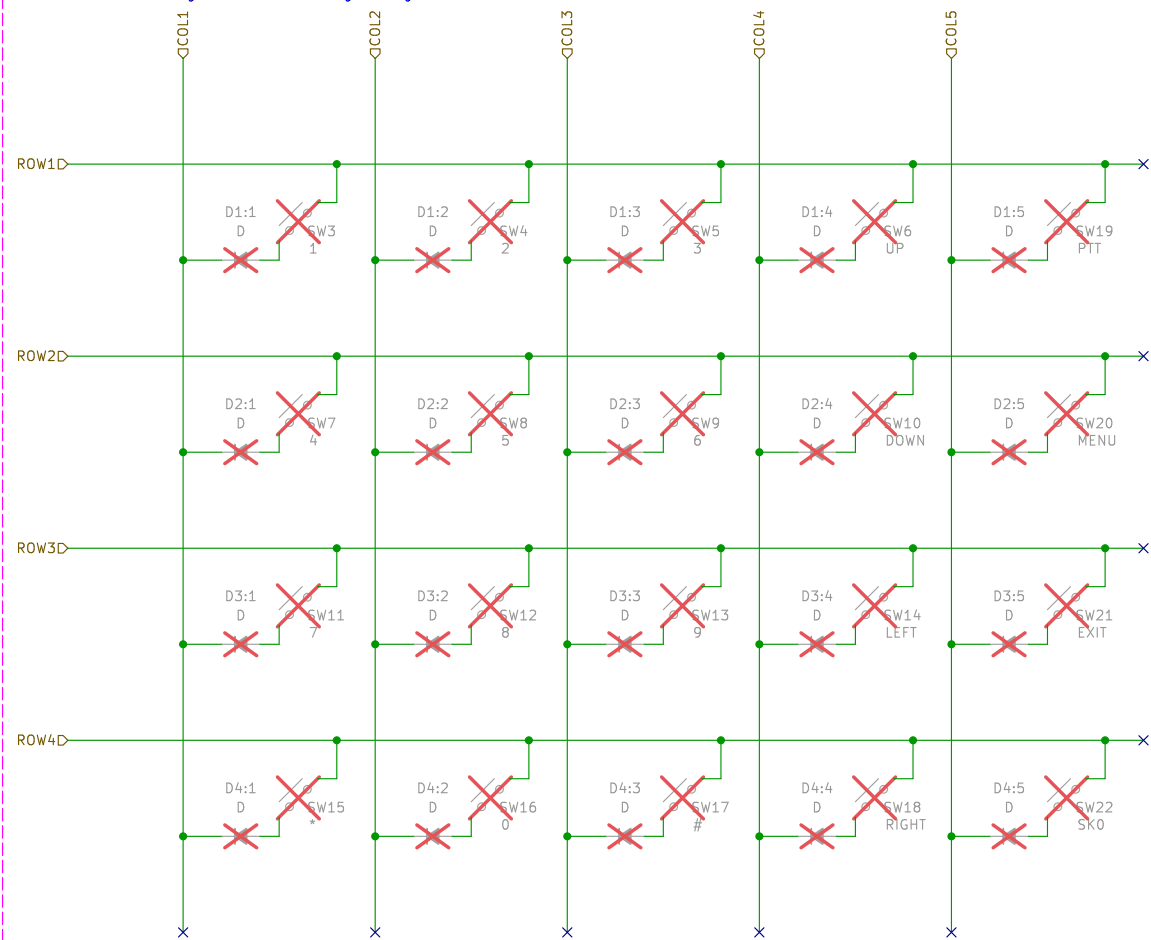




Keypad Matrix  
Application Note: The ROW pins get pulled up by the GPIO expander, with one ROW being pulled down.  
The scanner relies on the COL pins being read in as a logic swing to low.  
Remarked as Domino Logic, a rail-to-rail logic swing occurs.



#### Keypad Daughterboard

Conn\_01x08\_Socket

ROW4 1  
ROW3 2  
ROW2 3  
ROW1 4 J6  
COL1 5  
COL2 6  
COL3 7  
COL4 8

H1 MountingHole\_2mm\_M2\_Pad\_Via  
H2 MountingHole\_2mm\_M2\_Pad\_Via

Sheet: /Keypad/  
File: keypad.kicad\_sch

#### Title:

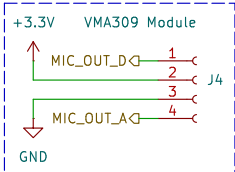
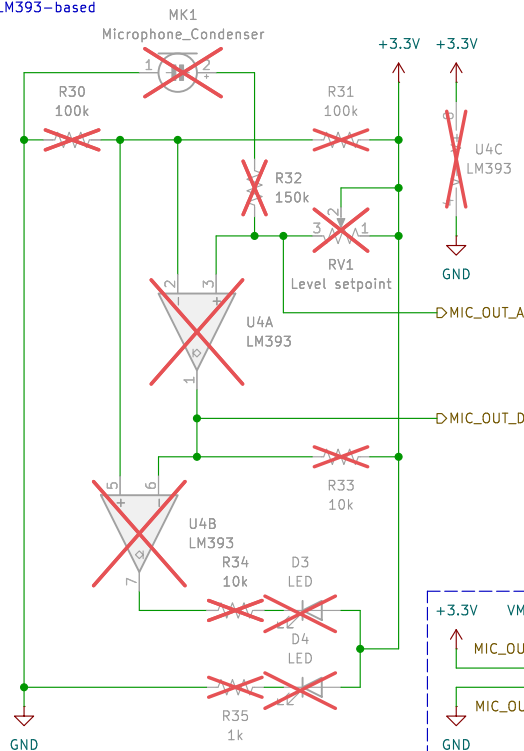
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KiCad E.D.A. 9.0.2

Date:

Rev:

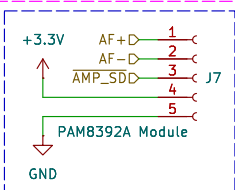
Id: 4/6

# Microphone Module LM393-based

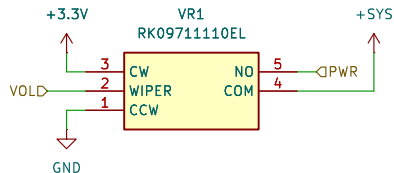


# Received Audio Digitizer AF: RX audio from radio module

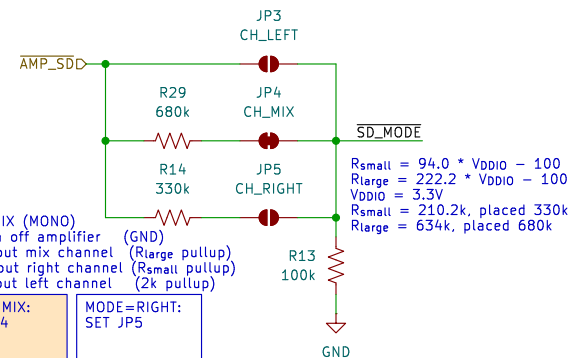
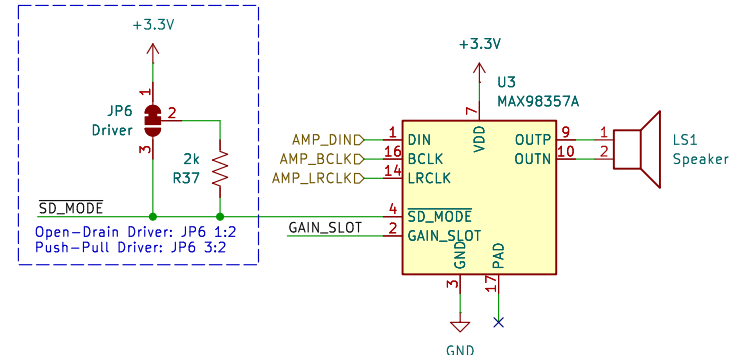
AF-  
AF+



# Volume Control Also acts as PWR



# Digital Audio Amplifier over I2S0

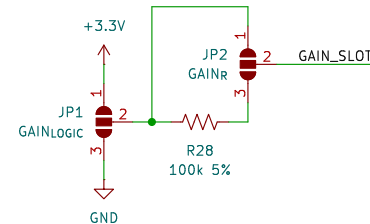


CHANNEL MODE SELECT: MIX (MONO)  
SD < 0.16V = Turn off amplifier (GND)  
SD 0.16V to 0.77V = Output mix channel (Rlarge pullup)  
SD < 0.16V = Output right channel (Rsmall pullup)  
SD > 1.4V = Output left channel (2k pullup)

MODE=LEFT: SET JP3  
MODE=MIX: SET JP4  
MODE=RIGHT: SET JP5

# GAIN SLOT SELECT: GAIN=9dB

GAIN=15dB: GAINLogic = LOW GAINr = 100k JP1 3:2, JP2 3:2  
GAIN=12dB: GAINLogic = LOW GAINr = 0R JP1 3:2, JP2 1:2  
GAIN=9dB: GAINLogic = NC GAINr = 0R JP1 NC, JP2 NC  
GAIN=6dB: GAINLogic = HIGH GAINr = 0R JP1 1:2, JP2 1:2  
GAIN=3dB: GAINLogic = HIGH GAINr = 100k JP1 1:2, JP2 3:2



Sheet: /Audio Subsystem/  
File: audio\_subsystem.kicad\_sch

# Title:

Size: A4  
KiCad E.D.A. 9.0.2

Date:

Rev:

Id: 5/6

