

## Aviation start-up looking for an electronics/ micro-controller programmer

Looking for an electronics/ micro-controller programmer to make a dual engine test dashboard to gather and log data from a prototype helicopter/drone for analyses. The dashboard will have sensor displays, switches and dials. The helicopter has 2 engines so many of the sensors will be duplicates. Below is the basic outline, it might change around a bit. The code has to be easy to convert to use other sensors for other engine, so variables and mapping that could be easily changed to accept new sensor ranges. I will need a copy of the original code when finished. I would also like to see some examples of work that are similar or relevant.

### Tasks:

- Choosing the components for purchase
- Making the dashboard, (I have a lot of tools here and I could help)
- Connect all sensors to the micro controller
- Program the micro controller
- Log the data

### The switches and control:

- Main switch
- 2 x Push button start switches
- 2 x Fuel pump switches
- 2 x Engine kill switches
- 2 x Engine throttle pot (connected to servo)
- 2 x Air fuel mixture pot (connected to servo)
- 2 x Engine choke pot (connected to servo)

### The sensors that are required now are (more to be added later):

- 2 x rpm sensor
- 2 x air temperature sensors (have the sensors)
- 2 x O2 sensors from engine exhaust
- 2 x Cylinder head temp sensor (have the sensors)
- 2 x Exhaust gas temperature sensors (have the sensors)
- 3 x air speed sensors (needs to be purchased)
- 3 x air pressure sensors (needs to be purchased)
- 3 x load cell to measure lift (needs to be purchased)
- 2 or 3 vibration sensors (needs to be purchased)
- 1 x gearbox temperature sensor (needs to be purchased)

### Display

- Not decided on the display,  
could be a computer screen or an LCD display.

Tarek Ibrahim

tarek@airvinci.com

(416) 858 3366

