

Instructions
Relay Breakout Boards *RB5V-NL-T* and *RB12V-NL-T*
Non-Latching Relay
Transistor-controlled

Thanks for your purchase! This series of breadboard-ready relay breakout boards was brought about while prototyping audio circuits. I got tired of dealing with the tiny non-breadboard-friendly relays I was testing with, and instead decided to fab some modular options that can be placed neatly on a breadboard or a more permanent protoboard.

This version uses a *non-latching* DPDT relay. Also included is transistor control to make it easy to trigger via the 3.3V or 5V logic levels of GPO from Raspberry Pi/Arduino/etc, and an LED to indicate an active state. Basically, this relay breakout board gets you two independent switches, driven by a single control signal.

This model uses the EC2-5NU, or EC2-12NU, which is a single coil non-latching relay. This means the relay will always default to Normally Closed position during a logic low.

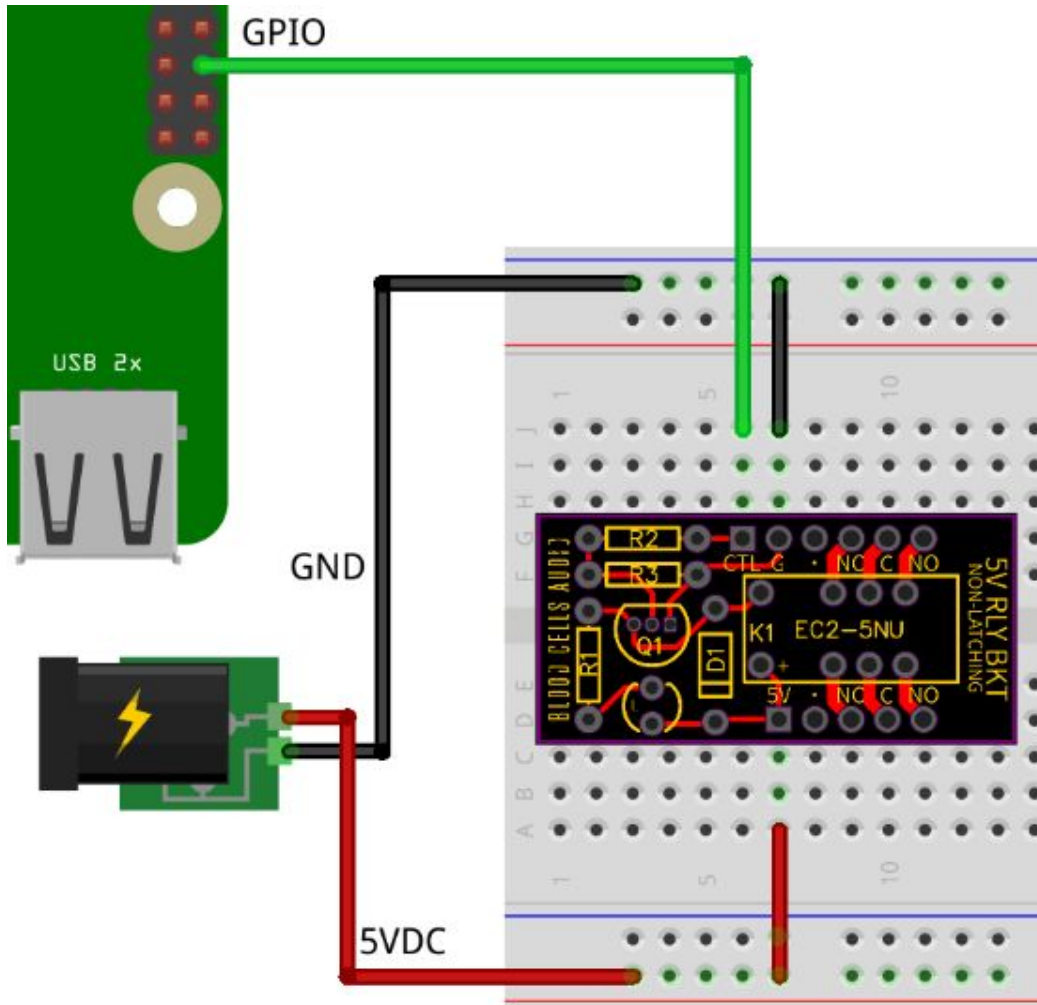


Connections:

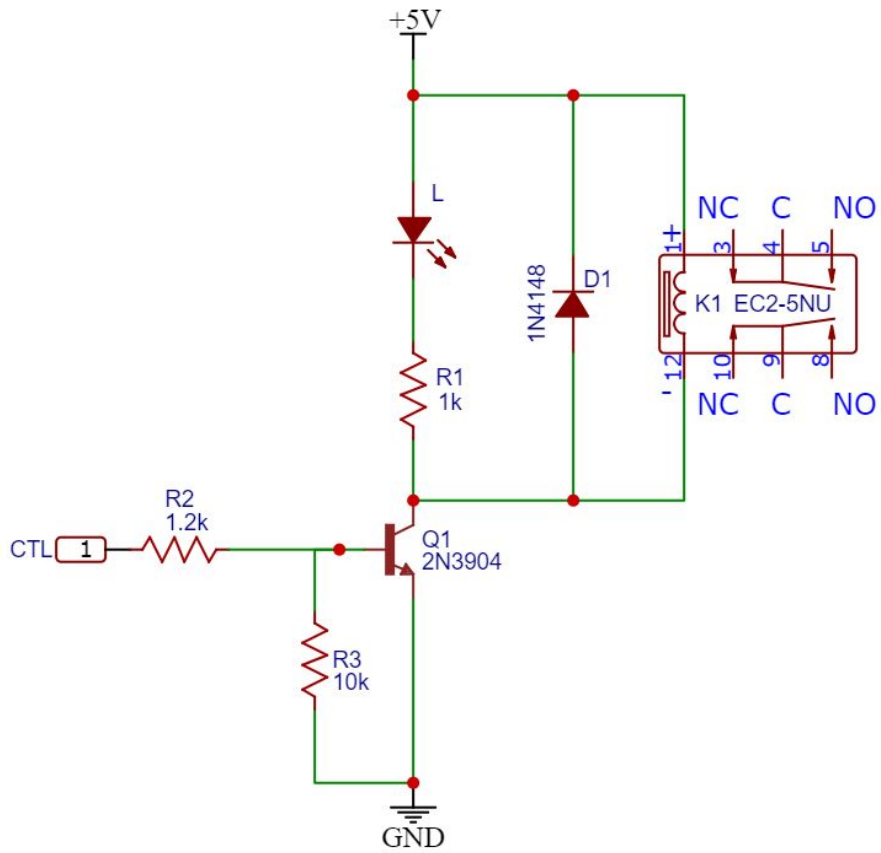
- Connect 5VDC to the 5V pin. (Use 12VDC for the 12V version).
- Connect ground to the G pin
- Connect the signal you want to switch to the C (Common) pin.
- Connect a GPO pin or other logic-level voltage source to the CTL pin.

When a logic high signal is applied to the CTL pin, the relay will activate and internally connect the C pin to the NO (Normally Open) pin. The LED will also light to give you an active visual.

When the CTL pin is low or left floating, the relay goes to an inactive state. This means the C pin is connected to the NC (Normally Closed) pin.

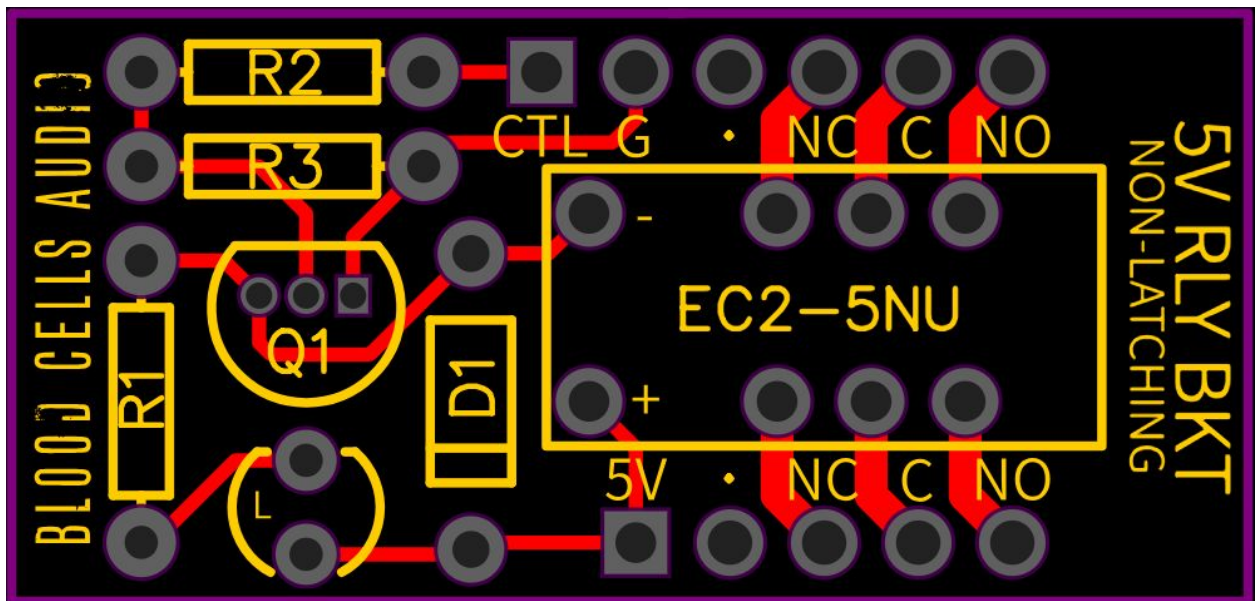


Schematic:



*R1 = 3.32K in 12V Relay Version

Board layout:



Additional info:

When held active, the relay coil and LED draws about 31mA in total.

Relay Specs:

EC2-5NU / EC2-12NU

- Maximum Switching Power 60 W, 125 VA
- Maximum Switching Voltage 220 VDC, 250 VAC
- Maximum Switching Current 2 A
- Maximum Carrying Current 2 A

Datasheet is available by searching the relay model #, or at

www.bloodcellsaudio.com/relaybreakouts

*****PSA*****

This PCB is built for a *breadboard*. A typical solderless breadboard's contacts are rated for 5V at 1A, or 15 Volts and 333mA. Just because the relay is rated for bigger stuff, doesn't mean you should run big stuff through your breadboard. Don't do it!