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|---------|-----------------|------------------|
| Client  | Vandagraph      |                  |
| Project | Oxygen Analyser | www.smallfry.com |

## **VANDAGRAPH - Oxygen Analyser**

Foam model and progress review-meeting notes.

16<sup>th</sup> May 2006

Present at meeting

Vandagraph: JL

Smallfry: DB, MS

On presenting the foam model JL's first comment was that it needed to be made approximately 5mm taller so that it can be held comfortable in a large hand.

There will be 2 different types of PCB. One for when the analyser is wall mounted and runs for days, the other switches off automatically after 10mins. If the wrong unit is ordered the customer can modify it in the field by cutting one resistor connection. The current design can be resealed after the PCB has been accessed which is a big plus and will make this process easier.

There is an issue with battery contact corroding when cover is left off. So the contacts need to be replaceable, this would be a back to base job. JL also identified an issue with metal-formed contacts getting compressed and not returning fully and causing a bad contact. The preferred route forward is wire formed contacts fed through from the electrical housing area then sealed with silicone.

The Calibration dial needs to be recessed more to stop it being turn accidentally.

The sensor has a membrane at both ends and the air pressure needs to be equal for the reading to be accurate. The pressure can be equalised by opening the battery and sensor cover.

The battery polarity needs to be clearly displayed on the unit.

Finished PCB's will be available in 2-3 weeks but the PCB's can be made larger if necessary for mounting. DB will inform JL if any size changers are needed.

The LCD will be glued to the PCB. JL is looking at the PCB's being coated in black epoxy for anti corrosion. This means these components will be treated as throwaway and both will be replaced if faulty.

Once CAD work is complete DB will produce a quotation for Rapid prototype of the unit to pass on to JL. It was agreed that a prototype is needed to prove points outlined above and to carry out some product testing. Once the prototype is finished it would be necessary to have a review around mid June, date to be confirmed. Also it was agreed that at this point tooling options would be explored.

JL would like Smallfry to look at the product branding/labelling options. The information for label is to be supplied by JL.

DB did point out that the original quote was for producing the CAD data only and that all work and support after completion of the CAD data would need to be quoted for.