

2020 MATE ROV COMPETITION TECHNICAL DOCUMENTATION SCORE SHEET - RANGER AND EXPLORER

Judge Name (First Last): See Instruction Tab
 Competition Class: See Instruction Tab
 Company #: See Instruction Tab

Final Score	0
Safety Score	0



COMPANY/SCHOOL NAME: N/A

Category	Criteria	Scoring Requirements	Enter your scores here	Raw Score	Points Possible by category	Raw %	Weight	Category Score	Comments
	Systems approach	Described how the company brainstormed ideas		0					
		Used rational process (data, trade study) to evaluate alternatives		0					
	Vehicle structure	Company demonstrated a balanced systems approach to the design: e.g. good integration between vehicle and sensors, holistic approach to vehicle systems		0					
	Vehicle systems	Described trade-offs and rationale for vehicle cost, size, and weight		0					
	Control/Electrical system	Described logically and clearly how components and materials were selected to perform specific tasks in a cost effective way		0					
		Described how the design evolved to meet the mission specifications		0					
	Propulsion	Described the vehicle's electronic design and cabling		0					
		Described the control system design (to include code, if applicable)		0					
		Demonstrated understanding of tether design and requirements		0					
		Developed and described a tether management protocol		0					
	Buoyancy and Ballast	Explained rationale for number, type, and placement of thrusters		0					
		Described trade-offs to balance power consumption, cost, performance and mission requirements		0					
	Payload and Tools	Description of buoyancy system that demonstrates application of buoyancy principles		0					
	Build vs. buy, new vs. used	Explained rationale for number, type, and placement of cameras		0					
		Payload tools were designed to meet mission requirements		0					
		Sensors were designed or selected to meet mission requirements		0					
		Explained build (in-house) vs. buy (outsource) decisions and how they related to mission requirements		0					
		Explained new vs. re-used/inherited decisions and how reused components meet requirements for this year		0					
SID	System Integration Diagrams			0	1	0%	5%	0.00	
	<i>Max 1 point</i>	SID was included with the report <i>Note: Pre-competition safety inspectors will review and score in greater detail</i>		0					
Safety	Content			0	12	0%	10%	0.00	
	Safety procedures	Described the safety rationale, including how it covers personnel, equipment, and operational safety		0					
		Highlighted safety features and other vehicle-specific safety precautions related to tasks		0					
		Document included a checklist for construction and operation		0					
Critical Analysis	Testing and Troubleshooting			0	12	0%	10%	0.00	
		Described vehicle testing methodology		0					
		Described troubleshooting strategies and techniques used		0					
		Described use of prototyping and testing to evaluate design options		0					

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Accounting*	<i>*See supplemental info tab for more information</i>			0	24	0%	10%	0.00	
	Budget								
		Thorough and accurate description of budget planning and following		0					
		Reasonable travel expense estimates were provided		0					
	Cost accounting								
		Overall accounting was thorough and accurate		0					
		A clear distinction was made between items purchased, re-used, and donated		0					
		All income sources were acknowledged and estimates of the fair market value of donations (items, services, and time) are reasonable		0					
		Accounting reflects effective use of funds		0					
				0	197	100%		0.00	Base Score
				Raw Score	Max Points (cat)	Total % (check:100)			
Discretionary Points			0-4 pts each	0	16		1	0	Discretionary points
		Document described exceptional design of vehicle, sensors, instruments, software, tools or other features		0					
		Company developed exceptional original software or made exceptional adaptation of software to create a unique solution		0					
		Document describes remarkable effort to design and manufacture every component of the vehicle		0					
		Other (Explanation/example is required in comments)		0					
Deductions			0-4 pts each	0	12		1	0	Deduction points
		Components designed/implemented by a commercial company without adequate justification		0					
		Evidence that the work was performed by coaches, mentors, parents, or other non-team members		0					
		Significant overuse of commercial or reused components without adequate justification		0					
Other Comments								0	Final Score