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1  /* _Atten_PE43703.ino
2  ****
3  *      JFW 50P-1896 Programmable Attenuator Evaluation Program      *
4  *      JFW 50P-1896 equipped with three PE43703 programmable attenuators. *
5  *      Parallel control mode.                                       *
6  *      Carte Mega 2560                                             *
7  *      LCD Keypad                                                 *
8  *      Pierre Marie GAYRAL F5XG may 2023                          *
9  ****
10
11 LCDKeypad Arduino library
12 https://github.com/dzindra/LCDKeypad
13
14 Copyright 2014 Jindřich Doležý (jindrich@dolezy.cz)
15 based on the code by fj604 from http://forum.arduino.cc/index.php?topic=38061.0
16
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29
30 ATmega2560-Arduino Pin Mapping Port C :
31
32     PC0 ( A8 )           Digital pin 37
33     PC1 ( A9 )           Digital pin 36
34     PC2 ( A10 )          Digital pin 35
35     PC3 ( A11 )          Digital pin 34
36     PC4 ( A12 )          Digital pin 33
37     PC5 ( A13 )          Digital pin 32
38     PC6 ( A14 )          Digital pin 31
39     PC7 ( A15 )          Digital pin 30
40
41
42 */
43
44 #include <LiquidCrystal.h>
45 #include <LCDKeypad.h>
46
47 LCDKeypad lcd;
48 int EN_ = 22;
49 int CP = 23;
50 int atten = 0;
51 int Old_atten = 0;
52
53 void setup() {
54     lcd.begin(16,2);
55     lcd.clear();
56
57     lcd.print("Atten_PE43703");
58     lcd.setCursor(0,1);
59     lcd.print(" 0 - 95 dB");
60
61     delay(2000);
62     lcd.clear();
63     lcd.print("Atten :");
64
65     pinMode(EN_,OUTPUT);      // EN/   Pin 14 CY74FCT823C
66     digitalWrite(EN_,HIGH);
67
68     pinMode(CP,OUTPUT);      // CP   Pin 13 CY74FCT823C
69     digitalWrite(CP,LOW);
70
71     DDRC = 0xFF;             // Port C all pins OUTPUT
72     PORTC = atten;           // B00000000
73

```

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74 }
75
76
77
78 void driveAtten() {
79     PORTC = atten;
80     Serial.begin(115200);
81     Serial.print("Attén : ");
82     Serial.println(atten,BIN);
83
84     digitalWrite(EN_,LOW); // _____|_____ enable
85     delay(1);
86     digitalWrite(CP,HIGH); // _____|_____ write
87     delay(1);
88     digitalWrite(EN_,HIGH); // _____|_____ disable
89     digitalWrite(CP,LOW); // _____|_____ hold
90
91 }
92
93
94 void loop() {
95     // use buttonBlocking in menus or other cases
96     // when you need repeated and debounced key presses
97     // key direction will be returned once only for each blocking period (default 500ms)
98
99     switch (lcd.buttonBlocking()) {
100     case KEYPAD_LEFT:
101         atten -= 10;
102         if (atten <= 0 ){
103             atten = 0 ;
104         }
105         break;
106     case KEYPAD_RIGHT:
107         atten += 10;
108         break;
109     case KEYPAD_DOWN:
110         atten -= 1;
111         if (atten <= 0 ){
112             atten = 0 ;
113         }
114         break;
115     case KEYPAD_UP:
116         atten += 1;
117         break;
118     case KEYPAD_SELECT:
119         driveAtten();
120         // atten = 0;
121         break;
122     }
123
124     if (atten >= 96){
125         lcd.setCursor(0,1);
126         //lcd.print(atten);
127         lcd.print("Valeur maxi !");
128         delay(1000);
129         lcd.setCursor(0,1);
130         lcd.print("          ");
131         atten = 0;
132     }
133
134     lcd.setCursor(7,0);
135     lcd.print(atten);
136     lcd.print(" ");
137
138
139 }
140

```