**T05**

**Reaction Time Game**

**Requirements**

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# Revision History

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| --- | --- | --- | --- |
| Rev # | Reviser | Date | Comments |
| 1.0 | Jacob, Kris, Ryan | 10/25/14 | Document created |
| 1.1 |  |  |  |
| 1.2 |  |  |  |

# 

# Functionality

* The game must accept user button inputs and display reaction speed relative to a visual cue.
* Must accommodate 1 – 4 players
* The game must declare a winner

# Performance

* Must be able to time in milliseconds
* Unit must function stand alone
* User must be able to have a continuous gaming experience
* Must be able to run for 6 hours

# Economic

* Must cost less than current gaming consoles

# Energy

* Must have a rechargeable battery
* Must be chargeable without removing the battery

# Health and Safety

* Must operate without hurting people

# Environmental

* Must not use non-rechargeable batteries
* Must use ROHS compliant parts when applicable

# Maintainability

* Must use parts from established sources
* The microcontroller must be replaceable by the use
* The battery must be replaceable by the user

# Manufacturability

* Case must be able to be manufactured by the equipment in existing campus labs
* PCB must be a 2 layer board

# Operational

* Game must be portable
* Must be robust enough to survive a typical user experience

# Usability

* The game should be learnable in less than 5 minutes by ages 2 – infinity
* The user interface should be usable by those with impaired or underdeveloped motor skills