

Detail of 'VarSpeedServo .h' library's functions with example code to understand easily.

'VarSpeedServo.h

The VarSpeedServo.h Arduino library allows the use of up to 8 servos moving asynchronously (because it uses interrupts or timer0, timer1, timer2).

In addition, you can set the speed of a move, optionally wait (block) until the servo move is complete, and create sequences of moves that run asynchronously.

This code is an adaptation of the standard Arduino Servo.h library, which was first adapted by Korman and posted on the Arduino forum to add the speed capability.

Philip van Allen updated it for Arduino 1.0 + and added the ability to wait for the move to complete.

Allows simultaneous, asynchronous movement of all servos

The speed of a move can be set

The write() function initiates a move and can optionally wait for completion of the move before returning

A servo can be sent a sequence of moves (where each move has a position and speed)

Sample Code - one servo moving, wait for first movement to finish, and then execute another movement

```
#include <VarSpeedServo.h>

VarSpeedServo myservo;      // create servo object to control a servo

void setup() {
  myservo.attach(9);        // attaches the servo on pin 9 to the servo object
}

void loop() {
  myservo.write(180, 30, true); // move to 180 degrees, use a speed of 30, wait until move is complete
  myservo.write(0, 30, true);   // move to 0 degrees, use a speed of 30, wait until move is complete
}
```

Sample Code - two servos moving in the same time with different speed, and wait for both to finish and do another move.

```
#include <VarSpeedServo.h>

// create servo objects

VarSpeedServo myservo1;
VarSpeedServo myservo2;

void setup() {
  myservo1.attach(9);
  myservo2.attach(6);
}
```

```
void loop() {

    int LEF = 0;

    int RIG = 180;

    int SPEED1 = 160;

    int SPEED2 = 100;

    myservo1.write(LEF, SPEED1);
    myservo2.write(LEF, SPEED2);

    myservo1.wait();    // wait for servo 1 to finish
    myservo2.wait();    // wait for servo 2 to finish

    myservo1.write(RIG, SPEED1);
    myservo1.wait();    // wait for S1

    myservo1.write(LEF, SPEED1);
    myservo2.write(RIG, SPEED2);

    myservo1.wait();
    myservo2.wait();

    myservo1.write(RIG, SPEED1);
    myservo1.wait();

    delay(1000);

}
```

