Arduino: Playground

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The **ServoTimeTimer1** Library drives servos on **pins 9 and 10** by using the timer1 hardware. This library is based on the Servo Timer 1 Library but instead of controlling the angle with degrees ranging between 0 and 180, you send the actual pulse length in microseconds. Microseconds will give you more than 10 times the resolution that degrees,

Standard Methods

attach(int)
    Turn a pin into a servo driver. Calls pinMode. Returns 0 on failure.
detach()
    Release a pin from servo driving.
write(int)
    Set the angle of the servo in microseconds 500 to 2500
read()
    return the value set with the last write().
attached()
    return 1 if the servo is currently attached.

Installation and Examples

You can find the code in Attach:servotimetimer1.zip

Unpack it into your arduino-xxxx/hardware/libraries folder (since Arduino 00010) to add the library.

You will find an example under File/Sketchbook/Examples/Library-ServoTimeTimer1 called *tow_pots_controlling_two_servos*

Connect on potentiometer to analog 0 and another to analog 1. Connect one servo to digital 9 and the other to digital 10. Compile. Turn the potentiometers to move the servos.

Here is the code:

```
//Example code for using ServoTimeTimer1 library
// hardware control of up to two servos, on Arduino pins 9 & 10

#include <ServoTimeTimer1.h>

#define servoPin1 9
#define servoPin2 10
#define potPin1 0
#define potPin2 1

ServoTimeTimer1 servo1;
ServoTimeTimer1 servo2;

int potVal1 = 0;
int potVal2 = 0;

void setup()
{
  servo1.attach(servoPin1);
  servo2.attach(servoPin2);

}

void loop()
{
```

```
        potVal1 = analogRead(potPin1);

        potVal2 = analogRead(potPin2);

        //Here we convert a 0-1023 range to a 500-2546 range
        //2546 is clipped to the maximum value of 2500 internally

        servo1.write((potVal1*2)+500);
        servo2.write((potVal2*2)+500);

}
```