

A

B

C

D

E

A

B

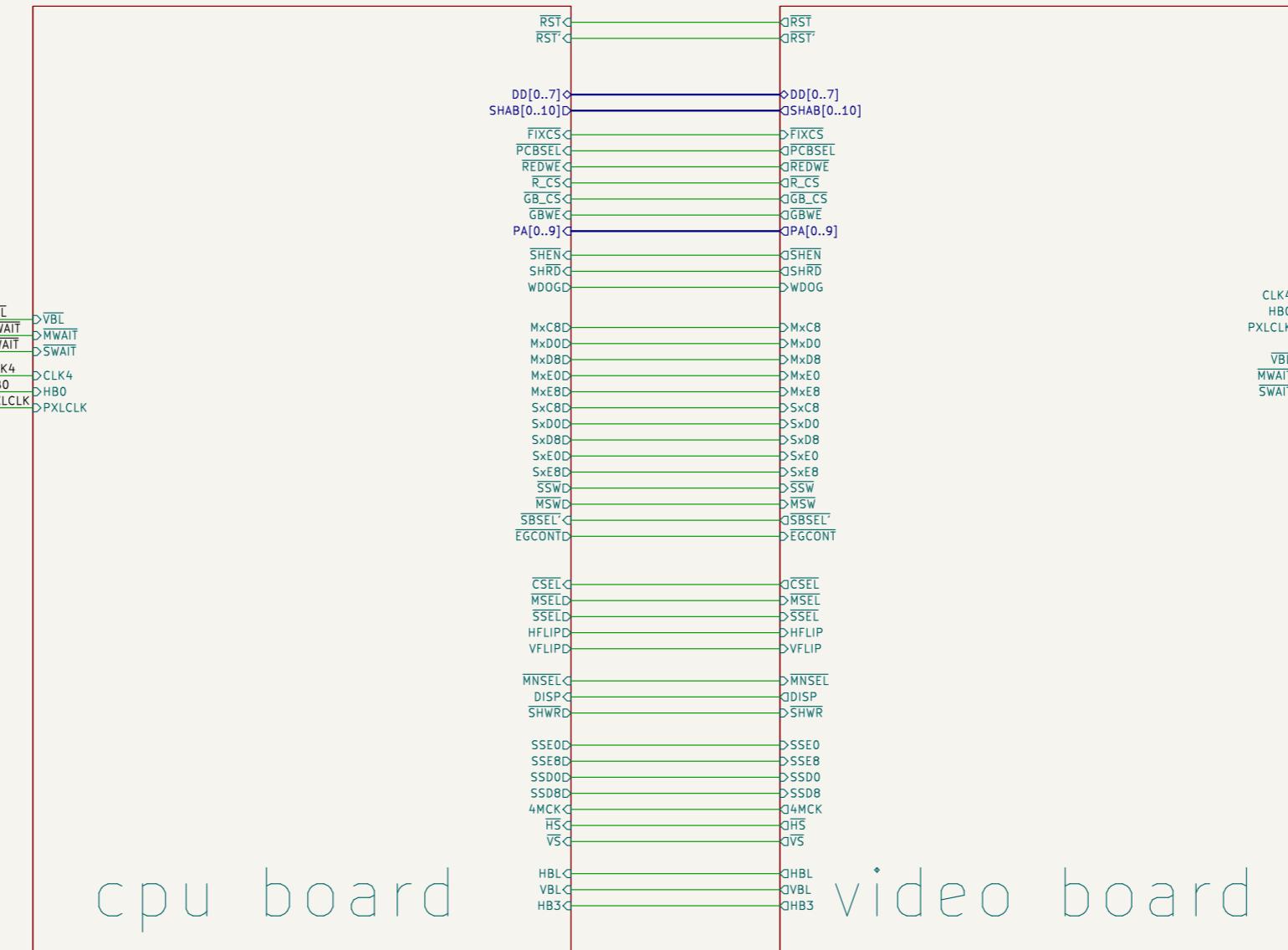
C

D

E

tehkanwch
bootleg board

- original PCB has through-hole vias whereas the bootleg has filled vias
- original uses three custom packages from Mitsubishi with logic inside.
These were replaced by a small daughter board on the bootleg, serving the same functionality
- different edge connectors
- debug edge connector on video board not present on bootleg
- cabinet input logic partly missing and rewired on the bootleg to replace the trackball interface for a joystick one
- different power amplifier for sound without heat sink on the bootleg
- slightly different frequencies for crystal oscillators (cost reduction?)
- device reference markers (silkscreen) on bootleg have reversed order on bootleg



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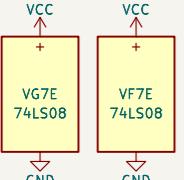
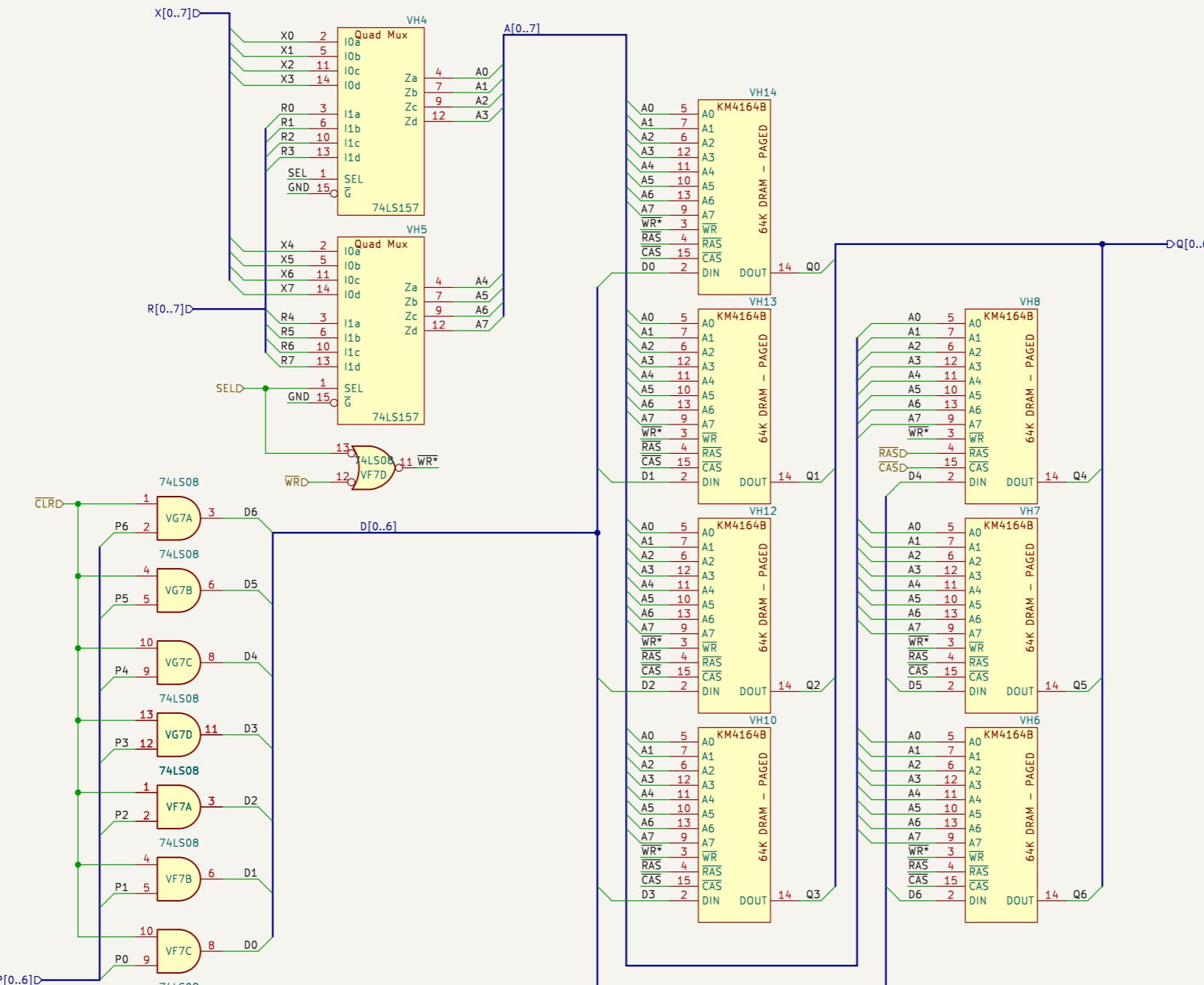
Sheet: /
File: tehkanwch.kicad_sch

Title: TEHKAN WORLD CUP (tehkanwch bootleg)

Size: A3 | Date: 2024-11-15
KiCad E.D.A. 8.0.8



Rev:
Id: 1/26



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Sheet: /video board/object/frame buffer B/
File: buffer.kicad_sch

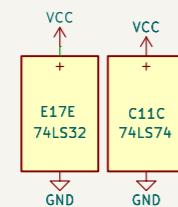
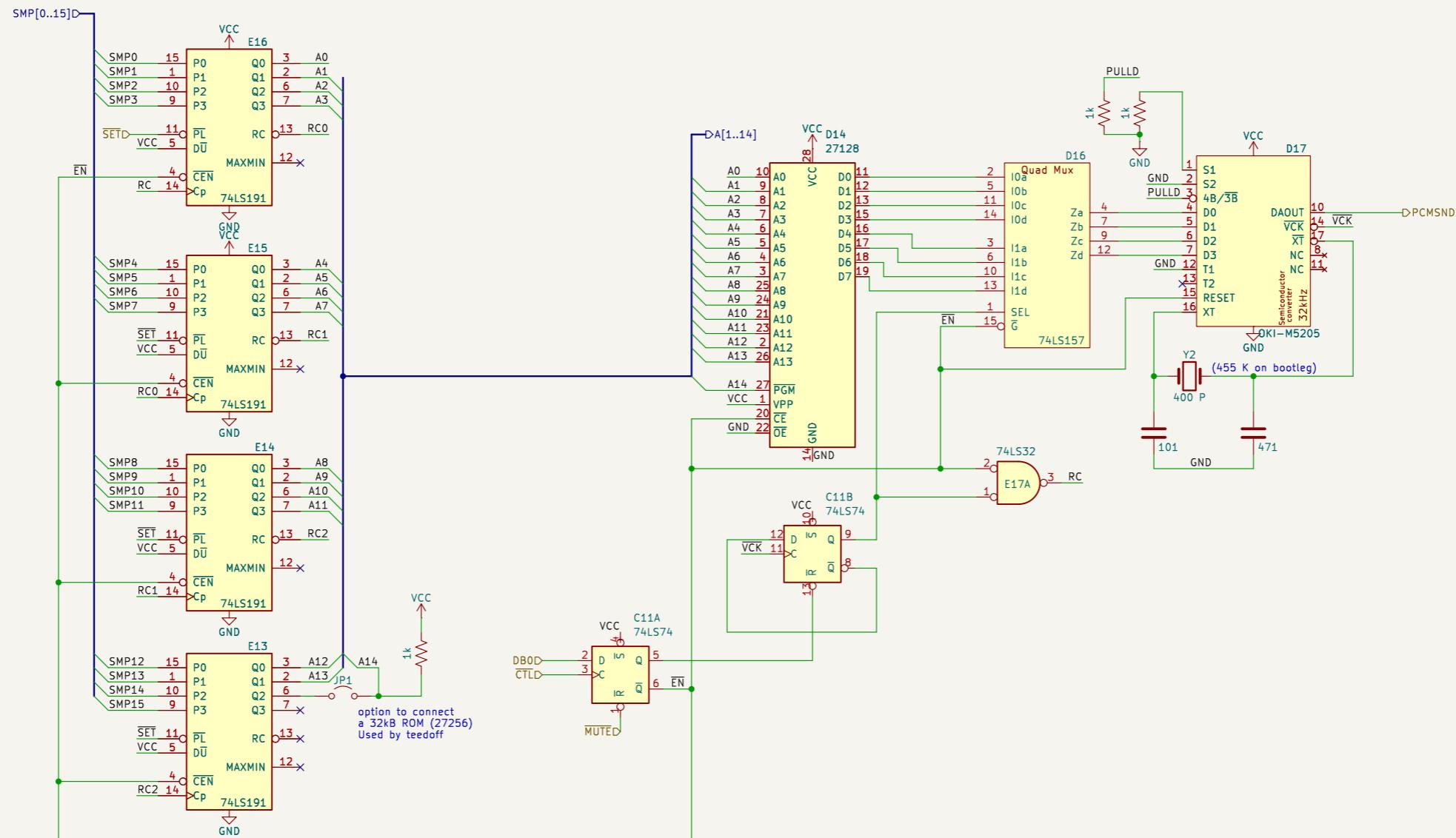
Title: Line Buffer

Size: A3 Date: 2024-11-15
KiCad E.D.A. 8.0.8

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Digitized by srujanika@gmail.com

Rev:
Id: 2/26



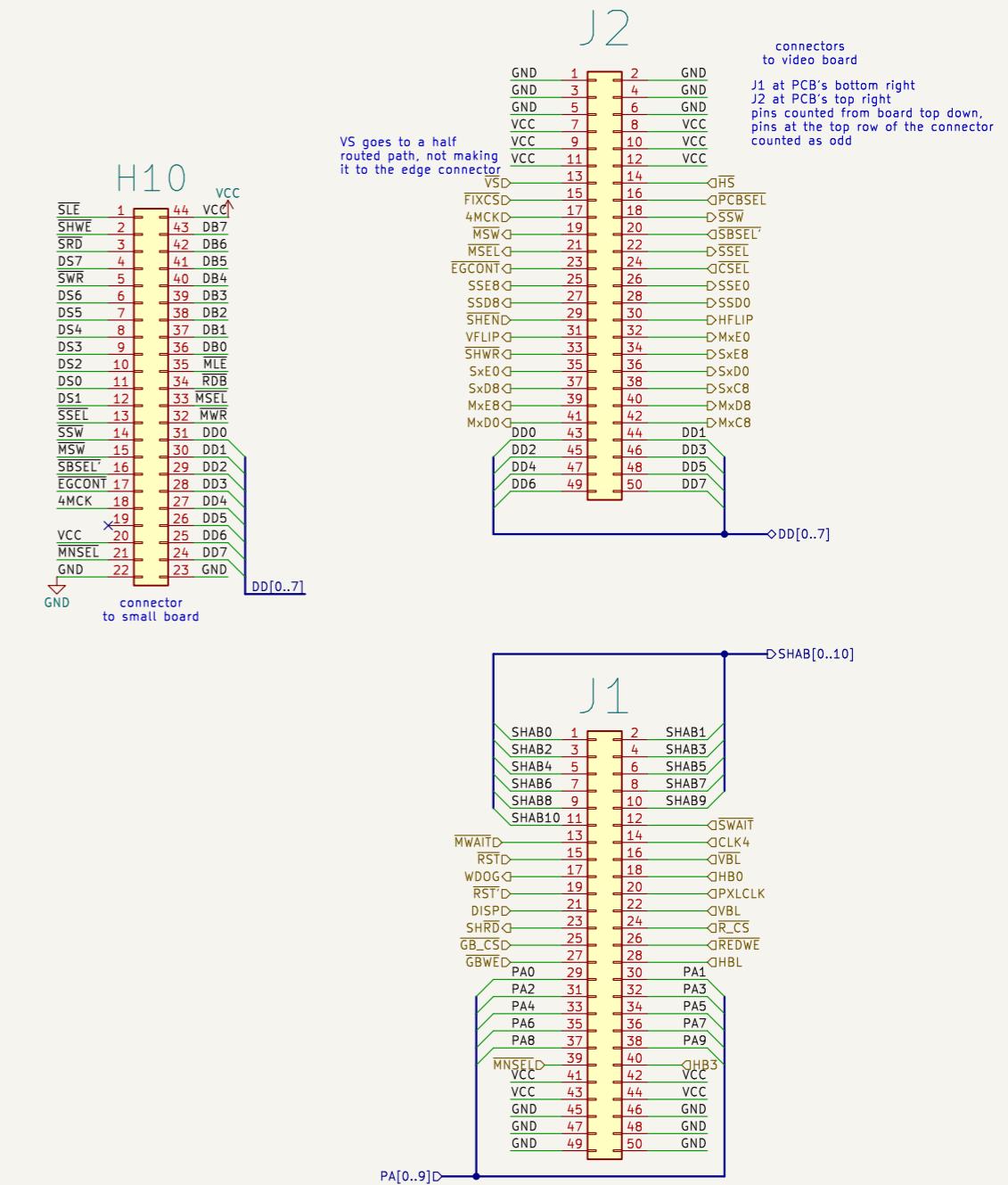
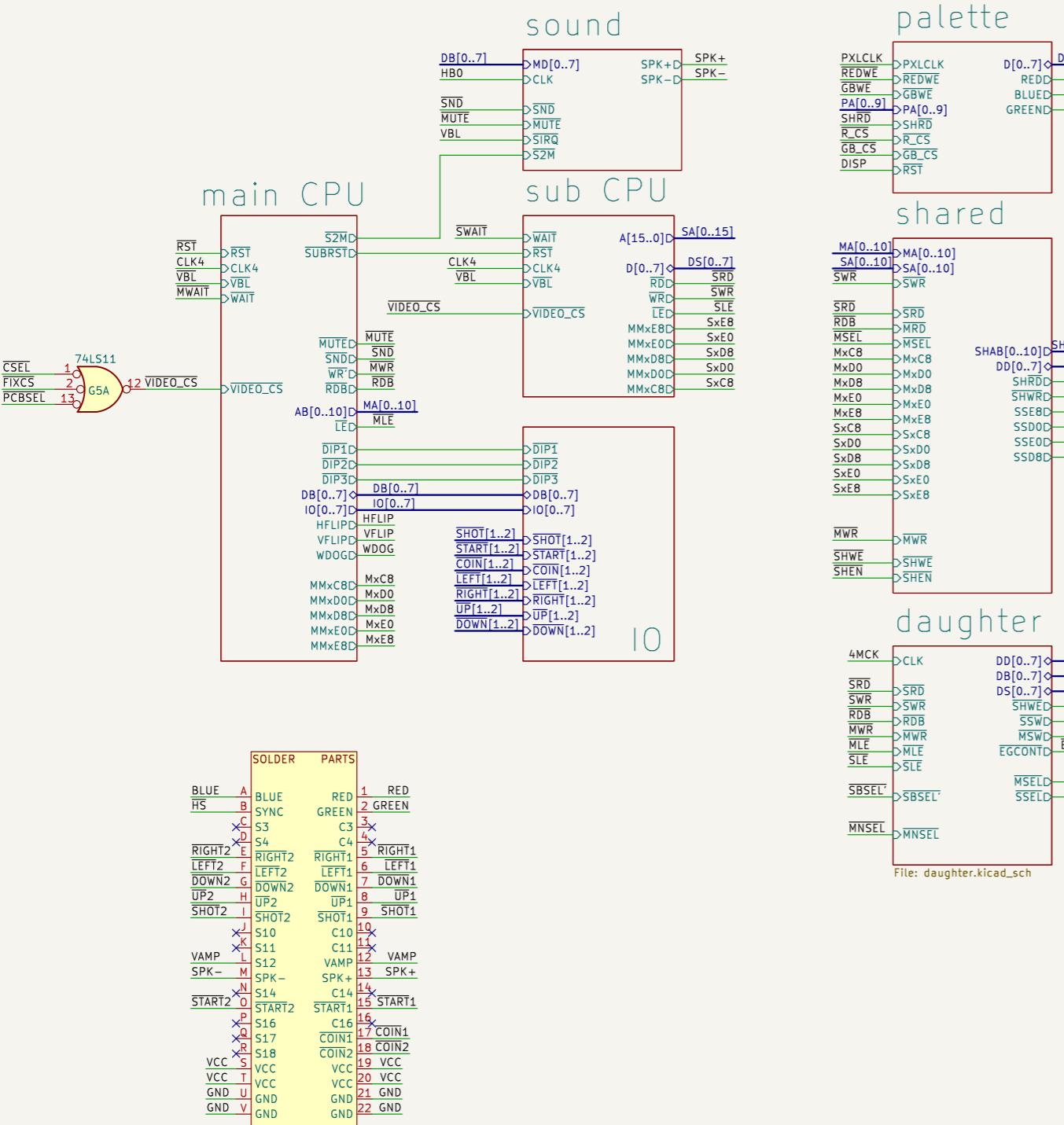
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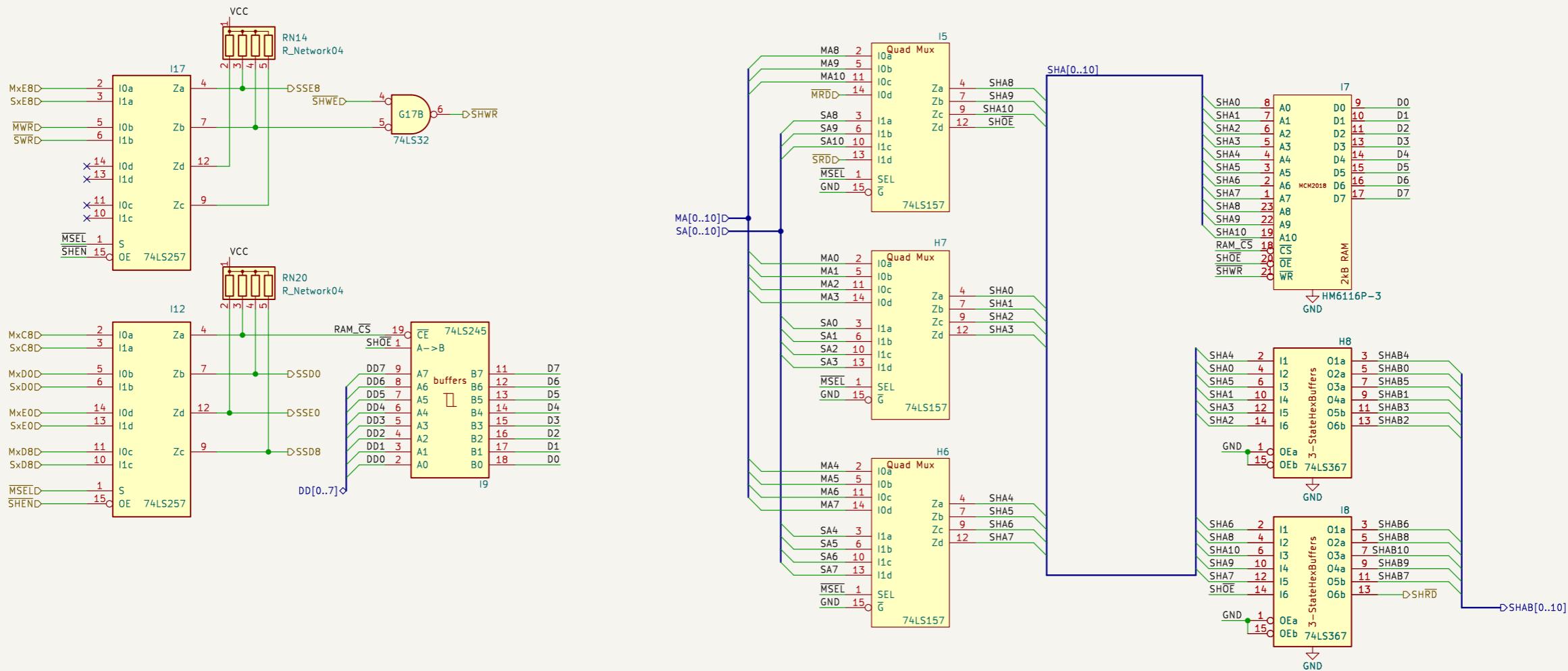
Sheet: /cpu_board/sound/PCM/
File: pcm.kicad_sch

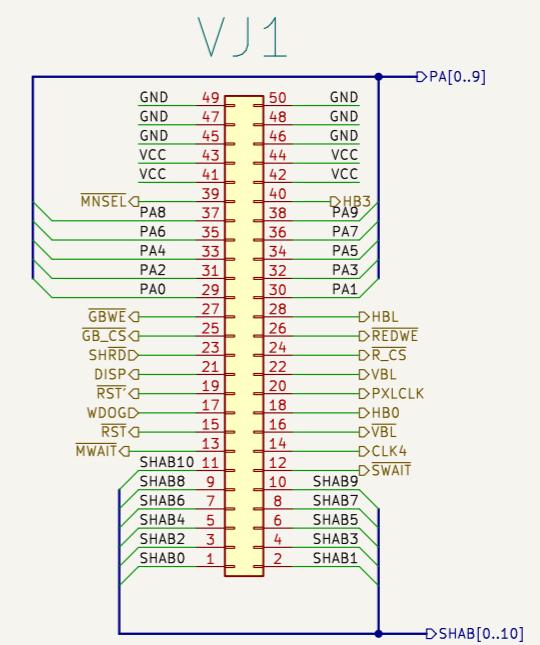
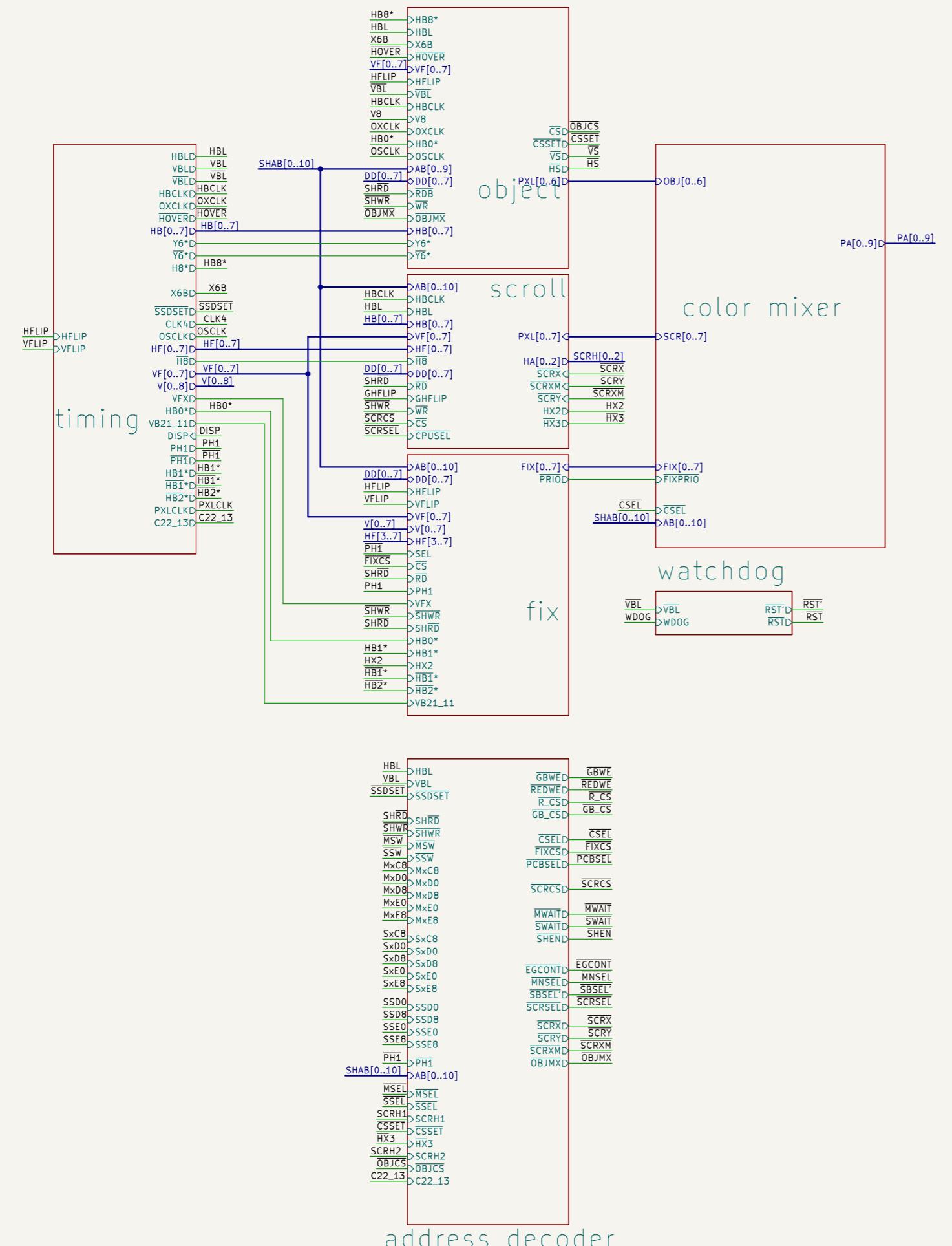
Title: PCM

Size: A3 Date: 2024-11-15
KiCad E.D.A. 8.0.8

Rev: Id: 5/26

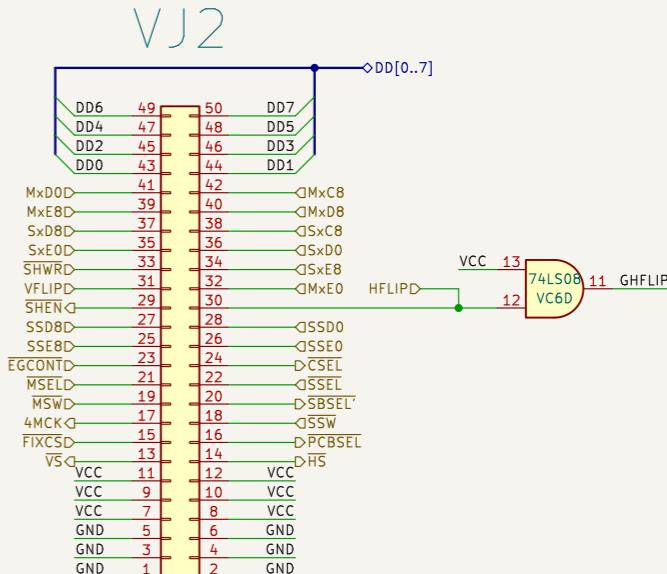






connectors
to CPU board

/J1 at PCB's top right
/J2 at PCB's bottom right
pins counted from board bottom up,
pins at the top row of the connector
counted as even



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File: video.kicad_sch

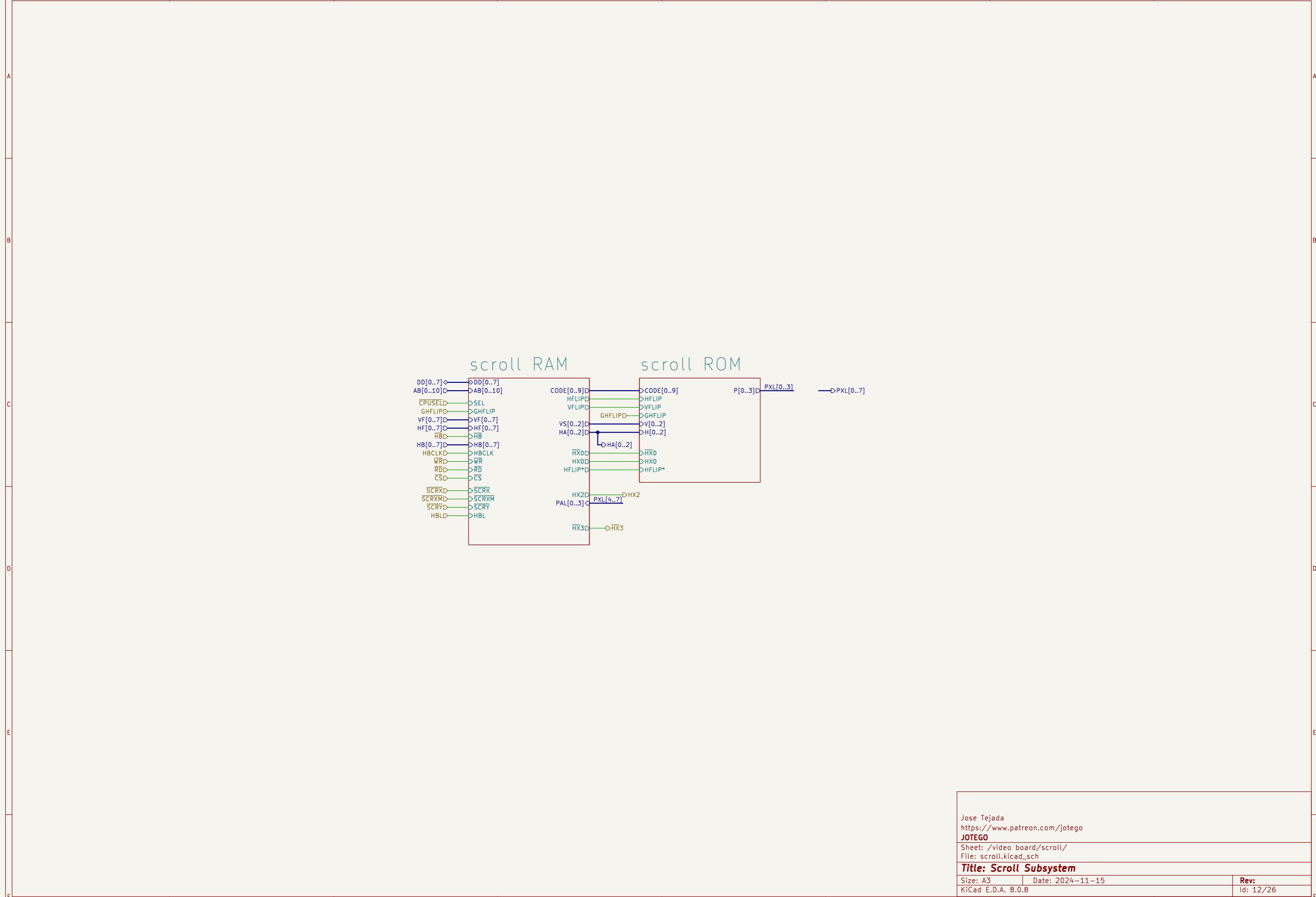
Size: A3 Date: 2024-11-15

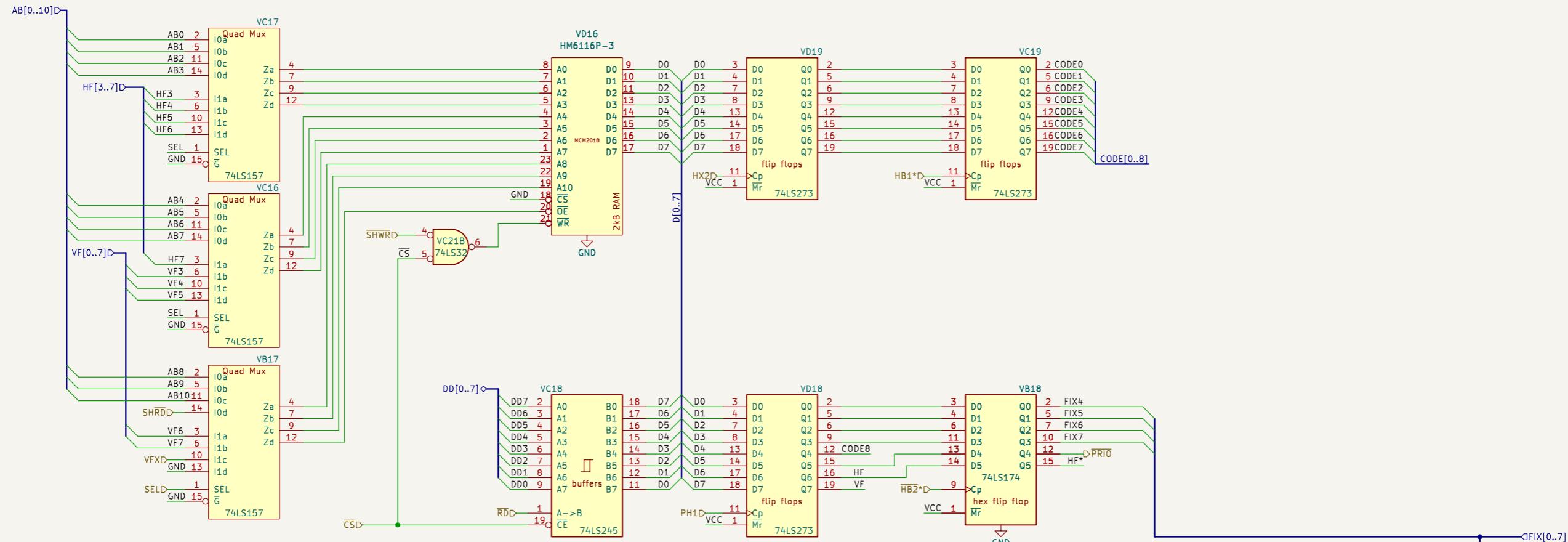
KiCad EDA 8.0.8

RICHARD E.D.A. 8.0.0

For more information about the study, please contact Dr. John Smith at (555) 123-4567 or via email at john.smith@researchinstitute.org.

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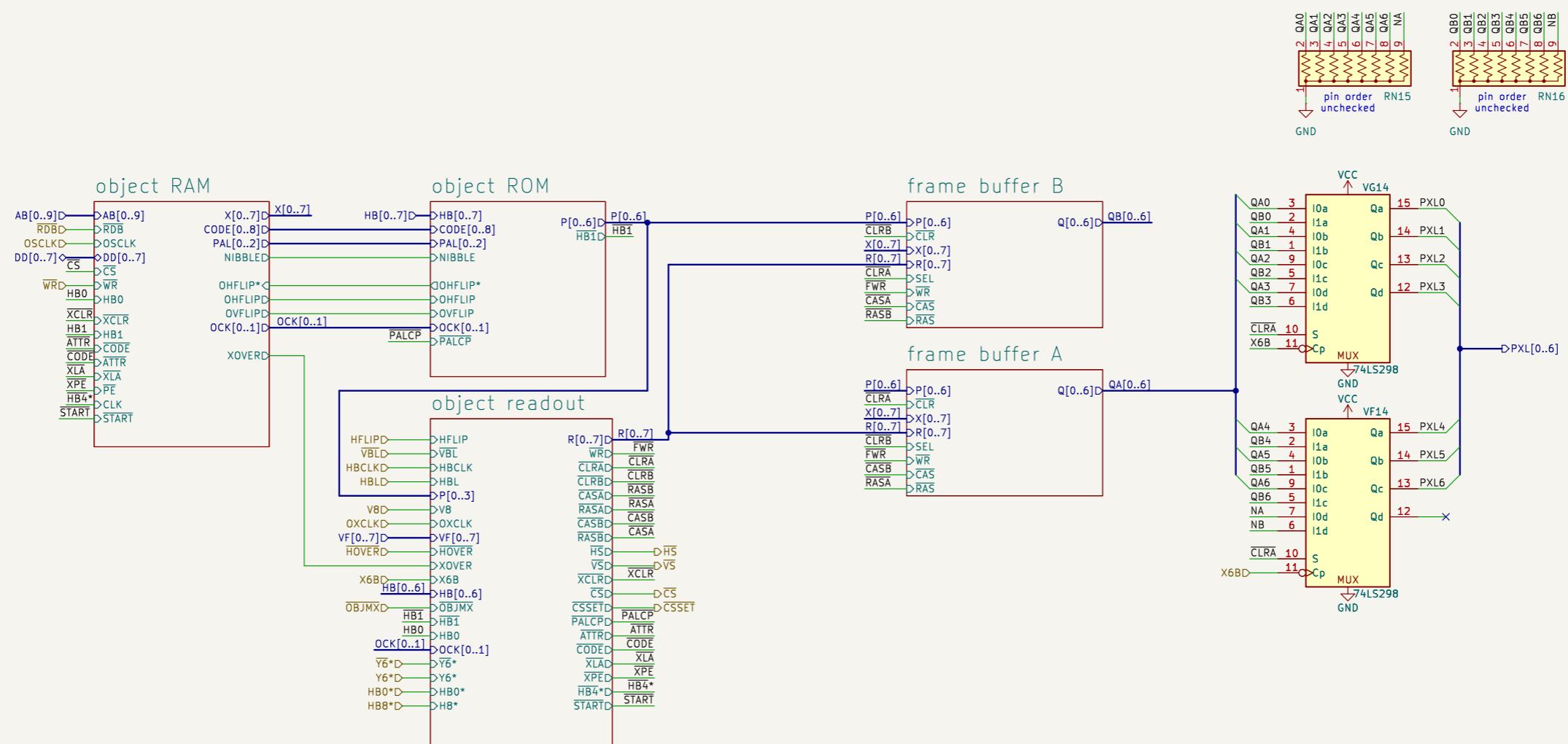
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Sheet: /video board/fix/
File: fix.kicad_sch

Title: Fixed Character Layer

Size: A3 Date: 2024-11-15
KiCad E.D.A. 8.0.8

Rev: Id: 13/26



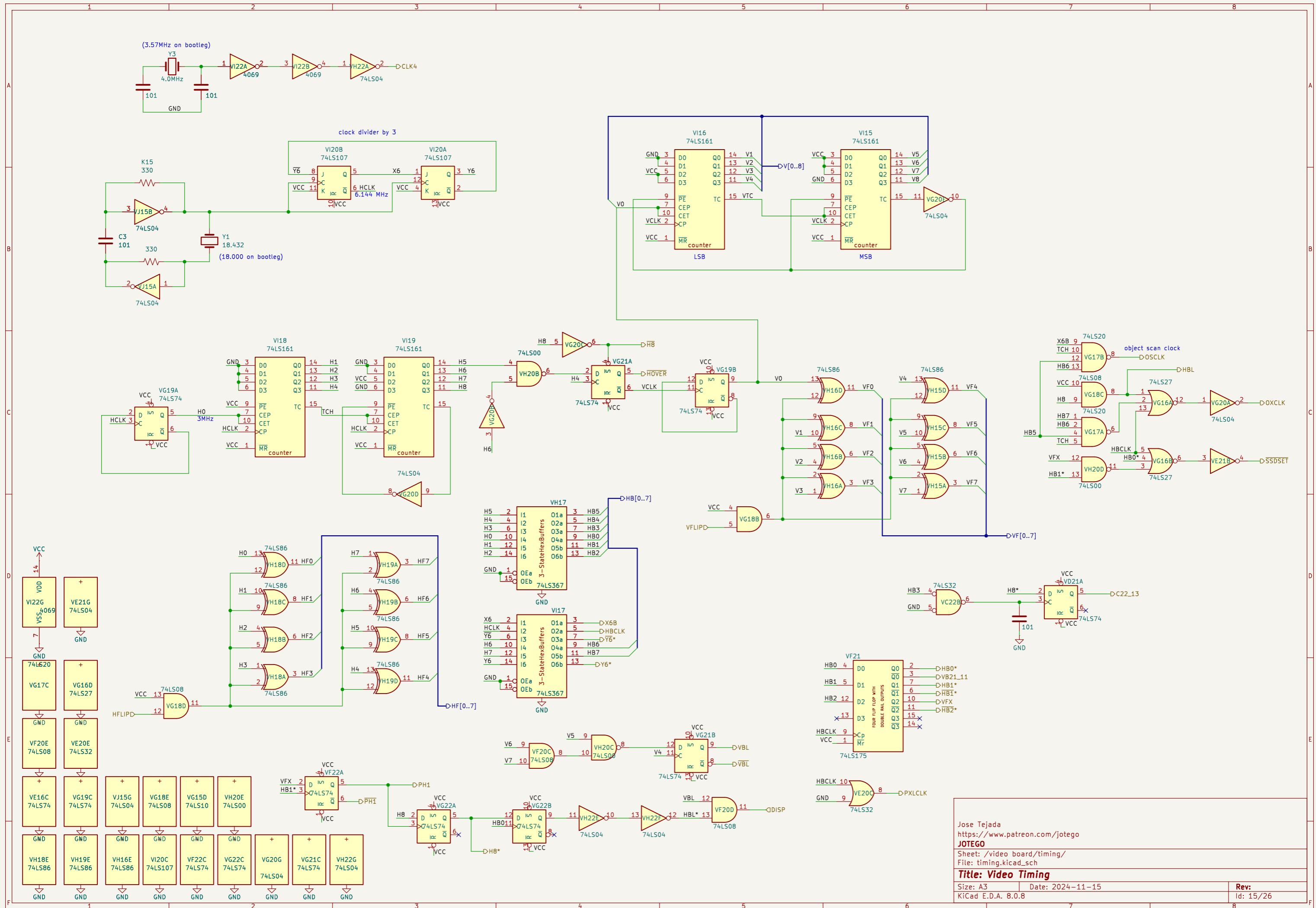
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Sheet: /video board/object/
File: object.kicad_sch

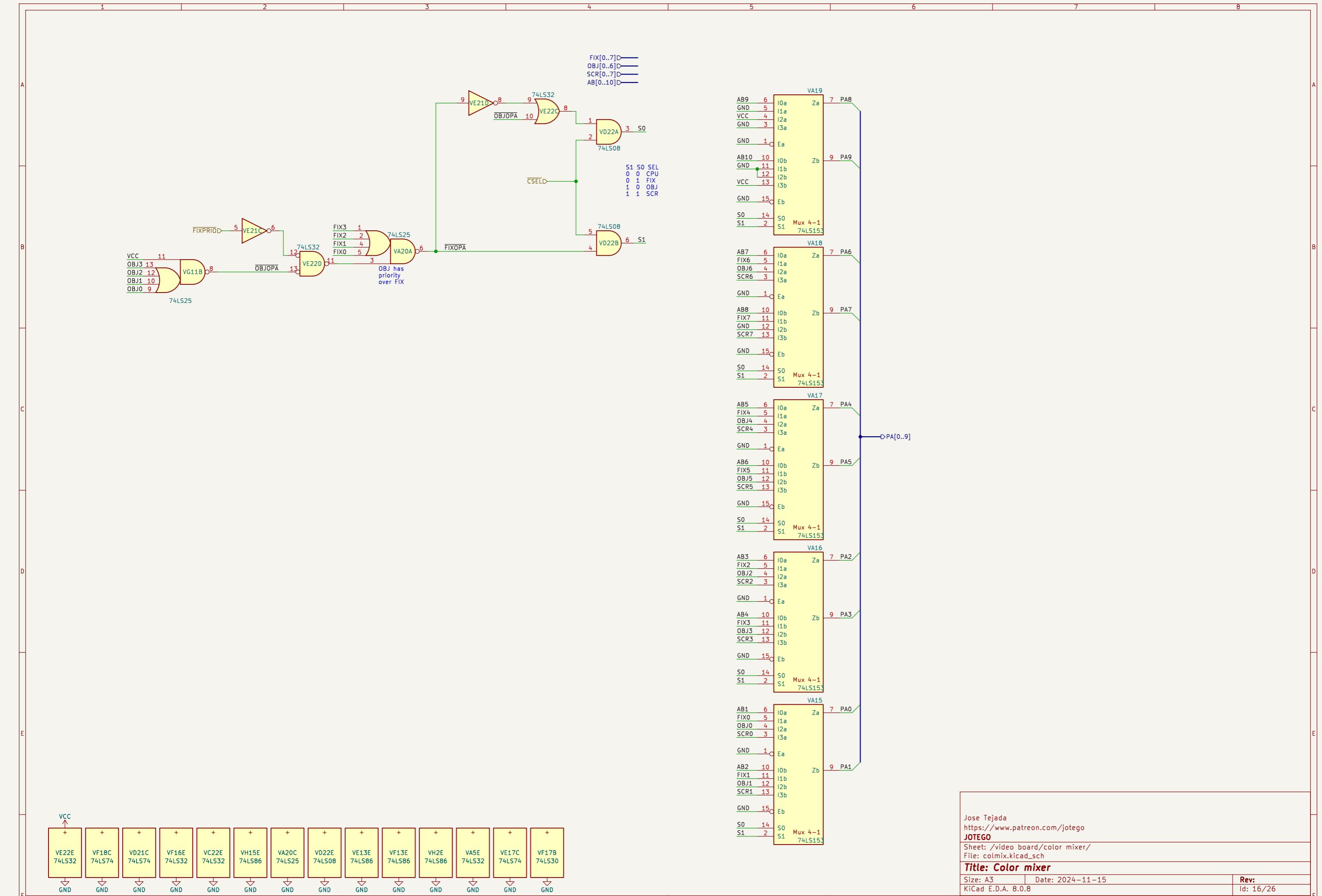
Title: Object Subsystem

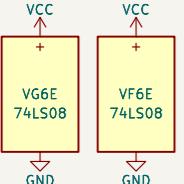
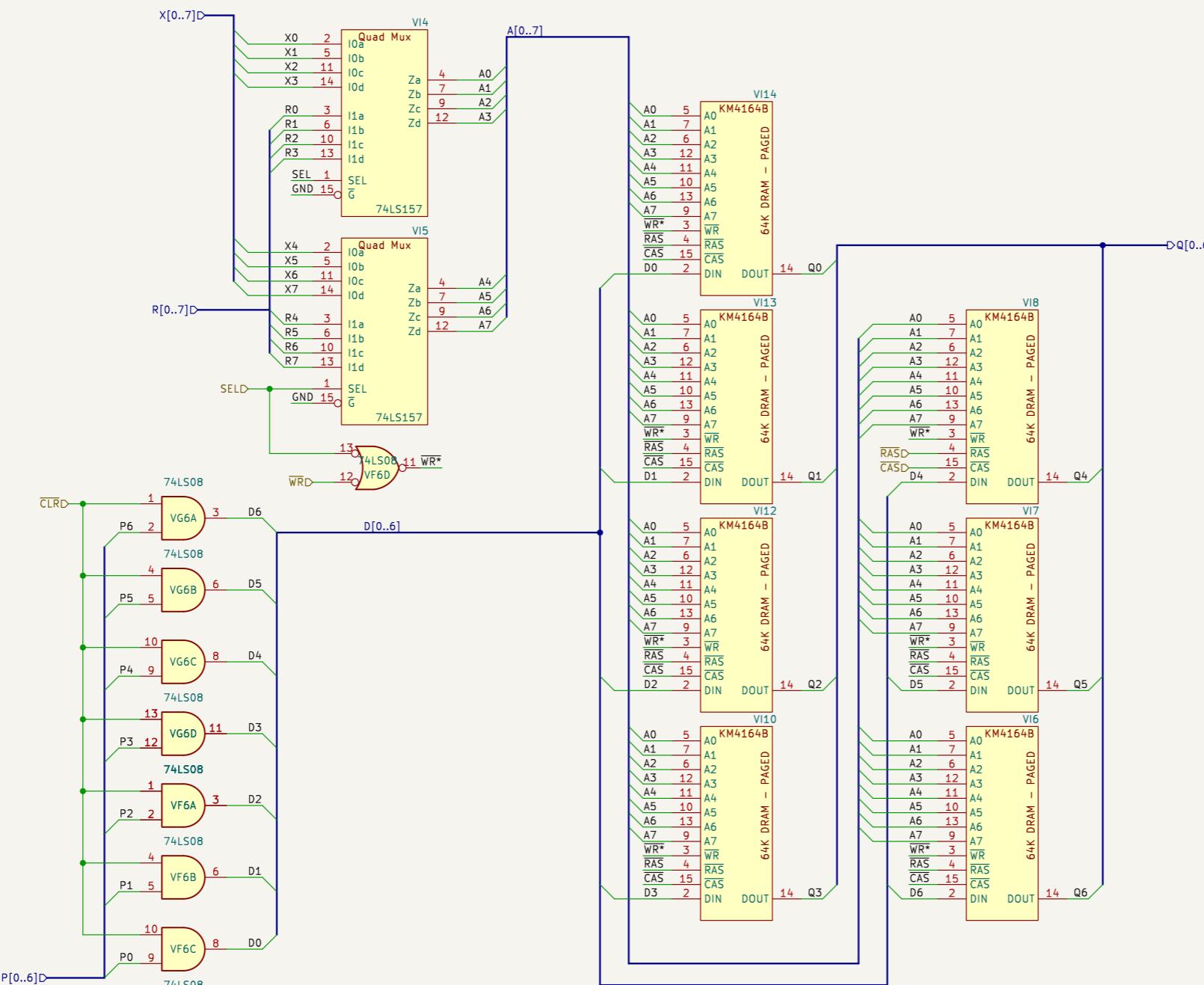
Size: A3 | Date: 2024-11-15
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Rev:
Id: 14/26



1 2 3 4 5 6 7 8





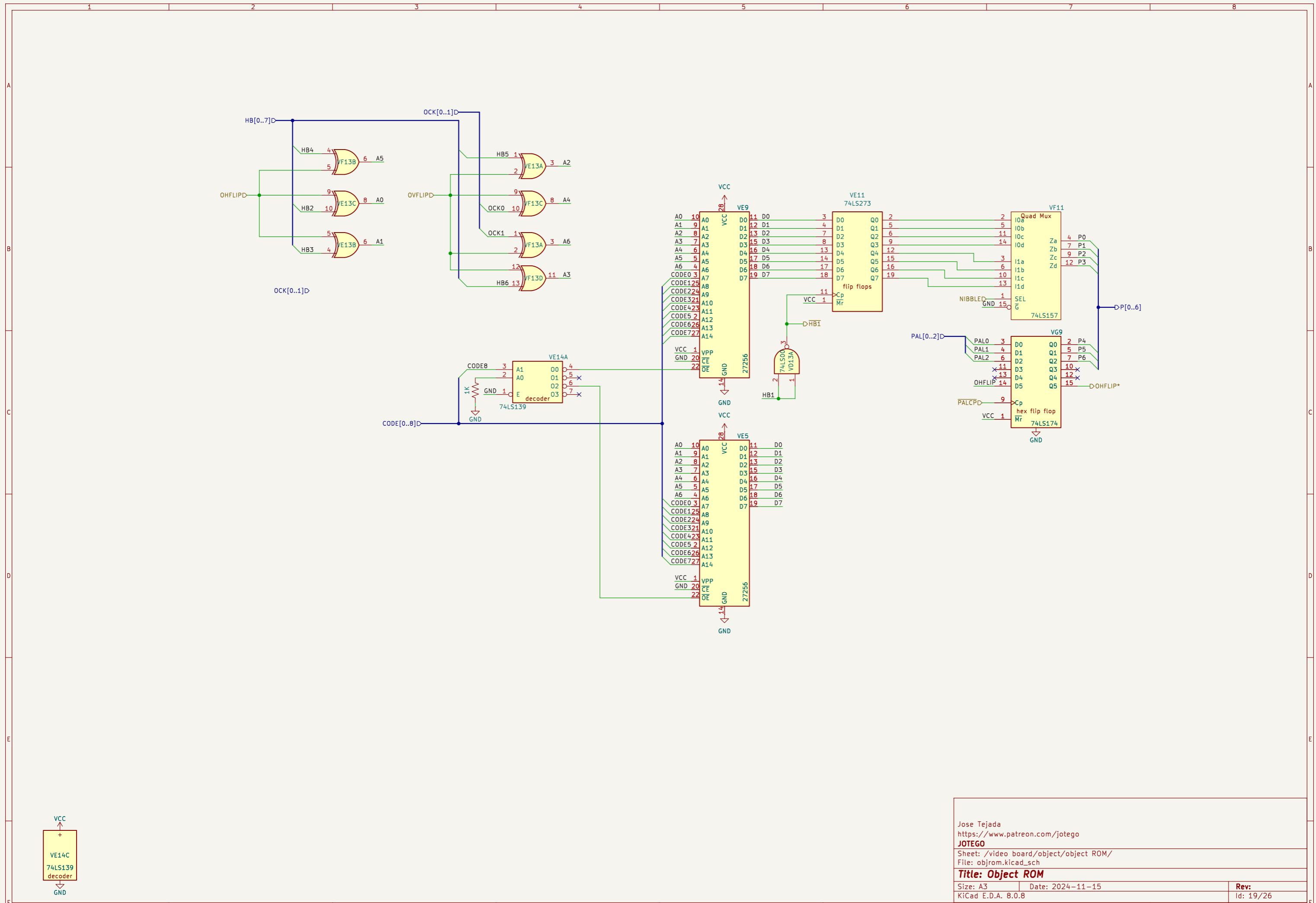
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Sheet: /video board/object/frame buffer A/
File: buffer.kicad_sch

Title: Line Buffer

Size: A3 | Date: 2024-11-15
KiCad E.D.A. 8.0.8

Rev:
Id: 17/26



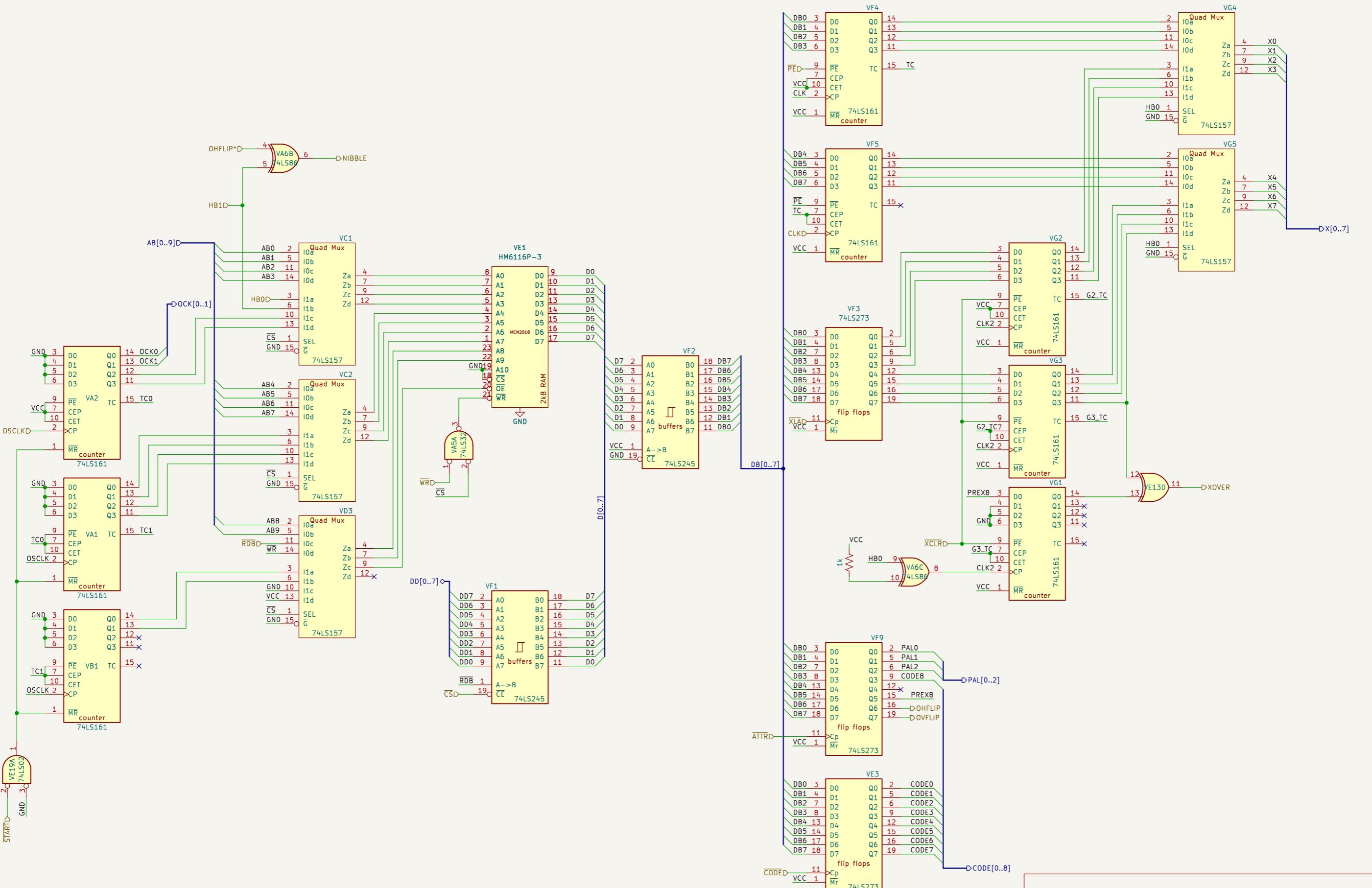
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Sheet: /video board/object/object ROM/
File: objrom.kicad_sch

Title: Object ROM

Size: A3 | Date: 2024-11-15
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Rev:
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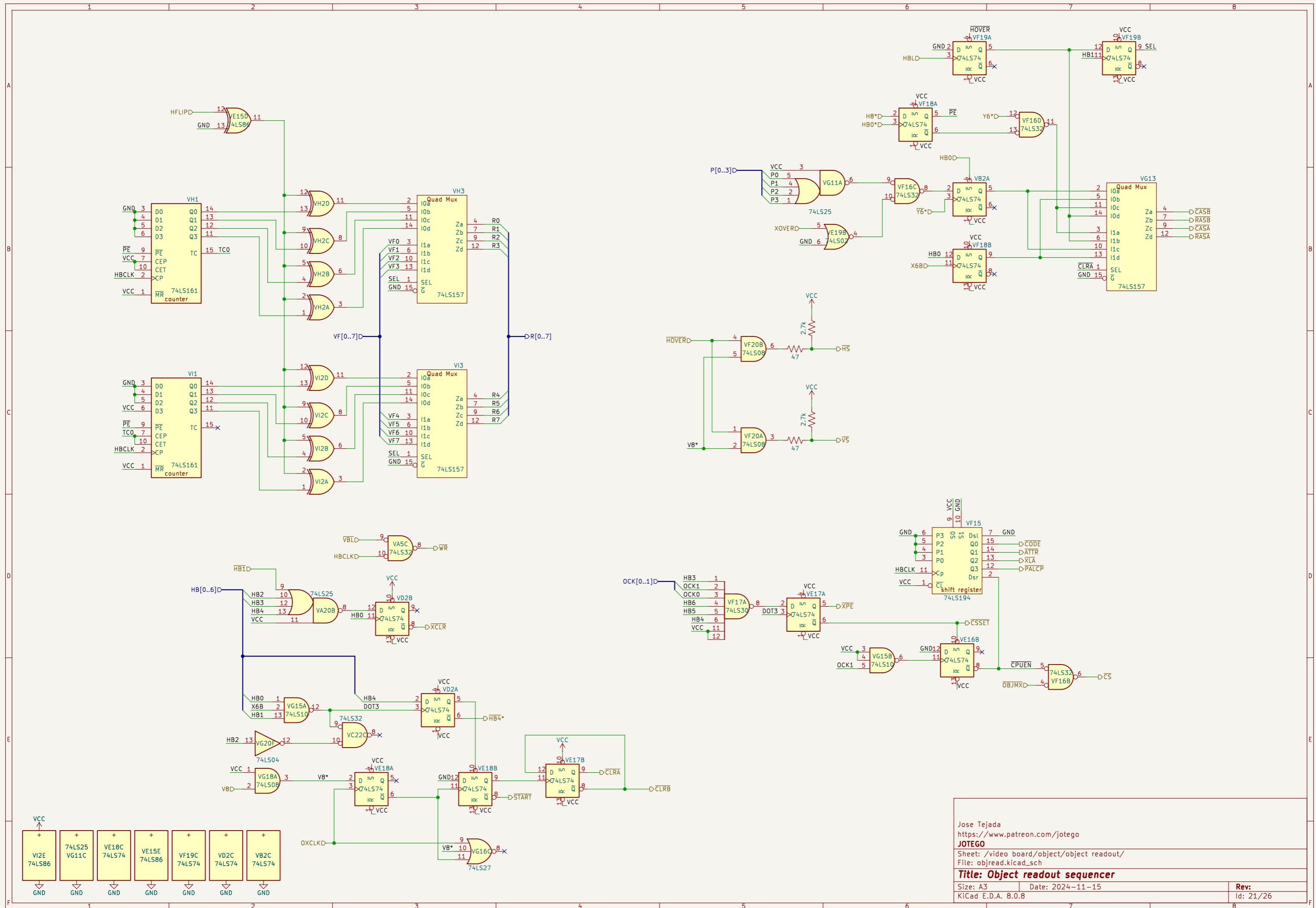
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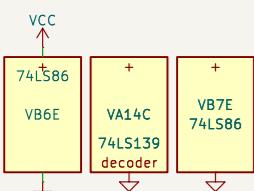
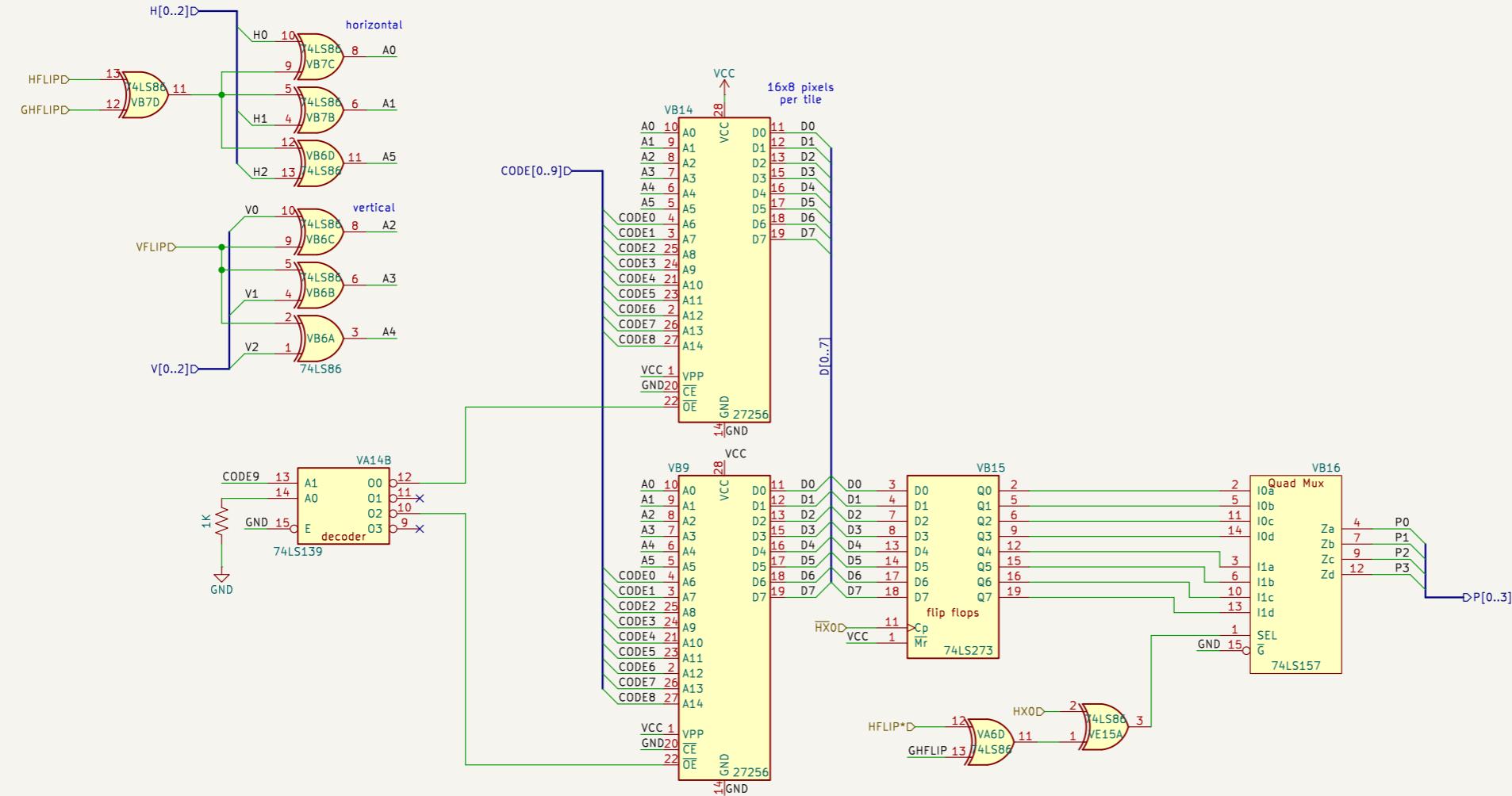
Sheet: /video board/object/object RAM/
File: objram.kicad_sch

Title: Object RAM

Size: A3 | Date: 2024-11-15
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Rev: 20/26





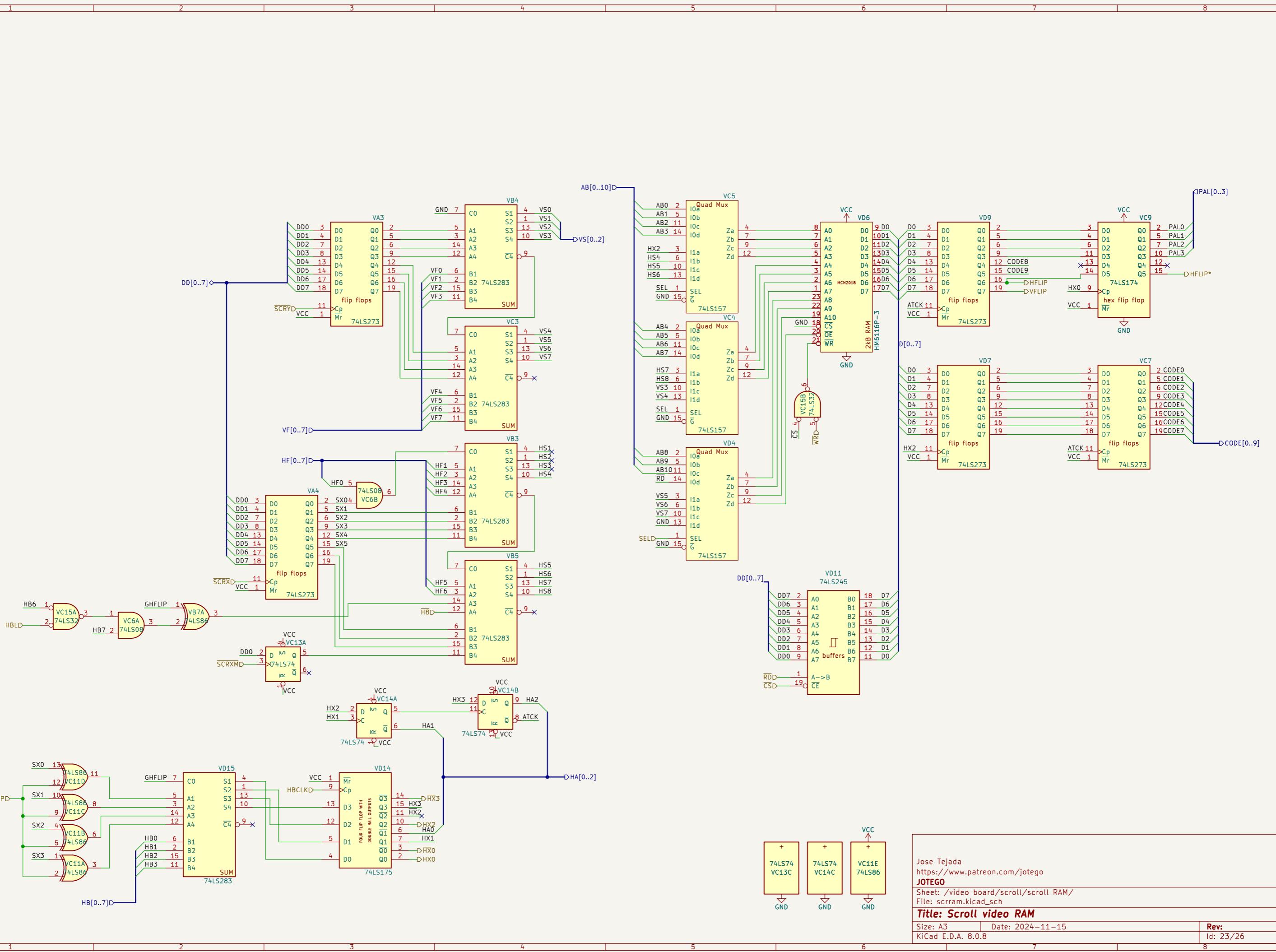
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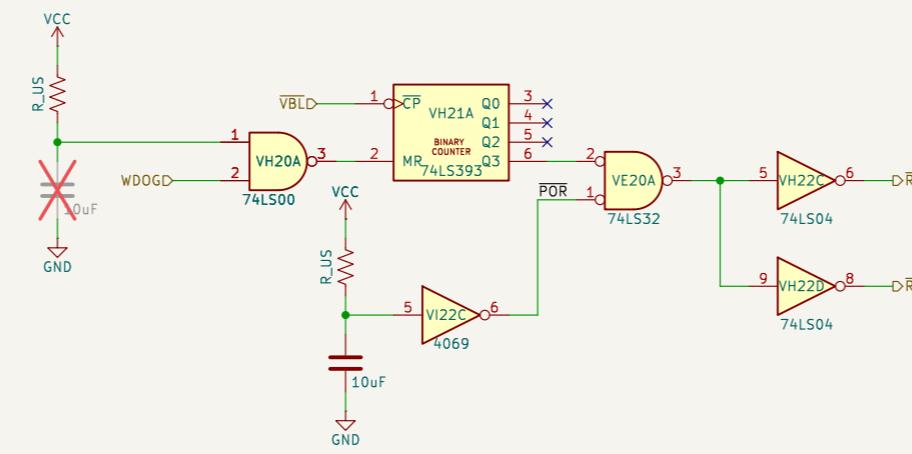
Sheet: /video board/scroll/scroll ROM/
File: scrom.kicad_sch

Title: scroll ROM

Size: A3 | Date: 2024-11-15
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Rev:
Id: 22/26





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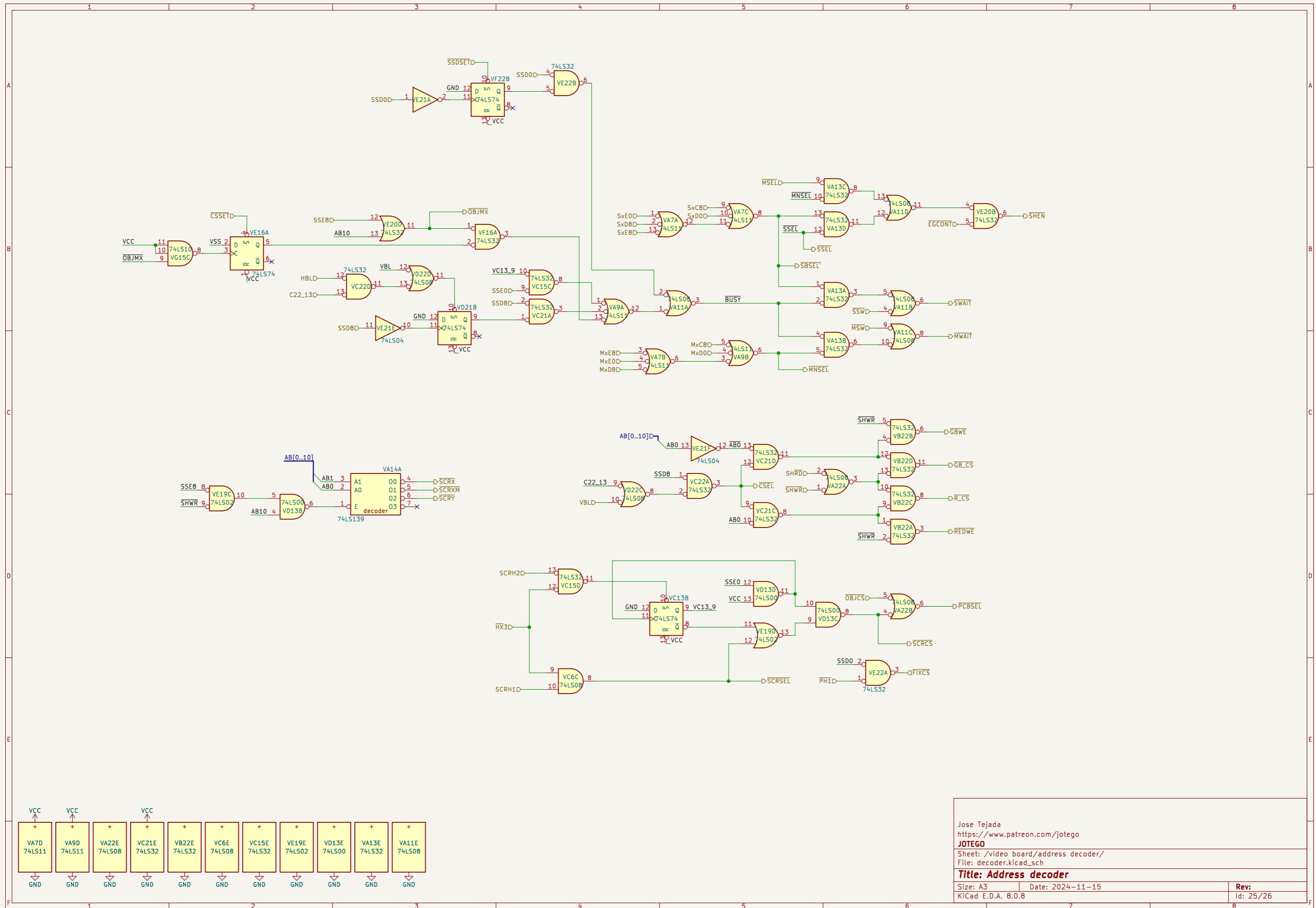
Sheet: /video_board/watchdog/
File: watchdog.kicad_sch

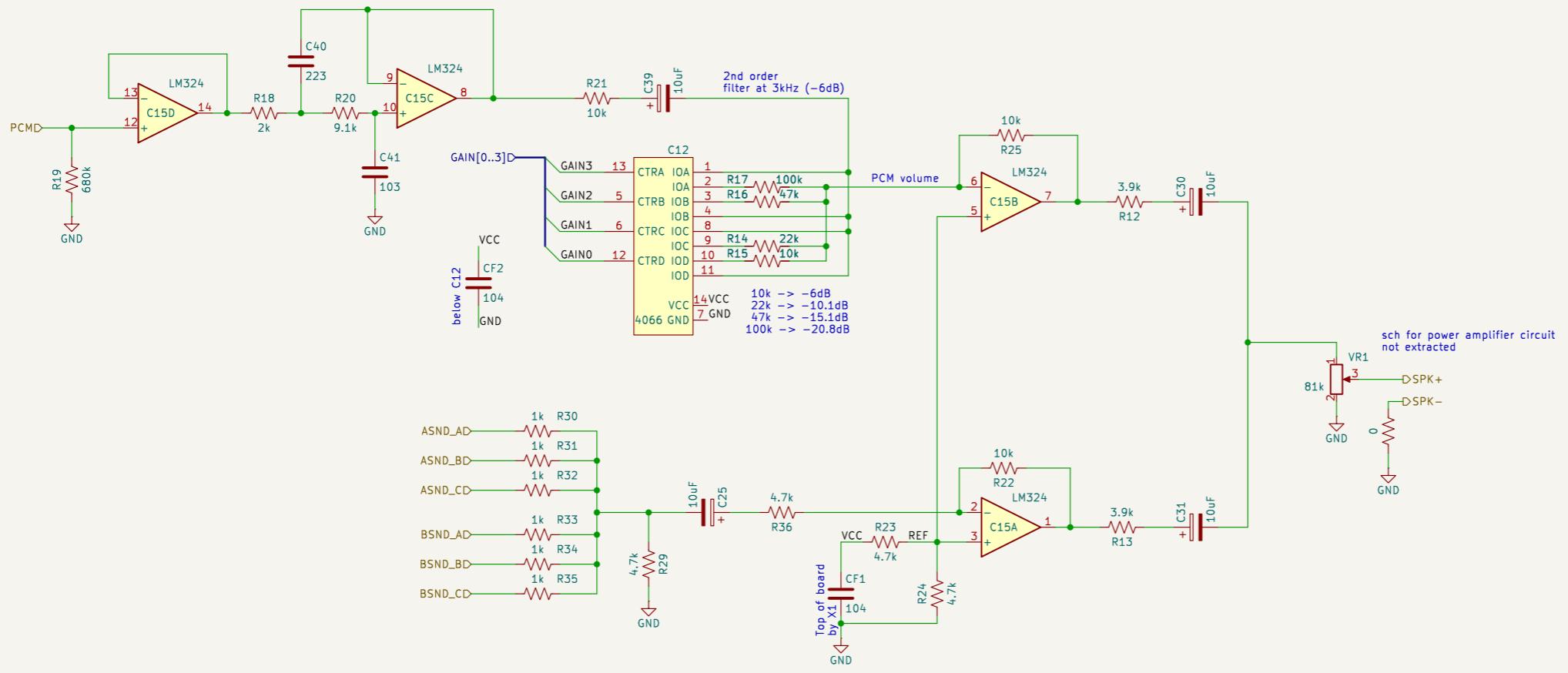
Title: Watchdog Circuit

Size: A3 Date: 2024-11-15
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Rev: 1d: 24/12





Passive component references
when shown, come from original PCB.
The bootleg did not have
references for passives.

Device components follow bootleg references.
The bootleg counts letters from left to right and numbers from bottom to top.
The original counts numbers left to right and letters bottom to top.



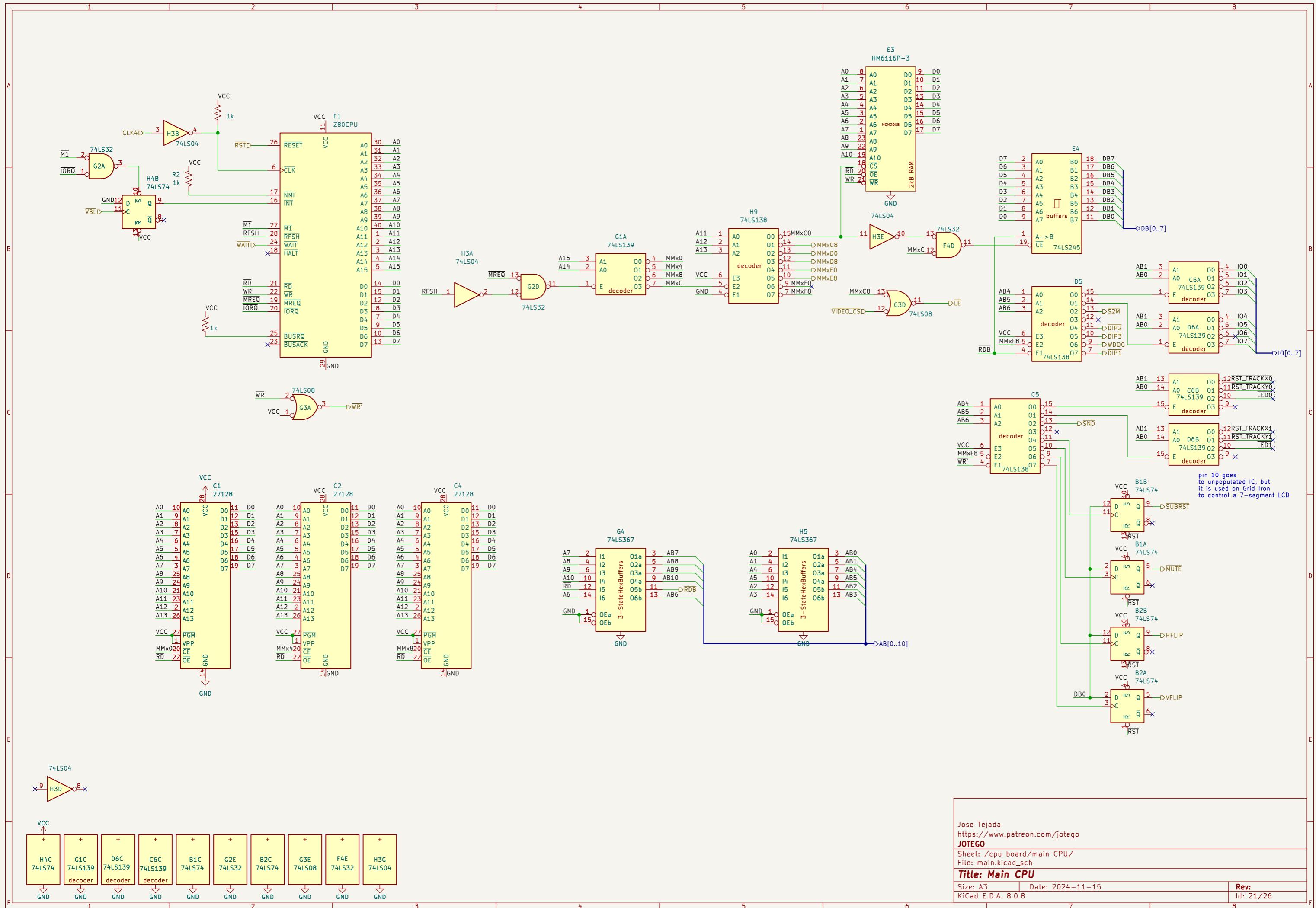
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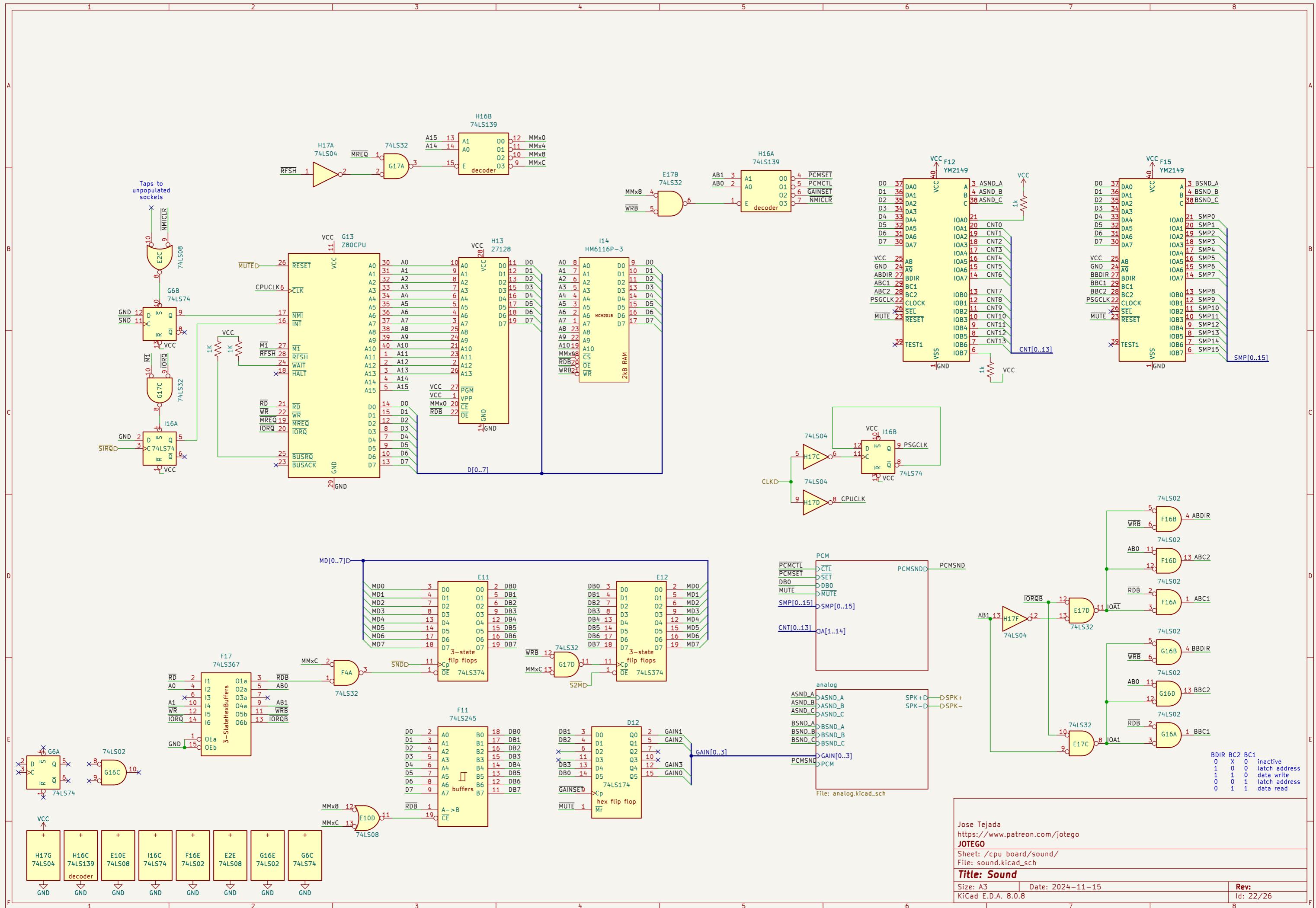
Sheet: /cpu board/sound/analog/
File: analog.kicad_sch

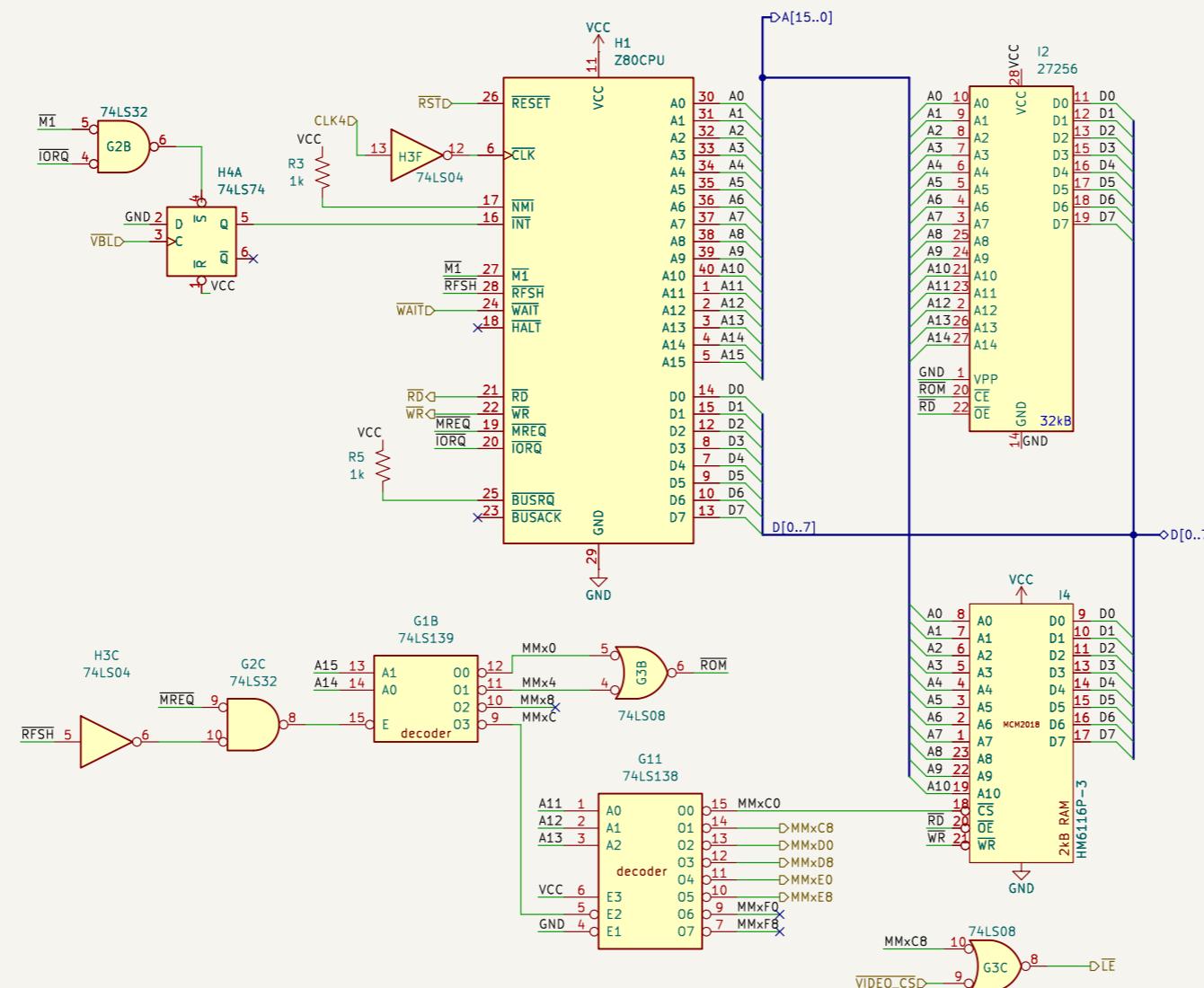
Title: Sound amplifiers

Size: A3 | Date: 2024-11-15
KiCad E.D.A. 8.0.8

Rev: | Id: 26/26







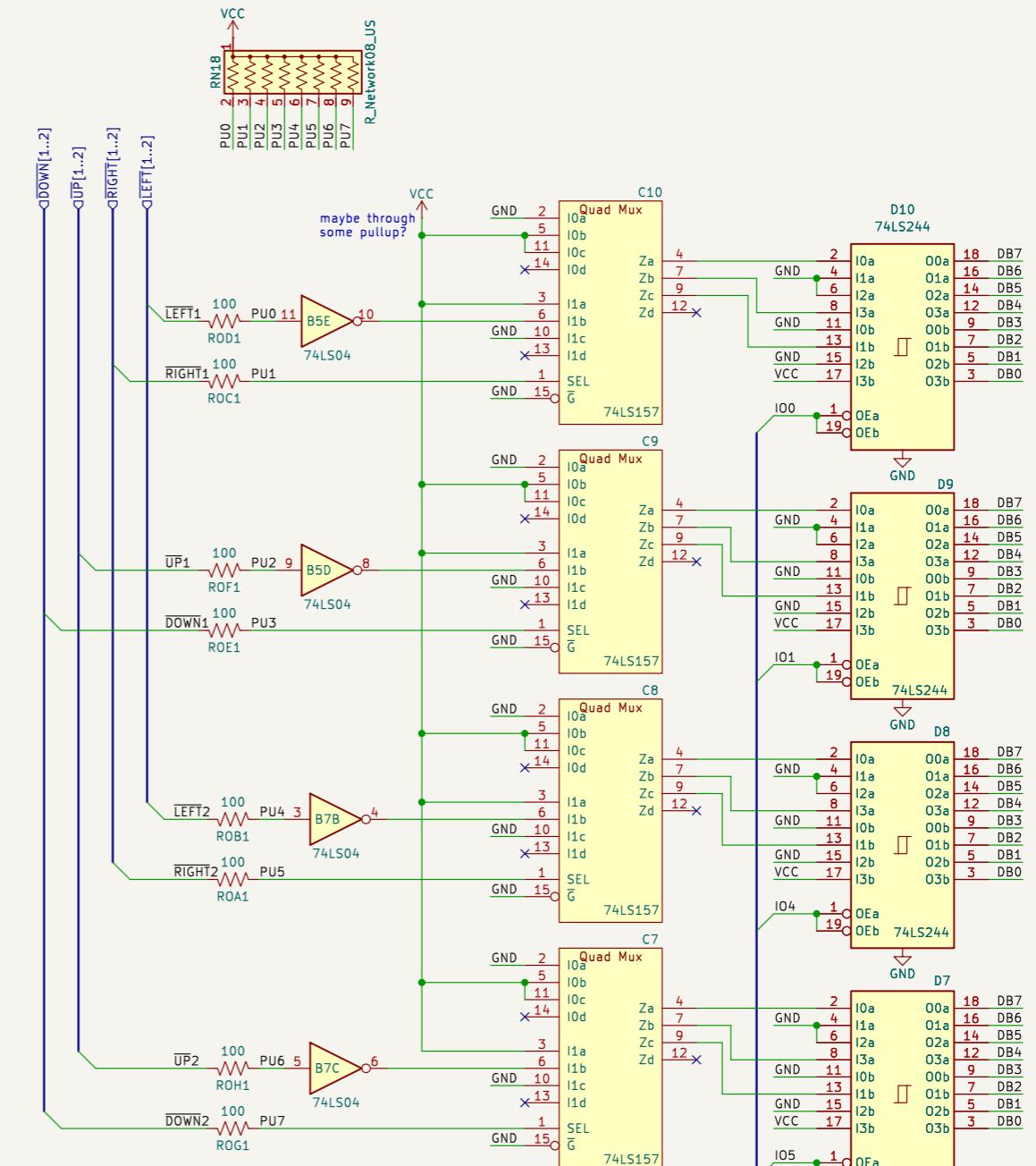
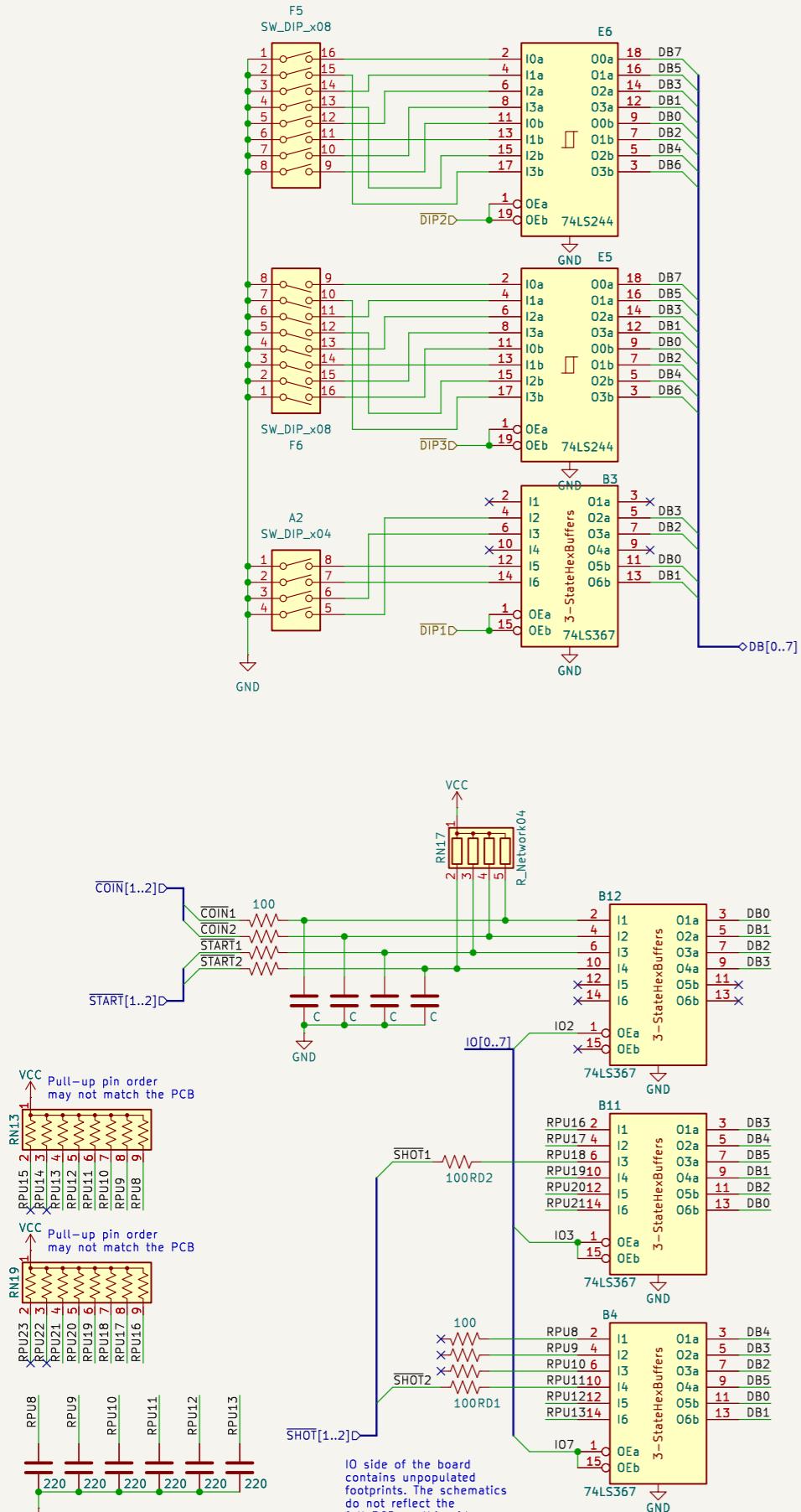
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Sheet: /cpu board/sub CPU/
File: subcpu.kicad_sch

Title: Subordinate CPU

Size: A3 | Date: 2024-11-15
KiCad E.D.A. 8.0.8

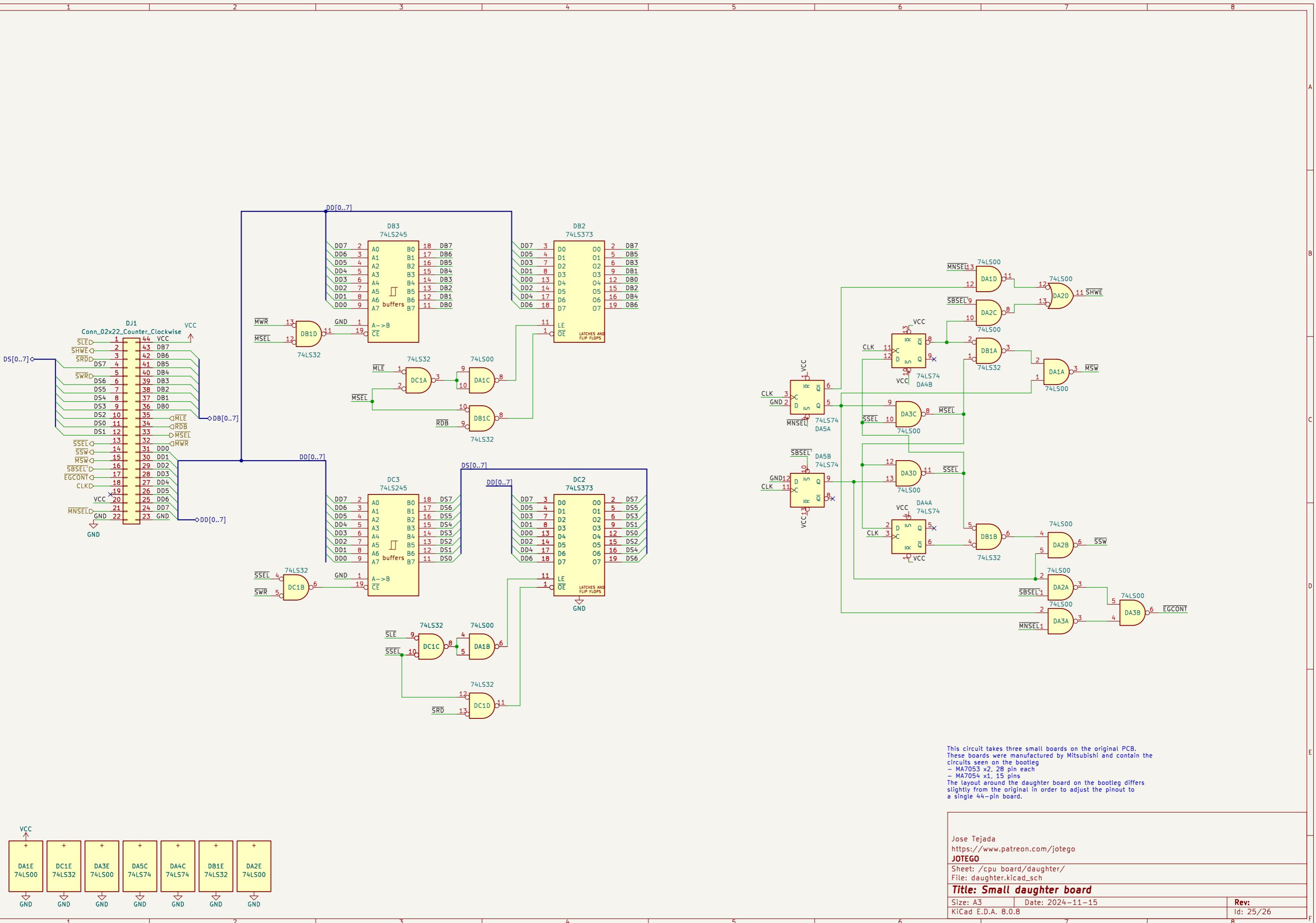
Rev:
Id: 23/26



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Sheet: /cpu_board/IO/
File: io.kicad_sch
Title: Cabinet Input/Output
Size: A3 | Date: 2024-11-15
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Rev: Id: 24/26



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Sheet: /cpu_board/daughter/
File: daughter.kicad_sch

Title: Small daughter board

Size: A3 | Date: 2024-11-15
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Rev: 25/26

A

B

C

D

E

F

A

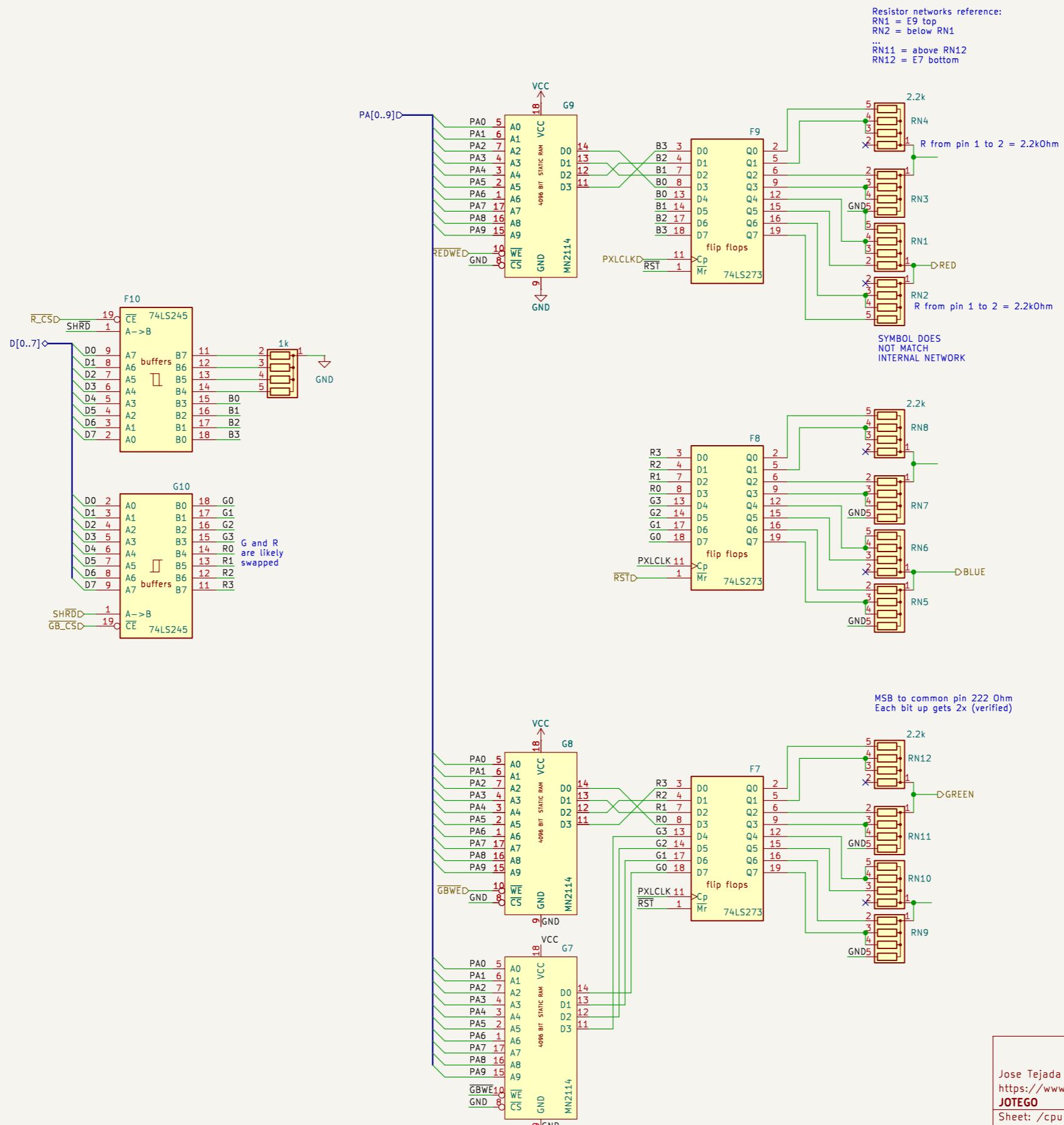
B

C

D

E

F



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Sheet: /cpu board/palette/
File: palette.kicad_sch

Title: Color Palette

Size: A3 | Date: 2024-11-15
KiCad E.D.A. 8.0.8

Rev: #/26