**class PWM – Pulse width modulation**

**Quick usage example**

**from** machine **import** PWM

pwm **=** PWM(0, frequency**=**5000) *# use PWM timer 0, with a frequency of 50KHz*

*# create pwm channel on pin P12 with a duty cycle of 50%*

pwm\_c **=** pwm**.**channel(0, pin**=**'P12', duty\_cycle**=**0.5)

pwm\_c**.**duty\_cycle(0.3) *# change the duty cycle to 30%*

**Constructors**

***class*machine.PWM(*timer*, *frequency*)**

Create a PWM object. This sets up the **timer** to oscillate at the specified **frequency**.**timer** is an integer from 0 to 3. **frequency** is an integer from 1 to 19455 Hz (this values can change in future upgrades).

**Methods**

**pwm.channel(*id*, *pin \**, *duty\_cycle=0.5*)**

Connect a PWM channel to a pin, setting the intial duty cycle. **id** is an integer from 0 to 7. **pin** is a string argument. **duty\_cycle** is a keyword-only float argument, with values between 0 and 1. Returns an instance of **PWMChannel**.

**class PWMChannel — control a PWM channel**

**Methods**

**pwmchannel.duty\_cycle(*value*)**

Set the duty cycle for a PWM channel. **value** is a float argument, with values between 0 and 1.

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