

RANGER CLASS DEMONSTRATION – *NOTE CHANGES IN 2017!!!*

RANGER class companies that are determined by the MATE Center to be prohibitively far from a regional event are required to submit a video that:

- Demonstrates the ability of their vehicle to perform specific tasks;
- Shows compliance with MATE's design and build specifications.

Video specifications: The video **MUST** show the following ROV features for the specified amount of time. Companies can choose to narrate the video to better explain how their vehicle meets these required specifications.

The video **MUST** show in this order:

1. 15 seconds (or more) showing a properly sized fuse or breaker. The company **MUST** use a ruler to show that this fuse or breaker is within 30 cm of Anderson Powerpole connectors. **(ELEC-008R, ELEC-010R)**.
2. 30 seconds (or more) of the inside of the control box showing the wiring and components. MATE will be looking for:
 - No exposed wiring **(ELEC-017R)**.
 - That the control box is neatly laid out with attention to workmanship. **(ELEC-022R)**.
 - Separation and identification of 120VAC wiring from DC and control voltages. **(ELEC-023R)**. If 120VAC is not used in the control box, you should video a slide stating that AC power is not used in the control box.
3. 15 seconds (or more) showing wires entering and leaving control systems and strain reliefs for those wires and tether. **(ELEC-024R)**
4. 30 seconds (or more) showing any hydraulic / pneumatic systems including a pressure release valve and regulator in the system **(FLUID-007, FLUID-011)**, and that any pressurized cylinder, pressure storage device meets the MATE specifications of **(FLUID-012, FLUID-013)**. In addition, the type of fluid should be clearly stated in the video **(FLUID-002, FLUID-003, FLUID-004)** If the vehicle does not use fluid power, **you should video a slide stating that Fluid Power is not used on this ROV for 10 seconds.**
5. 60 seconds (or more) total, 10 seconds (or more) per side of the ROV (4 sides plus top and bottom) showing that all motors are waterproofed and propellers are shrouded. There are no sharp edges or elements of the ROV that could cause damage **(MECH-006, ELEC-017R)**.

Video demonstrating specific tasks: Following those requirements, the video must demonstrate that the ROV can complete the **Entertainment** product demonstration task. The ROV must complete the entire task within 15 minutes.

The **UNCUT** video must show the vehicle:

1. Launching safely from the side of the pool and maneuvering to the platform.

See specifications (**MECH-004 & MECH-005**).

2. Completing the entire **Entertainment: Light and Water Show Maintenance** task. This includes:
 - a. Disconnecting the power cable from the platform.
 - b. Turning the valve to stop the flow of water to the platform.
 - c. Disengaging the locking mechanism at the base of the fountain.
 - d. Removing the old fountain.
 - e. Installing the new fountain.
 - f. Re-engaging the locking mechanism at the base of the fountain.
 - g. Turning the valve to restore the flow of water to the platform.
 - h. Reconnecting the power cable to the platform.
 - i. Returning the old fountain to the surface, side of the pool.

The camera angle must demonstrate that the ROV is under its own power and not being guided by human assistance when in the water. The MATE Center requires that the camera show the complete ROV in the field of view at all times. A video that cuts between camera angles will not pass the demonstration requirement as “uncut” footage. The video is permitted to show a split screen or may incorporate a separate window showing the ROV camera or other footage. However, the video **MUST** show an uncut view of the vehicle from launch to completion of the task. The task must be completed within 15 minutes.

Companies must follow the product demonstration order as laid out in the product demonstration task mission notes.

Videos must be submitted no later than 11:59 PM, Hawaii time, May 13th, 2017. Videos must be uploaded to YouTube or Vimeo and the link shared via the form located here – <https://www.emailmeform.com/builder/form/IFKbdLUvk3e1V>.

MATE competition organizers will review the videos and respond by May 27th. Video submissions will NOT be accepted after May 13th – NO EXCEPTIONS. If the video does not clearly demonstrate that the company’s vehicle meets the specifications and accomplishes the tasks, the team is not eligible to participate in the international competition. No extensions past the due date will be given for any reason.

MATE strongly encourages companies to submit their videos well before May 13th. That way, if an issue is found, companies will have the opportunity to address the issue and submit an updated video before the May 13th deadline. Note that it may take MATE up to 5 working days to evaluate a video submission.