

Forum:[Hack Forums](#)

Thread: [Control stepper motor with RPI using python](#)

SIM-1517404 - July 20, 2017, 12:56 pm

Hi,

I'm working on controlling a bipolar stepper motor with the Raspberry pi using python scripts. I want to rotate the motor a specific set of degrees for a full 360 degree rotation. For example rotate the motor 11,25 degrees at a time a total of 32 times for a full rotation.

I have all the connections set up, but when I runda script I found online the motor goes crazy, rotating uncontrollably in both directions.

Can someone point me in the right direction? The scripts I used is:

```
Code import RPi.GPIO as GPIO
import time
```

```
# Variables
```

```
delay = 0.0055
steps = 500
```

```
GPIO.setmode(GPIO.BCM)
GPIO.setwarnings(False)
```

```
# Enable pins for IN1-4 to control step sequence
```

```
coil_A_1_pin = 18
coil_A_2_pin = 23
coil_B_1_pin = 24
coil_B_2_pin = 25
```

```
# Set pin states
```

```
GPIO.setup(coil_A_1_pin, GPIO.OUT)
GPIO.setup(coil_A_2_pin, GPIO.OUT)
GPIO.setup(coil_B_1_pin, GPIO.OUT)
GPIO.setup(coil_B_2_pin, GPIO.OUT)
```

```
# Function for step sequence
```

```
def setStep(w1, w2, w3, w4):
    GPIO.output(coil_A_1_pin, w1)
    GPIO.output(coil_A_2_pin, w2)
    GPIO.output(coil_B_1_pin, w3)
    GPIO.output(coil_B_2_pin, w4)
```

loop through step sequence based on number of steps

```
for i in range(0, steps):  
    setStep(1,0,1,0)  
    time.sleep(delay)  
    setStep(0,1,1,0)  
    time.sleep(delay)  
    setStep(0,1,0,1)  
    time.sleep(delay)  
    setStep(1,0,0,1)  
    time.sleep(delay)
```

Reverse previous step sequence to reverse motor direction

```
for i in range(0, steps):  
    setStep(1,0,0,1)  
    time.sleep(delay)  
    setStep(0,1,0,1)  
    time.sleep(delay)  
    setStep(0,1,1,0)  
    time.sleep(delay)  
    setStep(1,0,1,0)  
    time.sleep(delay)
```

koolkid - July 20, 2017, 1:06 pm

increase the delay to about 0.5 or 1 maybe 2 and post your results

SIM-1517404 - July 20, 2017, 1:26 pm

(Jul 20, 2017 01:06 PM)koolkid Wrote: [\[CITE\]](#) increase the delay to about 0.5 or 1 maybe 2 and post your results

It goes 1 step forward, pauses for about a second, 1 step backwards, pauses for a second and repeat.

koolkid - July 20, 2017, 1:36 pm

change the delay to 0.05 and see if that works

SIM-1517404 - July 20, 2017, 1:42 pm

(Jul 20, 2017 01:36 PM)koolkid Wrote: [\[CITE\]](#) change the delay to 0.05 and see if that works

Does the same thing, just faster. I think my output pins on the motor are messed up, I'm gonna double check and I'll get back.

koolkid - July 20, 2017, 2:13 pm

(Jul 20, 2017 01:42 PM)Swatchi Wrote: [\[CITE\]](#) Does the same thing, just faster. I think my output pins on the motor are messed up, I'm gonna double check and I'll get back.

ok do that and test it again and see if it works

SIM-1517404 - July 21, 2017, 5:34 am

(Jul 20, 2017 02:13 PM)koolkid Wrote: [\[CITE\]](#) ok do that and test it again and see if it works

Now it's not rotating at all. I have no clue what is wrong, trying to figure it out.

koolkid - July 21, 2017, 5:45 am

(Jul 21, 2017 05:34 AM)Swatchi Wrote: [\[CITE\]](#) Now it's not rotating at all. I have no clue what is wrong, trying to figure it out.

did you switch the pins around ??

SIM-1517404 - July 21, 2017, 5:55 am

(Jul 21, 2017 05:45 AM)koolkid Wrote: [\[CITE\]](#) did you switch the pins around ??

Yeah I did. The motor is getting voltage because it tightens up, but I don't know if maybe the driver is fried. I don't know what else to check/do at this point.

koolkid - July 21, 2017, 6:54 am

(Jul 21, 2017 05:55 AM)Swatchi Wrote: [\[CITE\]](#) Yeah I did. The motor is getting voltage because it tightens up, but I don't know if maybe the driver is fried. I don't know what else to check/do at this point.

try putting back the pins to their original state