Wiring

Monday, April 7, 2025 11:27 AM

For KEYPAD:

✅ Recommended Arduino Pin Mapping (based on your wire colors)

Keypad Pin	Function	Wire Color	Connect to Arduino Pin
1	Row 1	Black	D9
2	Row 2	White/Black Striped	D8
3	Row 3	Blue	D7
4	Row 4	Green	D6
5	Col 1	White	D5
6	Col 2	Yellow	D4
7	Col 3	Orange	D3
8	Col 4	Red	D2

> 🧠 This layout puts the keypad into the expected logical order (Row 1–4, Col 1–4) without needing to flip code arrays. It also aligns to our earlier Keypad layout.

For LCD:

🪛 Updated LCD Wiring (No Pin Conflicts)

LCD Pin	Label	Connect to MEGA	Notes
1	VSS	GND	Ground
2	VDD	5V	Power
3	V0	Potentiometer	Contrast control
4	RS	D22	← Changed
5	RW	GND	Always write mode
6	E	D23	← Changed
11	D4	D24	← Changed
12	D5	D25	← Changed
13	D6	D26	← Changed
14	D7	D27	← Changed
15	LED+	5V (w/ resistor)	Backlight
16	LED-	GND	Backlight

Pin 1 - Black - GND
Pin 2 - White -0 5V
Pin3 - Gray - GND (bypass Potentiameter)
Pin 4 - Purple - D22
Pin 5 - Blue - GND
Pin 6 - Green - D23
Pin 11 - Yellow -D24
Pin 12 - Orange - D25
Pin 13 -Brown - D26
Pin 14 - Red - D27
Pin 15 - Green

🔧 CURRENT PHASE: **Wire and Test the 4×4 Membrane Keypad**

🎯 Step 1: **Wire the keypad to the Pi (8 GPIO pins)**

Here's your confirmed layout:

Keypad Pin #	Function	BCM GPIO	Pi Pin # (Physical)
1	Row 1	GPIO 21	40
2	Row 2	GPIO 20	38
3	Row 3	GPIO 16	36
4	Row 4	GPIO 12	32
5	Col 1	GPIO 25	22
6	Col 2	GPIO 24	18
7	Col 3	GPIO 23	16
8	Col 4	GPIO 18	12

✅ Connect in this exact order. You may use a breadboard or direct GPIO jumpers.
