Control Surface Example

PieterP

```
#include
#include


Adafruit_MotorShield AFMSbot(0x61); // Rightmost jumper closed
Adafruit_MotorShield AFMStop(0x60); // Default address, no jumpers


Adafruit_DCMotor *mFader6 = AFMSbot.getMotor(1);
Adafruit_DCMotor *mFader8 = AFMSbot.getMotor(2);
Adafruit_DCMotor *mFader1 = AFMSbot.getMotor(3);
Adafruit_DCMotor *mFader3 = AFMSbot.getMotor(4);

Adafruit_DCMotor *mFader2 = AFMStop.getMotor(1);
Adafruit_DCMotor *mFader4 = AFMStop.getMotor(2);
Adafruit_DCMotor *mFader5 = AFMStop.getMotor(3);
Adafruit_DCMotor *mFader7 = AFMStop.getMotor(4);


int motorSpeed = 250;
int Dword;

//BUTTON INITIALIZE
int play = 27;
int prehear = 29;

int listen1 = 45;
int listen2 = 43;
int listen3 = 41;
int listen4 = 39;

int load1 = 53;
int load2 = 51;
int load3 = 49;
int load4 = 47;

int loop1 = 37;
int loop2 = 35;
int loop3 = 33;
int loop4 = 31;

//POT INITIALIZE
int tempo = A7;
int speed1 = A0;
int speed2 = A1;
int speed3 = A2;
int speed4 = A3;




void setup() {

  Serial.begin(9600);           // set up Serial library at 9600 bps

  AFMSbot.begin();  // create with the default frequency 1.6KHz
  AFMStop.begin();

  // Set the speed to start, from 0 (off) to 255 (max speed)
  mFader1->setSpeed(motorSpeed);
  mFader2->setSpeed(motorSpeed);
  mFader3->setSpeed(motorSpeed);
  mFader4->setSpeed(motorSpeed);
  mFader5->setSpeed(motorSpeed);
  mFader6->setSpeed(motorSpeed);
  mFader7->setSpeed(motorSpeed);
  mFader8->setSpeed(motorSpeed);

  //Define Buttons as Inputs..
  pinMode(play, INPUT);
  pinMode(prehear, INPUT);

  pinMode(listen1, INPUT);
  pinMode(listen2, INPUT);
  pinMode(listen3, INPUT);
  pinMode(listen4, INPUT);

  pinMode(load1, INPUT);
```

```
  pinMode(load2, INPUT);
  pinMode(load3, INPUT);
  pinMode(load4, INPUT);

  pinMode(loop1, INPUT);
  pinMode(loop2, INPUT);
  pinMode(loop3, INPUT);
  pinMode(loop4, INPUT);

}

void loop() {
  serialListen();

  doAnythingToDo();

}

void resetTrack1() {
  int fader1 = analogRead(A15);
  int fader2 = analogRead(A11);
  if (fader1 >= 1) {
    mFader1->run(BACKWARD);
  }
  delay(200);
  mFader1->run(RELEASE);

  if (fader2 >= 1) {
    mFader2->run(BACKWARD);
  }
  delay(200);  mFader2->run(RELEASE);
}

void resetTrack2() {
  int fader3 = analogRead(A14);
  int fader4 = analogRead(A10);

  if (fader3 >= 1) {
    mFader3->run(FORWARD);
  }
  delay(220);
  mFader3->run(RELEASE);

  if (fader4 >= 1) {
    mFader4->run(FORWARD);
  }
  delay(220);  mFader4->run(RELEASE);
}

void resetTrack3() {
  int fader5 = analogRead(A13);
  int fader6 = analogRead(A9);

  if (fader5 >= 1) {
    mFader5->run(BACKWARD);
  }
  delay(250);
  mFader5->run(RELEASE);

  if (fader6 >= 1) {
    mFader6->run(BACKWARD);
  }
  delay(250);
  mFader6->run(RELEASE);
}

void resetTrack4() {
  int fader7 = analogRead(A12);
  int fader8 = analogRead(A8);
  if (fader7 >= 1) {
    mFader7->run(FORWARD);
  }
  delay(250);
  mFader7->run(RELEASE);

  if (fader8 >= 1) {
    mFader8->run(FORWARD);
  }
  delay(250);
  mFader8->run(RELEASE);
}

void serialListen() {
  Dword = Serial.read();


```

```
    if (Dword == '1') {
      resetTrack1();
    }

    if (Dword == '2') {
      resetTrack2();
    }

    if (Dword == '3') {
      resetTrack3();
    }

    if (Dword == '4') {
      resetTrack4();
    }

  }


  void doAnythingToDo() {
    int BSplay = digitalRead(play);
    int BSprehear = digitalRead(prehear);

    int BSlisten1 = digitalRead(listen1);
    int BSlisten2 = digitalRead(listen2);
    int BSlisten3 = digitalRead(listen3);
    int BSlisten4 = digitalRead(listen4);

    int BSload1 = digitalRead(load1);
    int BSload2 = digitalRead(load2);
    int BSload3 = digitalRead(load3);
    int BSload4 = digitalRead(load4);

    int BSloop1 = digitalRead(loop1);
    int BSloop2 = digitalRead(loop2);
    int BSloop3 = digitalRead(loop3);
    int BSloop4 = digitalRead(loop4);

    int PVtempo = analogRead(tempo);
    int PVspeed1 = analogRead(speed1);
    int PVspeed2 = analogRead(speed2);
    int PVspeed3 = analogRead(speed3);
    int PVspeed4 = analogRead(speed4);

  //TRACK1
  int fader1 = analogRead(A15);
  int fader2 = analogRead(A11);
  //TRACK2
  int fader3 = analogRead(A14);
  int fader4 = analogRead(A10);
  //TRACK3
  int fader5 = analogRead(A13);
  int fader6 = analogRead(A9);
  //TRACK4
  int fader7 = analogRead(A12);
  int fader8 = analogRead(A8);

    Serial.print(BSplay);
    Serial.print(" ");
      Serial.print(BSprehear);
    Serial.print(" ");

      Serial.print(BSlisten1);
    Serial.print(" ");
      Serial.print(BSlisten2);
    Serial.print(" ");
      Serial.print(BSlisten3);
    Serial.print(" ");
      Serial.print(BSlisten4);
    Serial.print(" ");

      Serial.print(BSload1);
    Serial.print(" ");
      Serial.print(BSload2);
    Serial.print(" ");
      Serial.print(BSload3);
    Serial.print(" ");
      Serial.print(BSload4);
    Serial.print(" ");

      Serial.print(BSloop1);
    Serial.print(" ");
      Serial.print(BSloop2);
    Serial.print(" ");
      Serial.print(BSloop3);
    Serial.print(" ");
```

```
      Serial.print(BSloop4);
    Serial.print(" ");

        Serial.print(PVtempo);
    Serial.print(" ");
      Serial.print(PVspeed1);
    Serial.print(" ");
      Serial.print(PVspeed2);
    Serial.print(" ");
      Serial.print(PVspeed3);
    Serial.print(" ");
        Serial.print(PVspeed4);
    Serial.print(" ");
    Serial.print(fader1);
      Serial.print(" ");
    Serial.print(fader2);
      Serial.print(" ");
    Serial.print(fader3);
      Serial.print(" ");
    Serial.print(fader4);
      Serial.print(" ");
    Serial.print(fader5);
      Serial.print(" ");
    Serial.print(fader6);
      Serial.print(" ");
    Serial.print(fader7);
      Serial.print(" ");
    Serial.println(fader8);

  }
```