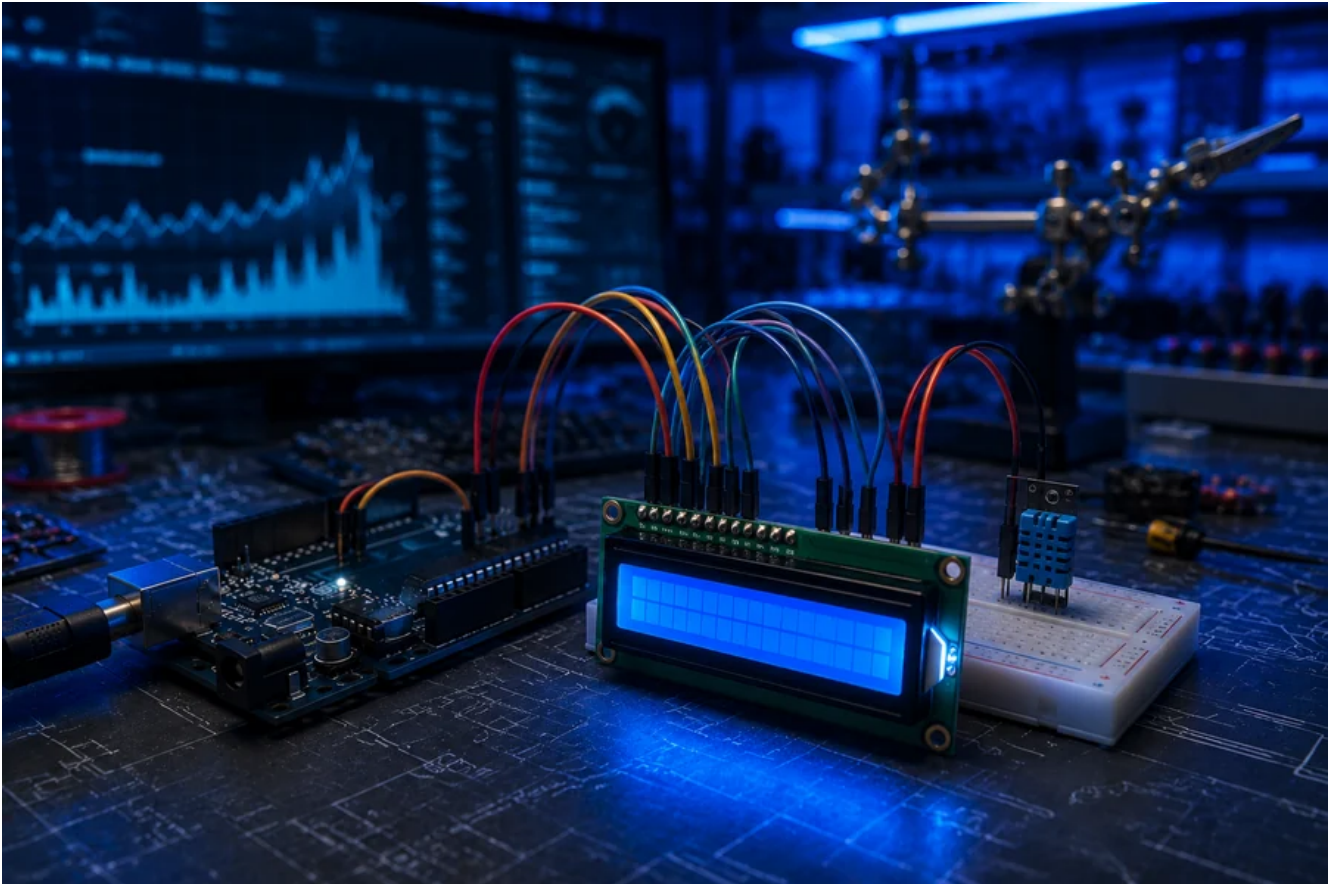


# Arduino LCD Display Lab Manual

Printable pinout, wiring, code, build steps, expected results, and troubleshooting for every Arduino tutorial on the WolfieWeb Arduino page.

## Arduino LCD Display Lab Manual



**Goal:** Display live values instead of hiding everything in the serial monitor.

### Pin Codes and Wiring Map

Part / Lead	Arduino Pin / Connection	Purpose
LCD VSS	GND	Ground
LCD VDD	5V	Power
LCD VO	10K pot center pin	Contrast
LCD RS	D12	Register select
LCD E	D11	Enable
LCD D4	D5	Data
LCD D5	D4	Data
LCD D6	D3	Data
LCD D7	D2	Data

## Step-by-Step Build Instructions

**Step 1:** Wire power and contrast first. If contrast is wrong, a working LCD can look dead.

**Step 2:** Wire RS, E, D4, D5, D6, and D7 exactly as the code defines.

**Step 3:** Install or include the LiquidCrystal library.

**Step 4:** Upload the test sketch and look for the first line text.

**Step 5:** Use `lcd.setCursor(0,1)` to write sensor data on the second line.

## Expected Result

The LCD shows the title on line one and live values on line two. Adjust the contrast if the screen is blank or filled with blocks.

## Troubleshooting

Problem	What to check
Blank screen	Contrast pin not adjusted, power missing, or backlight not connected.
Gibberish text	Data pins do not match the code.
Only blocks show	LCD initialized wrong or contrast set too high.

## Arduino Code

```
#include <LiquidCrystal.h>
LiquidCrystal lcd(12, 11, 5, 4, 3, 2);

void setup() {
  lcd.begin(16, 2);
  lcd.print("Temp Monitor");
}

void loop() {
  int sensorValue = analogRead(A0);
  lcd.setCursor(0, 1);
  lcd.print("Value: ");
  lcd.print(sensorValue);
  lcd.print(" ");
  delay(500);
}
```

Scan the QR code on the package README or visit [www.wolfieweb.com/works01.html](http://www.wolfieweb.com/works01.html) for the live tutorial page.