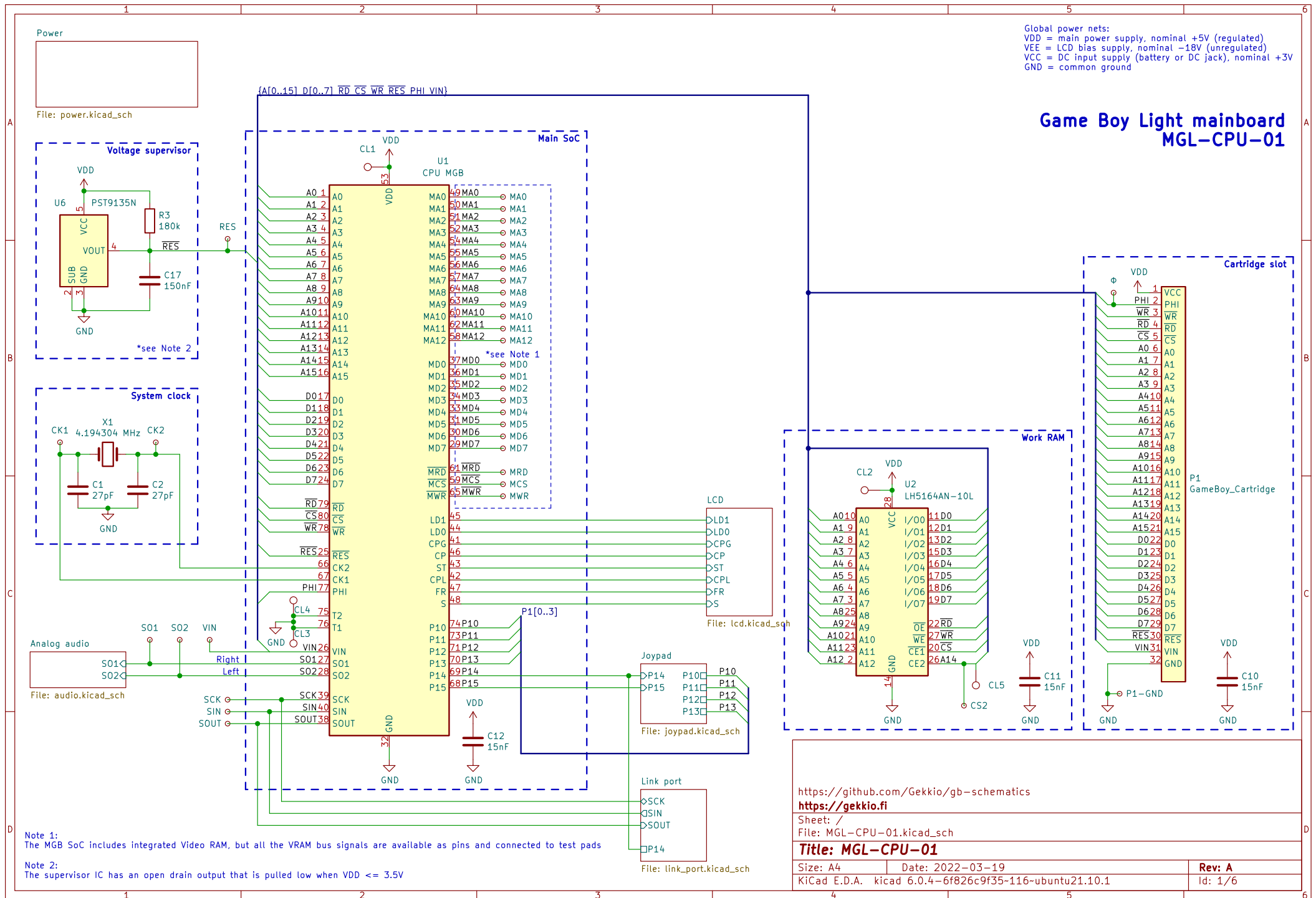


Global power nets:
VDD = main power supply, nominal +5V (regulated)
VEE = LCD bias supply, nominal -18V (unregulated)
VCC = DC input supply (battery or DC jack), nominal +3V
GND = common ground

Game Boy Light mainboard MGL-CPU-01



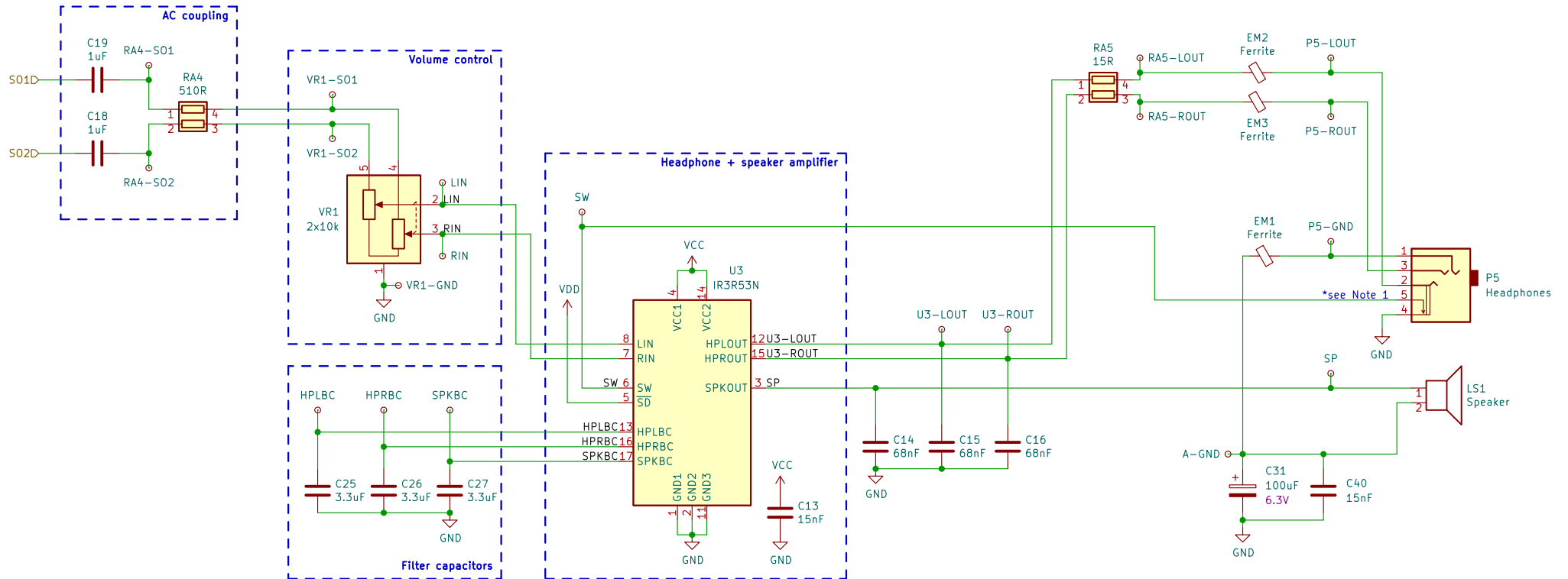
<https://github.com/Gekkio/gb-schematics>
<https://gekkio.fi>

Sheet: /
File: MGL-CPU-01.kicad_sch

Title: MGL-CPU-01

Size: A4 Date: 2022-03-19
KiCad E.D.A. kicad 6.0.4-6f826c9f35-116-ubuntu21.10.1

Rev: A
Id: 1/6



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

<https://github.com/Gekkio/gb-schematics>

<https://gekkio.fi>

Sheet: /Analog audio/

File: audio.kicad_sch

Title: MGL-CPU-01

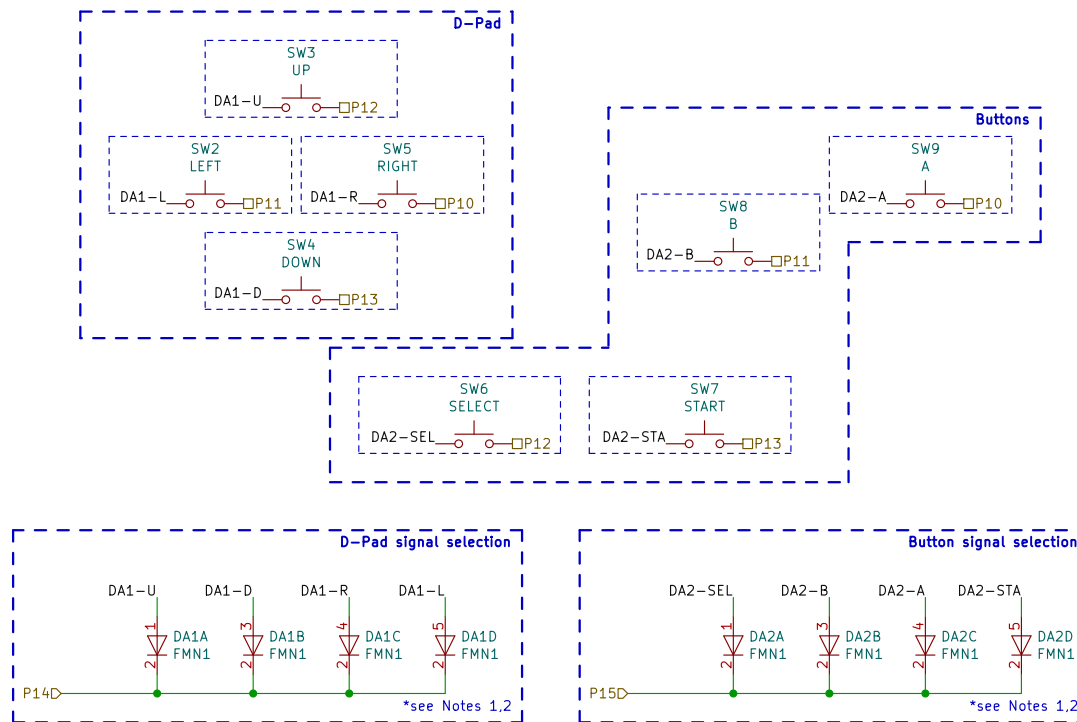
Size: A4

Date: 2022-03-19

Rev: A

KiCad E.D.A. kicad 6.0.4-6f826c9f35-116-ubuntu21.10.1

Id: 2/6



Note 1:
Some 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

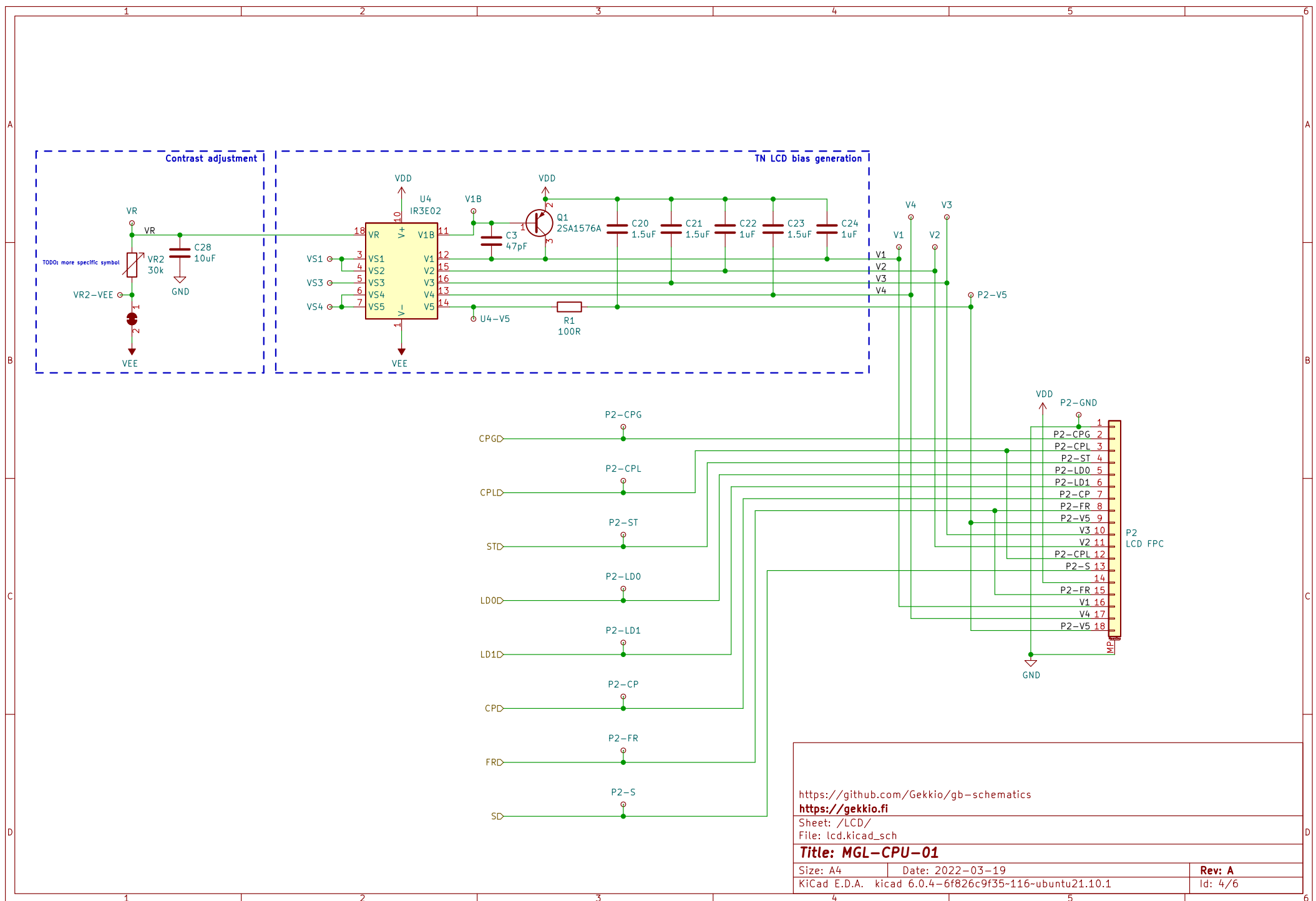
<https://github.com/Gekkio/gb-schematics>
<https://gekkio.fi>

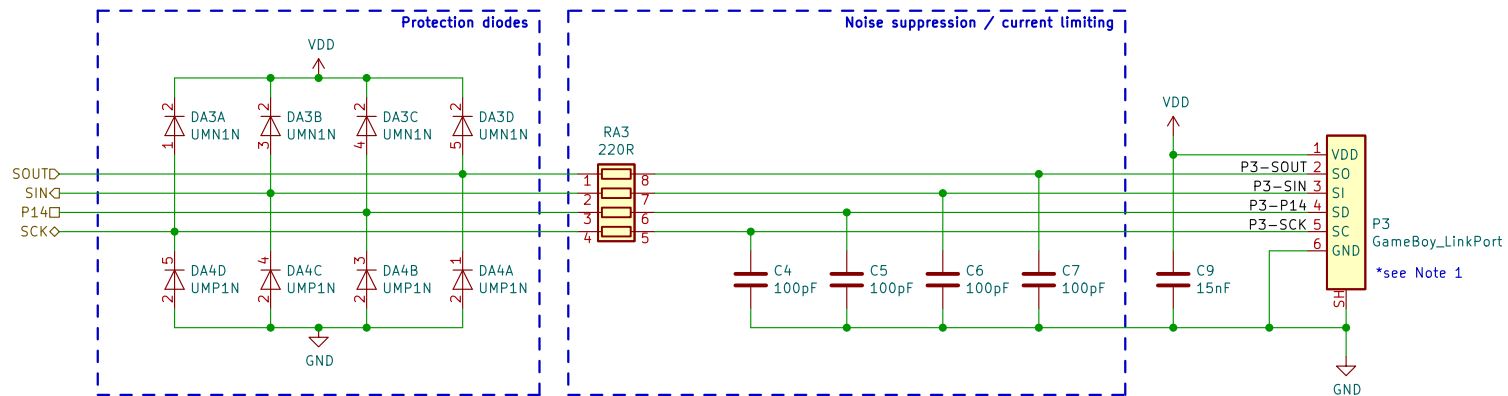
Sheet: //Joypad/
File: joypad.kicad_sch

Title: MGL-CPU-01

Size: A4 Date: 2022-03-19
KiCad E.D.A. kicad 6.0.4-6f826c9f35-116-ubuntu21.10.1

Rev: A
Id: 3/6





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

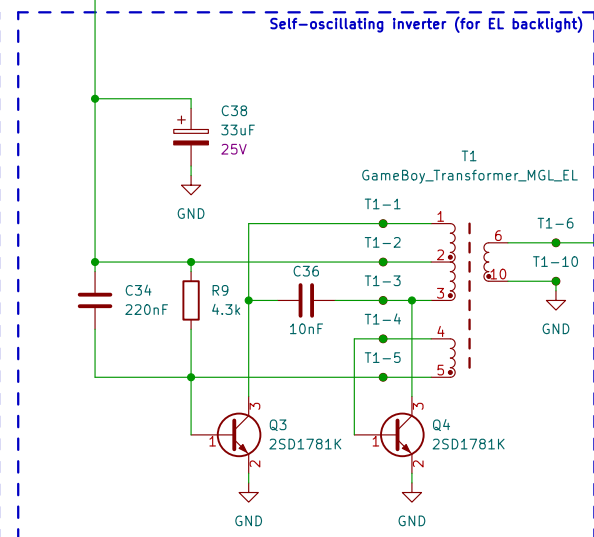
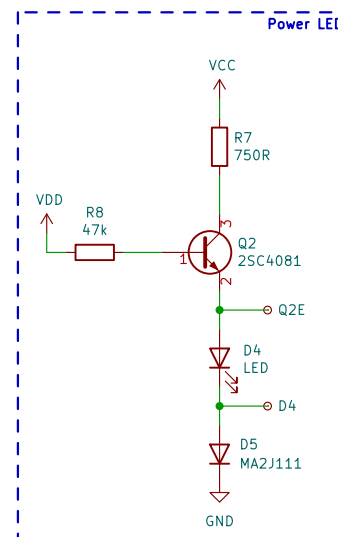
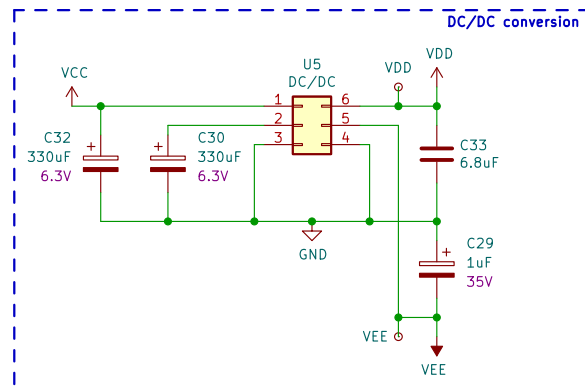
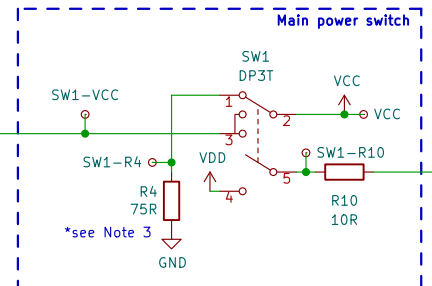
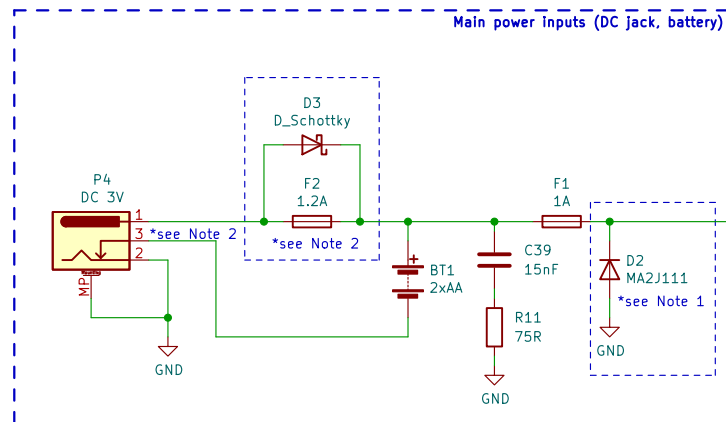
<https://github.com/Gekkio/gb-schematics>
<https://gekkio.fi>

Sheet: /Link port/
File: link_port.kicad_sch

Title: MGL-CPU-01

Size: A4 Date: 2022-03-19
KiCad E.D.A. kicad 6.0.4-6f826c9f35-116-ubuntu21.10.1

Rev: A
Id: 5/6



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:
D3/F2 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) D2 + F2 populated

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

Note 3:
R4 provides a discharge path from VCC to GND when the power switch is in the off position

<https://github.com/Gekkio/gb-schematics>

<https://gekkio.fi>

Sheet: /Power/
File: power.kicad_sch

Title: MGL-CPU-01

Size: A4 Date: 2022-03-19
KiCad E.D.A. kicad 6.0.4-6f826c9f35-116-ubuntu21.10.1

Rev: A
Id: 6/6