



Attiny85 5110LCD DS18B20 Thermometer

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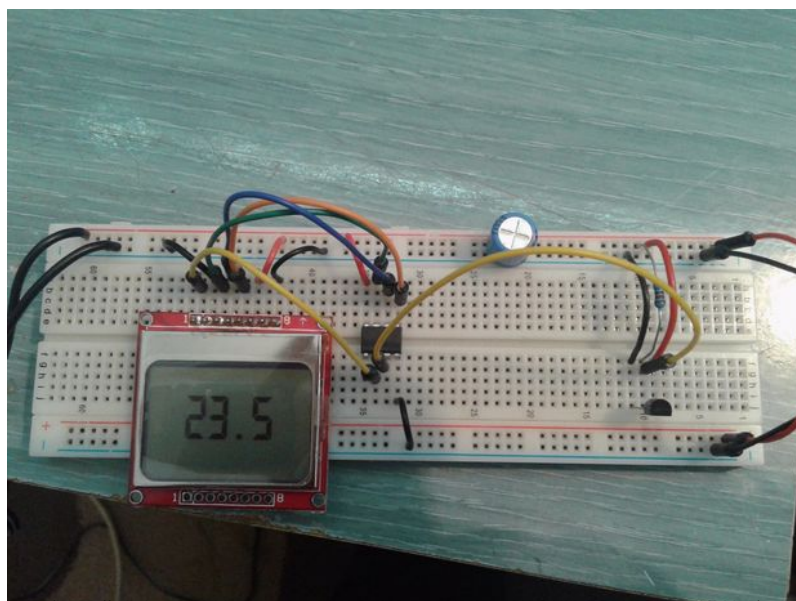
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I was able to make a simple thermometer with Attiny85 microcontroller. A small price, small dimensions, low power and low voltage.

Step 1: Parts:

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Bio: My hobby is electronics since childhood. I'm interested in Arduino, programming, drawing PCB in Eagle and solder the connections.....

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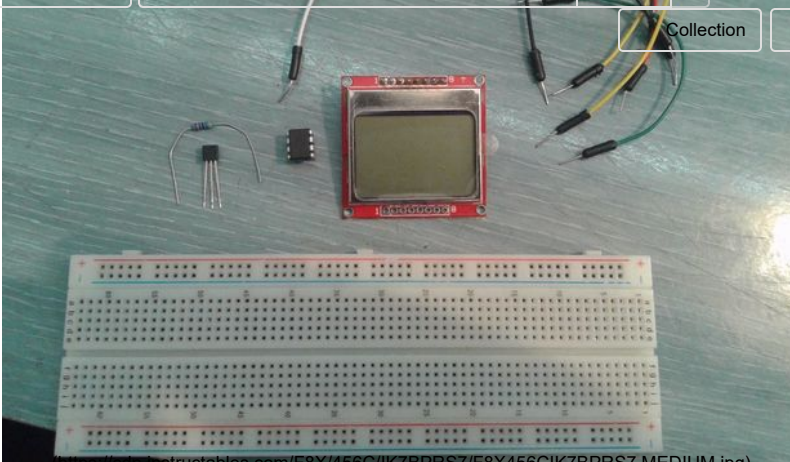


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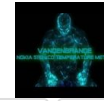
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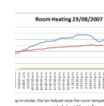
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For this project you need a some parts:

- 1: Attiny85 uC
2. Nokia 5110 LCD
3. DS18B20 + 4,7K ohm resistor
4. Breadbord + jumper wire

Step 2: NOTICE:

Is possible error for uploading code on Attiny85. I would recommend using the arduino 1.0.5 Ide (i use 1.0.6) and it should work just fine. You need a tinyPCRELpatch. Extract from zip and copy file to C:\Program Files (x86) \Arduino\hardware. Then you should not have problems with upload. Also copy a libraries in C:\Users\your user\Documents\Arduino\libraries.

Step 3: Upload Code;

```
#include <OneWire.h>

#define ONEWIRE_BUSS 4

OneWire TemperatureSensor(ONEWIRE_BUSS);

#include

// SCK (CLK) ----- Attiny85 pin 5
// MOSI (DIN)----- Attiny85 pin 6
// DC (register select) ----- Attiny85 pin 7
// RST ----- Attiny85 pin 2
// CS (CE) ----- to GND
//LCD5110 myGLCD(0, 1, 2, 3, 6); //D6 don't exist - conect CS to GND

extern uint8_t BigNumbers[];

void setup(void) {

myGLCD.InitLCD();
```

myGLCD.clrScr();
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void loop(void) {
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myGLCD.setFont(BigNumbers);

byte i;

byte data[12];

int16_t raw;

float t;

TemperatureSensor.reset(); // reset one wire buss

TemperatureSensor.skip(); // select only device

TemperatureSensor.write(0x44); // start conversion

delay(1000); // wait for the conversion

TemperatureSensor.reset();

TemperatureSensor.skip();

TemperatureSensor.write(0xBE); // Read Scratchpad

for (i = 0; i < 9; i++) { // 9 bytes

data[i] = TemperatureSensor.read();

}

raw = (data[1] << 8) | data[0];

t = (float)raw / 16.0;

myGLCD.printNumF(t, 1, CENTER, 14);

}

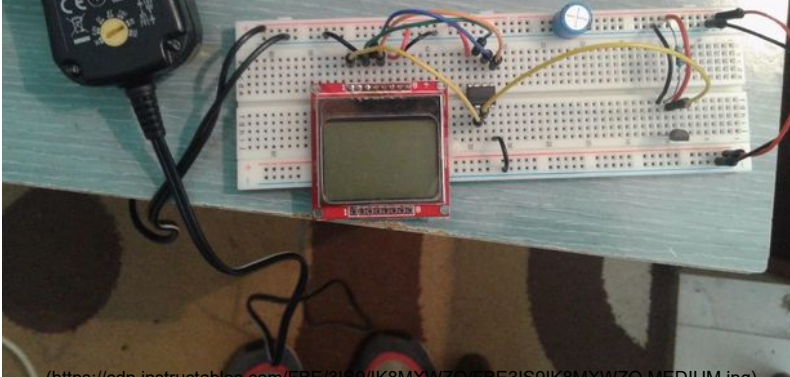
Step 4: Specifications:



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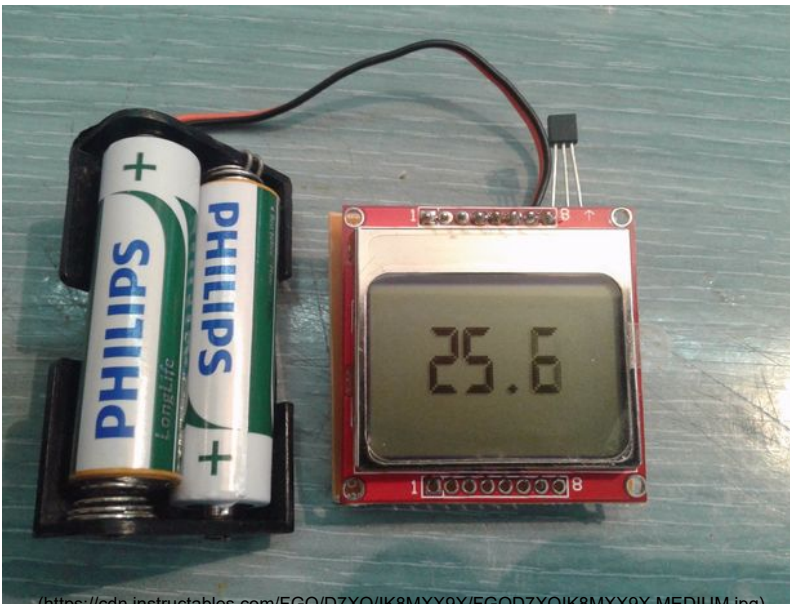
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Working voltage 3 - 3.3 V

Current 5mA

Step 5: Version With Batteries:



Step 6: All Files in Zip:

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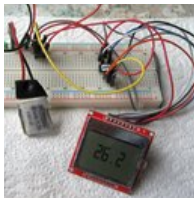
2017-07-19

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Thank you for that instrctable :)

Work fine with Arduino 1.8.3

powered by Li-ion 3.7V 120mA



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hemanthk13 (/member/hemanthk13/)

2016-09-17

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Just wired LCD without thermometer

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hemanthk13 (/member/hemanthk13/)

2016-09-17

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Full documentation of the LCD library used here ..

https://github.com/chapuzzo/ardusketches/blob/master/libraries/LCD5110_Basic/LCD5110_Basic.pdf

chiskas2 (/member/chiskas2/)

2016-06-10

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MisloElectronics (/member/MisloElectronics/) · chiskas2 (/member/chiskas2/)

Could you please clarify the input voltage? are you using the AtTiny version for 3V or the 5V working at 3V?

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ATTiny work for 3 - 5 V and display work 3 - 3.3 V

2016-06-10

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diy_bloke (/member/diy_bloke/)

2016-06-02

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your #include 'library' is empty

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#include <LCD5110_Basic.h>

2016-06-02

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download a zip file :)

diy_bloke (/member/diy_bloke/) · MisloElectronics (/member/MisloElectronics/)

2016-06-02

Reply

tnx, I missed that

luisfranco1990 (/member/luisfranco1990/)

2016-05-03

Reply

hi i like your project.. im try to do some like, but i want to change the thermometer for a resistive divider in a regular arduino i just make a analogRead, can i used the lcd code and change the temp code just for a analogRead?

thanks!

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