

Control Surface Example

PieterP

```
1  #include
2  #include
3
4
5  Adafruit_MotorShield AFMSbot(0x61); // Rightmost jumper closed
6  Adafruit_MotorShield AFMStop(0x60); // Default address, no jumpers
7
8
9  Adafruit_DCMotor *mFader6 = AFMSbot.getMotor(1);
10 Adafruit_DCMotor *mFader8 = AFMSbot.getMotor(2);
11 Adafruit_DCMotor *mFader1 = AFMSbot.getMotor(3);
12 Adafruit_DCMotor *mFader3 = AFMSbot.getMotor(4);
13
14 Adafruit_DCMotor *mFader2 = AFMStop.getMotor(1);
15 Adafruit_DCMotor *mFader4 = AFMStop.getMotor(2);
16 Adafruit_DCMotor *mFader5 = AFMStop.getMotor(3);
17 Adafruit_DCMotor *mFader7 = AFMStop.getMotor(4);
18
19
20 int motorSpeed = 250;
21 int Dword;
22
23 //BUTTON INITIALIZE
24 int play = 27;
25 int prehear = 29;
26
27 int listen1 = 45;
28 int listen2 = 43;
29 int listen3 = 41;
30 int listen4 = 39;
31
32 int load1 = 53;
33 int load2 = 51;
34 int load3 = 49;
35 int load4 = 47;
36
37 int loop1 = 37;
38 int loop2 = 35;
39 int loop3 = 33;
40 int loop4 = 31;
41
42 //POT INITIALIZE
43 int tempo = A7;
44 int speed1 = A0;
45 int speed2 = A1;
46 int speed3 = A2;
47 int speed4 = A3;
48
49
50
51
52 void setup() {
53
54     Serial.begin(9600);           // set up Serial library at 9600 bps
55
56     AFMSbot.begin(); // create with the default frequency 1.6KHz
57     AFMStop.begin();
58
59     // Set the speed to start, from 0 (off) to 255 (max speed)
60     mFader1->setSpeed(motorSpeed);
61     mFader2->setSpeed(motorSpeed);
62     mFader3->setSpeed(motorSpeed);
63     mFader4->setSpeed(motorSpeed);
64     mFader5->setSpeed(motorSpeed);
65     mFader6->setSpeed(motorSpeed);
66     mFader7->setSpeed(motorSpeed);
67     mFader8->setSpeed(motorSpeed);
68
69     //Define Buttons as Inputs..
70     pinMode(play, INPUT);
71     pinMode(prehear, INPUT);
72
73     pinMode(listen1, INPUT);
74     pinMode(listen2, INPUT);
75     pinMode(listen3, INPUT);
76     pinMode(listen4, INPUT);
77
78     pinMode(load1, INPUT);
```

```

79     pinMode(load2, INPUT);
80     pinMode(load3, INPUT);
81     pinMode(load4, INPUT);
82
83     pinMode(loop1, INPUT);
84     pinMode(loop2, INPUT);
85     pinMode(loop3, INPUT);
86     pinMode(loop4, INPUT);
87
88 }
89
90 void loop() {
91     serialListen();
92
93     doAnythingToDo();
94
95 }
96
97 void resetTrack1() {
98     int fader1 = analogRead(A15);
99     int fader2 = analogRead(A11);
100    if (fader1 >= 1) {
101        mFader1->run(BACKWARD);
102    }
103    delay(200);
104    mFader1->run(RELEASE);
105
106    if (fader2 >= 1) {
107        mFader2->run(BACKWARD);
108    }
109    delay(200); mFader2->run(RELEASE);
110 }
111
112 void resetTrack2() {
113     int fader3 = analogRead(A14);
114     int fader4 = analogRead(A10);
115
116     if (fader3 >= 1) {
117         mFader3->run(FORWARD);
118     }
119     delay(220);
120     mFader3->run(RELEASE);
121
122     if (fader4 >= 1) {
123         mFader4->run(FORWARD);
124     }
125     delay(220); mFader4->run(RELEASE);
126 }
127
128 void resetTrack3() {
129     int fader5 = analogRead(A13);
130     int fader6 = analogRead(A9);
131
132     if (fader5 >= 1) {
133         mFader5->run(BACKWARD);
134     }
135     delay(250);
136     mFader5->run(RELEASE);
137
138     if (fader6 >= 1) {
139         mFader6->run(BACKWARD);
140     }
141     delay(250);
142     mFader6->run(RELEASE);
143 }
144
145 void resetTrack4() {
146     int fader7 = analogRead(A12);
147     int fader8 = analogRead(A8);
148     if (fader7 >= 1) {
149         mFader7->run(FORWARD);
150     }
151     delay(250);
152     mFader7->run(RELEASE);
153
154     if (fader8 >= 1) {
155         mFader8->run(FORWARD);
156     }
157     delay(250);
158     mFader8->run(RELEASE);
159 }
160
161 void serialListen() {
162     Dword = Serial.read();
163
164

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165     if (Dword == '1') {
166         resetTrack1();
167     }
168
169     if (Dword == '2') {
170         resetTrack2();
171     }
172
173     if (Dword == '3') {
174         resetTrack3();
175     }
176
177     if (Dword == '4') {
178         resetTrack4();
179     }
180
181 }
182
183
184 void doAnythingToDo() {
185     int BSplay = digitalRead(play);
186     int BSprehear = digitalRead(prehear);
187
188     int BSlisten1 = digitalRead(listen1);
189     int BSlisten2 = digitalRead(listen2);
190     int BSlisten3 = digitalRead(listen3);
191     int BSlisten4 = digitalRead(listen4);
192
193     int BSload1 = digitalRead(load1);
194     int BSload2 = digitalRead(load2);
195     int BSload3 = digitalRead(load3);
196     int BSload4 = digitalRead(load4);
197
198     int BSloop1 = digitalRead(loop1);
199     int BSloop2 = digitalRead(loop2);
200     int BSloop3 = digitalRead(loop3);
201     int BSloop4 = digitalRead(loop4);
202
203     int PVtempo = analogRead(tempo);
204     int PVspeed1 = analogRead(speed1);
205     int PVspeed2 = analogRead(speed2);
206     int PVspeed3 = analogRead(speed3);
207     int PVspeed4 = analogRead(speed4);
208
209     //TRACK1
210     int fader1 = analogRead(A15);
211     int fader2 = analogRead(A11);
212     //TRACK2
213     int fader3 = analogRead(A14);
214     int fader4 = analogRead(A10);
215     //TRACK3
216     int fader5 = analogRead(A13);
217     int fader6 = analogRead(A9);
218     //TRACK4
219     int fader7 = analogRead(A12);
220     int fader8 = analogRead(A8);
221
222     Serial.print(BSplay);
223     Serial.print(" ");
224     Serial.print(BSprehear);
225     Serial.print(" ");
226
227     Serial.print(BSlisten1);
228     Serial.print(" ");
229     Serial.print(BSlisten2);
230     Serial.print(" ");
231     Serial.print(BSlisten3);
232     Serial.print(" ");
233     Serial.print(BSlisten4);
234     Serial.print(" ");
235
236     Serial.print(BSload1);
237     Serial.print(" ");
238     Serial.print(BSload2);
239     Serial.print(" ");
240     Serial.print(BSload3);
241     Serial.print(" ");
242     Serial.print(BSload4);
243     Serial.print(" ");
244
245     Serial.print(BSloop1);
246     Serial.print(" ");
247     Serial.print(BSloop2);
248     Serial.print(" ");
249     Serial.print(BSloop3);
250     Serial.print(" ");

```

```
251     Serial.print(BSloop4);
252     Serial.print(" ");
253
254     Serial.print(PVtempo);
255     Serial.print(" ");
256     Serial.print(PVspeed1);
257     Serial.print(" ");
258     Serial.print(PVspeed2);
259     Serial.print(" ");
260     Serial.print(PVspeed3);
261     Serial.print(" ");
262     Serial.print(PVspeed4);
263     Serial.print(" ");
264     Serial.print(fader1);
265     Serial.print(" ");
266     Serial.print(fader2);
267     Serial.print(" ");
268     Serial.print(fader3);
269     Serial.print(" ");
270     Serial.print(fader4);
271     Serial.print(" ");
272     Serial.print(fader5);
273     Serial.print(" ");
274     Serial.print(fader6);
275     Serial.print(" ");
276     Serial.print(fader7);
277     Serial.print(" ");
278     Serial.println(fader8);
279
280 }
```