



Setpoint: desired distance from sensor to ball

- Controlled by the potentiometer

Controller output: controls voltage to motor, AKA how fast the fan blows

Sensor: the ultrasonic sensor will provide feedback for the PID controller, allowing it to adjust

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Pseudo code:

Setpoint will be a variable for the PID controlled by the potentiometer

Bounds will be set on the range of distances the ping pong ball could be at, so the ping pong ball never gets too close to the sensor

If the potentiometer is turned up, the PID will raise the set point for the ping pong ball and apply more voltage to the fan motor to float the ball higher

If the potentiometer is turned down, the PID will lower the set point for the ball and apply less voltage to the fan so the ball is floated lower in the air

Code will set up the ultrasonic sensor as the feedback for the PID controller