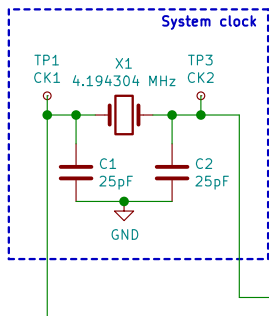
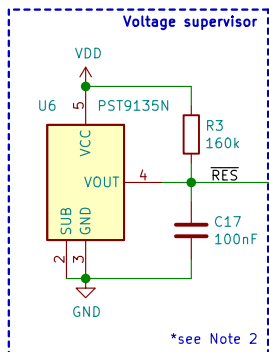


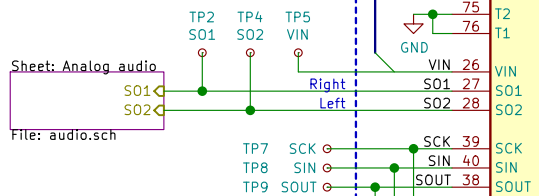
Sheet: Power

File: power.sch



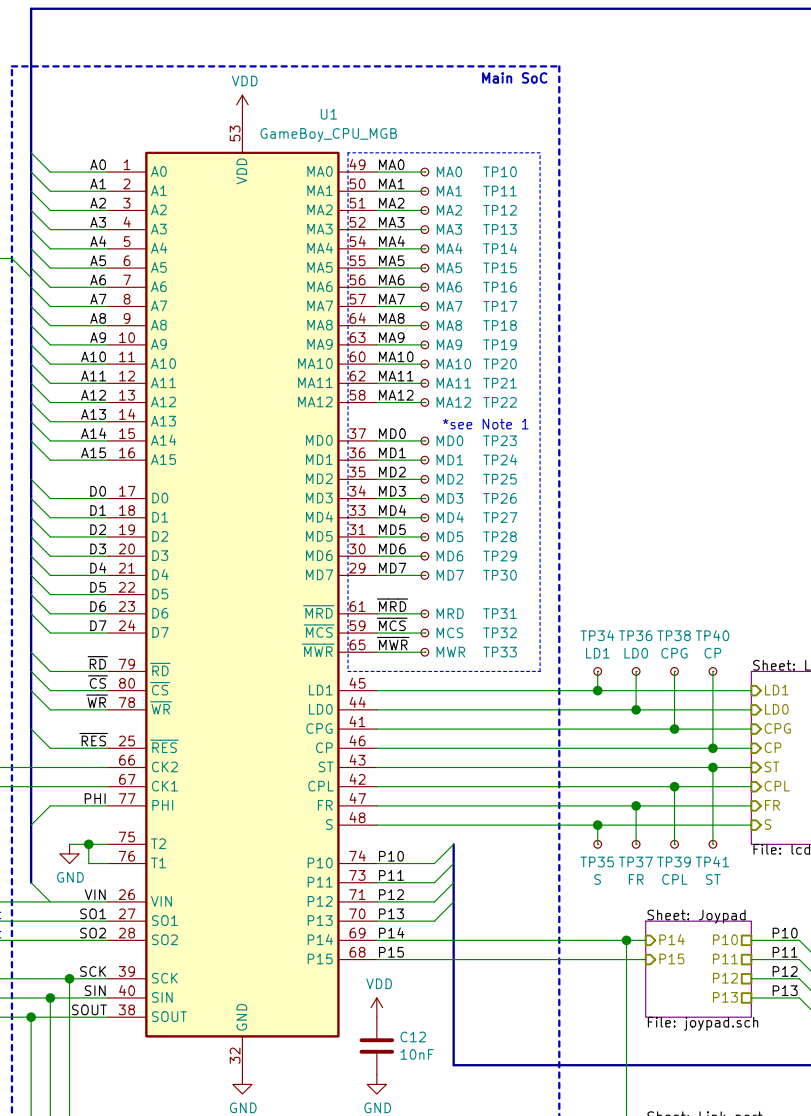
Sheet: Analog audio

File: audio.sch



Note 1:
The MGB SoC includes integrated Video RAM, but all the VRAM bus signals are available as pins and connected to test pads

Note 2:
The supervisor IC has an open drain output that is pulled low when VDD <= 3.5V



Sheet: LCD

File: lcd.sch

Sheet: Joypad

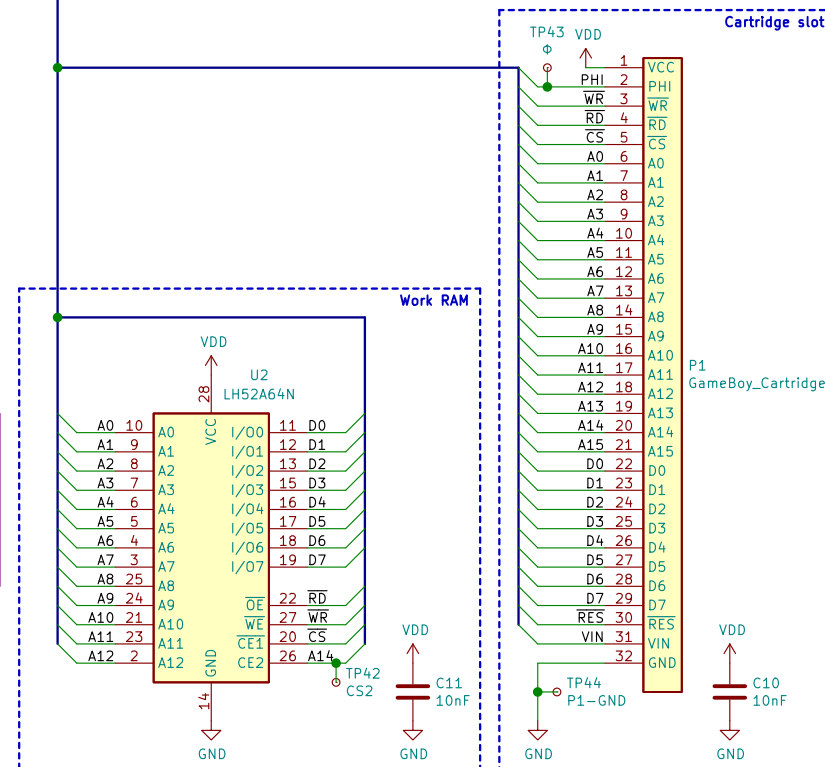
File: joypad.sch

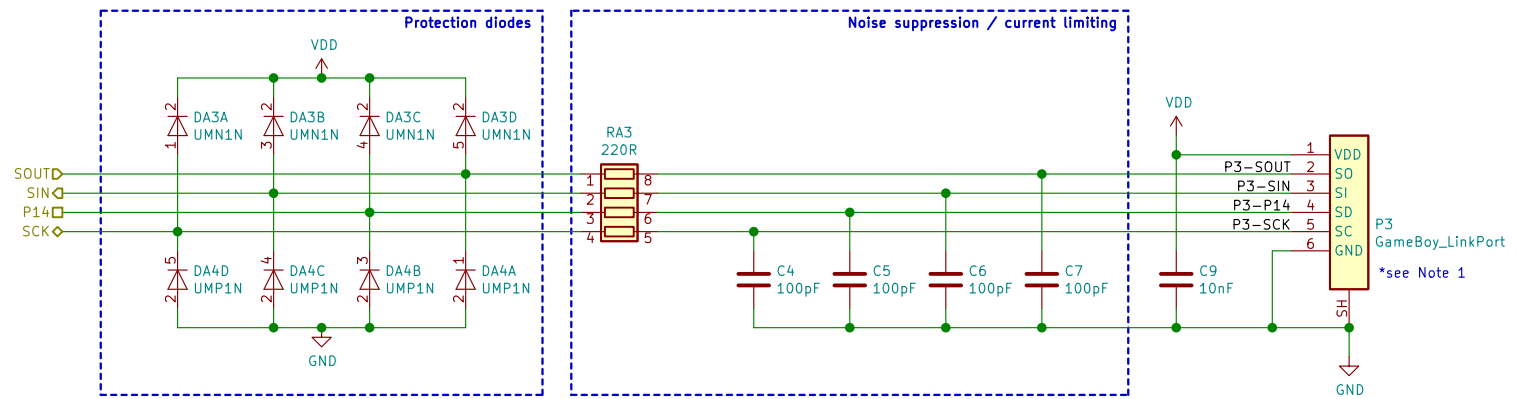
Sheet: Link port

File: link_port.sch

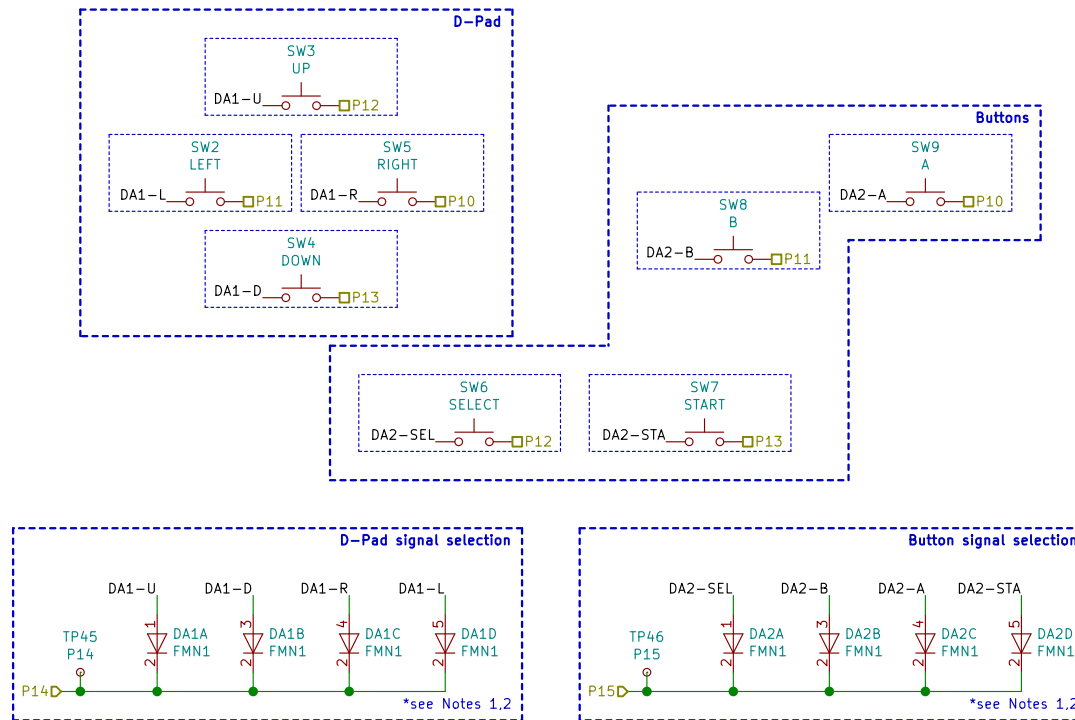
Global power nets:
VDD = main power supply, nominal +5V (regulated)
VEE = LCD bias supply, nominal -18V (unregulated)
VCC = DC input supply (battery or DC jack), nominal +3V
GND = common ground

Game Boy Pocket mainboard
MGB-CPU-01
MGB-ECPU-01
MGB-LCPU-01
MGB-LCPU-02



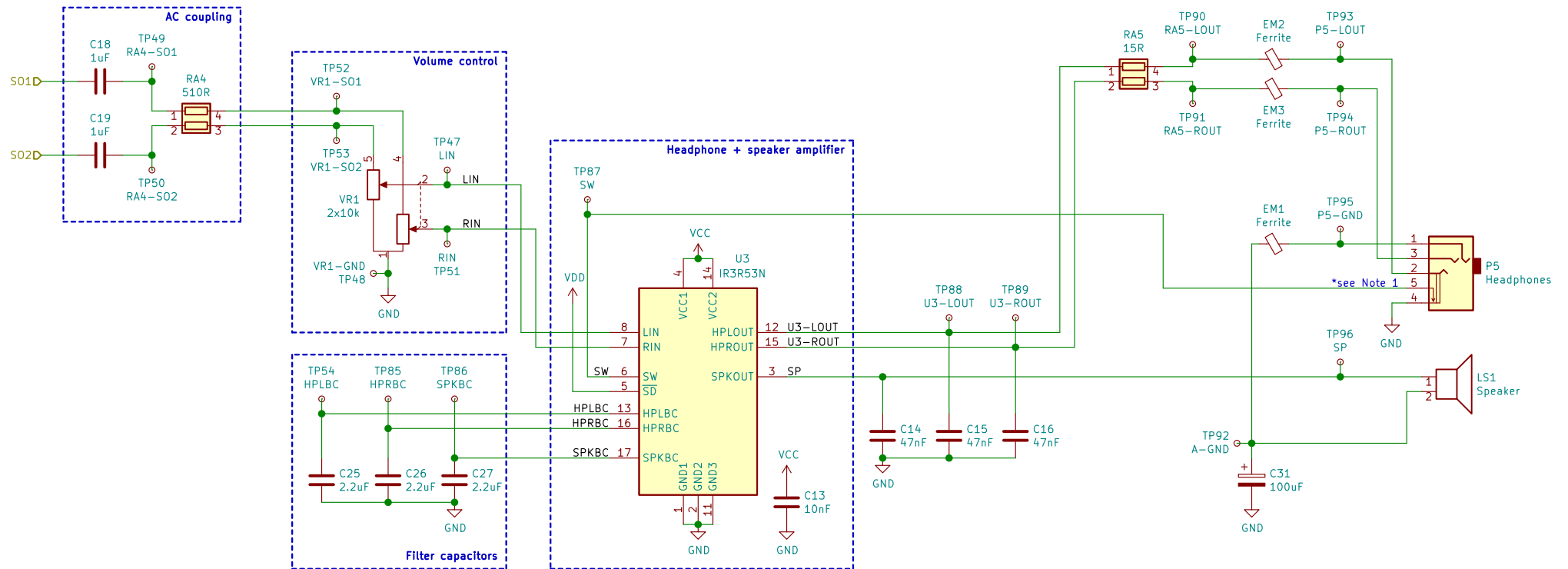


Note 1:
Official link cables omit pin 1 (VDD) and pin 4 (P14/SD), but unofficial cables usually have all 6 signals with VDD/SD crossed

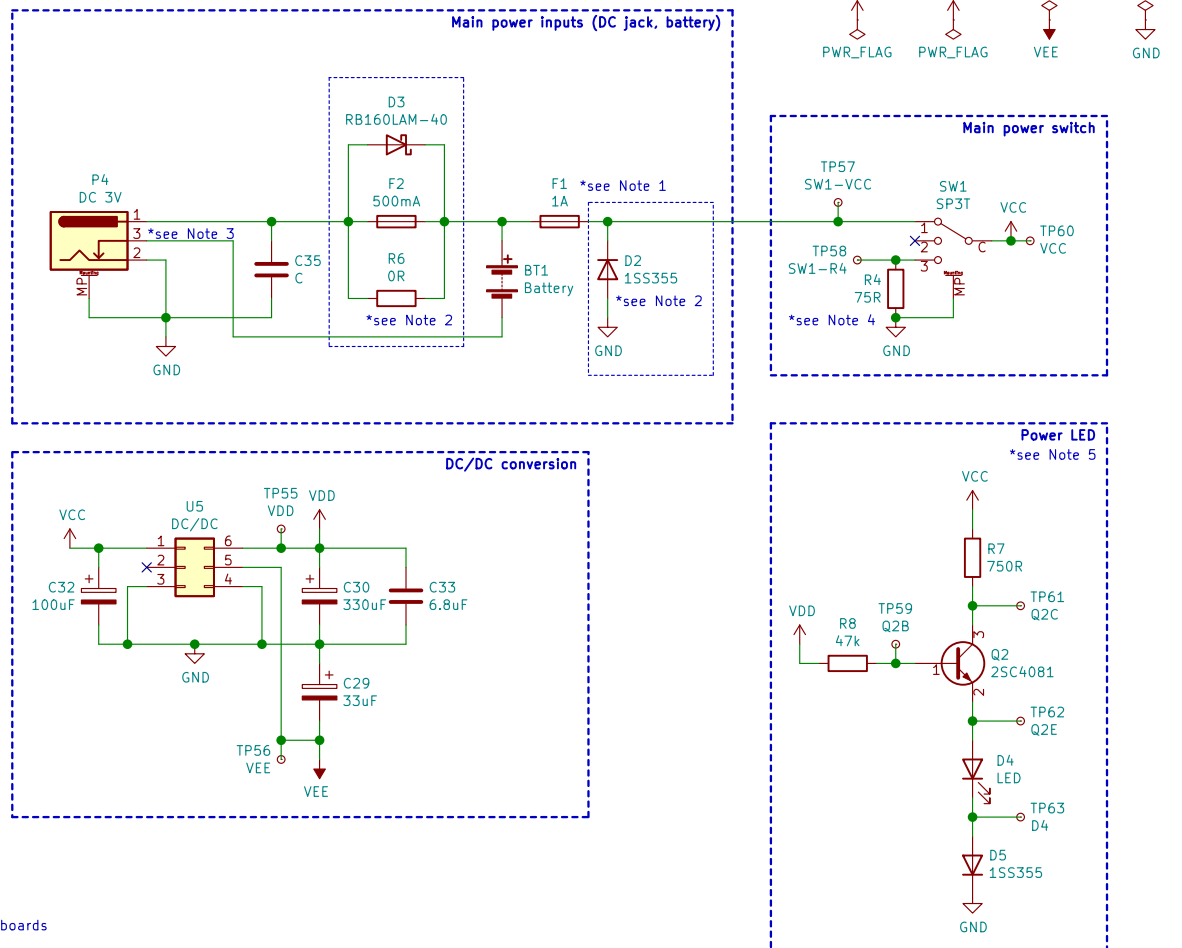


Note 1:
Earlier boards use Panasonic MA6X124 (SOT-23-6 footprint) instead of Rohm FMN1 (SOT-23-5 footprint)
The SOT-23-6 footprint on the board is compatible with both

Note 2:
Warning: MA6X124 and FMN1 datasheets use non-standard pin numbering!
This schematic uses standard SOT-23-5/SOT-23-6 numbering



Note 1:
Pins 4 (GND) and 5 (SW) are normally connected, and inserting a plug disconnects SW from GND.



Global power nets:
VDD = main power supply, nominal +5V (regulated)
VEE = LCD bias supply, nominal -18V (unregulated)
VCC = DC input supply (battery or DC jack), nominal +3V
GND = common ground

Note 1:
F1 is 600mA on earlier boards

Note 2:
D3/F2/R6 share the same footprint, and the actual device can be only one of them
D2 is also optional and not used in all cases.
Known combinations:
1) only D2 populated, no D3/F2/R6
2) D2 + R6 populated
3) D2 + F2 populated
4) only D3 populated, no D2

Note 3:
Pins 2 (GND) and 3 (BT-) are normally connected, and inserting a DC plug disconnects GND from BT-

Note 4:
R4 provides a discharge path from VCC to GND when the power switch is in the off position

Note 5:
Power LED circuit is not present on early MGB-CPU-01 boards

