

**Rover Monitor**  
rev: 0.2

The schematic diagram illustrates the circuit for the Rover Monitor, centered around a Raspberry Pi (U1) and an OLED display (U2). The Raspberry Pi's GPIO pins are connected to various components:

- Power Supply:** The Pi is powered by +3V3 and +5V. The +5V pin is connected to the +5V supply, and the +3V3 pin is connected to the +3V3 supply.
- GPIO Connections:**
  - GPIO4, GPIO14, GPIO15, GPIO18, GPIO23, GPIO24, GPIO25, /SPI\_CE1, /EE\_CLK, GPIO5, GPIO12, GPIO16, GPIO20, and GPIO21 are connected to GND.
  - GPIO13 and GPIO19 are connected to GND.
  - GPIO16, GPIO20, and GPIO21 are connected to GND.
  - GPIO13 and GPIO19 are connected to GND.
  - GPIO16, GPIO20, and GPIO21 are connected to GND.
- OLED Display (U2):** The OLED display is connected to the Pi's GPIO pins. The VCC pin is connected to +3V3, and the GND pin is connected to GND. The SCL pin is connected to GPIO23, and the SDA pin is connected to GPIO24. The /Res pin is connected to GPIO25, and the DC pin is connected to GPIO26. The /CS pin is connected to GPIO27.
- Other Components:**
  - JP1:** A jumper connecting the SCL pin of the OLED display to the SCL pin of the Pi.
  - JP2:** A jumper connecting the /Res pin of the OLED display to the /Res pin of the Pi.
  - D3:** A 1N4448W diode connected to the +3V3 supply.
  - C3:** A 10uF capacitor connected to the +3V3 supply.
  - R8:** A 15K resistor connected to the +3V3 supply.
  - R9:** A 15K resistor connected to the +3V3 supply.
  - R10:** A 15K resistor connected to the +3V3 supply.
  - C1:** A 10uF capacitor connected to the +3V3 supply.
  - C2:** A 0.1uF capacitor connected to the +3V3 supply.
  - D1:** A status LED connected to GPIO13.
  - D2:** An alarm LED connected to GPIO20.
  - BZ1:** A buzzer connected to GPIO16.
  - Q1, Q2, Q3:** MMBT3904 transistors connected to GPIO13, GPIO20, and GPIO16 respectively.
  - R1, R2:** 4.7K resistors connected to the Run-Stop and Shutdown switches.
  - R3, R4, R5, R6, R7:** 27K resistors connected to the status LED, alarm LED, and buzzer.
  - R8:** A 15K resistor connected to the +3V3 supply.
  - R9:** A 15K resistor connected to the +3V3 supply.
  - R10:** A 15K resistor connected to the +3V3 supply.
  - C1:** A 10uF capacitor connected to the +3V3 supply.
  - C2:** A 0.1uF capacitor connected to the +3V3 supply.
  - C3:** A 10uF capacitor connected to the +3V3 supply.
  - D3:** A 1N4448W diode connected to the +3V3 supply.

The diagram also shows a power flag (PWR\_FLAG) connected to GND.

Rev: V0.2  
Id: 1/1