Séquenceur à base de Arduino Micro

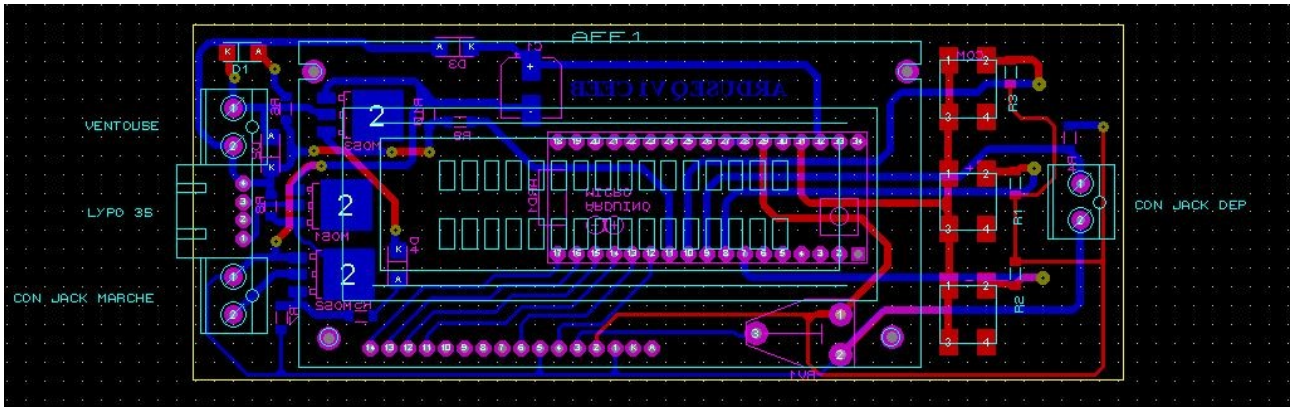
F. Douguet , CEEB, 2014

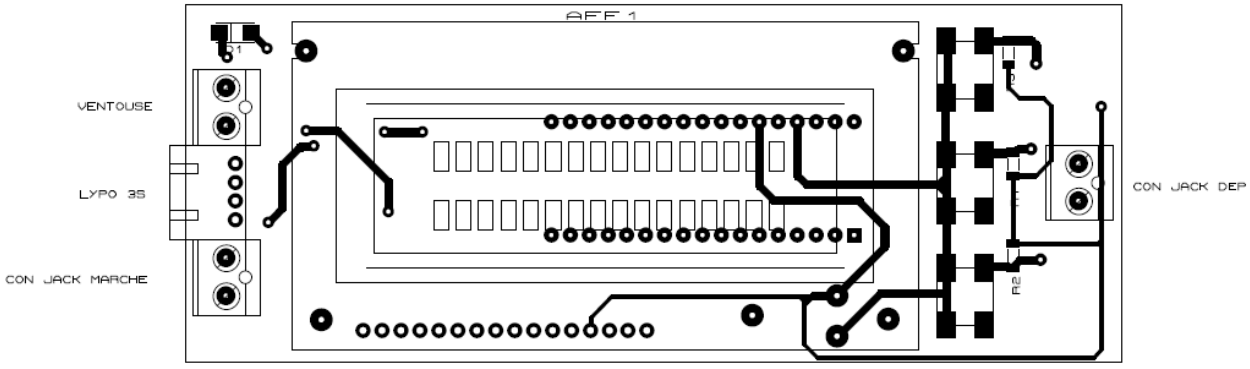
ArduSeq : séquenceur "intermédiaire" utilisant un Arduino Micro.

Les caractéristiques :

- circuit évitant la décharge d'un accu Lipo 3S sous les 10V fatidiques !
- afficheur 2 lignes 16 caractères
- 3 poussoirs +, - et com (dont vous pourrez faire ce que bon vous semble...)
- réglage numérique de la temporisation d'ouverture de trappe
- entré jack M/A (NF)
- entrée jack de départ (NF)
- sortie de puissance pour électro aimant permanent 12V
- Dimension 48 x 125 mm

Attention D4 est une BZX55C10V et non 4V7


VENTOUSE
LYPO 3S
CON JACK MARCHE
CON JACK DEP


VENTOUSE
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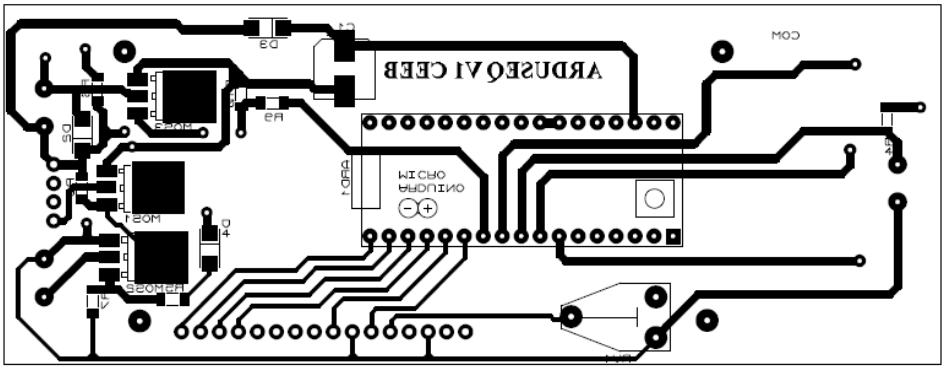
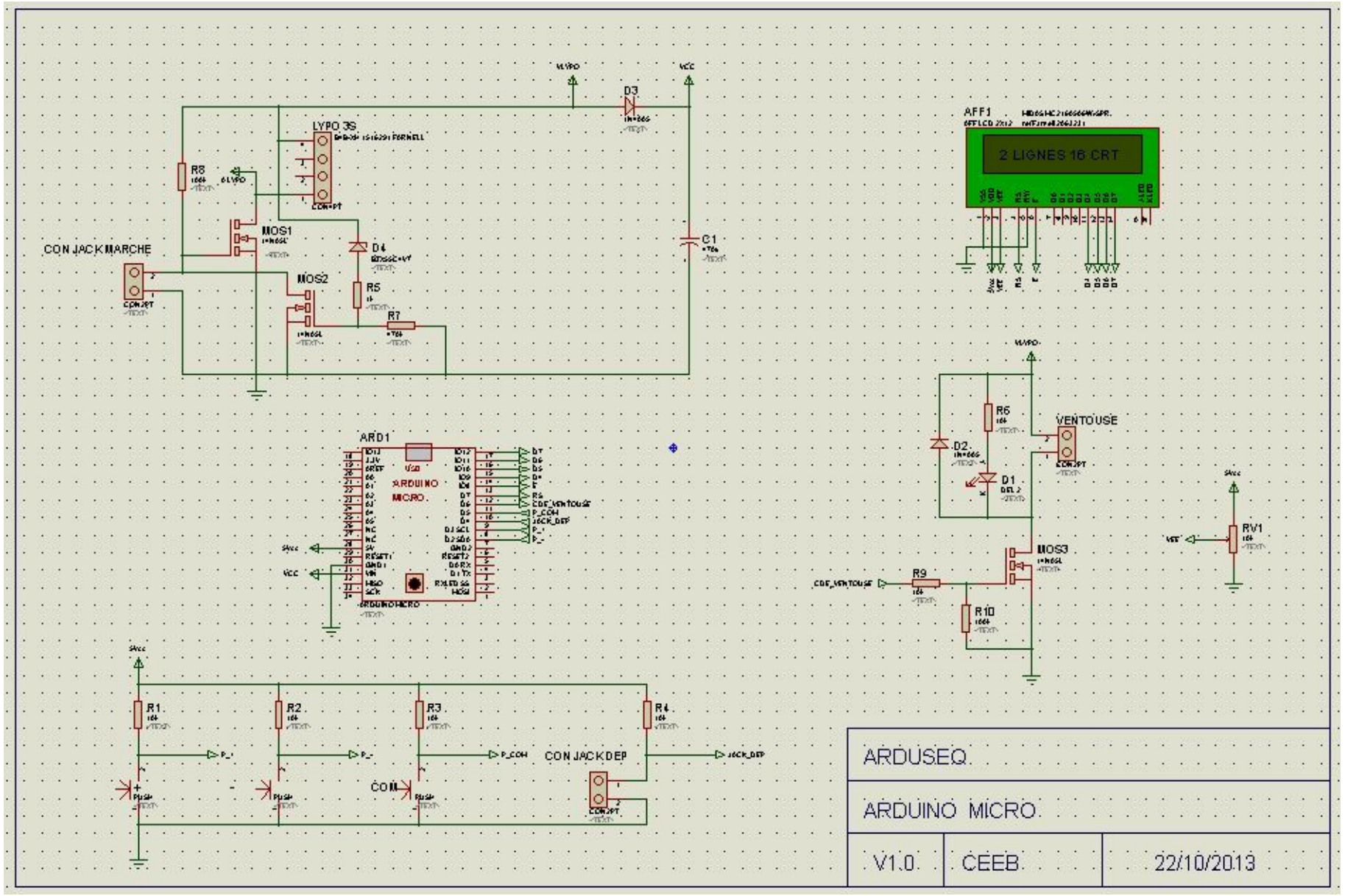




ARDUSEQ		
ARDUINO MICRO		
V1.0	CEEB	22/10/2013

10 Resistors

Quantity:	References	Value
6	R1-R4, R6, R9	10k
1	R5	1k
1	R7	470k
2	R8, R10	100k

1 Capacitors

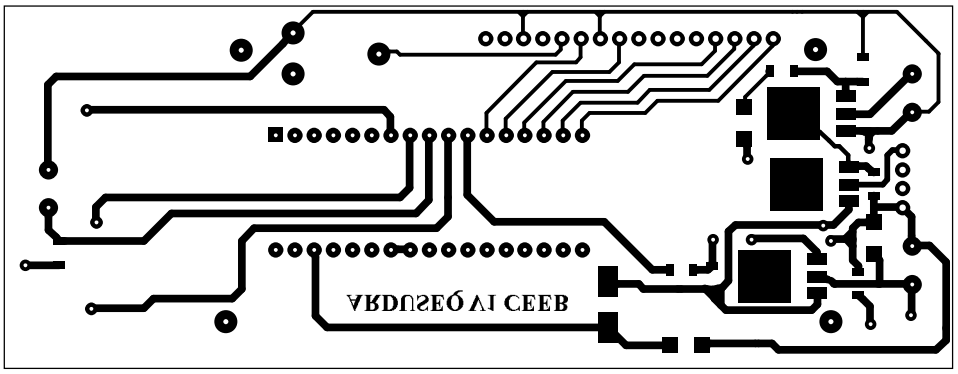
Quantity:	References	Value
1	C1	470u

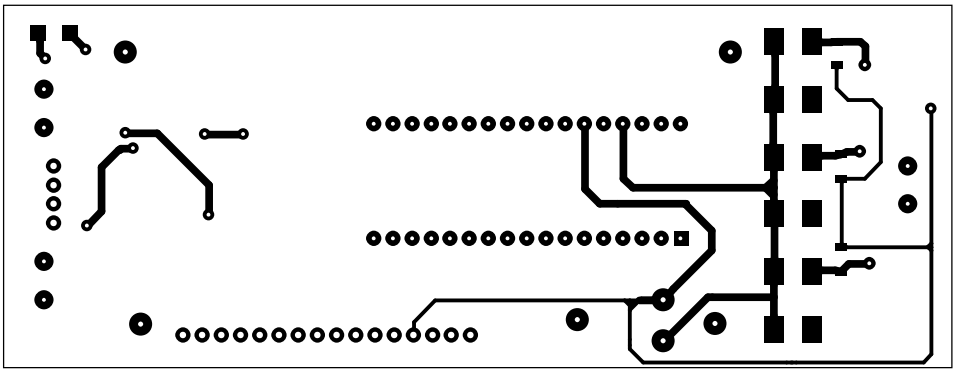
4 Diodes

Quantity:	References	Value
1	D1	DEL 2
2	D2, D3	1N4005
1	D4	BZX55C4V7

13 Miscellaneous

Quantity:	References	Value
3	+, -, COM	PUSH
1	AFF1	AFF LCD 2X12
1	ARD1	ARDUINO MICRO
3	CON JACK DEP, CON JACK MARCHE, VENTOUSE	CON2PT
1	LYPO 3S	CON4PT
3	MOS1-MOS3	14N05L
1	RV1	10k


ARDUSEO V1 CEEB



```
// include the library code:
#include <LiquidCrystal.h>
#include <EEPROM.h>

// initialize the library with the numbers of the interface pins
LiquidCrystal lcd(7, 8, 9, 10, 11, 12);//RS, En, d4, d5, d6; d7
const int BoutonPlusPin = 3;
const int BoutonMoinsPin = 2;
const int JackDepPin = 4;
const int CdeTrappe = 6;
const int BoutonTransfert = 5;
const int AddTempo=0;

int EtatBoutonPlus = 0;
int EtatBoutonMoins = 0;
int EtatJackDep = 0;
int EtatBoutonTransfert = 0;
unsigned int Tempo;


char Chru,Chrd,mem;

void Conv(){
Chru=(Tempo - (Tempo/10)*10)+48;
Chrd=(Tempo/10)+48;

};

void setup() {
  //Boutons et Jack dÃ©part
  pinMode(BoutonPlusPin,INPUT);
  pinMode(BoutonMoinsPin,INPUT);
  pinMode(JackDepPin,INPUT);
  pinMode(BoutonTransfert,INPUT);
  pinMode(CdeTrappe,OUTPUT);


  lcd.begin(16, 2);
  lcd.setCursor(0,0);
  lcd.print("Sequenceur Minif");
  lcd.setCursor(0,1);
  lcd.print(" CEEB 2013/2014  ");
  delay(5000);
  lcd.setCursor(0,0);
  lcd.print("Tempo   Etat    ");
  lcd.setCursor(0,1);
  lcd.print("                 ");


  Tempo=EEPROM.read(AddTempo);
  if(Tempo>30 || Tempo<0) Tempo=0;


  lcd.setCursor(3,2);
  lcd.print("Sec  Marche  ");
  lcd.display();
}

void loop() {
  EtatBoutonPlus=digitalRead(BoutonPlusPin);
  EtatBoutonMoins=digitalRead(BoutonMoinsPin);
  EtatJackDep=digitalRead(JackDepPin);
  EtatBoutonTransfert=digitalRead(BoutonTransfert);
```

```
if(EtatBoutonTransfert==LOW){
lcd.setCursor(0,0);
lcd.print("Transfert des   ");
lcd.setCursor(0,1);
lcd.print("donnees stockees");
lcd.display();

//Transfert des donnÃ©es en mÃ©moire
//Keyboard.begin();
//Keyboard.println("Donnees stockees en memoire ");

//Tempo=EEPROM.read(AddTempo);
//Conv();
//Keyboard.write(Chrd);
//Keyboard.write(Chru);



while(1);
}

if(EtatBoutonPlus==LOW) {
  if(Tempo>=30){Tempo=30;} else {Tempo+=1;}
  EEPROM.write(AddTempo,Tempo);
  delay(300);
 }

if(EtatBoutonMoins==LOW) {
  if(Tempo<=1){Tempo=1;} else {Tempo-=1;}
  EEPROM.write(AddTempo,Tempo);
  delay(300);
 }

Conv();
lcd.setCursor(0,2);
lcd.print(Chrd);
lcd.print(Chru);
lcd.display();

if(EtatJackDep==HIGH) {
  lcd.setCursor(8,2);
  lcd.print("Deco    ");
  lcd.display();
      while(Tempo>=1){
        delay(1000);
        Tempo-=1;
        Conv();
        lcd.setCursor(0,2);
        lcd.print(Chrd);
        lcd.print(Chru);
        lcd.display();
        }
  digitalWrite(CdeTrappe, HIGH);
  lcd.setCursor(8,2);
  lcd.print("Ejection");
  lcd.display();
        Tempo=10;
        while(Tempo>=1){
        delay(1000);
        Tempo-=1;
        Conv();
        lcd.setCursor(0,2);
        lcd.print(Chrd);
        lcd.print(Chru);
```

```
          lcd.display();
          }



    //delay(10000);
    digitalWrite(CdeTrappe, LOW);
    lcd.setCursor(8,2);
    lcd.print("Inactif ");
    lcd.display();
  while(1);
  }
}
```