

imPROVise

“Working Well Under Pressure”
History Of M.A.T.E. R.O.V. competition.

Company Spec Sheet

Company Name:

Improvise

School:

Keith Grammar School, Keith, Moray, Scotland

Distance to final: 8351km



Improvise company photo *RGU (twitter.com/robertgordonuni)*

This is Keith Grammar School's second year competing in the M.A.T.E. R.O.V. competition. Team is made of a mix of returning members and members who are new to the competition; as indicated below. All team members have collectively invested a total of 1528 hours each investing the equal amount of 127.3 hours.

Back Row: (Left to Right) Maximillian Siegrist (C.E.O., 2nd year), Adam Featch (C.F.O., 1st year), Niamh Duncan (Graphic Design, 1st year), Steven Tubbs (Mentor)

Middle Row: (Left to Right) Gregor Stratford (Head of Graphic Design 1st year), Tom Watson (Engineer, 2nd year), Louise Ragazzoni (Safety Manager, 1st year), Benajmin Williams (Chief Engineer, 2nd year),

Front Row: (Left to Right) Gregor Mchardy (Tooling Manager, 1st year), Jack Duncan (Vice C.E.O., 2nd year), Lewis Roger (Engineer, 2nd year), Jamie Herd (Tether Manager, 2nd year), Kayleigh Tidball (Graphic Design, 1st year).

Range Of Grades Among Team Members

Our company members range from years S2 to S6. Of those in the team in S4/5/6 National 5's and Highers are being studied for and have already been achieved in Maths, Physics, Engineering Science and technical studies. As well as a wide range of other subjects with skills applicable to this competition such as Graphic Communication and English. Those in S2 aspire for a career in the field of S.T.E.M.

General Safety Features (note safety information specific to the R.O.V. is covered under R.O.V. specifications)

- High visibility vests are always worn at the poolside
- Safety glasses were worn whilst working on the R.O.V. and in the workshop
- No naked wires in the control boxes
- warning signs have been placed near hazards in the control box and on Proteus

R.O.V. Specifications

R.O.V. Name: Proteus

Total Value of R.O.V.: £799.05

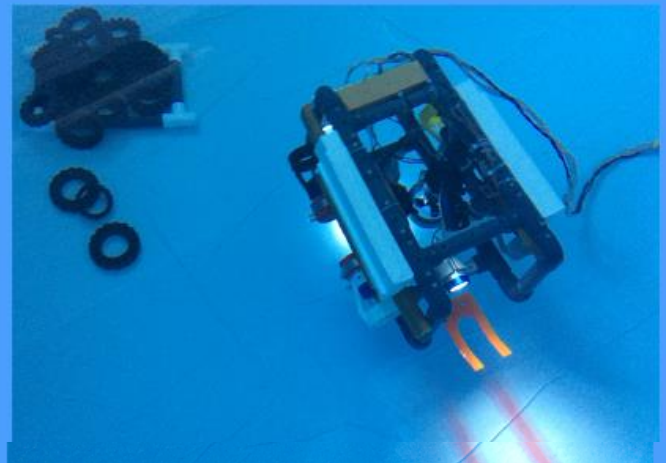
Total Cost Value Including

Donated and Re-Used Parts: £799.05

Tether Length: 15m

Dimensions: (H)220mm x

(L)220mm x (B)440



Proteus and “Clams” Tom Watson

Safety Features

- 25A fuse fitted in main power line and 10A camera fuses as per M.A.T.E. competition standards
- All electrical wiring onboard the R.O.V. has been insulated
- All moving parts (thrusters) have been firmly secured within the R.O.V. and shrouded appropriately
- All sharp edges have been filed
- Warning signs have been fitted on the R.O.V. where appropriate
- Tether is fully strain relieved at R.O.V. and control box as to not damage electrical wiring

Special Features

- Wrapped foam to maintain constant neutral buoyancy
- toolbar designed to interact with specific mission tasks
- 6x 500gph bilge pumps modified for propulsion
- all cables aboard Proteus are routed away from moving parts
- neutrally buoyant tether to increase flight accuracy

- many parts are 3d-printed to enable easy repair/replacement
- ergonomic control box for controlling the R.O.V.
- 3 HD cameras to allow clear observation of mission tasks

