

Dear MATE teams new and old,

April 15, 2008 email

As you know safety is the single most important factor in the design and operation of ROVs. This is true in industry and in our event. Obviously the use of electrical power in an aquatic environment presents many potential hazards. Over many years our judges have struggled with allowing teams the most opportunity to innovate while also ensuring a safe environment for competition participants. There has been much confusion every year when teams bring their ROVs to the event and undergo safety and engineering evaluations. Therefore the following statements may be of value as you finalize your vehicles for entry in the international competition.

- 1) All ROVs must use MATE provided topside power supplies. For EXPLORER class teams, this power supply will have connections for 48, 36, 24 and 12 volts DC.
- 2) ROVs may choose to step-DOWN (but not up) the voltage from the MATE power supply. This may be executed either above or below the waterline.
- 3) Onboard power (use of batteries in any submerged capacity) is prohibited with ONLY the following exceptions:
 - a) Commercial-off-the-shelf (COTS) dive lights powered by COTS batteries may be used.
 - b) Instruments (e.g. temperature probes) may make use of COTS batteries. However these batteries must be contained within watertight housings isolated from the main ROV systems. Professionally built housings (vs. "homemade") are the recommended method of protecting COTS batteries from exposure to water.
 - c) Teams whose ROVs include onboard power for instrumentation and/or dive lights should be prepared to demonstrate that they understand the safety implications and have used "best practices" to make their designs safe. Commercially designed and purchased housings will be much more likely to succeed this evaluation.
 - d) For the purposes of this competition COTS batteries are considered 9V, D-Cells, C-Cells, AA-Cells or AAA-Cells or "button" type batteries. Teams must provide the manufacturer information on any COTS batteries and should be able to show spare batteries in unopened commercial packaging. Full technical details of any COTS batteries must be available to competition officials upon request.
- 4) A panel of engineering and safety judges will make final determination on the safety of all ROVs. ROVs denied the opportunity to operate in the water will still be welcome to participate in other phases of the competition.

We recognize that these interpretations of the competition rules may differ from your own understanding, or even from what you experienced at regional competitions. Upon careful consideration of questions being submitted, and after consultation with the international host facility, we must insist upon these rules. Teams are advised to present any uncertainties they have about their planned power systems as soon as possible for further review.

Failure to account for these conditions of safe ROV operation may result in disqualification from the event.

Thank you for your interest in the MATE ROV Competition and understanding the importance of maintaining the highest standards of safety in our competition.

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