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//.....
//Declaration of stepper motor variables and constants
//.....

const int V2A = 42; //Stepper motor output pin
const int V2B = 43; //Stepper motor output pin
const int V2C = 34; //Stepper motor output pin
const int V2D = 35; //Stepper motor output pin

int V_evap = 0;

long V2_position = 0;
int V2a = 0; //Internal program variable, not to be confused with output V2A
int V2b = 0; //Internal program variable, not to be confused with output V2B
int V2c = 0; //Internal program variable, not to be confused with output V2C
int V2d = 0; //Internal program variable, not to be confused with output V2D
boolean kill_step = false; // used for pulse timing
long V2_roll = 0; // output from inner counter. input to decoder
long V2_count = 0; // output from outer main counter
long V2_goto = 0; // input, where we want to go
unsigned long V2_pulsestart = 0; // store timer start
const boolean wait_off = true; //deactivate when finished
const boolean invert_step = false; //
const long V2_range = 480; //steps from closed to fully open
const unsigned long V2_pulse = 33; //milliseconds active pulse

//=====

void setup()
{
    pinMode(V2A, OUTPUT);
    pinMode(V2B, OUTPUT);
    pinMode(V2C, OUTPUT);
    pinMode(V2D, OUTPUT);

}

//=====

```



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////////////////////////////////////  
//////////////////////////////////// STEPPER MOTOR CODING ROUTINE////////////////////////////////////  
////////////////////////////////////
```

```
void code_step (int rollto, boolean kill, boolean invert)  
{  
  if (kill == true) {  
    rollto = rollto + 8;  
  }  
  switch (rollto) {  
    case 0:  
      V2a = 1;  
      V2b = 0;  
      V2c = 0;  
      V2d = 0;  
      break;  
    case 1:  
      V2a = 1;  
      V2b = 0;  
      V2c = 1;  
      V2d = 0;  
      break;  
    case 2:  
      V2a = 0;  
      V2b = 0;  
      V2c = 1;  
      V2d = 0;  
      break;  
    case 3:  
      V2a = 0;  
      V2b = 1;  
      V2c = 1;  
      V2d = 0;  
      break;  
    case 4:  
      V2a = 0;  
      V2b = 1;  
      V2c = 0;  
      V2d = 0;  
      break;  
    case 5:  
      V2a = 0;  
      V2b = 1;  
      V2c = 0;  
      V2d = 1;  
      break;  
    case 6:  
      V2a = 0;  
      V2b = 0;  
      V2c = 0;  
      V2d = 1;  
      break;  
    case 7:  
      V2a = 1;  
      V2b = 0;  
      V2c = 0;  
      V2d = 1;  
      break;  
    default:  
      V2a = 0;  
      V2b = 0;  
      V2c = 0;  
      V2d = 0;  
      break;  
  }  
  if (invert == true) {  
    if (V2a == 1) {  
      V2a = 0;  
    }  
    else {  
      V2a = 1;  
    }  
    if (V2b == 1) {  
      V2b = 0;  
    }  
    else {  
      V2b = 1;  
    }  
    if (V2c == 1) {  
      V2c = 0;  
    }  
    else {  
      V2c = 1;  
    }  
    if (V2d == 1) {  
      V2d = 0;  
    }  
    else {  
      V2d = 1;  
    }  
  }  
}
```