

Atmega32 Development Board connection diagram

1. Use Atmega32 development board with Arduino.

_First install MightyCore Library. - go to the below link and follow the instructions.

<https://github.com/MCUdude/MightyCore#boards-manager-installation>

Boards Manager Installation

This installation method requires Arduino IDE version 1.6.4 or greater.

Open the Arduino IDE.

Open the File > Preferences menu item.

Enter the following URL in Additional Boards Manager URLs:

https://mcudude.github.io/MightyCore/package_MCUdude_MightyCore_index.json

Separate the URLs using a comma (,) if you have more than one URL

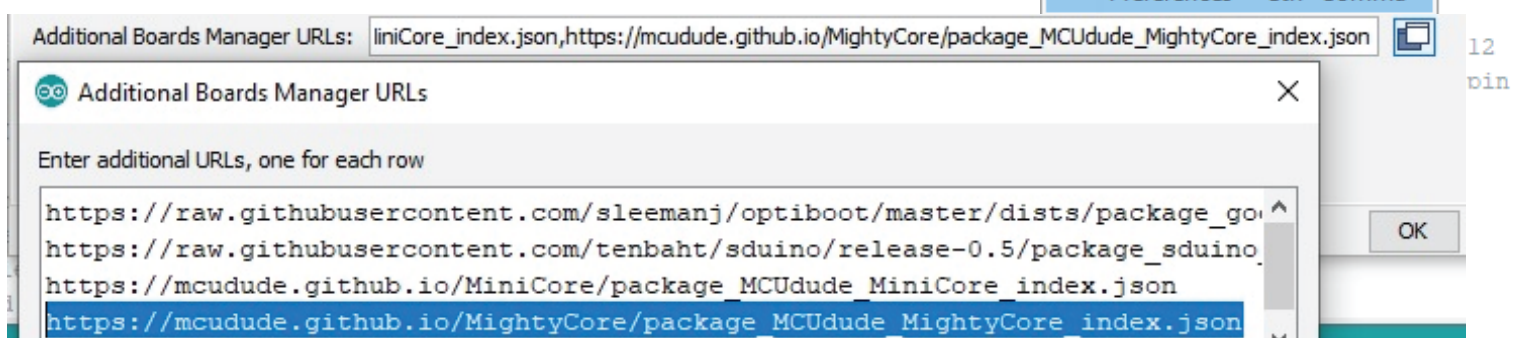
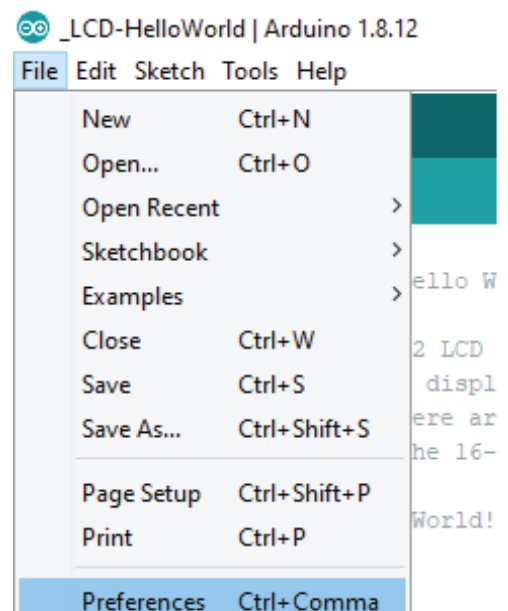
Open the Tools > Board > Boards Manager... menu item.

Wait for the platform indexes to finish downloading.

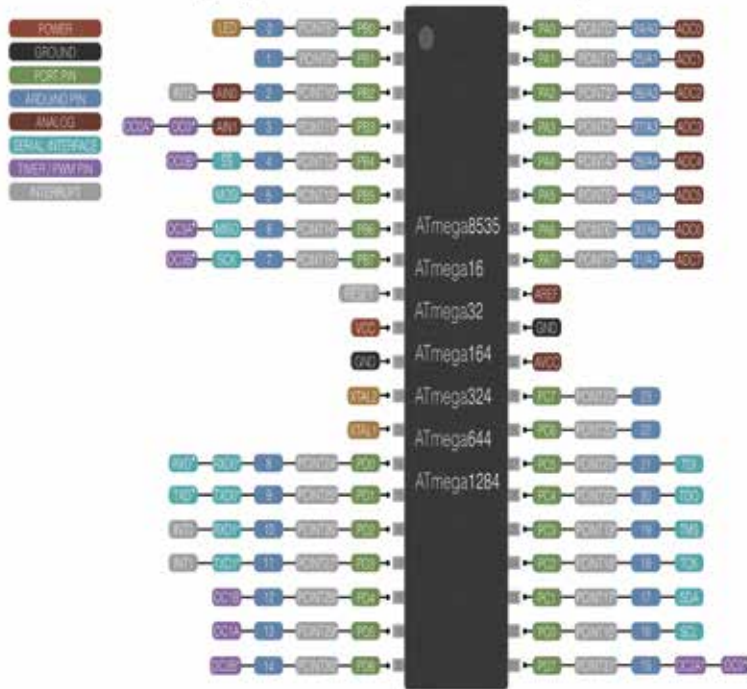
Scroll down until you see the MightyCore entry and click on it.

Click Install.

After installation is complete close the Boards Manager window.



MightyCore DIP40 Standard pinout

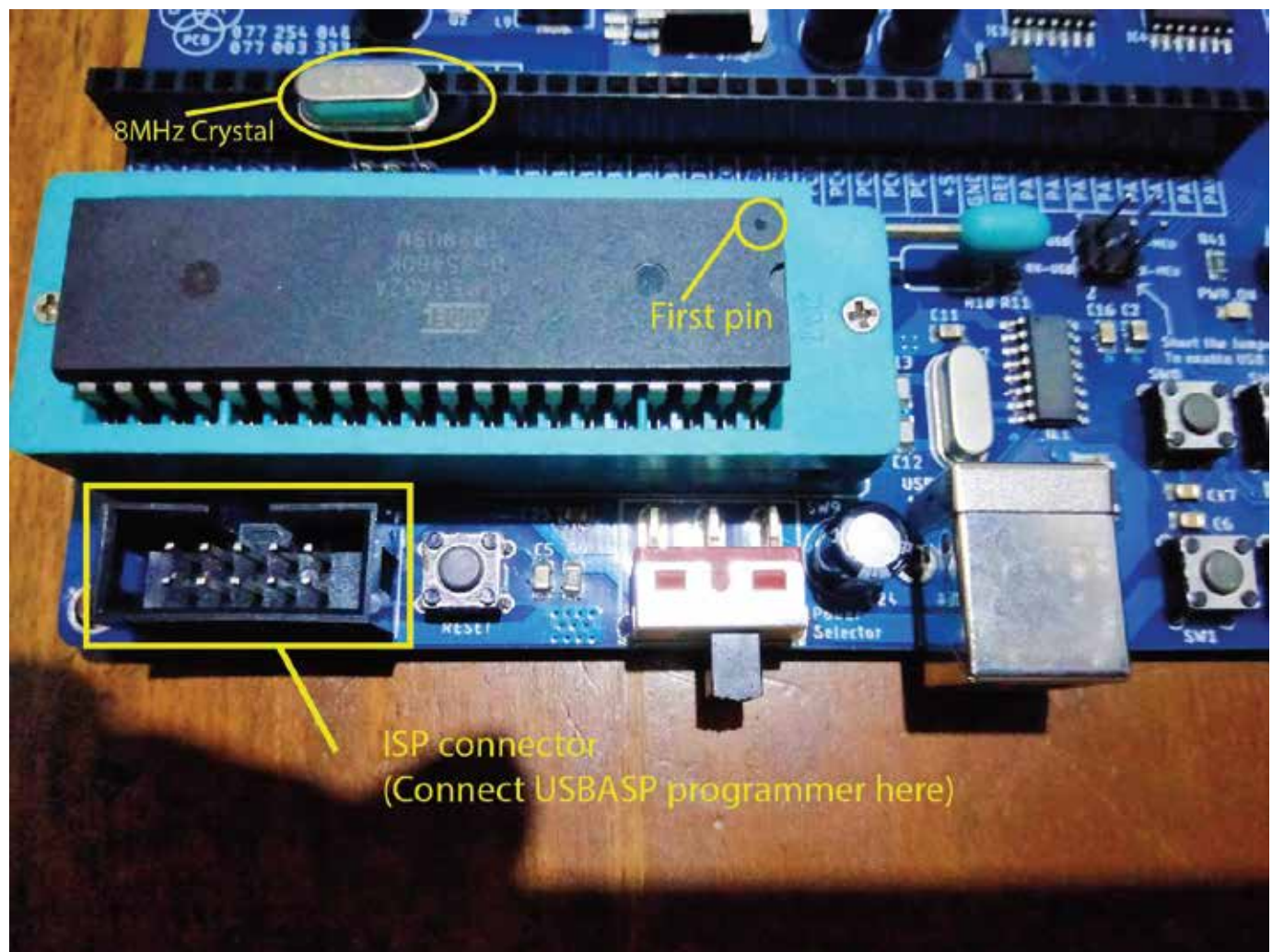


*ATmega8535/16/32 only

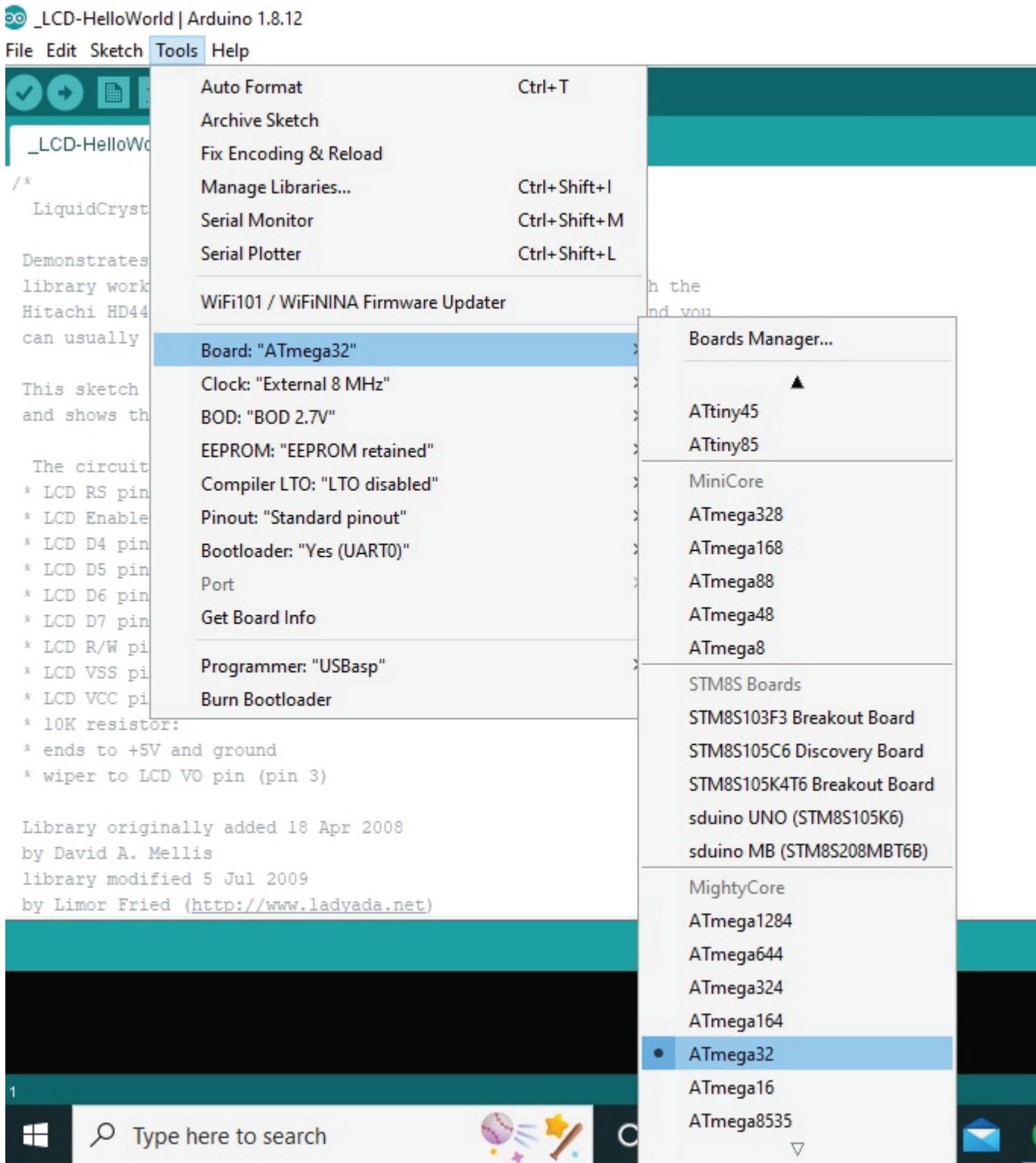
*ATmega164/324/644/1284 only

*ATmega1284 only

<http://github.com/MCUdude/MightyCore>



* Select MightyCore Atmega32 from the boards selection as the following image.



* Select USBasp as the programmer from tools menu and Burn Bootloader. Then select "External 8MHz" as the Clock.

LCD test program (4 bit interface)

```
#include <LiquidCrystal.h>
```

```
// initialize the library by associating any needed LCD interface pin  
// with the arduino pin number it is connected to  
//See arduino atmega32 pin mapping to connect LCD to board  
//RS-PC0, EN-PC1, D4-PC2, D5-PC3, D6-PC4, D7-PC5
```

```
const int rs = 16, en = 17, d4 = 18, d5 = 19, d6 = 20, d7 = 21;  
LiquidCrystal lcd(rs, en, d4, d5, d6, d7);
```

```
void setup() {  
  // set up the LCD's number of columns and rows:  
  lcd.begin(16, 2);  
  // Print a message to the LCD.  
  lcd.print("hello, world!");  
}
```

```
void loop() {  
  // set the cursor to column 0, line 1  
  // (note: line 1 is the second row, since counting begins with 0):  
  lcd.setCursor(0, 1);  
  // print the number of seconds since reset:  
  lcd.print(millis() / 1000);  
}
```

*Connect LCD_I/O connector pins to MCU pins as follows

RS -----> PC0

RW -----> GND (connect any GND pin of the board)

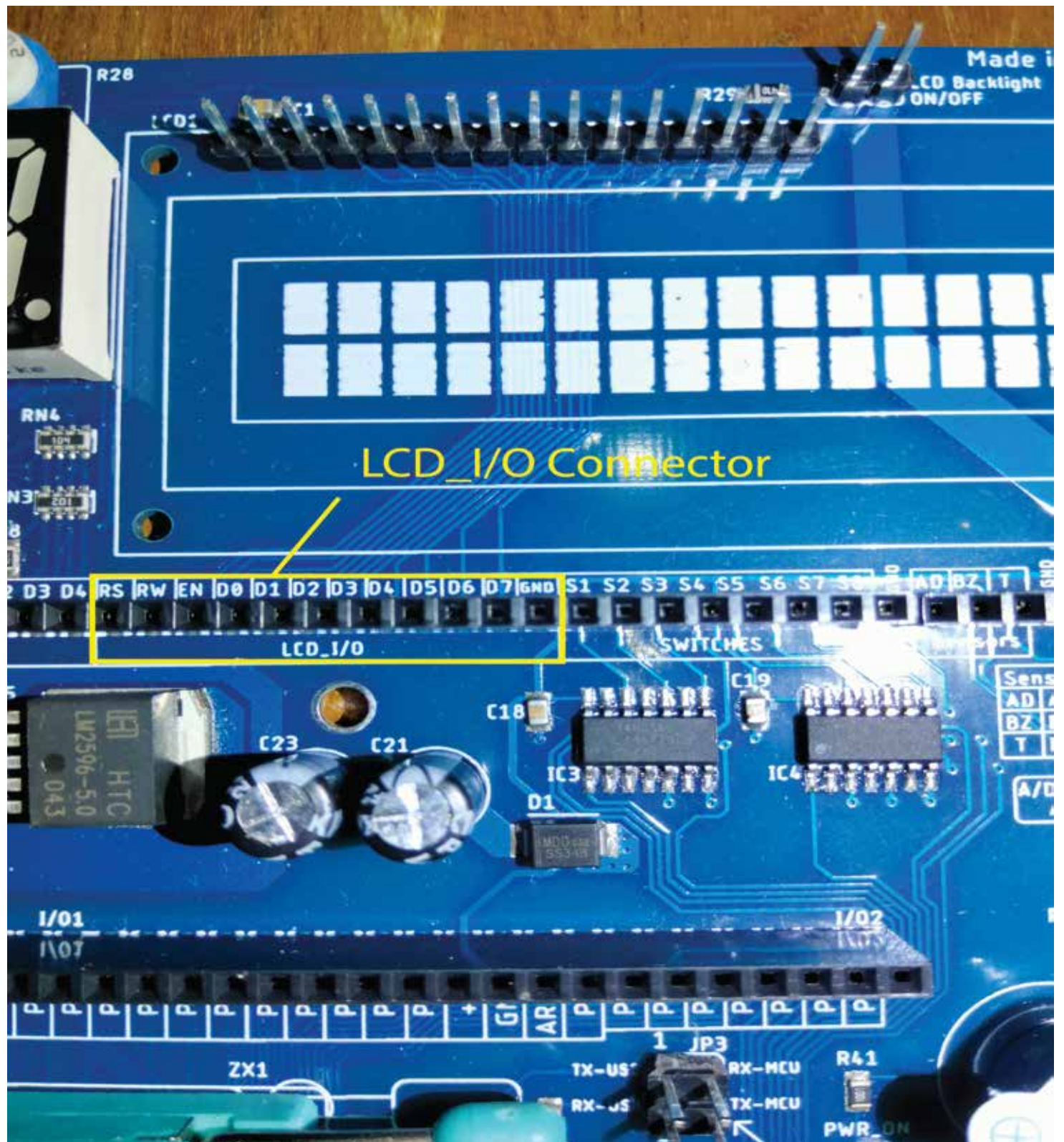
EN -----> PC1

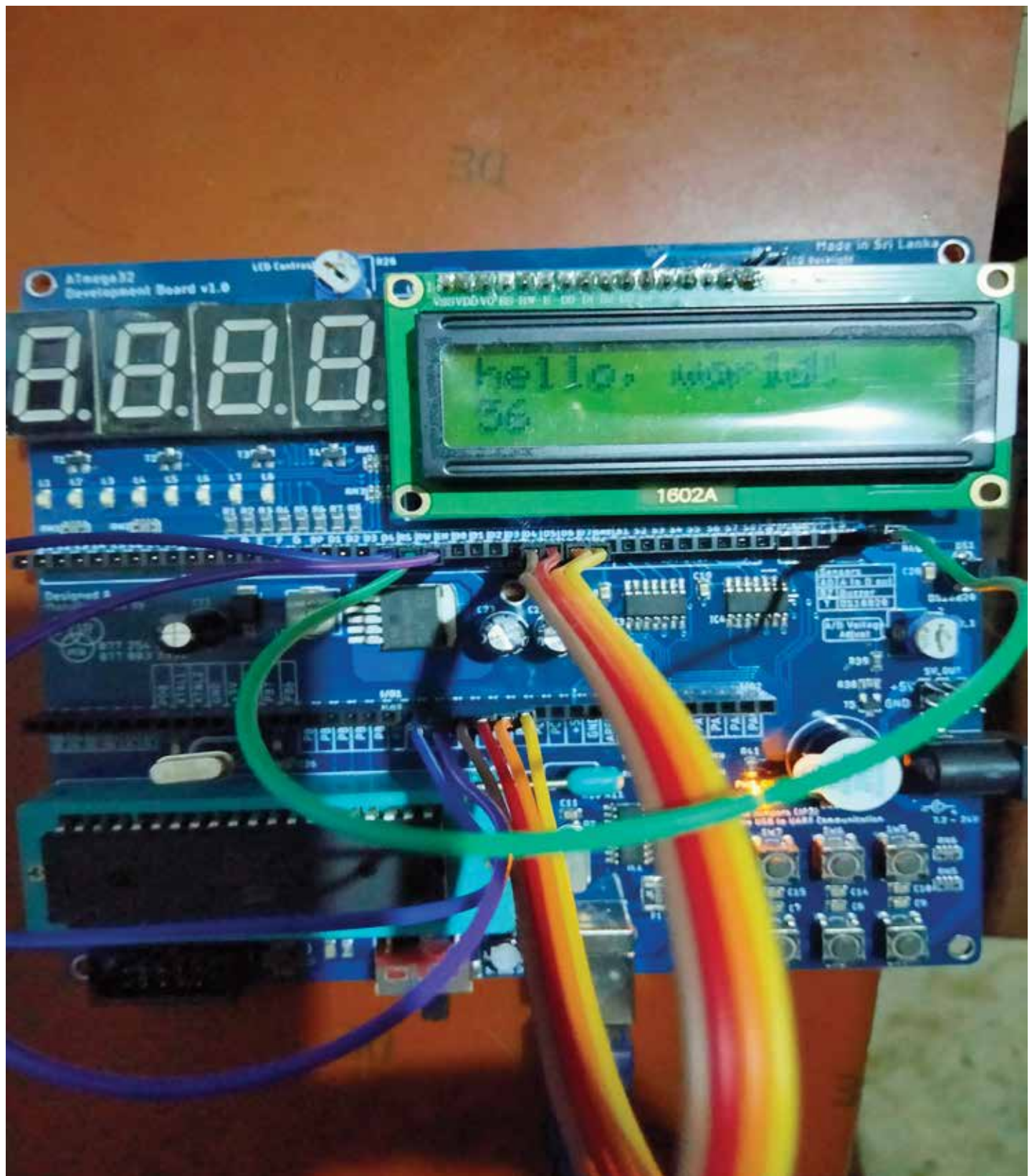
D4 -----> PC2

D6 -----> PC4

D5 -----> PC3

D7 -----> PC5





* Compile the program and "upload using programmer"