

THERMISTOR BASED RESPIRATORY MONITORING

Thermistor respiratory monitor is low cost easy to use device to monitor breathing of patients. This portable device was designed for low resource environments. The device calculates the breathing rate by detecting changes in temperature when the patient breaths through a mask. Feature of this device include an alarm through a buzzer which beeps when the patient stops breathing or having a low breathing rate (<15bpm) or having a high breathing rate (>22bpm) a low battery indicator when the battery powering the device reaches a threshold voltage. The design and implementation also involved several different hardware components, as well as software functions. We use analog to digital conversions to sample readings from both the thermistor and the battery, timer to beep the buzzer. Our implementation also includes analog circuitry for voltage regulation.