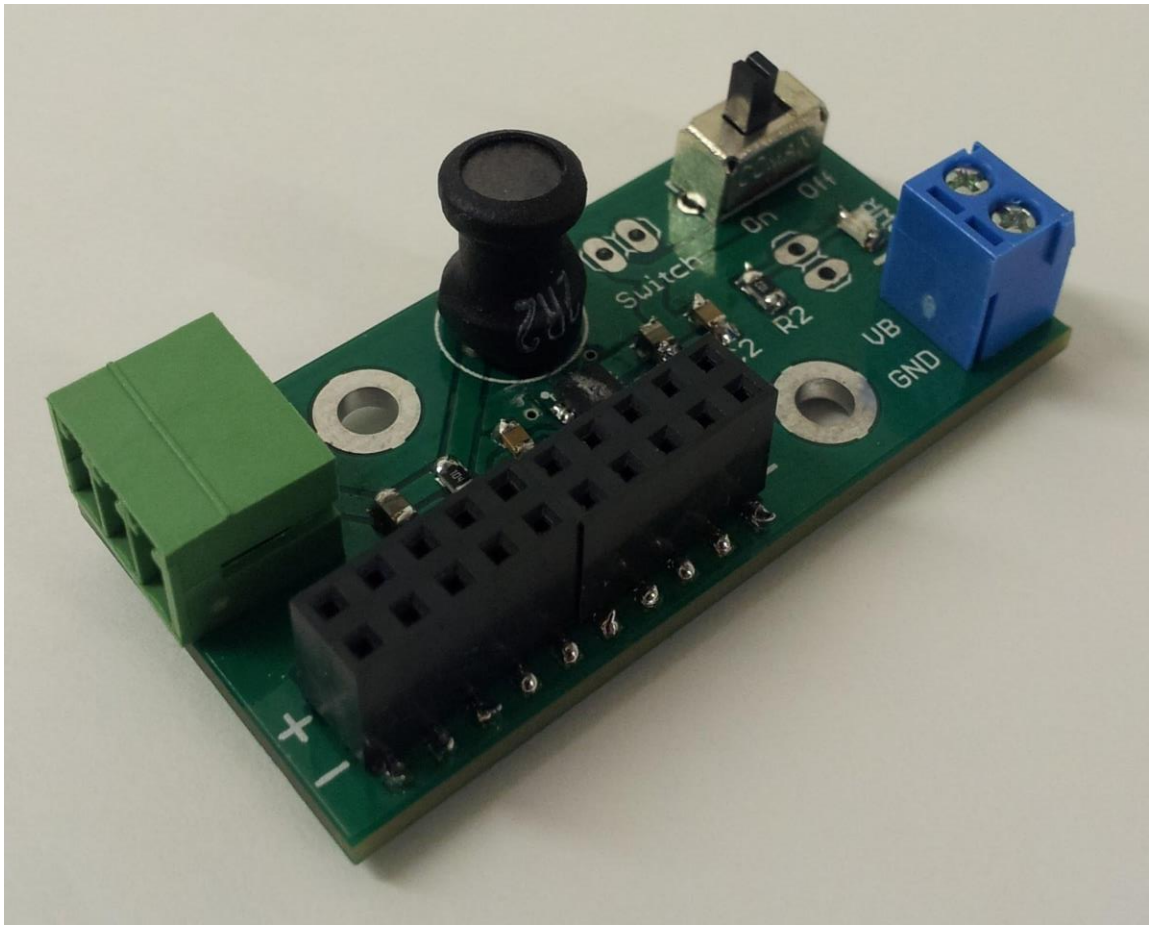
Power Board & PWM

Alimentation & techniques de variation

Power Board

A quoi ça sert?



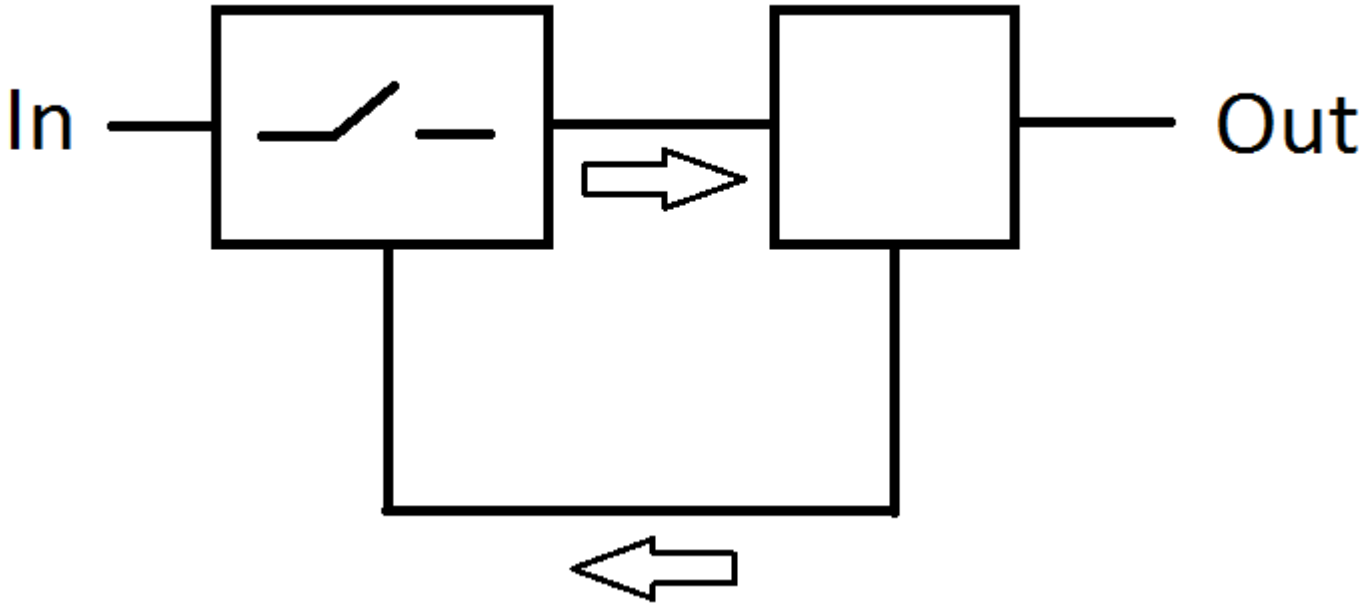
Power board

Principaux composant :

- Switch on / off
- Connectiques
- Regulateur de tension

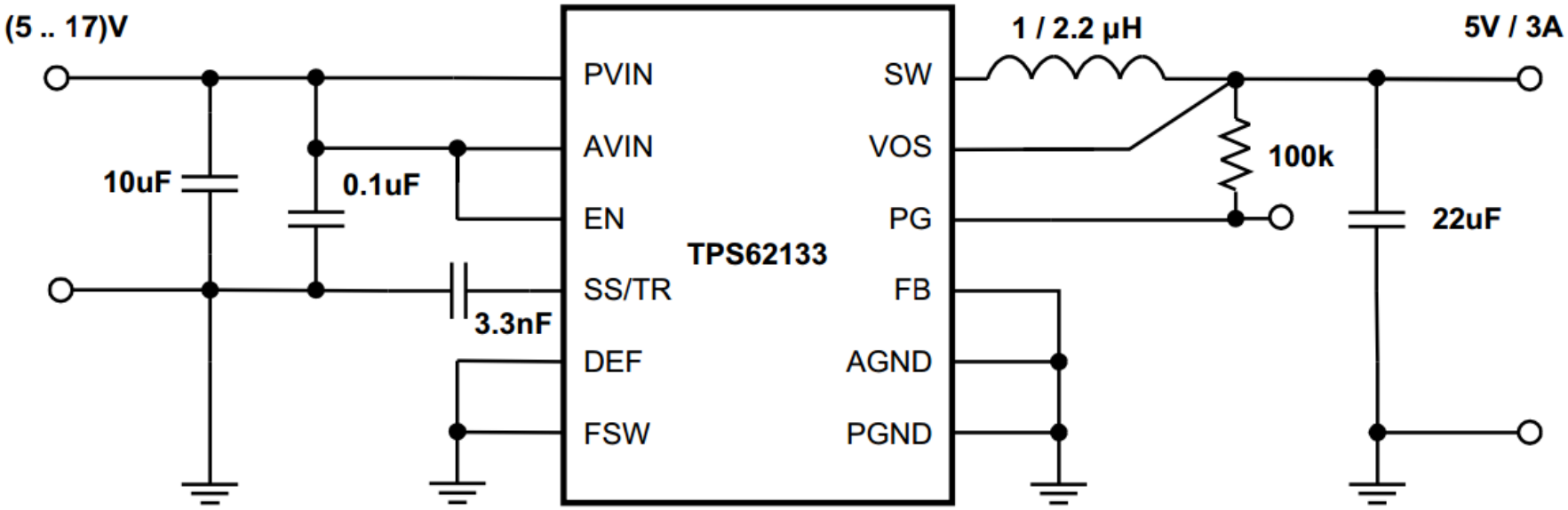
Regulateur de tension

Principe de fonctionnement :



Regulateur de tension

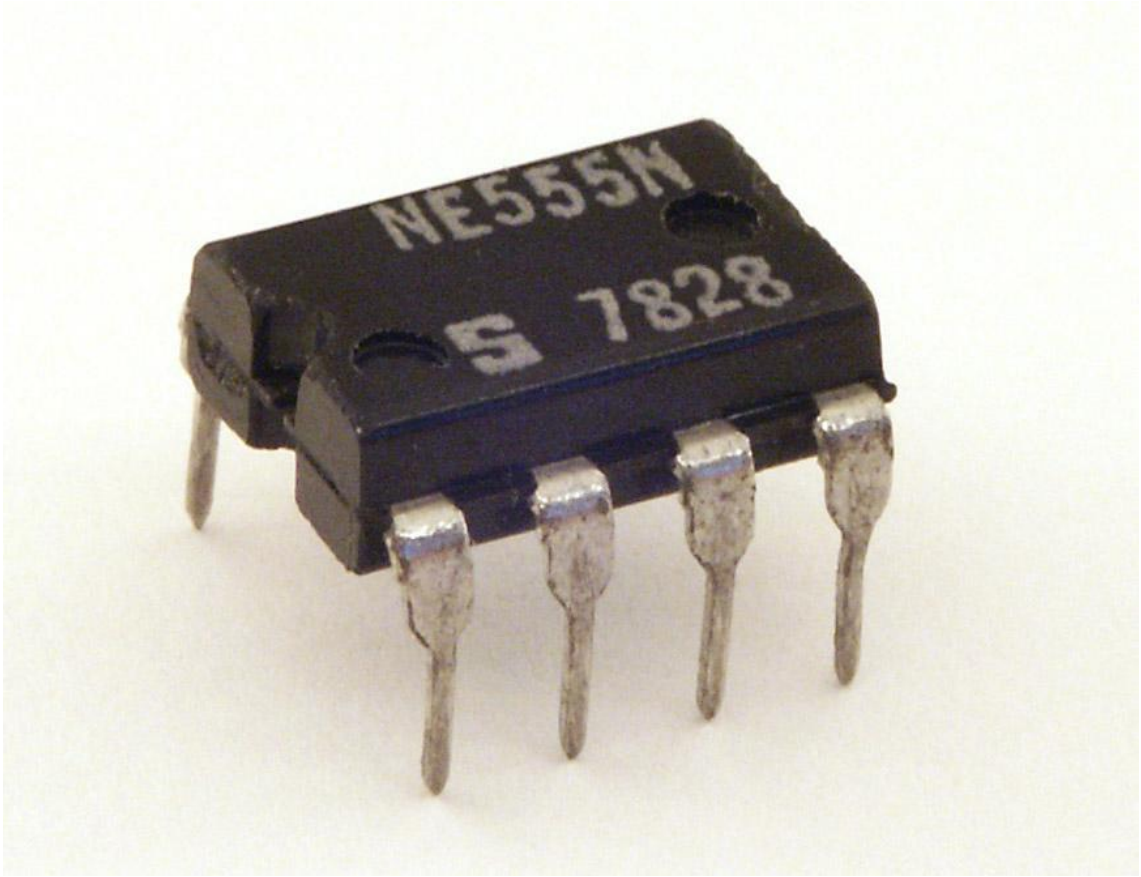
A quoi ça ressemble?



PWM

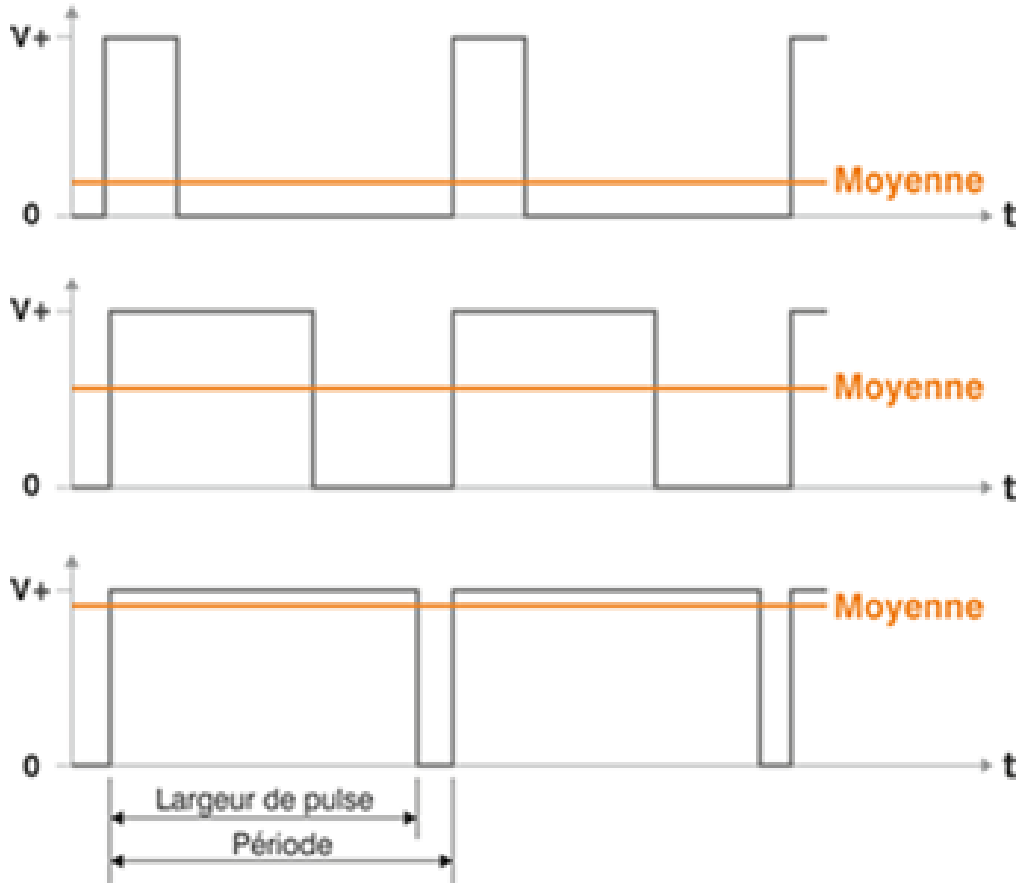
ou Pulse Width Modulation

Qu’est ce que c’est?



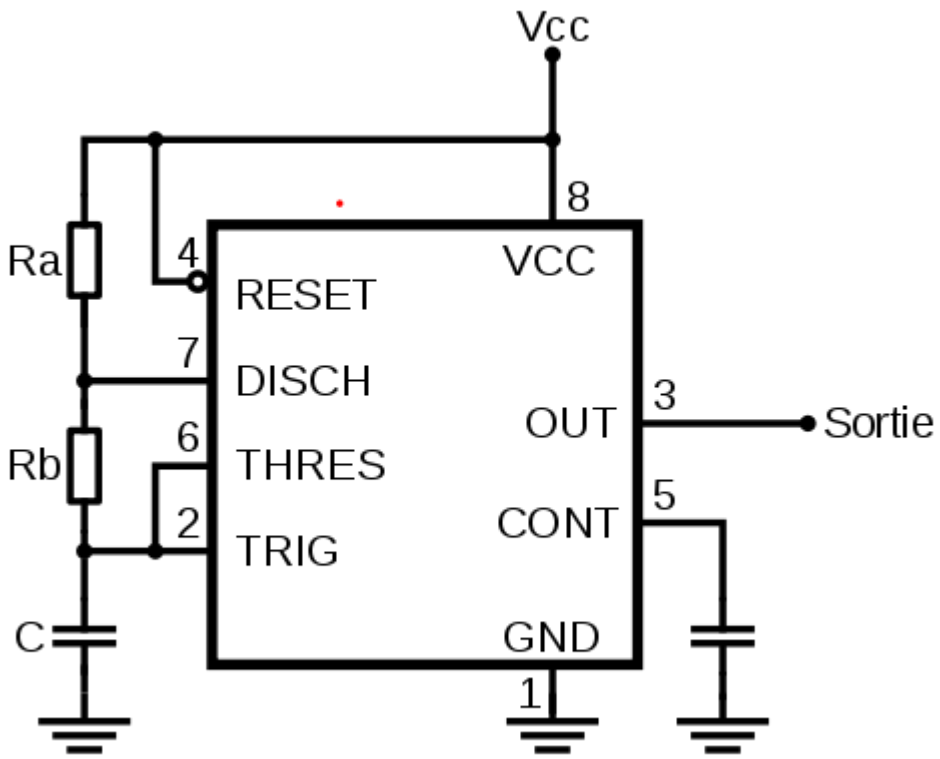
PWM

Comment ca fonctionne?



PWM

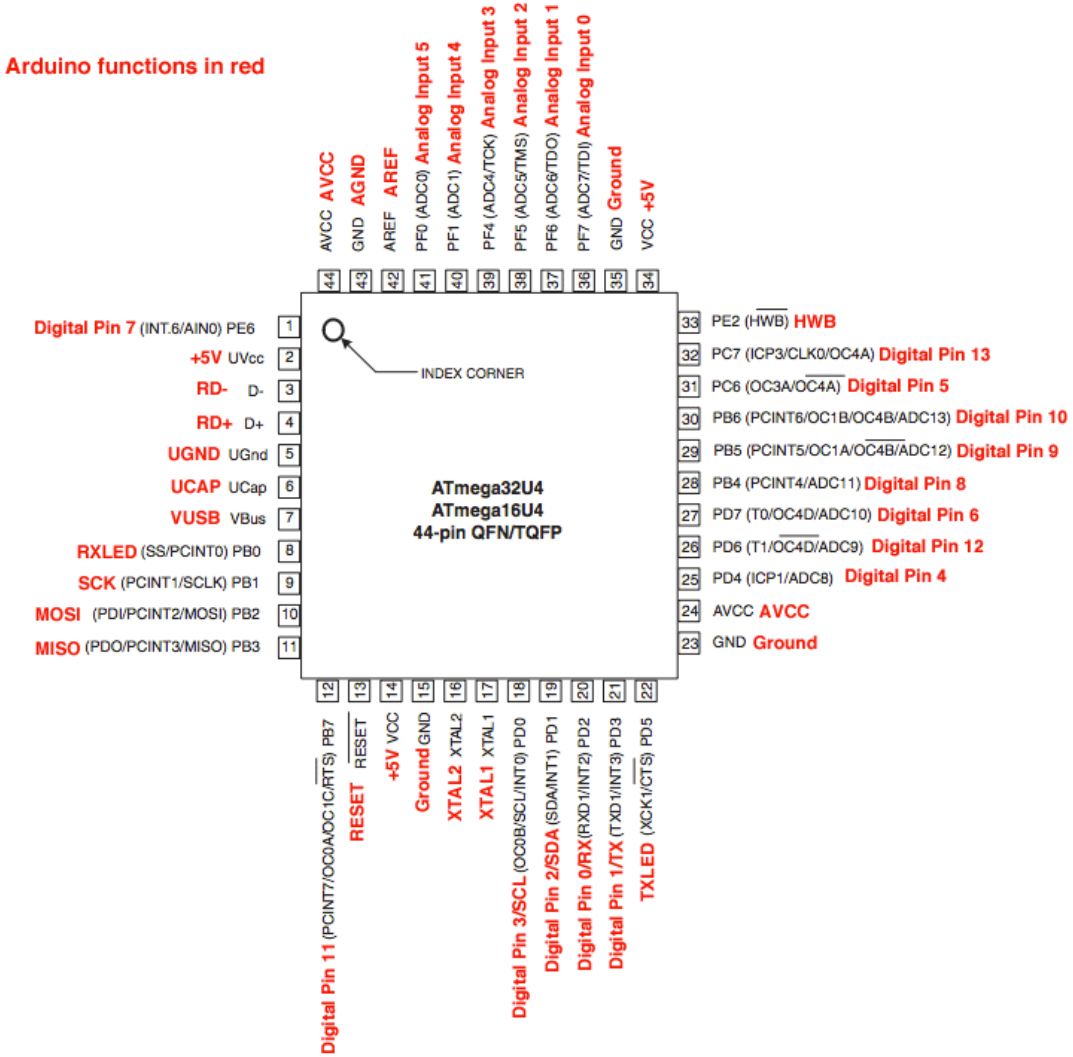
A quoi ça ressemble?



NE555

PWM & PRismino

Comment fait-on?



On choisit un pin digital parmis les pins disponibles: 5, 6, 9, 10, 11 et 13

PWM & PRismino

Le programme

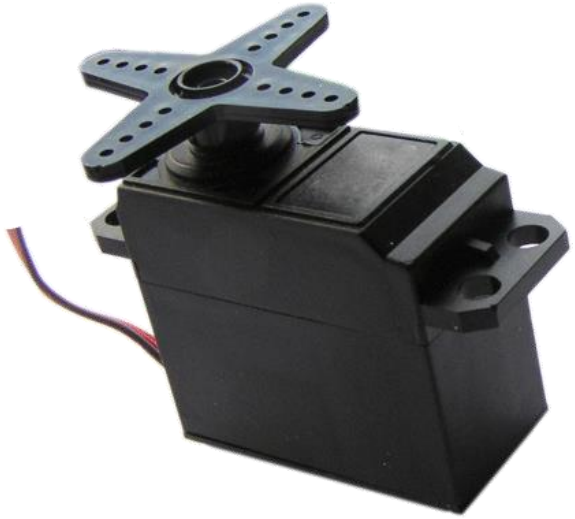
```
analogWrite(analogOutPin, outputValue);
```

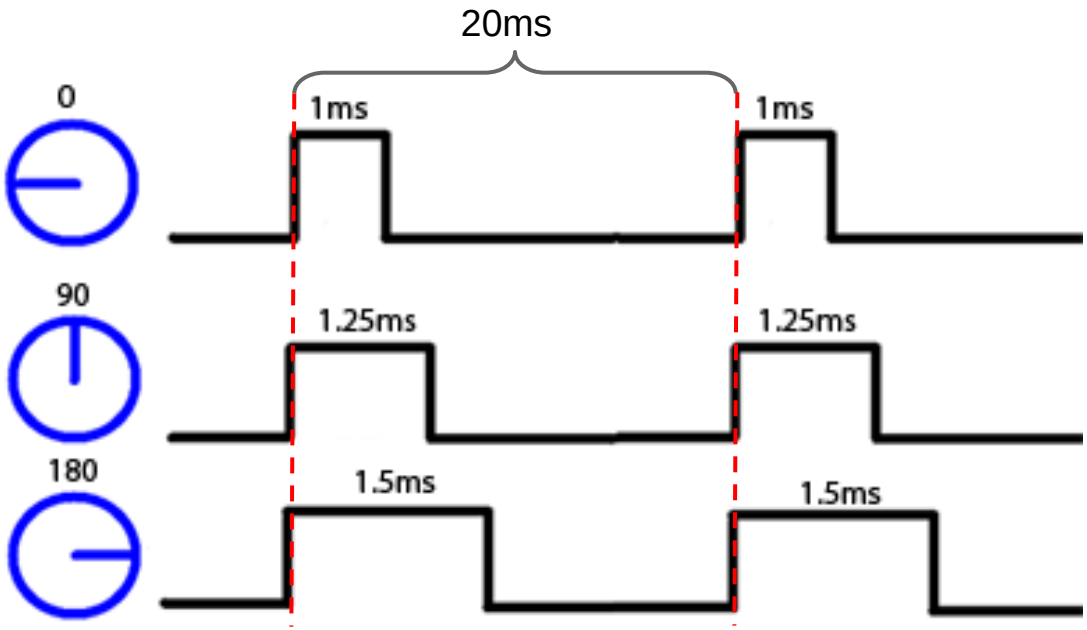
outputValue 0 -> 255 corresp. duty cycle 0 -> 100%

Fonctionnement typique 490 Hz
Fonctionne sur les pins 3, 5, 6, 9, 10, and 11

PWM

Exemple d'utilisation: Servo-moteur

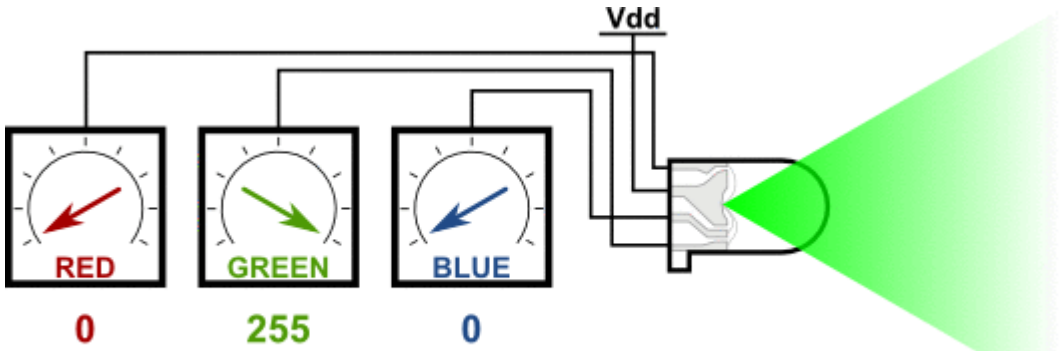


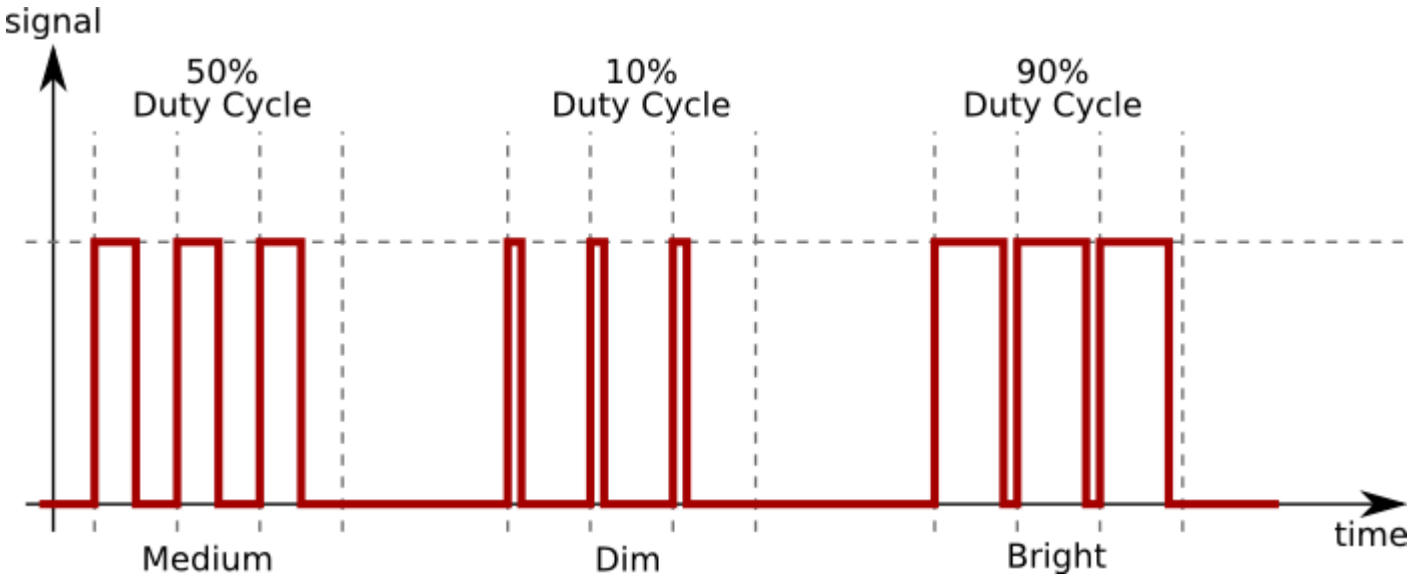


File → Examples → PRismino → ServoMotor

PWM

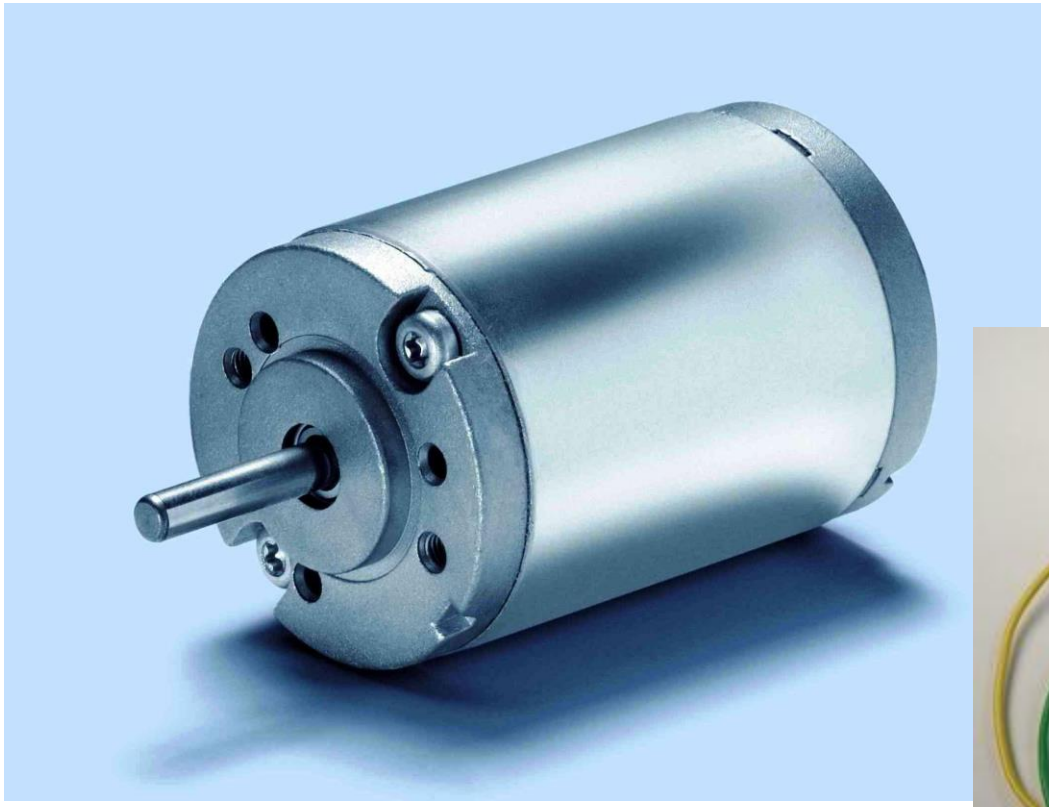
Exemple d'utilisation: Led RGB





H

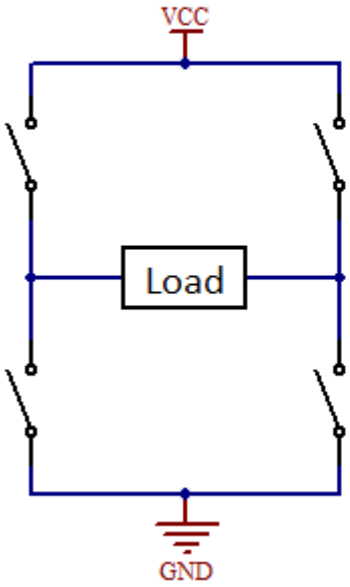
Qu’est-ce que c’est?



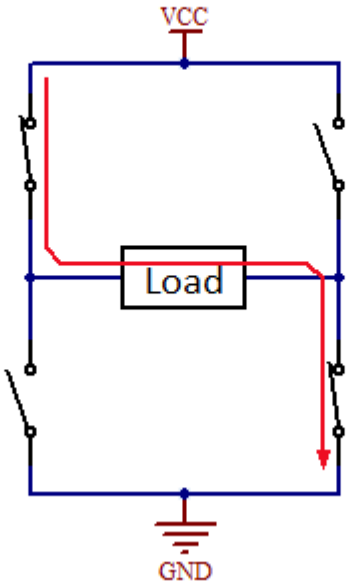
H

Comment ca fonctionne?

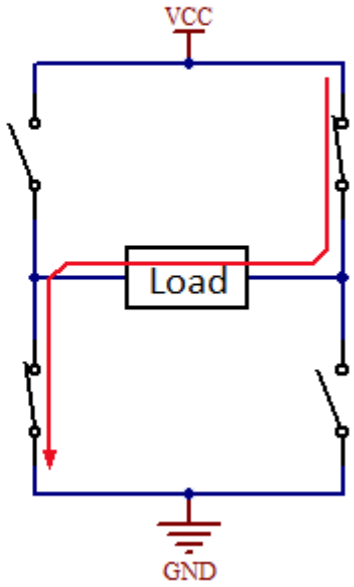
H bridge topology



Connecting the load in one direction

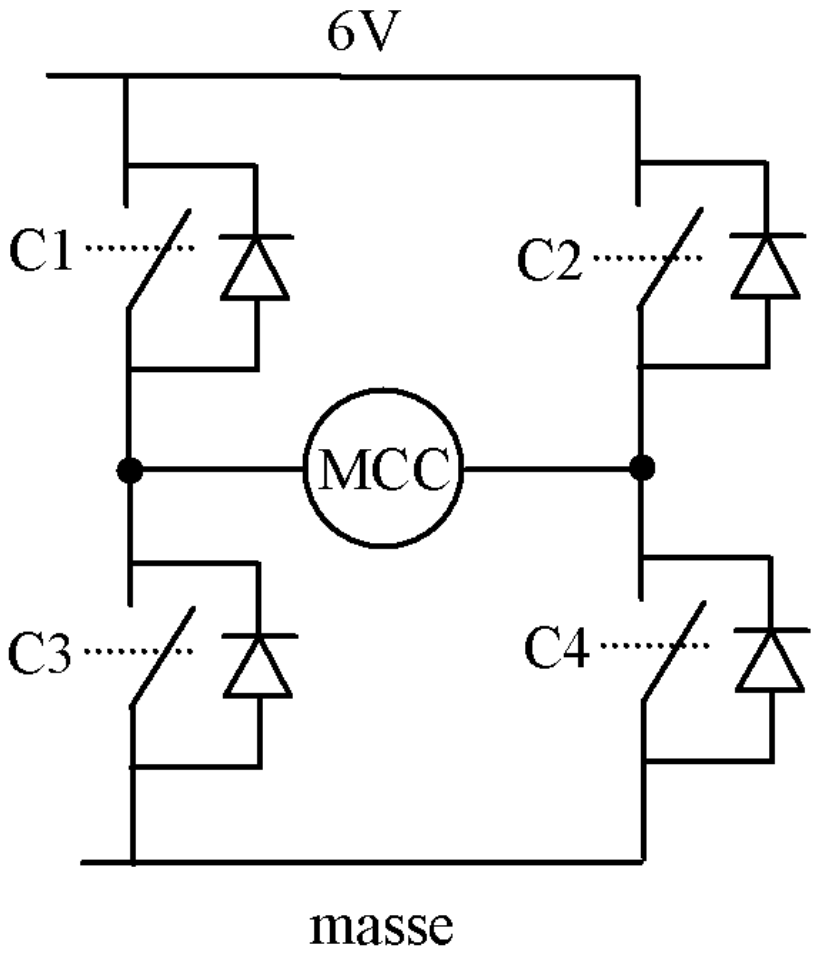


Connecting the load in the other direction



H

La diode de roue libre

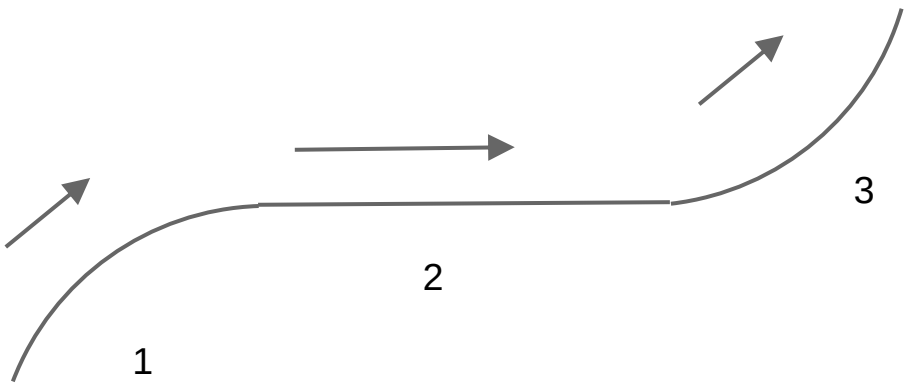


Pont en H & PRismino

Le programme

```
setSpeed(speedLeft, speedRight);
```

speedRight et speedLeft acceptent chacun une valeurs de -100% → 0 → 100%



	speedLeft	speedRight
1	70	20
2	50	50
3	20	70

Des questions?

N’hésitez pas à venir nous voir!
On répond avec plaisir

Infos!

- Journée montage/programmation
  - Samedi 26 octobre
  - En haut du BM, début à 9h
  - Jusqu'à 17h
  - Comités disponibles
  - Repas 5.-
  - Possibilité d'acheter un kit/s'inscrire

- Prochain démon: Boutons et Capteurs IR