

Mate ROV International competition 2017

Eureka C- Shark

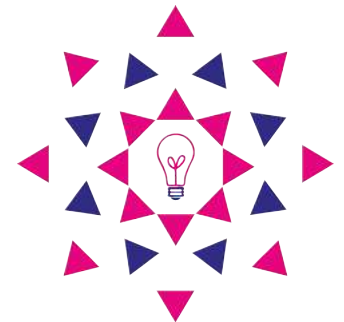
Eureka Tech Academy, Amman, Jordan



MATE
MARINE
ADVANCED
TECHNOLOGY
EDUCATION
CENTER

Eureka
Technical Report

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I. Introduction

Abstract

Eureka tech academy started in 2014, an academy first of its kind in Jordan to teach kids about electronics, robotics and other engineering subjects making some innovative future engineers, we've participated in many regional and international competitions, but never in the underwater robotics field! MATE has given us this opportunity in which we will be the first Jordanian team to be a part of ROV competition, also first Jordanian team become knowledgeable about underwater technology.

Our antique ROV; C-Shark, which we started by a sketch on small piece of paper 6 weeks before the competition, aiming to win in our first Jordanian ROV competition for the first time, so we have started designing, developing and hacking every possible single available instruction that can help achieving our target, our first task was to structure our design, furthermore we added the thrusters, then began Testing it in the water until we accomplished the upgrade, so our C-Shark with an copier to see, arm to grab equipment, actuators to shift around to detect the sea's and help humanity.

By taking the advantage of a team that consolidates the knowledge of mechanical building, electrical and electronic understanding and computer geeky types of people, C-Shark is alive.

Our new ROV feature is fully designed by computer using SolidWorks and build with high quality to achieve the tasks of the long beach problems.



Figure 2 Our first ROV design to participate the Arab ROV competition

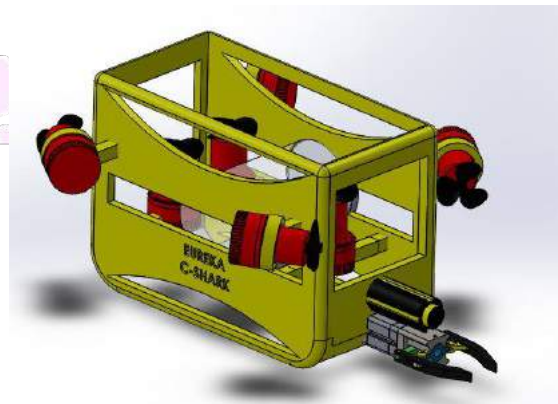


Figure 1 Our new design, with a pre-simulation

Team Profile

Our team is made up by 5 Members in ages between 14-15 years old and 2 supervisors, starting professionally, we aimed to put tasks to each member fitting their interests to make the process much more organized.



Bader Quadorah: CEO

15 YEARS OLD HE LOVES ROBOTICS AND PROGRAMMING SO MUCH, HE HAS THE LEADER SPIRIT TO PRODUCE MORE LEADERS AND A QUOTE HE FOLLOW: "A LEADER IS ONE WHO KNOWS THE WAY, GOES THE WAY, AND SHOWS THE WAY. "



Raad Kloob: CMO

THE ONE WHO USES THE DRILL MORE THAN HIS SMARTPHONE ... THE TECHNICIAN Raad kloob IS 15 YEARS OLD WHEN HE WAS YOUNG I HEARD THAT HE HAD BROKE EVERY TOY AND REMOTE IN HIS HOUSE SO HE CAN KNOW WHAT IS INSIDE IT BUT HE NEVER DID KNOW UNTIL NOW, HE IS A MECHANICAL AND AN ELECTRICIAN SPECIALIST.



Hamzeh Shaddad: The Mechanical Engineer

A MAN WHO ALWAYS SLEEPS WITH WIRES AND RESISTORS, THE ELECTRICIAN HAMZEH SHADDAD IS 14 YEARS OLD HE WORKS WITH EMBEDDED SYSTEMS AND HE IS ALSO C-SHARK PHOTOGRAPHER HAMZEH IS ALWAYS READY FOR FIGHTS HE HAS HIS SILICON GUN AND THE SOLDER



Omar Al-Omari: COO

The big mind who is always 5 steps ahead, working on making the ROV building easier and provide the supplements when needed.



Khaled Al-saidi: The Mechatronics Engineer

THE MAIN GRAPHIC DESIGNER AND THE 3D DESIGNER Khaled al-Saidi IS 14 YEARS OLD, WHEN HE WAS A KID HE ALWAYS DREAMED TO BUILD A SUBMARINE AND TO DESIGN IT SO HE BEGAN FROM HERE.

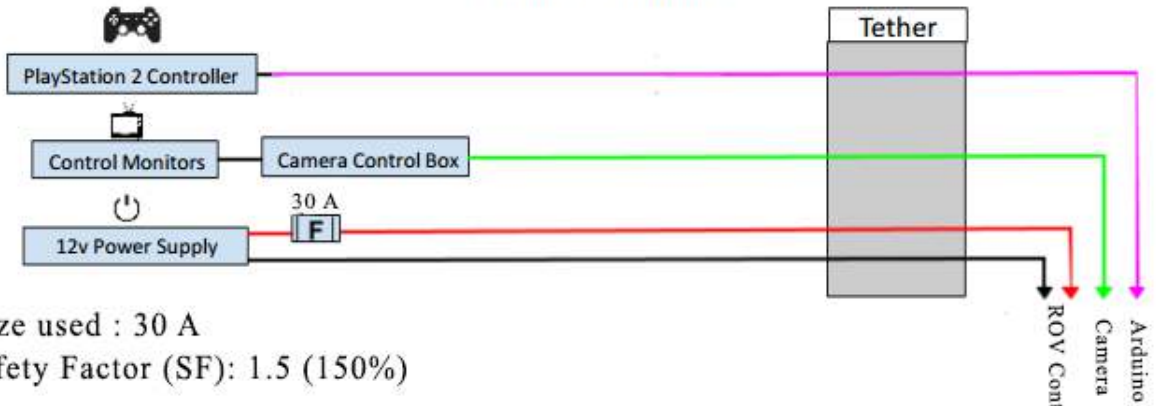


Emad Al-Omar & Mahmoud Hasan

Mentors Of the team



Surface Controls



Fuze used : 30 A
Safety Factor (SF): 1.5 (150%)

ROV Under water control

