

Ocean Observing Systems Score Sheet

School/Team: _____

Team captain: _____

Mission station officials: _____

5-Minute Set-Up and Safety Check

- All power cords, power bars, pressurized cylinders, etc. are secured.
- A fuse is present in the vehicle's electrical system.
- No hazardous materials are leaking onto the pool deck.
- Vehicle is hand-launched by team members in a safe manner.
- No team member has entered the water in order to prepare and/or launch vehicle.
- Vehicle is in the water near the side of the control shack at the end of the 5-minute set-up period.

Note: Teams may attach the electronics module (see Task #1 below) to the ROV on the pool deck or when the ROV is in the water at the side of the pool. The attachment should be completed during the teams 5 minute set up time.

Mission official's notes: _____

- Team is ready for the mission:** _____ (official's initials)

Note: An official's decision to disqualify a team due to safety concerns is final. If there is a safety concern, please contact the lead official or competition coordinator.

Fuses

If a team blows their 40-amp fuse, their mission performance period is over. The team will receive points for the mission tasks they have completed up to that point, but will not receive a time bonus score.

Task #1 – Complete the central node.

Scoring – 110 points

- _____ Transport the electronics module from the surface control shack to the frame under the control of the ROV – **20 points**
- _____ Place the electronics module in the hole located on the top, horizontal surface of the trawl-resistant frame so that it fits completely in the hole and remains there once the ROV has released it – **30 points**
- _____ Open the door of the trawl-resistant frame to gain access to the open ports located on the electronics module – **20 points**
- _____ Retrieve the power/communications connector from its stand on the seafloor – **20 points**
- _____ Insert the power/communications connector into the correct open port on the electronics module so that it remains in the port and attached to the closed end of the port once your ROV has released it – **20 points***

*No partial points are given for a partial insertion. If the power/comms connector is inserted but comes out of the port once the ROV has released it, no points are awarded. Teams are permitted to retrieve the power/comms connector and try the insertion as many times as needed to achieve a successful connection. The door of the trawl-resistant frame does NOT need to be closed once the power/comms connector is inserted.

No points are awarded if the power/comms connector is inserted into the instrument port.

Total Task 1 score: _____

Task #2 – Lay the instrument cable through assigned waypoints and connect it to the central node.

Scoring – 60 points

- _____ Retrieve the instrument connector from its position on the seafloor – **20 points**
- _____ Lay the cable through 4 waypoints* – **up to 20 points** (5 points for each waypoint)
- _____ Insert the instrument connector into the correct open port on the electronics module so that it remains in the port and attached to the closed end of the port once the ROV has released it** – **20 points**

*Teams may lay the cable through the waypoints in any order, but they must lay the cable through all 4 waypoints in order to receive full points.

Teams may skip a waypoint(s); however, they do not receive points for the skipped waypoints. For example, if the ROV lays the cable through 2 waypoints before connecting it to the central node, the team is only awarded 10 points. Teams may “undo” a waypoint(s). However, once they remove cable from a waypoint(s) they lose the points that they received for that waypoint(s). Points are only returned if they ROV re-lays the cable through the waypoint(s).

The ROV may release the instrument connector, retrace its path to lift the cable into a missed waypoint(s), retrieve the instrument connector, and continue on to insert it into the open port. The ROV may also first insert the instrument connector into the port then move the cable into a missed waypoint(s). Full points are only given if, when the mission performance period ends, the cable is laid through all 4 waypoints and the instrument connector is successfully inserted into the port

**No partial points are given for a partial insertion. If the instrument connector is inserted but comes out of the port once the ROV has released it, no points are awarded. Teams are permitted to retrieve the instrument connector and try the insertion as many times as needed to achieve a successful connection. The door of the frame does NOT need to be closed once the instrument connector is inserted.

No points are awarded if the instrument connector is inserted into the power/comms port.

Total Task 2 score: _____

TIME BONUS

1 point for every minute & 0.01 point for every second under 30 minutes remaining

For example, the duration of the mission is 25 minutes, 27 seconds. Minutes under 30 remaining = 4; seconds = 33. 4 minutes x 1 point = 4 points; 33 seconds x 0.01 points = 0.33. Therefore, the total time bonus = 4.33 points.

Duration of mission: _____

Minutes under 30 remaining: _____ x 1 point = _____

Seconds remaining _____ x 0.01 points = _____

TIME BONUS: _____

Note: The mission performance period ends when the ROV has 1) successfully completed the two mission tasks; 2) returned to the surface; and 3) physically touched the side of the pool in front of the control shack under its own power.

The ROV does not need to return to the surface between tasks.

PENALTY POINTS

_____ Illegal pulling on tether (second infraction) – minus 5 points*

_____ Illegal communication (second infraction) – minus 5 points

_____ Modifications made to the electronics module or other props – minus 5 points

_____ Flotation or other materials left attached to the electronics module – minus 5 points

_____ Severing the power/communications cable connector – minus 5 points

_____ Minus 1 point per each additional minute above 5-minute demobilization period

*Pulling on the tether to retrieve a disabled vehicle, including those disabled by a blown fuse, is an automatic penalty of 5 points.

TOTAL PENALTY POINTS: _____

SUMMARY

TOTAL SCORE = TOTAL TASK SCORE + TIME BONUS – penalty points

Task #1 _____ + Task #2 _____ =

TOTAL TASK SCORE _____ + TIME BONUS _____ – penalty points _____ =

TOTAL MISSION SCORE _____

Mission official's initials: _____ **Team captain's initials:** _____