

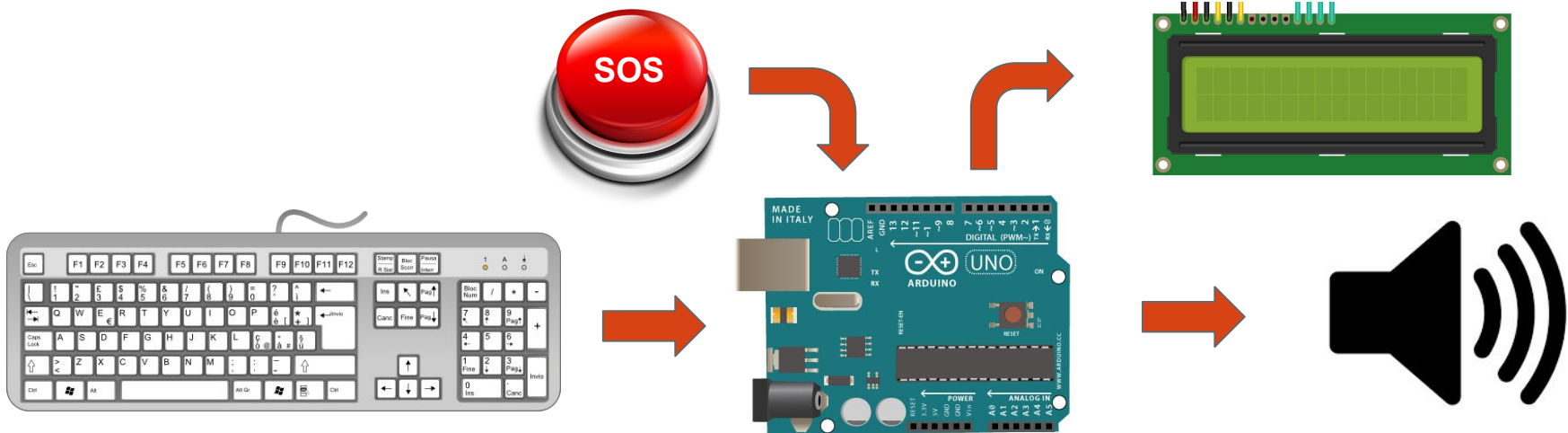
# Morse Click



-- --- .- . . . . - .- . - . . - .- .- .-

# Functions

- Convert PS/2 Keyboard clicks into morse code
- Send whole statement to morse code after Click Enter
- send SOS Signal without keyboard



# Morse Code

A • —  
B — • • •  
C — • — •  
D — • •  
E •  
F • • — •  
G — — •  
H • • • •  
I • •  
J • — — —  
K — • —  
L • — • •  
M — —  
N — •  
O — — —  
P • — — •  
Q — — • —  
R • — •  
S • • •  
T —

U • • —  
V • • • —  
W • — —  
X — • • —  
Y — • — —  
Z — — • •

1 • — — — —  
2 • • — — —  
3 • • • — —  
4 • • • • —  
5 • • • • •  
6 — • • • •  
7 — — • • •  
8 — — — • •  
9 — — — — •  
0 — — — — —

0 — — — •

A • — • —

A • — — • —

# Features

LCD screen

Change Morse mode with Page Up / Page Down

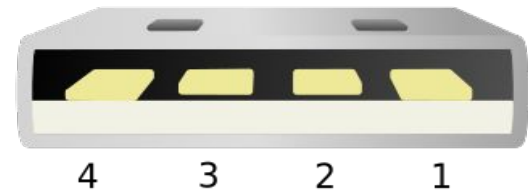
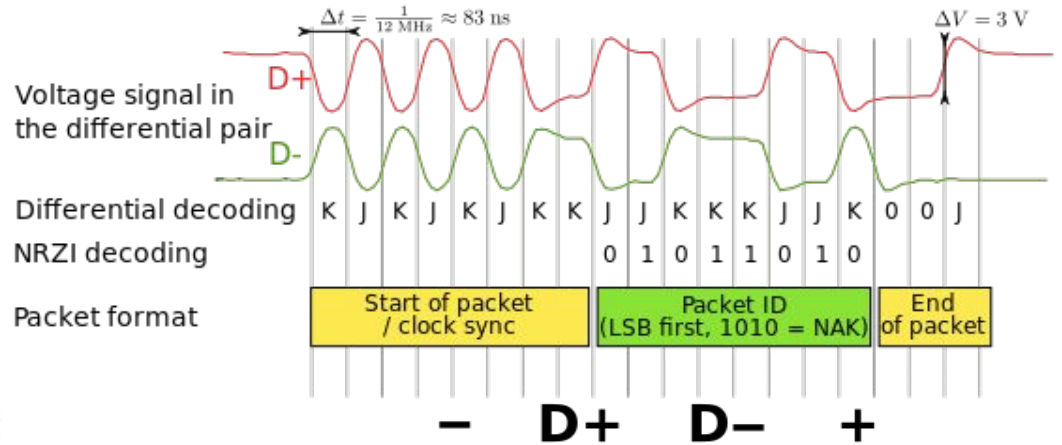
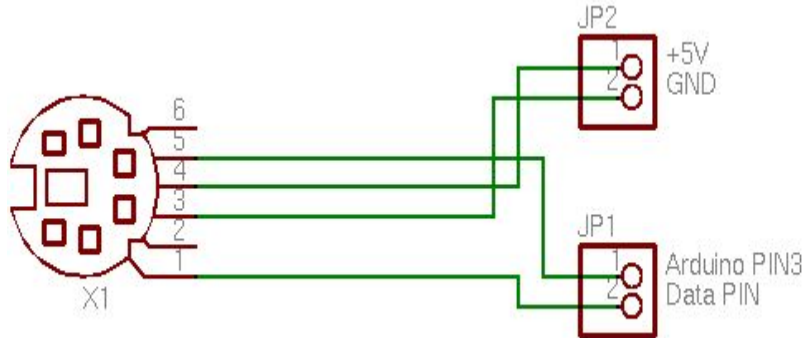
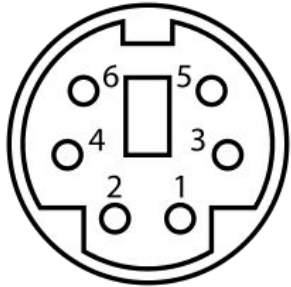
Change the phase period Arrow Up / Arrow Down

Change the tone frequency Arrow Left / Arrow Right

One button two functions: one click for STOP

5 second hold for SOS

# challenges PS/2 vs USB

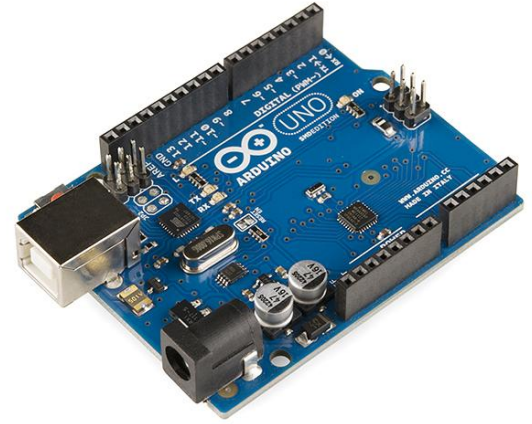


# challenges PS/2 vs USB



**USB Host Shield**  
**350:- SEK**

\$  
V



**Arduino Board**  
**215:- SEK**

# challenges: Support Ö Ä Å

LCD does not support special latin letters by default

CreateChar

```
byte 00[8] = { //Ö
    B10001,
    B00000,
    B01110,
    B10001,
    B10001,
    B10001,
    B01110,
};

lcd.createChar(2, 00); //Ö
```

# challenges: Buzzer interfere the LCD

For some reason the Buzzer (small speaker) was interfere the LCD

## **Solution:**

connect 220 resistance and avoid long cable

or

locate the buzzer far from the LCD



# challenges: Only 2 interruptible pins

Arduino UNO has only 2 interruptible pins 2 & 3

Pin 3 is already used for PS/2 Keyboard.

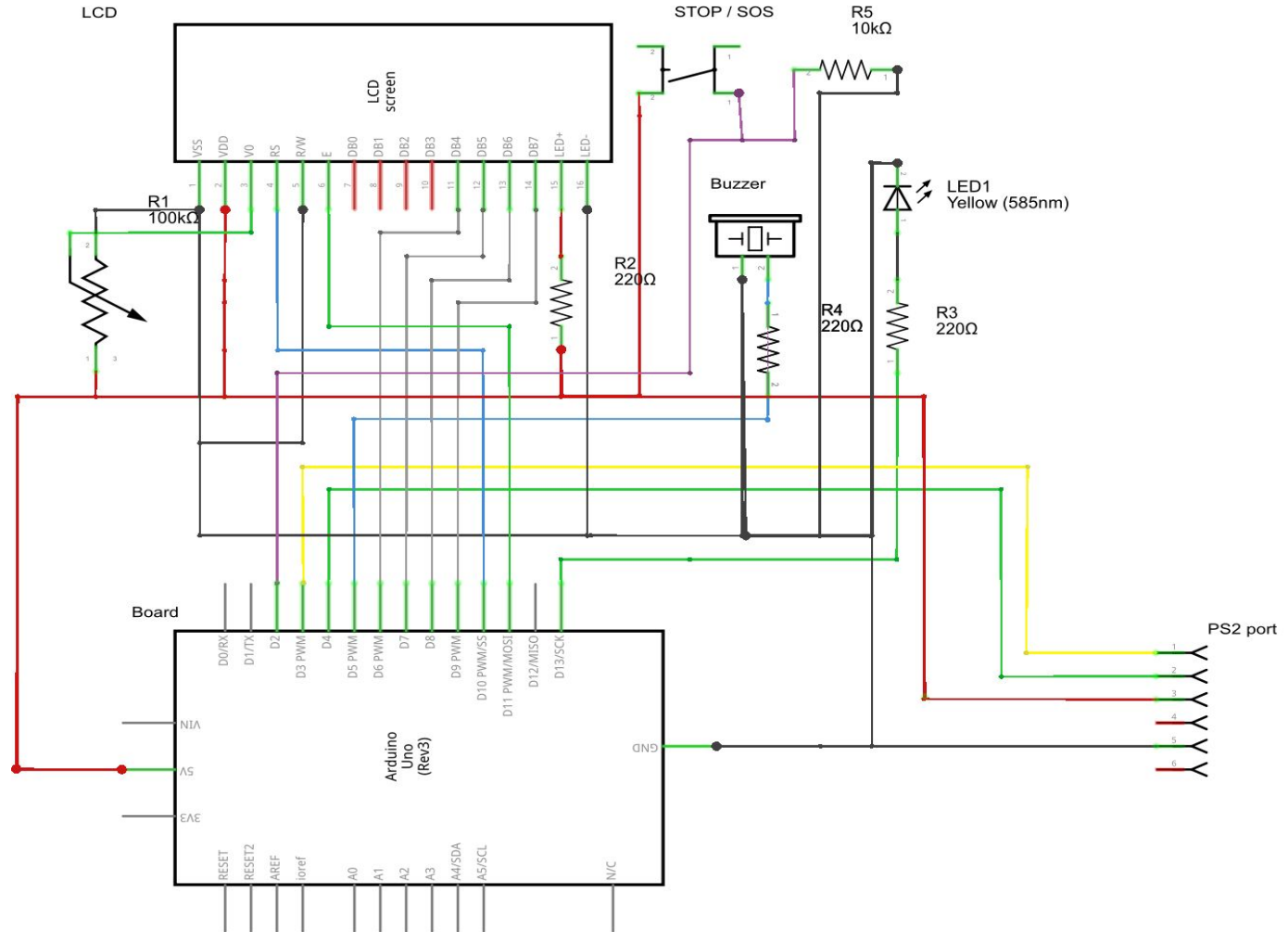
Pin 2 used for one buttons used for 2 functions: STOP and SOS

quick push for STOP, Hold for 5 sec for SOS

# Schema

## Material

1. Arduino UNO
2. LCD 16x2
3. 3x Resistance 220Ω
4. 1x Resistance 10KΩ
5. PS/2 female port
6. 30 lines breadboard
7. Buzzer
8. LED
9. Push Button
10. Potentiometer
11. PS/2 Keyboard





**KEEP  
CALM  
AND THANK YOU  
FOR YOUR  
ATTENTION**

# Q & A

