

Hook up all encoders, button to 5V and ground.

## 328P port configurations

use this for interrupts  
PCMK52

portd  
arduino pins  
pendulum component  
cart or pend?  
wire colors

### PORTD for reading encoders

7	6	5	4	3	2	1	0
PCINT23	PCINT22	PCINT21	PCINT20	PCINT19	PCINT18	PCINT17	PCINT16
PD7	PD6	PD5	PD4	PD3	PD2	PD1	PD0
digital pin 7	digital pin 6	digital pin 5	digital pin 4	digital pin 3	digital pin 2	digital pin 1	digital pin 0
		<b>rotary encoder</b>	<b>rotary encoder</b>	<b>rotary encoder</b>	<b>rotary encoder</b>		
		cart	cart	pendulum	pendulum		
		green	white	white	green		

PORTB  
arduino pins

pendulum component

### PORTB for PWM

7	6	5	4	3	2	1	0
crystal	crystal	digital 13	digital 12	digital 11	digital 10	digital 9	digital 8
						<b>PWM</b>	<b>state transition button</b>

PORTC  
arduino pin  
pendulum component  
l298n connection

### PORTC for motor direction control

7	6	5	4	3	2	1	0
?	reset	ai5	ai4	ai3	ai2	ai1	ai0
						<b>motor control</b>	<b>motor control</b>
						IN1	IN2