

## **L1 Altimeter Rubric:**

### **Schematic     \_\_\_/20**

Schematic includes an MCU, USB connector, storage device, and at least one sensor.     \_\_\_/5

Schematic uses at least one of the following communication protocols: I2C, SPI, UART.     \_\_\_/5

Schematic properly makes use of passive components such as resistors and capacitors.     \_\_\_/5

Schematic is properly formatted, using text, boxes, annotations, and other tools.     \_\_\_/5

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### **Routing     \_\_\_/20**

Components are all properly connected in a two layer PCB layout.     \_\_\_/5

Layout makes use of zones and vias.     \_\_\_/5

Connections are clean and the board is understandable.     \_\_\_/5

Layout is properly formatted, using edge cuts, measurements, silkscreen labels, and other formatting elements.     \_\_\_/5

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### **Soldering     \_\_\_/10**

All components are properly soldered onto the board.     \_\_\_/5

MCU boots and sensors and storage devices respond as intended.     \_\_\_/5

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### **Total     \_\_\_/50**

## **TinkerCad 555 Timer Rubric:**

### **Layout            \_\_\_/20**

The 555 Timer's pins are properly connected to the circuit. \_\_\_/5

The MOSFET is correctly linked to the 555 Timer, LEDs, and power. \_\_\_/5

The power, resistors, and capacitors are set to reasonable values. \_\_\_/5

Circuit is efficiently designed, with no unnecessary components or connections.. \_\_\_/5

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### **Functionality    \_\_\_/30**

When running the simulation, the LEDs are able to glow. \_\_\_/10

When running the simulation, the LEDs blink at regular intervals. \_\_\_/20

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### **Total            \_\_\_/50**

## **KiCad 555 Timer Rubric:**

### **Schematic     \_\_\_/15**

Schematic includes a 555 timer and transistor. \_\_\_/5

Schematic properly makes use of passive components such as resistors and capacitors. \_\_\_/5

Schematic is properly formatted, using text, boxes, annotations, and other tools. \_\_\_/5

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### **Routing        \_\_\_/15**

Components are all properly connected in a single layer PCB layout. \_\_\_/5

Connections are clean and the board is understandable. \_\_\_/5

Layout is properly formatted, using edge cuts, measurements, silkscreen labels, and other formatting elements. \_\_\_/5

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**Total        \_\_\_/30**