

PAN AND TILT SERVO CONTROLLER

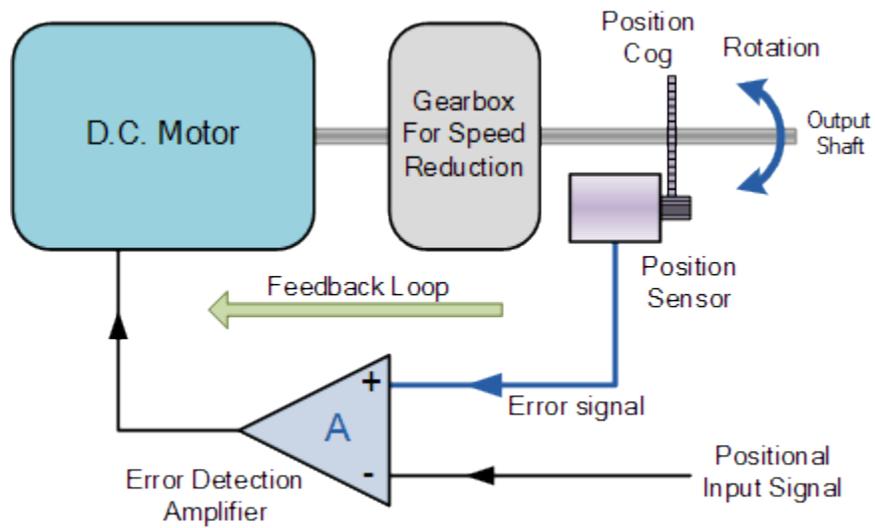
Servo motors are an ideal choice for implementing animated camera mounts. In a pan and tilt arrangement, the camera can be pointed side-to-side and top-to-bottom. Making a controller is a simple task when a microcontroller is used.

Pan & Tilt Servo

Pan and Tilt Servo Controller



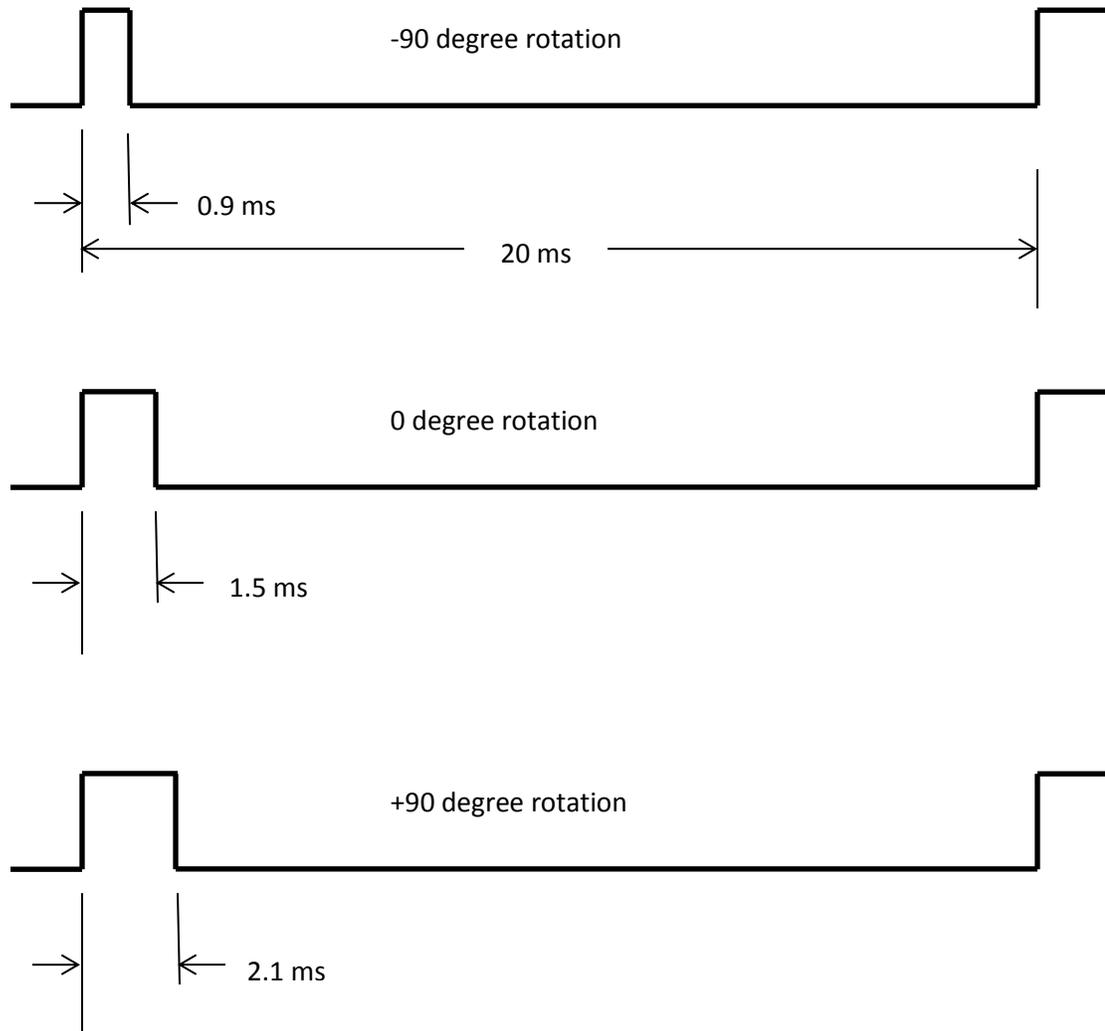
HS-85BB Servo Motor



Servo Motor Schematic

Pan and Tilt Servo Controller

Servo motors have internal electronic circuits that respond to pulse width modulation as shown in the following drawings.

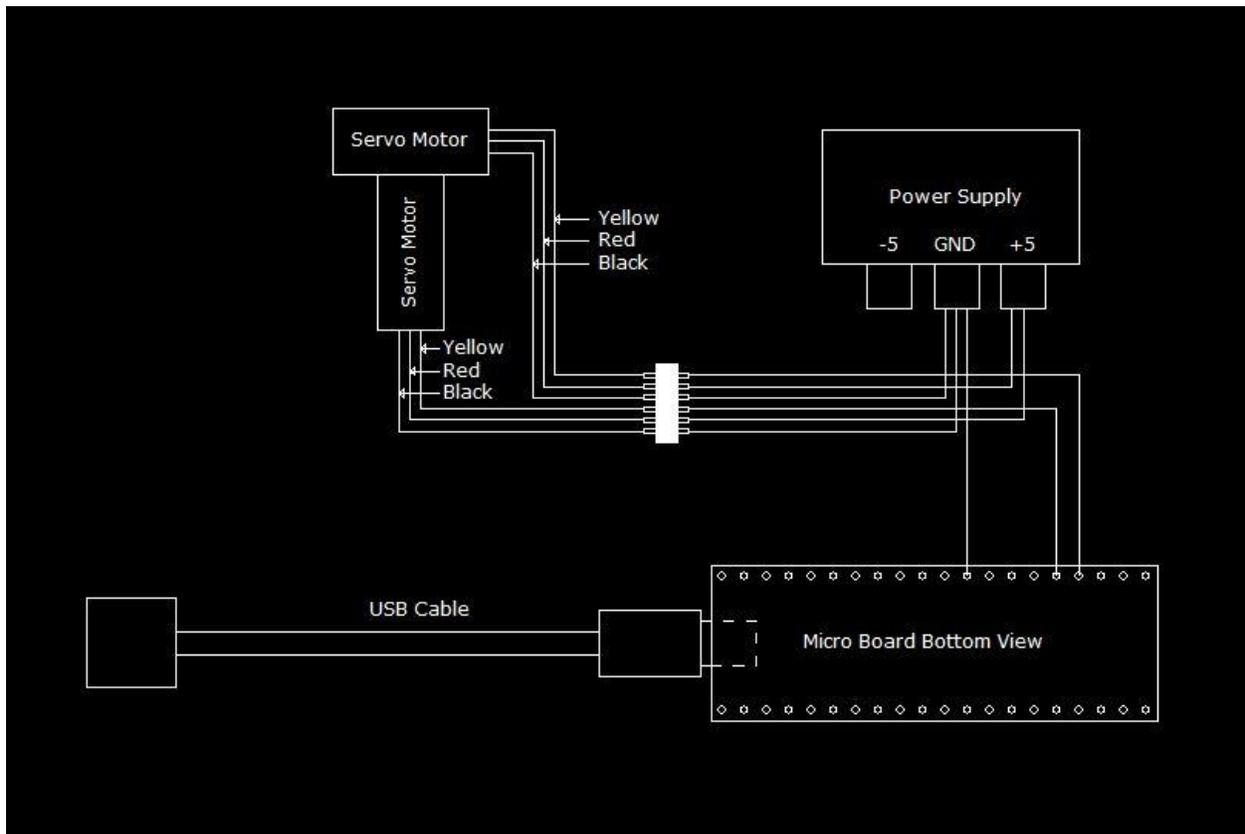


There is not much difference between the minimum pulse width and the maximum pulse width. The microcontroller should have high resolution to interpolate between these two extremes.

Pan and Tilt Servo Controller



The Lynxmotion RB-Lyn-316 has 2 servo motors in order to implement 2-axis movement. See <http://www.robotshop.com/ca/en/lynxmotion-micro-pan-and-tilt-kit-with-servos-black.html>



Wiring Diagram

Test Program

The test program was written in Delphi 7.

Hovering the cursor over the purple square will send seek commands to the servos. Moving the cursor side-to-side runs the Pan servo from -90 degrees to +90 degrees. Moving the cursor up-and-down runs the Tilt servo.

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Test Program Window