SW1 – D2 - test button (used to initiate calibration)

SW2 – D4 - toggle breath on/off

SW3 – D5 - reset alarm button

Pot 1 – A2 – sets the range of motion as percentage from full range as set in calibration

Pot 2 – A3 – sets the respiration rate from 6 to 24 per minute

Pot 2 – A6 – sets the inspirium pressure from 30 to 70 cm H2O

J3 – connects to the position sensor potentiometer in the arm

J4 – connects to the motor controller PWM input (usually don't connect the 5V)

J5 – connector to pressure sensor – if you use a 3.3V pressure sensor – supply 3.3V from the Arduino instead of the 5V

Assemble the potentiometer for arm position sense such that when the arm moves down (presses the Ambu more) – the voltage goes up. Range 0-5 volts

Assemble the user interface potentiometers such that during clockwise motion the voltage goes up. Range 0-5 volts

Motor polarity shall be set such that PWM>50% to the controller results in the arm pressing the Ambu (moving down).

The SW calibration procedure enable easy verification of the motor and position feedback polarity

(see calibration video for details)