**Pad-Pal Motor Controller FSM Diagram**

**Period:** 50 ms

const double OnDelay = 2;

Speed<(255\*(DutyCycle/100))

const double OnTime = 180;

const double DutyCycle = 32.5;

const int motorPin = 0;

**Ramp State**

int Speed;

int i;

i>=(OnTime/(TickDelay/1000)))

/Speed=0;

true

**Off State**

analogWrite(motorPin, Speed);

**Sustain State**

analogWrite(motorPin, Speed);

i++;

Speed++;

analogWrite(motorPin, Speed);

**Wait State**

i++;

analogWrite(motorPin, Speed);

i<(OnTime/(TickDelay/1000)))

Speed>=(255\*(DutyCycle/100))

/ i=0;

i!<(OnDelay/(TickDelay/1000)

/ i=o;

i<(OnDelay/(TickDelay/1000))

/Speed=0; i=0;