced. If it is not possible to reduce the risk the activity may have to remain prohibited.

Method:

Having identified the hazard / risk I have taken each individually and using the matrix calculated the Level of Risk. The assessment is highlighted in brown text. The calculated Risk is then transferred to the final Risk Assessment charts on pages 10 and 11 of this document

This produces the following results

Potential hazards/risks – The Interactive Playsystem

The Flight Case

The Flight Case	Slightly	Harmful	Extremely Harmful
Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate	Substantial Risk	Intolerable Risk

The Flight Case is a professionally custom made case for this purpose



Electric shock

Electric shock	Slightly	Harmful	Extremely Harmful
Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate	Substantial Risk	Intolerable Risk

The Interactive Playsystem uses a 12v converted system for charging converted from a standard 220v mains supply. All Bulb units contain the rechargeable batteries and are not exposed to User. The Interactive Playsystem uses wireless technology to transmit the scores from the bulb to the scoring pad

Trip Hazard

Trip Hazard	Slightly	Harmful	Extremely Harmful
Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate	Substantial Risk	Intolerable Risk

The Interactive Playsystem uses a charging system that requires an external mains supply so there is an identifiable risk (trip hazard). All other wires are contained within the flight case and do not offer any risk. The flight case stands off of the ground on attached legs, gain removing the trip hazard.

The Score Pad

Score Pad	Slightly	Harmful	Extremely Harmful
Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate	Substantial Risk	Intolerable Risk

The Score Pad is battery operated and therefore does not use mains electricity removing totally the risk of electric shock, tripping over cables and water within electric components. The LED low power lights are extremely strong and there is no risk foreseen. All components are not accessible to User and when in use forms part of the flight case

The final Risk Assessment chart for the Interactive Playsystem is page 11 of this document



Potential hazards/risks – The Bulb

The Bulb

The Bulb	Slightly	Harmful	Extremely Harmful
Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate	Substantial Risk	Intolerable Risk

The Bulb is made from a strong plastic that will not break through normal use.

Damage to the equipment that the Bulb is fitted to.

Damage to equipment	Slightly	Harmful	Extremely Harmful
Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate	Substantial Risk	Intolerable Risk

The Bulb has been designed to fit in a specifically designed pocket which will allow the Operator to insert and remove as necessary. The pocket is permanently fixed to the unit but does not impact the structure of the unit to which it is fitted. The Operator should remove all Bulbs before rolling or storing inflatable

Entrapment of fingers

Entrapment	Slightly	Harmful	Extremely Harmful
Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate	Substantial Risk	Intolerable Risk

The Bulb supplies sound and light and therefore requires small holes at the crown to allow the emission of sound. Using the ‘finger probe’ as required in EN 14960, the small diameter does not fit into the holes and therefore there is no potential risk. There are no other exposed parts available to users.



Electric shock

Electric shock	Slightly	Harmful	Extremely Harmful
Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate	Substantial Risk	Intolerable Risk

The Bulb is battery operated and therefore does not use mains electricity removing totally the risk of electric shock, tripping over cables and water within electric components. The LED low power lights are extremely strong and there is no risk foreseen. All components are fixed inside the Bulb and are totally inaccessible without tools.

The final Risk Assessment chart for the Bulb is page 13 of this document

Potential hazards/risks – The User

Entrapment

Entrapment	Slightly	Harmful	Extremely Harmful
Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate	Substantial Risk	Intolerable Risk

The only possible area of perceived entrapment is the sound emission holes and these are less than the smallest finger probe as set out in EN 14960

Electrocution

Electrocution	Slightly	Harmful	Extremely Harmful
Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate	Substantial Risk	Intolerable Risk

The Bulb is battery operated and therefore does not use mains electricity removing totally the risk of electric shock, tripping over cables and water within electric components. The LED low power lights are extremely strong and there is no risk foreseen. All components are fixed inside the Bulb and are totally inaccessible without tools. The 12v charging system is contained within the 'Games Box' and is not accessible to the User.

Climbing

Climbing	Slightly	Harmful	Extremely Harmful
Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate	Substantial Risk	Intolerable Risk



The Bulb has been developed with no flat edges and any attempt to climb on the bulb will result in the user sliding safely off.

Injury during use

Injury	Slightly	Harmful	Extremely Harmful
Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate	Substantial Risk	Intolerable Risk

The only identifiable risk is that the user could come into contact during play. As the Bulb is not a solid fixing within the play area, it will depress on any impact. Any impact could potentially result in bruising during normal play but no other injury is obvious.

The final Risk Assessment chart for the User is page 12 of this document

In the final Risk Assessment charts 'Harm', 'Likely hood' and 'Risk' are graded 1 – 5 where 1 is the lowest and 5 is the highest rating as follows

Harm

- 1 The injured party requires First Aid treatment eg superficial injuries (bumps and knocks), minor cuts and bruises, ill health leading to temporary discomfort. This level of injury is unlikely to result in absence from school or work.
- 2 The injured party requires more than First Aid treatment eg visit to Hospital A & E or General Practitioner. Injuries might include lacerations, burns, concussion, serious sprains or minor fractures. Such injuries are likely to result in absence from work or school.
- 3 Injuries including amputations, major fractures, poisoning, multiple of fatal injuries. Such injuries are likely to result in absence from work or school for extended periods.

Likely hood

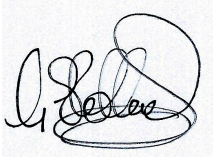
- 1 One event must occur at the same time to cause harm or the potential for harm arising.
- 2 More than one event must occur at the same time to cause harm or the potential for harm arising.
- 3 More than two events must occur at the same time to cause harm or the potential for harm arising.

Risk

- 1 No action required
- 2 No action required but monitor and review
- 3 Efforts should be made to reduce the risk. When moderate risk is associated with Extremely Harmful then additional control measures must be put in place to reduce the risk.
- 4 The activity must not commence until the risk is reduced.
- 5 The activity must not commence until the risk is reduced. If it is not possible to reduce the risk the activity may have to remain prohibited.




RISK ASSESSMENT - 'The Interactive Playsystem'

HAZARD	EXISTING CONTROL MEASURES	HARM (1-3)	LIKELY HOOD (1-3)	RISK (1-5)	FURTHER CONTROLS TO REDUCE RISK	RISK ACCEPTABLE Y/N
Flight Case	Check for defects prior to each use	1	1	1	Periodic checks during use	Y
Trip Hazard	All components are within case apart from mains supply lead	1	1	1	Cover mains supply lead	Y
Score pad	All components are within the score pad. Forms part of flight case during use	1	1	1	None required	Y
Electric Shock	All components are battery operated and charged with a converted 12v supply	1	1	1	Ensure Bulb is fitted correctly in pocket prior to each use	Y
RISK ASSESSMENT CARRIED OUT BY:	 George Holland			DATE: 27/4/2022	ANY OTHER ACTION REQUIRED: This Risk Assessment is based on all known facts at date.	

THE ABOVE INFORMATION IS BASED ON MANUFACTURERS INFORMATION AT DATE SHOWN




RISK ASSESSMENT - THE USER

HAZARD	EXISTING CONTROL MEASURES	HARM (1-3)	LIKELY HOOD (1-3)	RISK (1-5)	FURTHER CONTROLS TO REDUCE RISK	RISK ACCEPTABLE Y/N
Entrapment	The Bulb has been tested to ensure the sound emission holes do not take the smallest finger probe as per EN 14960. No exposed components	1	1	1	Ensure no damage to holes prior to installation at each session	Y
Electrocution	The Bulb is battery operated and poses no risk	1	1	1	None required	Y
Climbing	The Bulb shape has been developed so that it has no straight edges and therefore climbing is not possible	1	1	1	None required	Y
Injury	The Bulb in effect floats when a user falls against it. It may be possible for bruising during normal use	1	1	1	Monitor and re assess after substantial use	Y
RISK ASSESSMENT CARRIED OUT BY:	George Holland 			DATE: 27/4/2022	ANY OTHER ACTION REQUIRED: This Risk Assessment is based on all known facts at date. A further Risk Assessment should be carried out once the Bulb has been in use for 12 months or sooner should any unforeseen risk/hazard become obvious	



RISK ASSESSMENT - THE 'BULB'

HAZARD	EXISTING CONTROL MEASURES	HARM (1-3)	LIKELIHOOD (1-3)	RISK (1-5)	FURTHER CONTROLS TO REDUCE RISK	RISK ACCEPTABLE Y/N
Shatters during use	Check for defects prior to each use	1	1	1	Periodic checks during use	Y
Damage to components	Specifically designed fixing system	1	1	1	Check pockets prior to each use and at conclusion of session	Y
Entrapment	All components are within the Bulb. Sound emission holes smaller than smallest finger probe	1	1	1	None required	Y
Electric Shock	All components are battery operated	1	1	1	Ensure Bulb is fitted correctly in pocket prior to each use	Y
RISK ASSESSMENT CARRIED OUT BY:	George Holland 			DATE: 27/4/2022	ANY OTHER ACTION REQUIRED: This Risk Assessment is based on all known facts at date. A further Risk Assessment should be carried out once the Bulb has been in use for 12 months or sooner should any unforeseen risk/hazard become obvious	

THE ABOVE INFORMATION IS BASED ON MANUFACTURERS INFORMATION AT DATE SHOWN