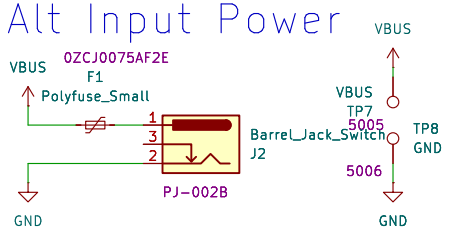
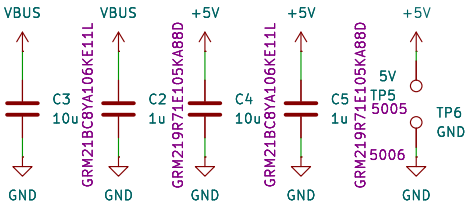
Alt Input Power



Input Power Filtering

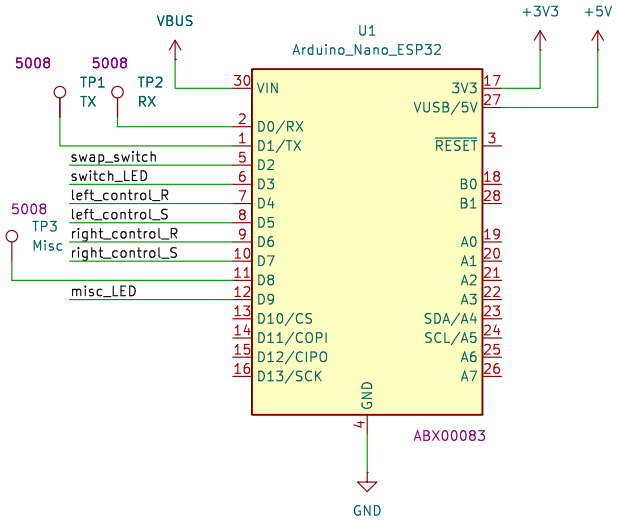


Decoupling caps are likely optional depending on the Nano 32's internap capacitance.

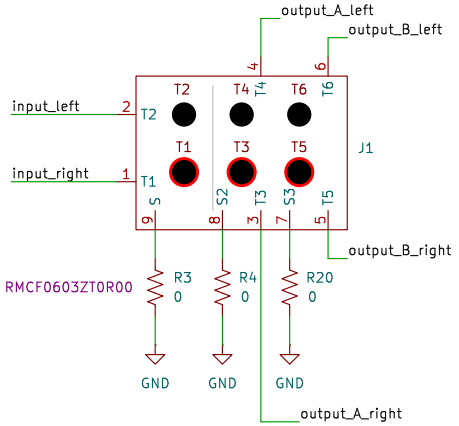
MCU Notes

Arduino Nano ESP32 Home Assistant Support
https://github.com/esphome/esphome/discussions/6325

MCU



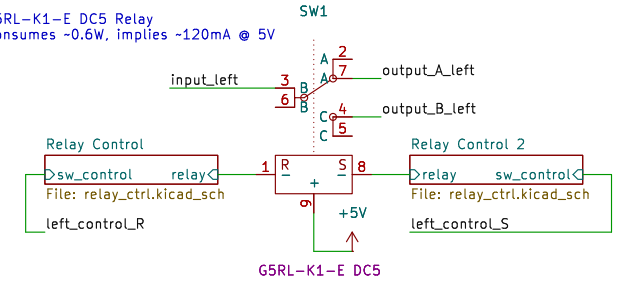
RCA Interface

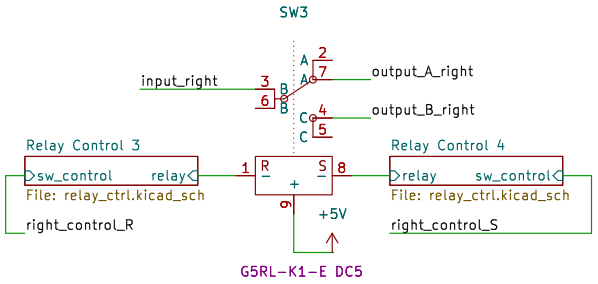


RCA Swtiching

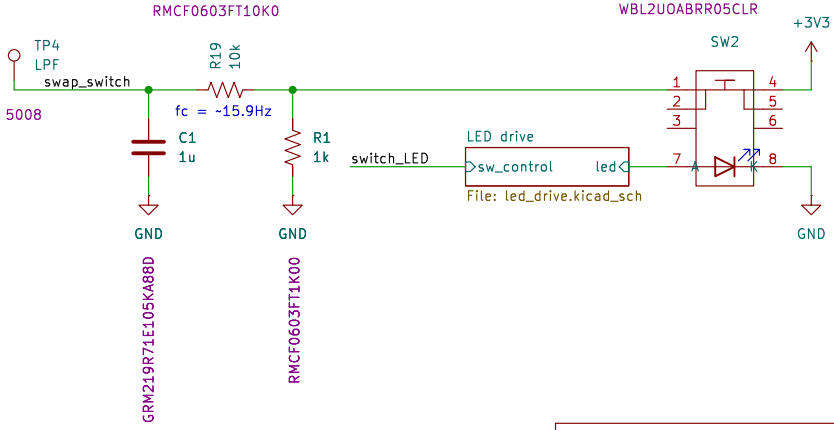
Relay Notes

G5RL-K1-E DC5 Relay
Consumes ~0.6W, implies ~120mA @ 5V

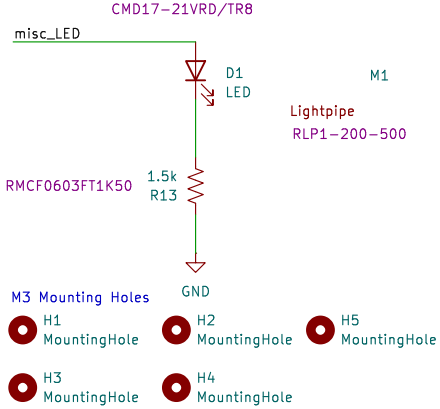




Manual Control & Indication



Misc

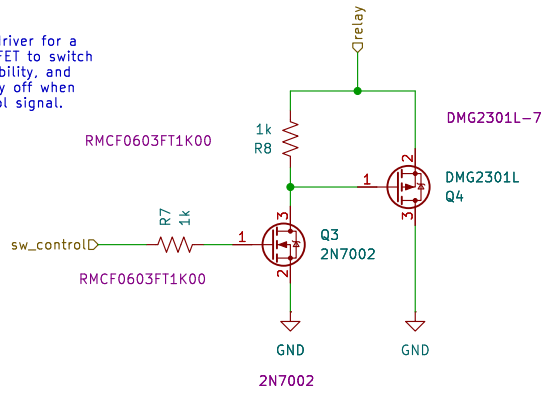


Docs: https://lastion.atlassian.net/wiki/x/AQD3Aw
Part Number: ee-001-501
Nick McComb
Sheet: /
File: ee-001-desk-audio-switch.kicad_sch

Title: Desk Audio Switch

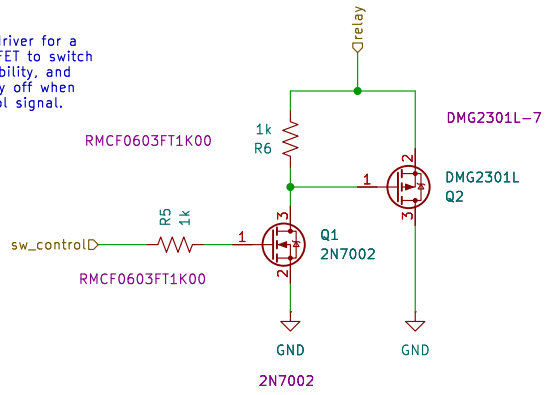
Size: A4	Date: 2024-12-15	**Rev: 1**
KiCad E.D.A. 8.0.7		Id: 1/6

Relay Control Circuit
Uses a 2N7002 (Q3) as a pre-driver for a DMG2301L (Q4) P-channel MOSFET to switch a relay. R7 ensures Q3 gate stability, and R8 pulls up Q4 to keep the relay off when idle. Controlled by the sw_control signal.



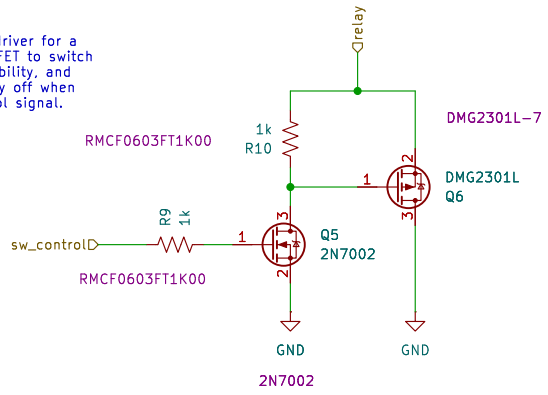
Nick McComb		
Sheet: /Relay Control/		
File: relay_ctrl.kicad_sch		
Title: Desk Audio Switch		
Size: A4	Date:	**Rev: 1**
KiCad E.D.A. 8.0.7		Id: 2/6

Relay Control Circuit
Uses a 2N7002 (Q3) as a pre-driver for a DMG2301L (Q4) P-channel MOSFET to switch a relay. R7 ensures Q3 gate stability, and R8 pulls up Q4 to keep the relay off when idle. Controlled by the sw_control signal.



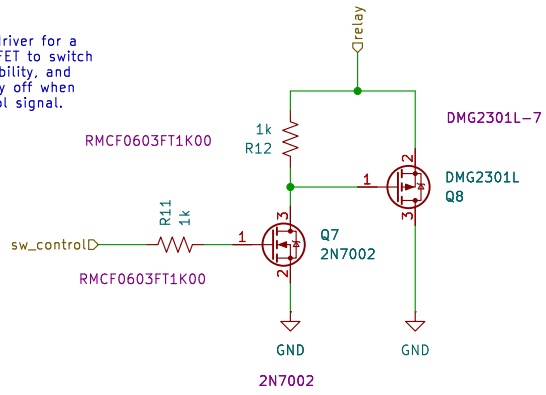
Nick McComb		
Sheet: /Relay Control 2/		
File: relay_ctrl.kicad_sch		
Title: Desk Audio Switch		
Size: A4	Date:	**Rev: 1**
KiCad E.D.A. 8.0.7		Id: 3/6

Relay Control Circuit
Uses a 2N7002 (Q3) as a pre-driver for a DMG2301L (Q4) P-channel MOSFET to switch a relay. R7 ensures Q3 gate stability, and R8 pulls up Q4 to keep the relay off when idle. Controlled by the sw_control signal.



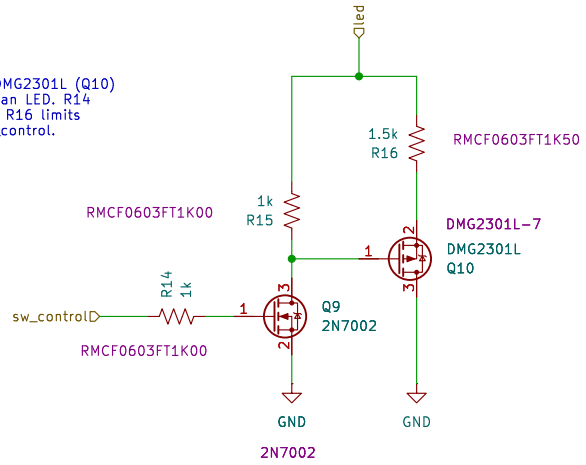
Nick McComb	
Sheet: /Relay Control 3/	
File: relay_ctrl.kicad_sch	
Title: Desk Audio Switch	
Size: A4	Date:
KiCad E.D.A. 8.0.7	Id: 4/6
	Rev: 1

Relay Control Circuit
Uses a 2N7002 (Q3) as a pre-driver for a DMG2301L (Q4) P-channel MOSFET to switch a relay. R7 ensures Q3 gate stability, and R8 pulls up Q4 to keep the relay off when idle. Controlled by the sw_control signal.



Nick McComb		
Sheet: /Relay Control 4/		
File: relay_ctrl.kicad_sch		
Title: Desk Audio Switch		
Size: A4	Date:	**Rev: 1**
KiCad E.D.A. 8.0.7		Id: 5/6

LED Control Circuit
A 2N7002 (Q9) pre-drives a DMG2301L (Q10)
P-channel MOSFET to control an LED. R14
and R15 stabilize gates, while R16 limits
LED current. Controlled by sw_control.



Nick McComb	
Sheet: /LED drive/	
File: led_drive.kicad_sch	
Title: Desk Audio Switch	
Size: A4	Date:
KiCad E.D.A. 8.0.7	Rev: 1
	Id: 6/6