1. Momentary Push Buttons with LEDs

Each button requires two connections:

- One for the switch function.
- One for the LED backlight.

Wiring for Each Button:

1. **Switch Wiring**:
   - One leg of the button to a **digital pin** (e.g., D2 for Button 1).
   - The other leg to **GND**.
   - Enable internal pull-up resistors in code (so no need for external resistors).
2. **LED Wiring**:
   - Connect the **positive leg** of the LED to a **current-limiting resistor** (220Ω to 330Ω).
   - Connect the resistor to a **digital pin** (e.g., D7 for Button 1 LED).
   - Connect the **negative leg** of the LED to **GND**.

Connections for All Buttons:

Button	Switch Pin (Digital)	LED Pin (Digital)
Button 1	D2	D7
Button 2	D3	D8
Button 3	D4	D9
Button 4	D5	D10
Button 5	D6	D11

2. SPDT Switches with Indicator LEDs

Each SPDT switch has three terminals:

- **Common (C)**: Connect to **GND**.
- **Normally Open (NO)**: Connect to a digital pin (e.g., D12 for SPDT1).
- **Normally Closed (NC)**: Optional for now (leave unconnected unless needed).

Indicator LED Wiring for SPDT Switches:

1. Connect the **positive leg** of the LED to a **digital pin**.
2. Connect the **negative leg** through a **resistor (220Ω)** to **GND**.

Connections:

SPDT Switch	Common (GND)	NO Pin (Digital)	LED Pin (Digital)
Switch 1	GND	D12	D13
Switch 2	GND	Unused	Unused

3. Potentiometer (Volume Control)

A potentiometer has three pins:

- **Left Pin**: Connect to **5V**.
- **Right Pin**: Connect to **GND**.
- **Middle Pin (Wiper)**: Connect to an **analog input pin** (e.g., A0).

4. Analog VU Meter (Needle Point)

The VU meter has two terminals:

1. **Signal Input**:
   - Connect through a **resistor (1kΩ)** to a **PWM-capable pin** (e.g., D6).
2. **GND**: Connect to **GND**.

5. Powering the System

- Power the Arduino Pro Micro using USB.
- Ensure all components draw current safely within the Arduino's limits. If needed, consider powering LEDs from an external power supply (with shared GND).

Full Pinout Summary

Component	Pin on Pro Micro
Button 1 (Switch)	D2
Button 1 (LED)	D7
Button 2 (Switch)	D3
Button 2 (LED)	D8
Button 3 (Switch)	D4
Button 3 (LED)	D9
Button 4 (Switch)	D5

Component	Pin on Pro Micro
Button 4 (LED)	D10
Button 5 (Switch)	D6
Button 5 (LED)	D11
SPDT Switch 1	D12
SPDT Switch 1 LED	D13
SPDT Switch 2	Unassigned
Potentiometer (Wiper)	A0
VU Meter	D6 (PWM)

Wiring Diagram

To help visualize:

1. **Buttons**: Connected to digital pins and GND. LEDs wired via resistors to digital pins.
2. **SPDT Switches**: Connected to digital pins and GND. LEDs connected via resistors.
3. **Potentiometer**: Center pin (wiper) to A0, outer pins to 5V and GND.
4. **VU Meter**: Signal via resistor to PWM pin (D6) and GND.