

## Power supply

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The diagram shows a voltage regulator circuit. A +12V input is connected to the IN pin (pin 1) of the L7805ABV regulator (U2). The GND pin (pin 2) is connected to ground. The OUT pin (pin 3) is connected to a +5V output. Two capacitors, C3 (470uF) and C4 (100nF), are connected in parallel between the input line and ground. Two capacitors, C5 (100nF) and C6 (100uF), are connected in parallel between the output line and ground.



# Connectors

The diagram illustrates two connectors, J1 and J2, and their connections. Connector J1 is a 2-pin connector with pins labeled 1 and 2. Pin 1 is connected to a +12V power source, and pin 2 is connected to a ground (GND) symbol. Connector J2 is also a 2-pin connector with pins labeled 1 and 2. Pin 1 is connected to a signal labeled FAN A, and pin 2 is connected to a signal labeled FAN B.



The diagram illustrates a Fan H-bridge circuit. It consists of two input signal conditioning stages and a main H-bridge driver (U1, L298N).

**Input Signal Conditioning:**

- FAN FS:** Connected to a +5V supply through a 100nF capacitor (C1) to GND.
- FAN VSS:** Connected to a +5V supply through a 100nF capacitor (C2) to GND.

**H-bridge Driver (U1, L298N):**

- Inputs:**
  - INPUT 1 (pin 5) and INPUT 2 (pin 7) are connected to +5V.
  - INPUT 3 (pin 10) is connected to FAN CTRL A.
  - INPUT 4 (pin 12) is connected to FAN CTRL B.
  - ENABLE A (pin 6) and ENABLE B (pin 11) are connected to +5V.
  - VS (pin 4) is connected to +5V.
  - VSS (pin 9) is connected to GND.
- Outputs:**
  - OUT 1 (pin 2) and OUT 2 (pin 3) are connected to FAN A.
  - OUT 3 (pin 13) and OUT 4 (pin 14) are connected to FAN B.
- Senses:**
  - SENSE A (pin 1) and SENSE B (pin 15) are connected to GND.



# Microcontroller



## Controls

The diagram shows the control inputs for the system. The **ADC POT** input is connected to a 10k resistor (R1) that is pulled up to +5V and grounded at the other end. The **BTN\_NEXT** input is connected to a 10k resistor (R2) pulled up to +5V and a 100nF capacitor (C12) to ground. A switch (SW1) is connected in series with the **BTN\_NEXT** line after the capacitor.



The diagram illustrates the electrical connections for an LCD module. It is divided into three main sections:

- Power Section (Top Left):** Shows the connection for the LED VSS pin. A +5V supply is connected to the LED VSS pin through a 100nF capacitor (C8) to ground (GND).
- Power Section (Bottom Left):** Shows the connection for the LED V0 and LED A pins. A +5V supply is connected to the LED V0 pin. The LED A pin is connected to ground (GND) through a 10k resistor (R3). The LED V0 pin is also connected to the LED A pin through the 10k resistor (R3).
- LCD Section (Right):** Shows the connections for the LCD module (U4). The VSS pin is connected to ground (GND). The VDD pin is connected to the +5V supply. The V0 pin is connected to the LED V0 pin. The A pin is connected to the LED A pin. The K pin is connected to ground (GND). The RS pin is connected to the LCD RS pin. The RW pin is connected to the LCD RW pin. The E pin is connected to the LCD E pin. The D0-D7 pins are connected to the LCD D0-D7 pins. The D4-D7 pins are also connected to the LCD D4-D7 pins.

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