TA0066 Servo and Motor Controller Module

1 Introductions

This module is as same as Adafruit Motor shield board(https://learn.adafruit.com/adafruit-motor-shield/overview).   It can use 2 DC hobby servos that run on 5V and up to 4 DC motors or 2 stepper motors (or 1 stepper and up to 2 DC motors) that run on 5-12VDC.

2. What pins are used on the motor shield?

All 6 analog input pins are available. They can also be used as digital pins (pins #14 thru 19)
Digital pin 2, and 13 are not used.

The following pins are in use only if the DC/Stepper noted is in use:
Digital pin 11: DC Motor #1 / Stepper #1 (activation/speed control)
Digital pin 3: DC Motor #2 / Stepper #1 (activation/speed control)
Digital pin 5: DC Motor #3 / Stepper #2 (activation/speed control)
Digital pin 6: DC Motor #4 / Stepper #2 (activation/speed control)

The following pins are in use if any DC/steppers are used
Digital pin 4, 7, 8 and 12 are used to drive the DC/Stepper motors via the 74HC595 serial-to-parallel latch
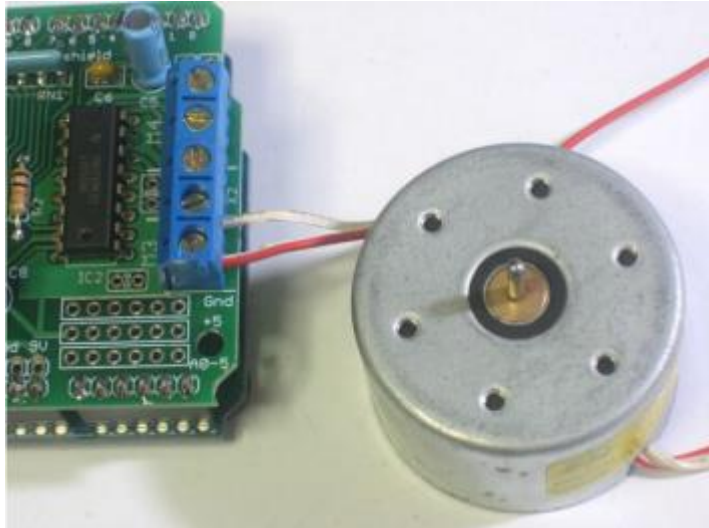
The following pins are used only if that particular servo is in use:
Digitals pin 9: Servo #1 control
Digital pin 10: Servo #2 control

3. Example

Here is a example to control a DC Motor through port M3.

```
// Adafruit Motor shield library
// this code is public domain, enjoy!

#include <AFMotor.h>

AF_DCMotor motor(3);

void setup() {
  Serial.begin(9600);        // set up Serial library at 9600 bps
  Serial.println("Motor test!");

  // turn on motor
  motor.setSpeed(200);

  motor.run(RELEASE);
}

void loop() {
  uint8_t i;

  Serial.print("tick");

  motor.run(FORWARD);
  for (i=0; i<255; i++) {
    motor.setSpeed(i);
    delay(10);
  }
```

```
  for (i=255; i!=0; i--) {
    motor.setSpeed(i);
    delay(10);
  }

  Serial.print("tock");

  motor.run(BACKWARD);
  for (i=0; i<255; i++) {
    motor.setSpeed(i);
    delay(10);
  }

  for (i=255; i!=0; i--) {
    motor.setSpeed(i);
    delay(10);
  }


  Serial.print("tech");
  motor.run(RELEASE);
  delay(1000);
}
```
********Code End********