

# National Science Olympiad 2015 – Mission Possible C

Supervisors will record this information for each team & each team is encouraged to use this form as a **pre-tournament Checklist!**  
Supervisors can also record the numbered items below on the Mission Possible excel spreadsheet found at [www.soinc.org](http://www.soinc.org)

Team Number: C\_\_\_\_ Team Name: \_\_\_\_\_  
Student Names: \_\_\_\_\_ Final Score: \_\_\_\_\_

## Safety

- |  |             |          |
|--|-------------|----------|
| 2. Did all team members properly wear safety spectacles with side shields at all times?              | Y           | N        |
| 2. and 3.i,k. Did the device pass safety inspection?   | Y           | N        |
| <b>IF EITHER OF THE ABOVE IS UNRESOLVED, DO NOT RUN (PARTICIPATION POINTS). IS THIS DEVICE SAFE?</b> | <b>1. Y</b> | <b>N</b> |

## Construction and Competition Parameters

### General

- |  |   |   |
|--|---|---|
| 3.a. All parts of the device fit and stay within a 60.0 cm x 60.0 cm x 60.0 cm imaginary cube during operation.  | Y | N |
| 3.b. Device begins with the Start Task and ends with the Final Task, as listed in Section 4.   | Y | N |
| 3.c. Device is designed to operate autonomously after initiating the Starting Task.  | Y | N |
| 3.e. All scorable actions and transfers are visible.   | Y | N |
| 3.f. All non-scorable Action and transfer, if any, contribute to the task sequence.  | Y | N |
| 3.g. No computers or integrated circuits are used (except an unmodified commercially sold buzzer in the final task)  | Y | N |
| 3.h. Continuous action(s) designed to take up time is not electrical. And at State or National, transfers that utilize electricity in any way with the intention to accomplish the idea time are not adjusted. | Y | N |
| 3.j. All sources of energy and actions are contained within the imaginary box before, during, and after the device's operation.  | Y | N |
| 3.k. Voltage to any single electrical circuit $\leq$ 10.0 volts, and all batteries are factory-sealed and voltage labeled by the manufacturer. Lead-acid batteries are not used.                               | Y | N |
| 3.l. Motors are not activated prior to starting the device.  | Y | N |
| 3.m. The top and at least one vertical wall are open or transparent for viewing all actions and tasks.   | Y | N |
| 4. Each single Action or component contribute to only one scoreable Transfer.  | Y | N |
| 4.d. Parallel steps are not present.   | Y | N |

**IS THIS DEVICE FREE OF ANY CONSTRUCTION AND COMPETITION VIOLATIONS** **2. Y** **N**

## Scoring Points:

- |  |                  |                 |                 |
|--|------------------|-----------------|-----------------|
| 5.g. Dimensions of the device in cm to the nearest 0.1 cm:   | 3. Height: _____ | 4. Width: _____ | 5. Depth: _____ |
| 5.b. Is the ASL submitted as designated by the Tournament Director?  | 6. Y             | N               |                 |
| 5.c. Does the ASL use the format specified?  | 7. Y             | N               |                 |
| 5.d. Is the ASL 100% accurate of intended scorable and unscored Actions and ETS?   | 8. Y             | N               |                 |
| 5.e. Are the scoreable Actions and ETS within the device, and are they correspondingly labeled in the ASL?   | 9. Y             | N               |                 |
| 5.f. Did the team use no more than 30 minutes to set up their device?  | 10. Y            | N               |                 |
| 5.h. All requirements of the Start Task are met: A golf ball is dropped into the device to initiate the first action and the golf ball is dropped from a location higher than the entire device.   | 11. Y            | N               |                 |
| 5.j. Number of golf balls properly dropped and staying in any approved scoring jug. Golf balls are properly dropped if they are lifted from a point below the bottom of the lowest scoring plastic beverage jug(s) and dropped into the scoring jug.   | 12.              |                 | _____           |
| 5.k. All requirements of the Final Task are met: The last golf ball to be counted triggers a switch to activate a buzzer to signal the end of the Device's operation. The buzzer is clearly audible to the judges.   | 13. Y            | N               |                 |
| 5.l. Number of successful unique ETS (max 6). In order for it to be successful, it must 1) be initiated by the process of a golf ball moving into a scoring jug; 2) has a sequence of 2 or more transfers from one Energy Form to a different Energy Form; 3) the ETS is successful in its entirety as listed in the ASL; 4) it causes the next golf ball to move toward and into a scoring jug; 5) the device ceases to work when the ETS is not successful or the ETS is removed; 6) both the initiating golf ball and next golf ball drop into a scoring jug. | 14.              |                 | _____           |
| 6.c. Number of times the device is touched, adjusted, or restarted.  | 15.              |                 | _____           |
| 6.d. Did any part or substance leave the boundary of the device during the operation?  | 16. Y            | N               |                 |
| 4.h. Ideal operation time in seconds to the nearest 0.1 s (Regional: 60.0 s, State: 60.1 s to 90.0 s, National: 90.1 s to 120.0 s).  | 17.              |                 | _____           |
| 5.d. Run time of the device in seconds to the nearest 0.1 sec (max 180.0 sec).   | 18.              |                 | _____           |

## Other

- |   |       |   |
|---|-------|---|
| 5.a. Device is able to compete.   | 19. Y | N |
| 3.c. The device is not remotely timed or controlled.  | 20. Y | N |
| 7. Was the device impounded before the deadline (leave this blank for Regional Tournament)? | 21. Y | N |