

# SDP General Fault Finding

**Don't panic - Be methodical**

**Use your senses - Look, listen, smell, touch**

Does something look faulty?

Does it make a strange sound?

Does it smell funny?

Is it hot?

**Cables and Connectors** - Wear and tear, exposed wires, loose connectors, broken solder joints.

**Multimeter**

Continuity Testing - Open Circuit - Closed Circuit

Voltage testing

**Check Wiring Diagrams**

**Check and compare specifications match** - example - are you trying to take sample readings from your sensor at a higher speed than the sensor supplies them? Are you running the serial port on the Arduino at a higher baud rate than it is capable of. Is your motor too low powered to move the weight of your robot?

**Logical substitutions** - switch one part at a time and keep testing

**Spares**

**Office Hours** - Mahbub or myself for a spare

**Out of Office Hours** - Natural Redundancy. Ask around the other groups to borrow a cable or motor etc so that you can check your problem, Not everyone will be using all of the kit that we have provided, so there should be a reasonable amount of spares amongst you already.

**F.A.Q.**

PI Root access:- We will add apt and apt-get and various other sudo permissions to the student accounts - just bring your PI in.

Full Sudo access can be given and you are allowed to put your own choice of OS on the PI. In both of these cases your PI will be considered as self-managed and will not get the same level of support as one with the standard build.

GPU Access:- Remote Access is possible via a scheduler system. Request early if interested.  
Don't bank on it being available at a specific time.

Ordering parts:- Can take about a week from initial parts request to delivery of parts.

Main sources of parts:- onecall.farnell.com - electronics, [rswww.com](http://rswww.com) - electro mechanics,  
active-robots.com and robotshop.com - robot parts

If possible provide me with suppliers order code numbers and quantities, if unsure come in and ask for help.

### **Questions?**

### **Suggestions?**

Next Time - 13/2/19 - Prototyping and Soldering

Topics for next time?

New Equipment, facilities or resources?