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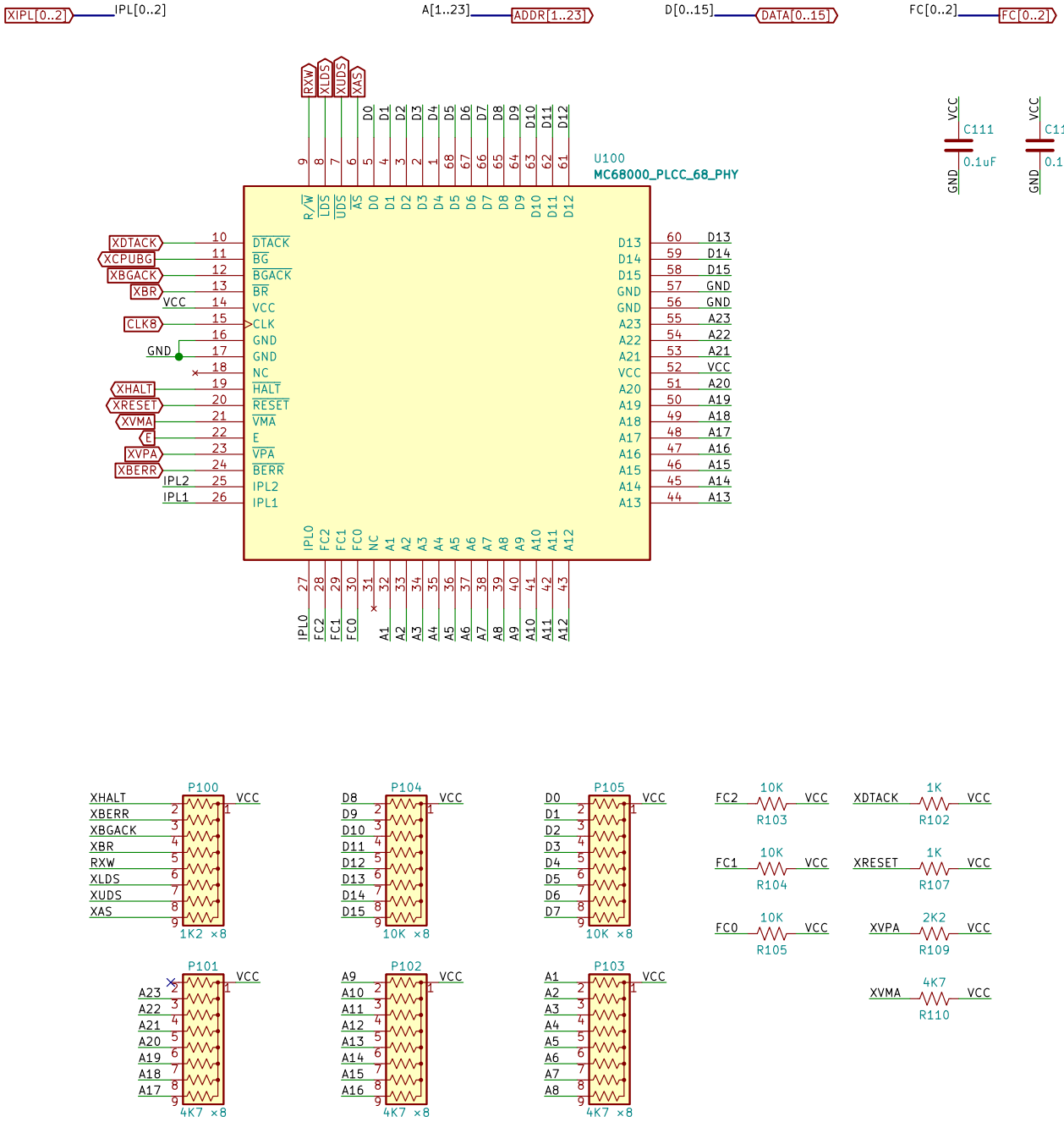


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Sheet: /
File: motherboard.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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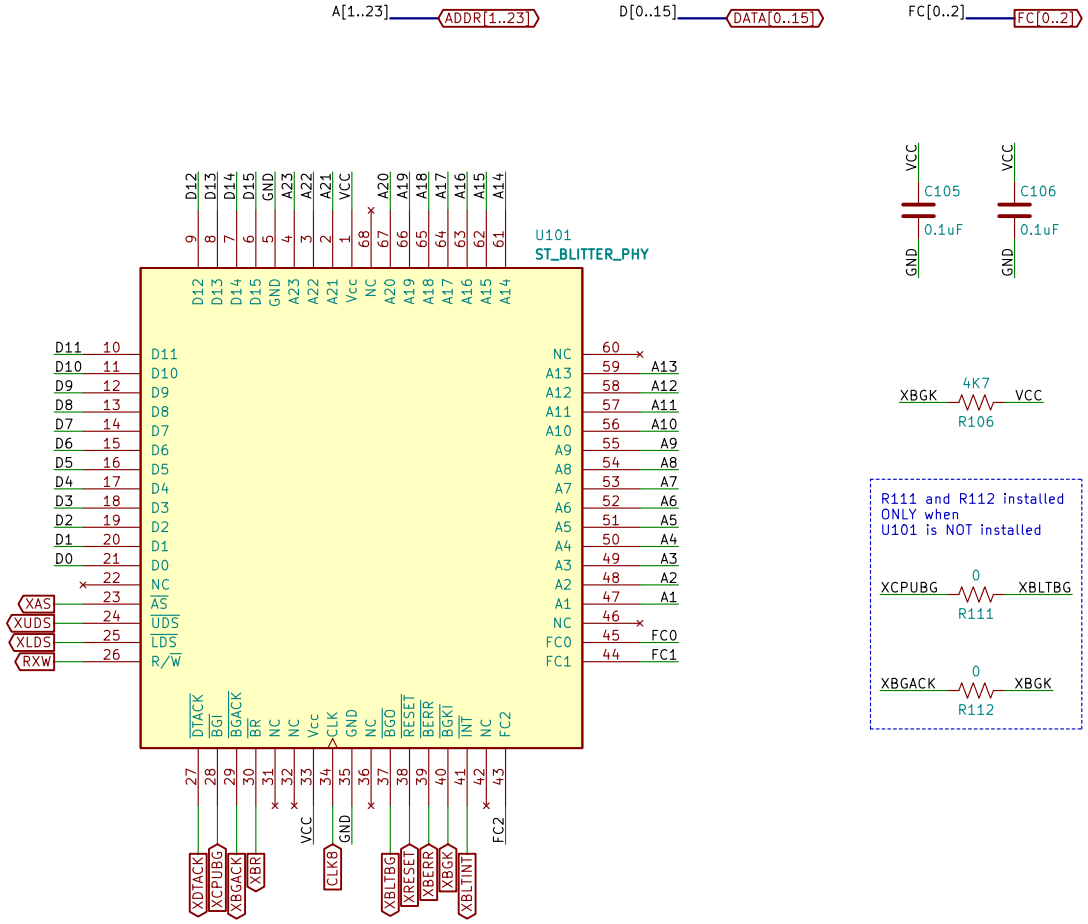
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Reference : C300780-001

Sheet: /U100 - MC68000/
File: subsheet_100.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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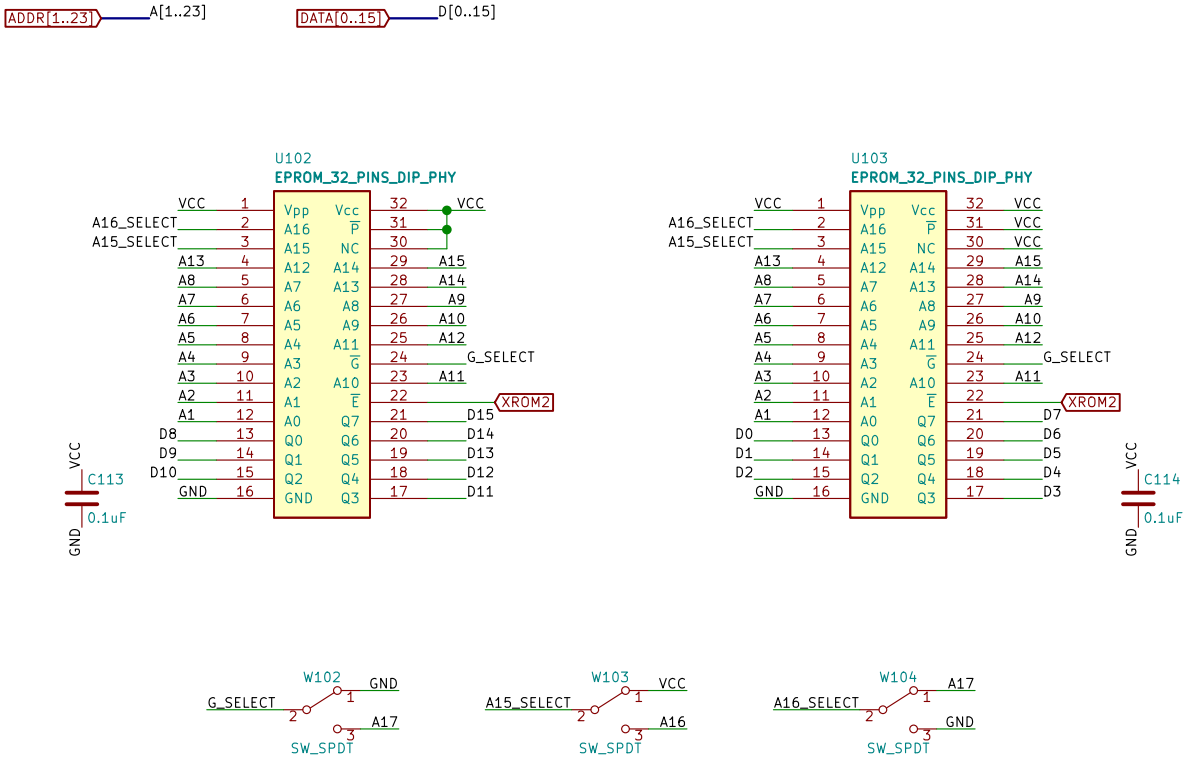
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Reference : C300780-001

Sheet: /U101 - Blitter/
File: subsheet_101.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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ROM jumper settings

Part Type	W102	W103	W104
27256	Don't care	1 and 2	N/C
27512	2 and 3	2 and 3	N/C
571001/27C1000/531000	2 and 3	2 and 3	2 and 3
27010/571000/27C1001	1 and 2	2 and 3	1 and 2

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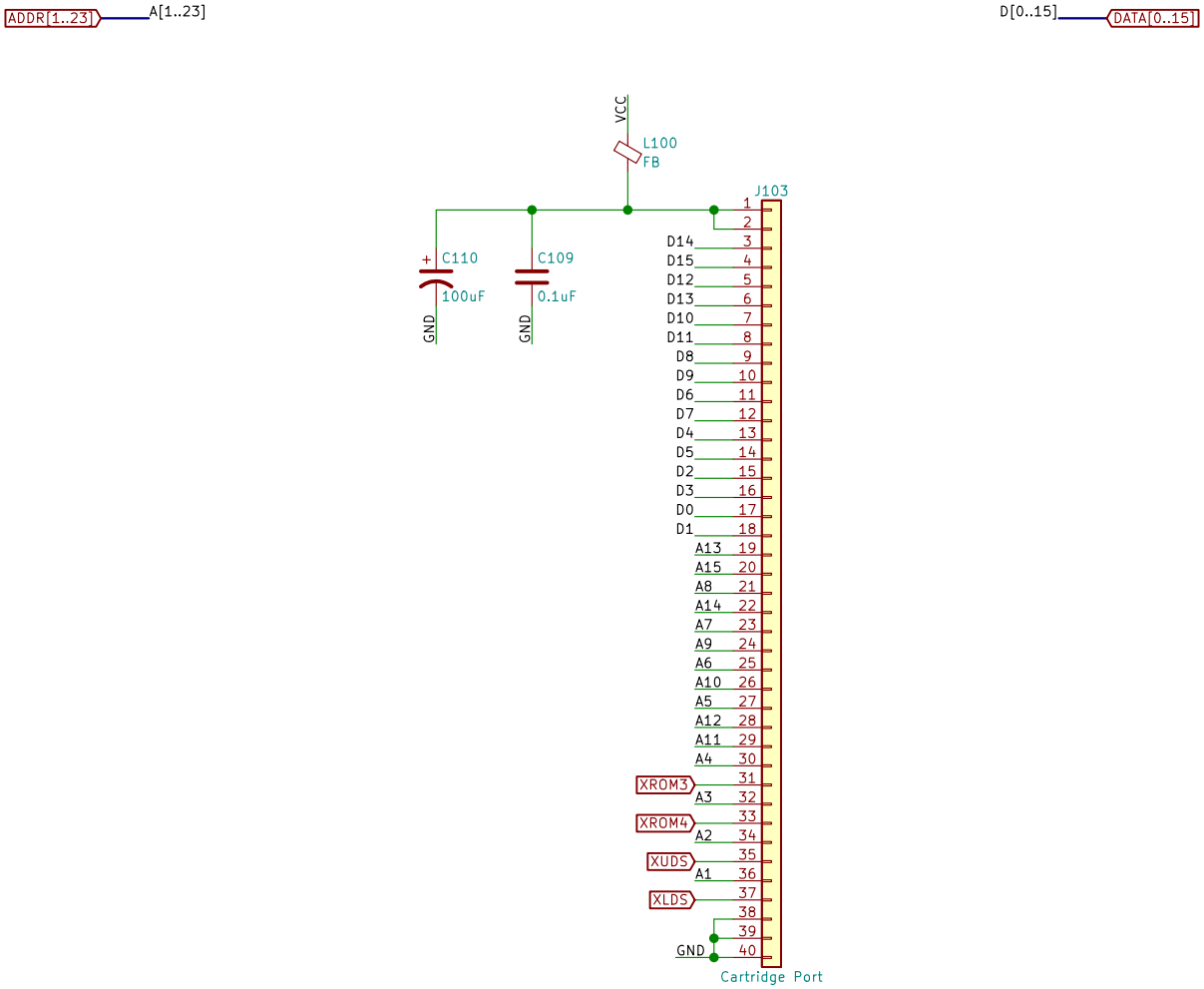
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Reference : C300780-001

Sheet: /U102 U103 - EPROMs/
File: subsheet_102.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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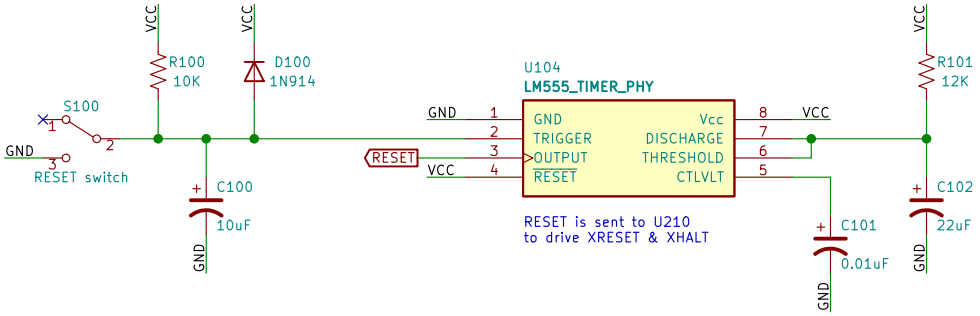
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Reference : C300780-001

Sheet: /J103 - Cartridge port/
File: subsheet_103.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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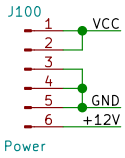
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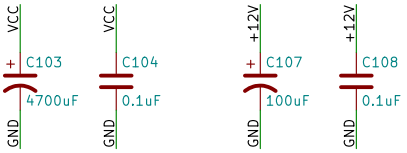
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File: subsheet_104.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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Collect power from PSU







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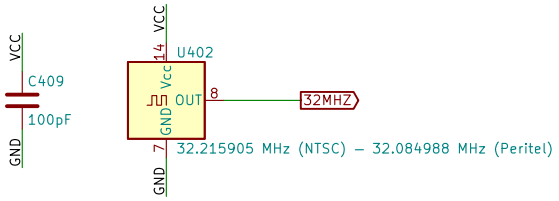
Reference : C300780-001

Sheet: /J100 - Power connector/
File: subsheet_105.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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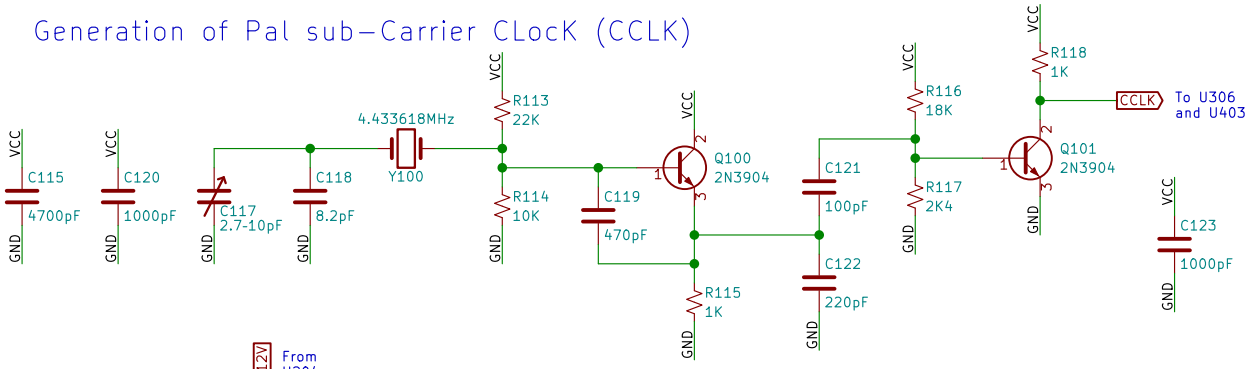
Installed ONLY in non-PAL systems



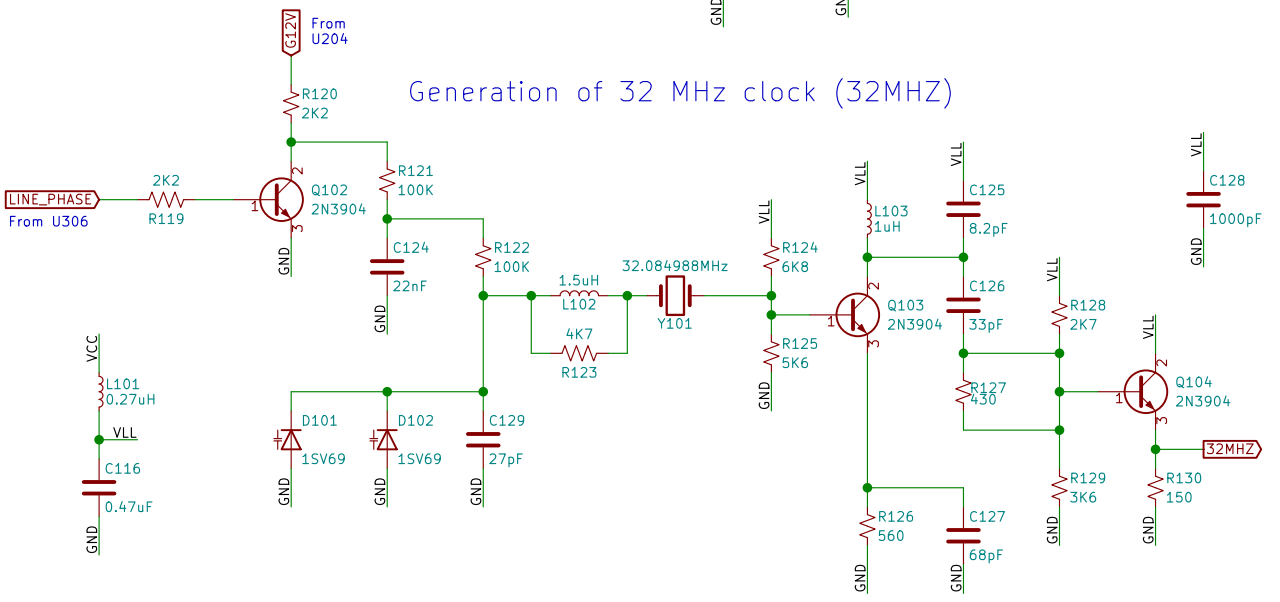
Installed ONLY in PAL systems

To have an idea of what this circuitry is for, see https://en.wikipedia.org/wiki/PAL

Generation of Pal sub-Carrier CLocK (CCLK)



Generation of 32 MHz clock (32MHZ)



Diode 1SV69 : Electronic tuning for UHF/VHF TV Tuner
https://pdf1.alldatasheet.com/datasheet-pdf/view/107651/ETC/1SV69.html

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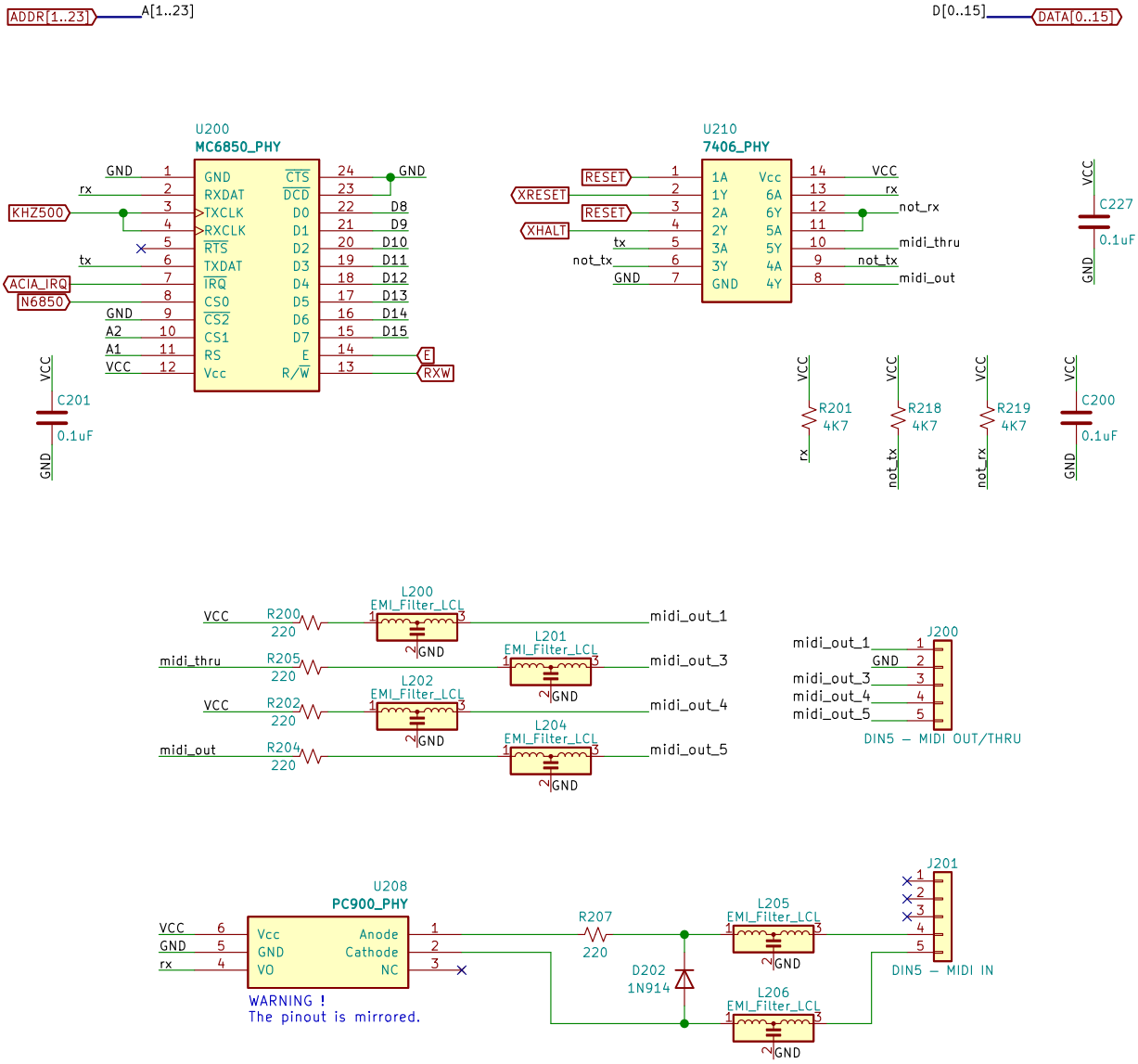
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Reference : C300780-001

Sheet: /32MHz + PAL subcarrier/
File: subsheet_106.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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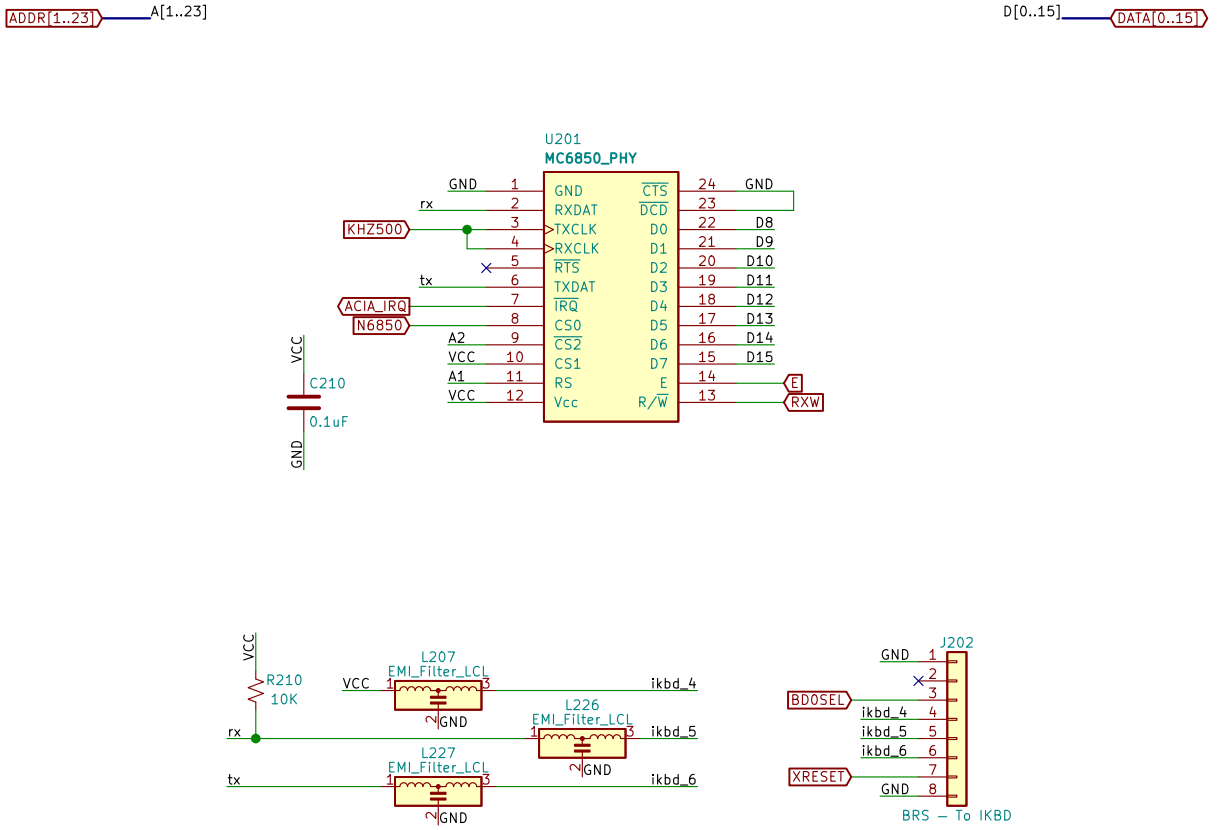
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Reference : C300780-001

Sheet: /U200 – Acia 1 to MIDI IO/
File: subsheet_200.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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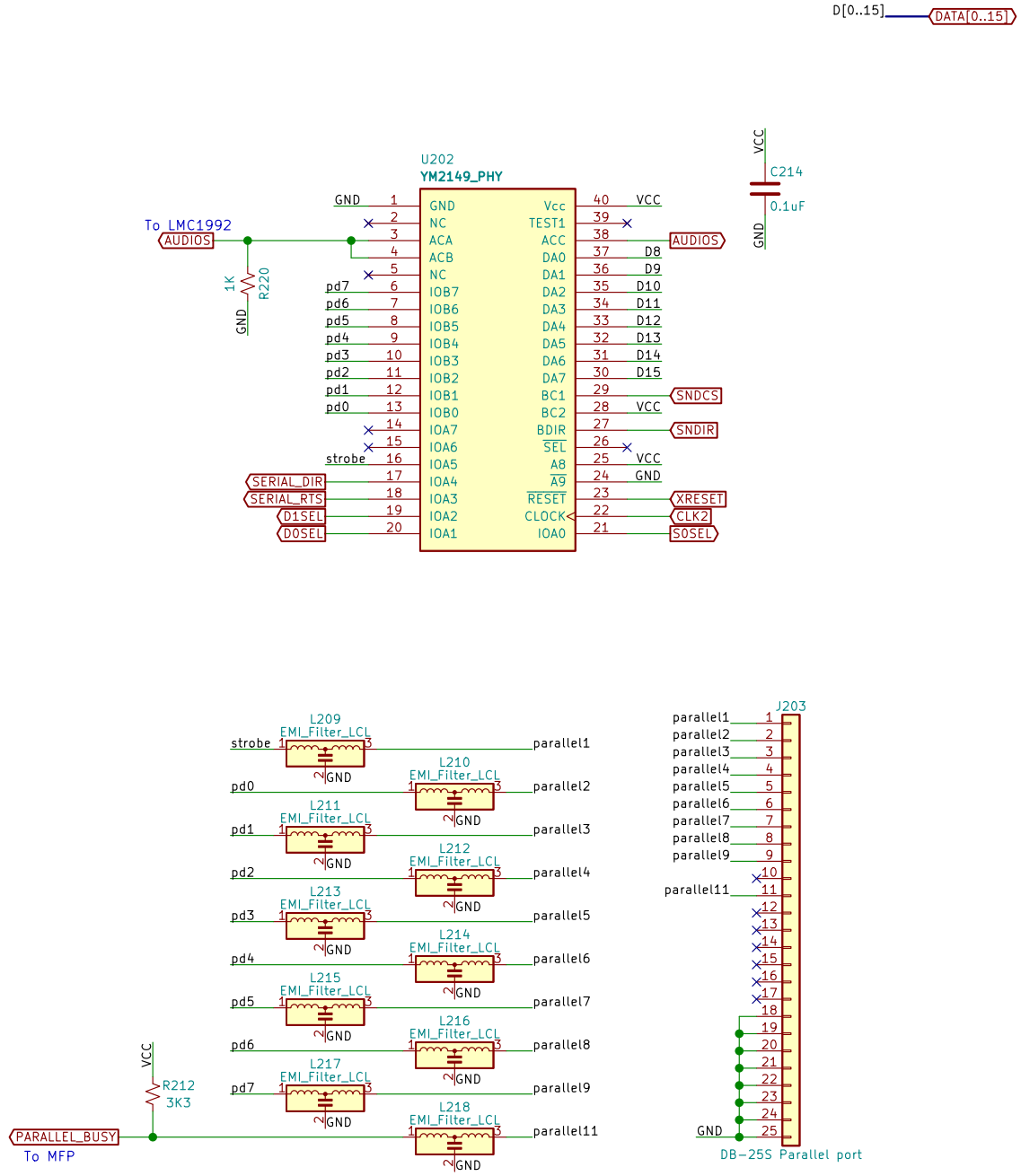
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Reference : C300780-001

Sheet: /U201 — Acia 2 to IKBD IO/
File: subsheet_201.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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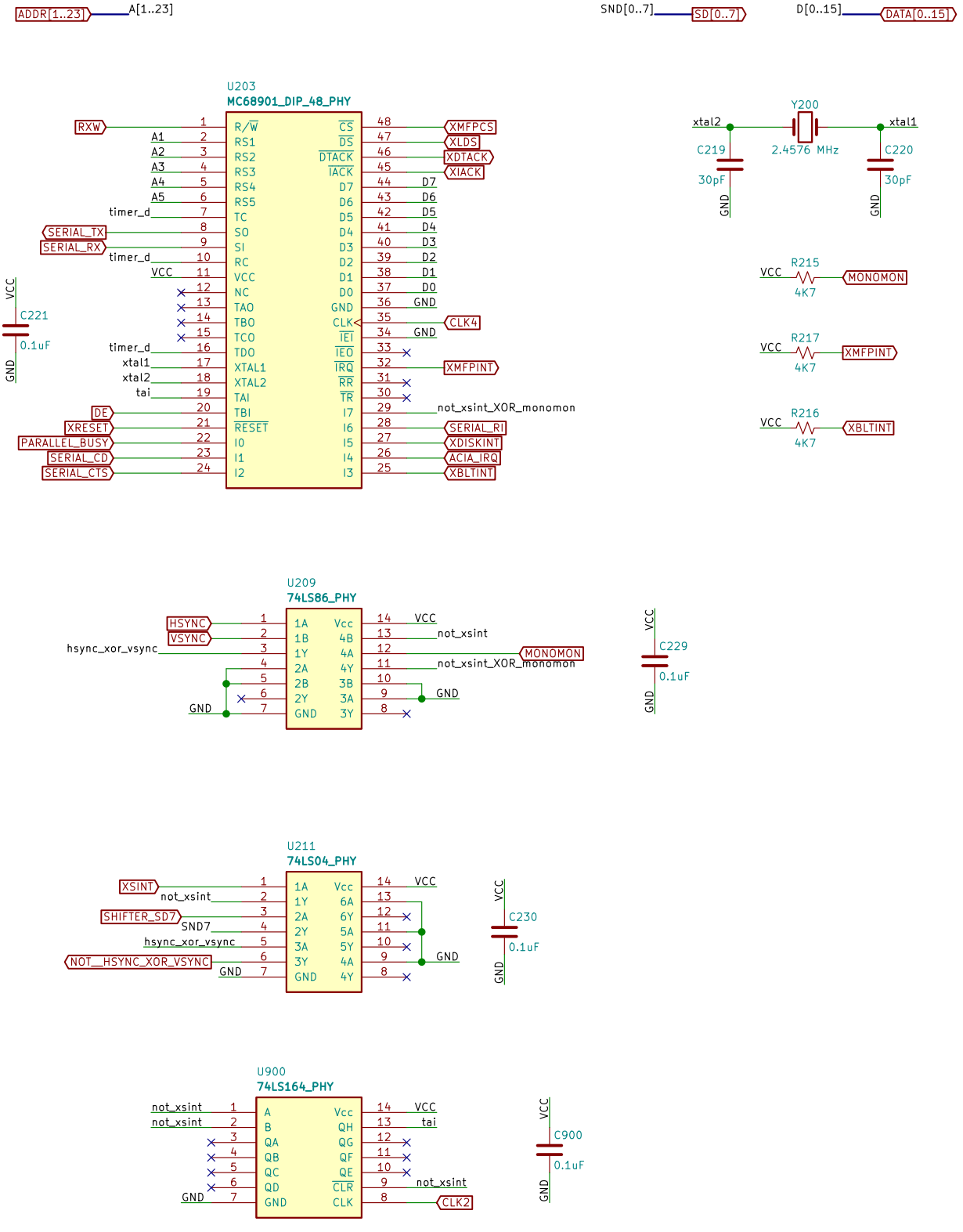
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Reference : C300780-001

Sheet: /U202 - PSG and Parallel IO/
File: subsheet_202.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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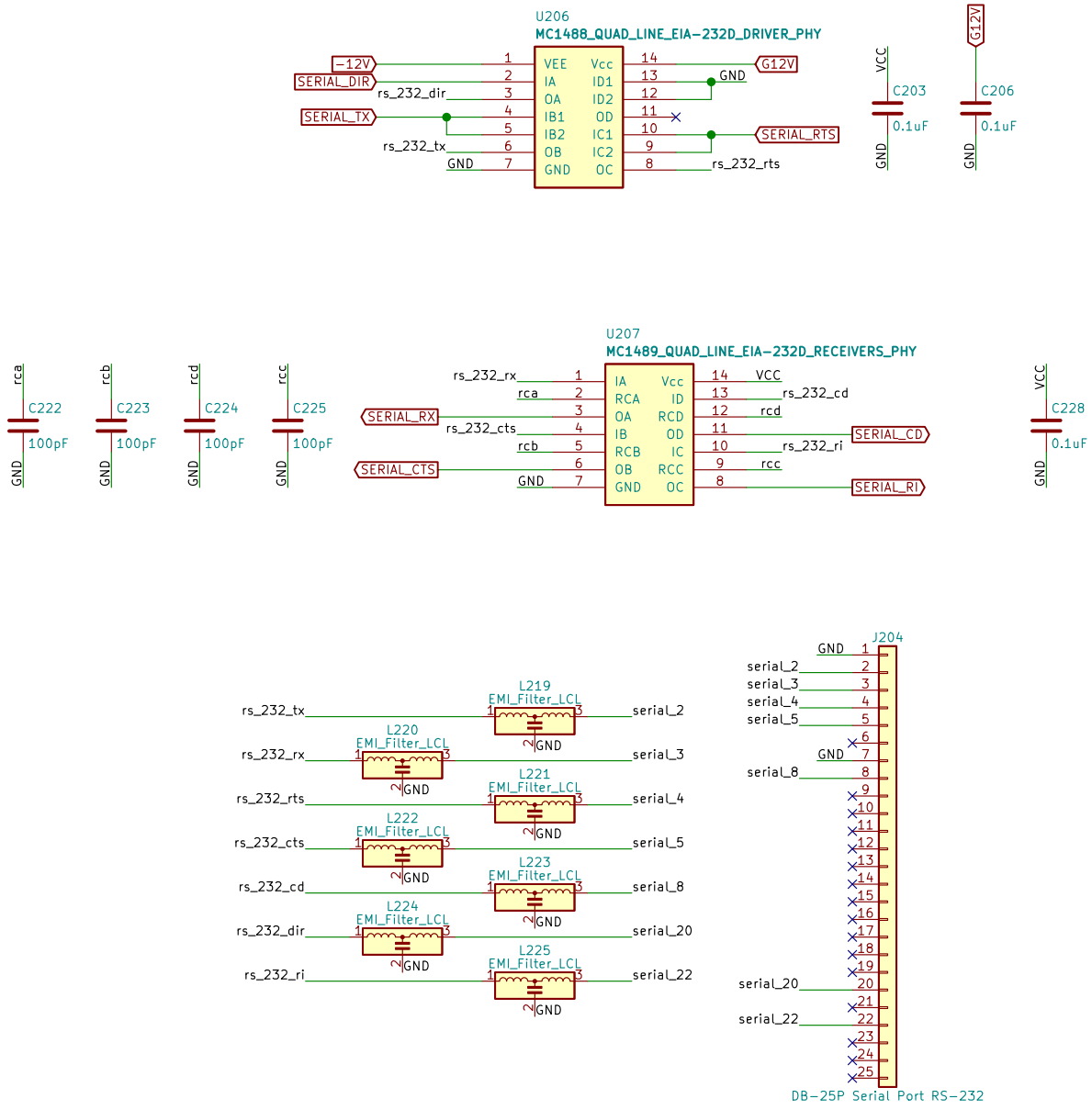
The original source project of this document may be found at https://github.com/sporniket/retro-computer-clean-schematics

Reference : C300780-001

Sheet: /U203 - MFP 68901/
File: subsheet_203.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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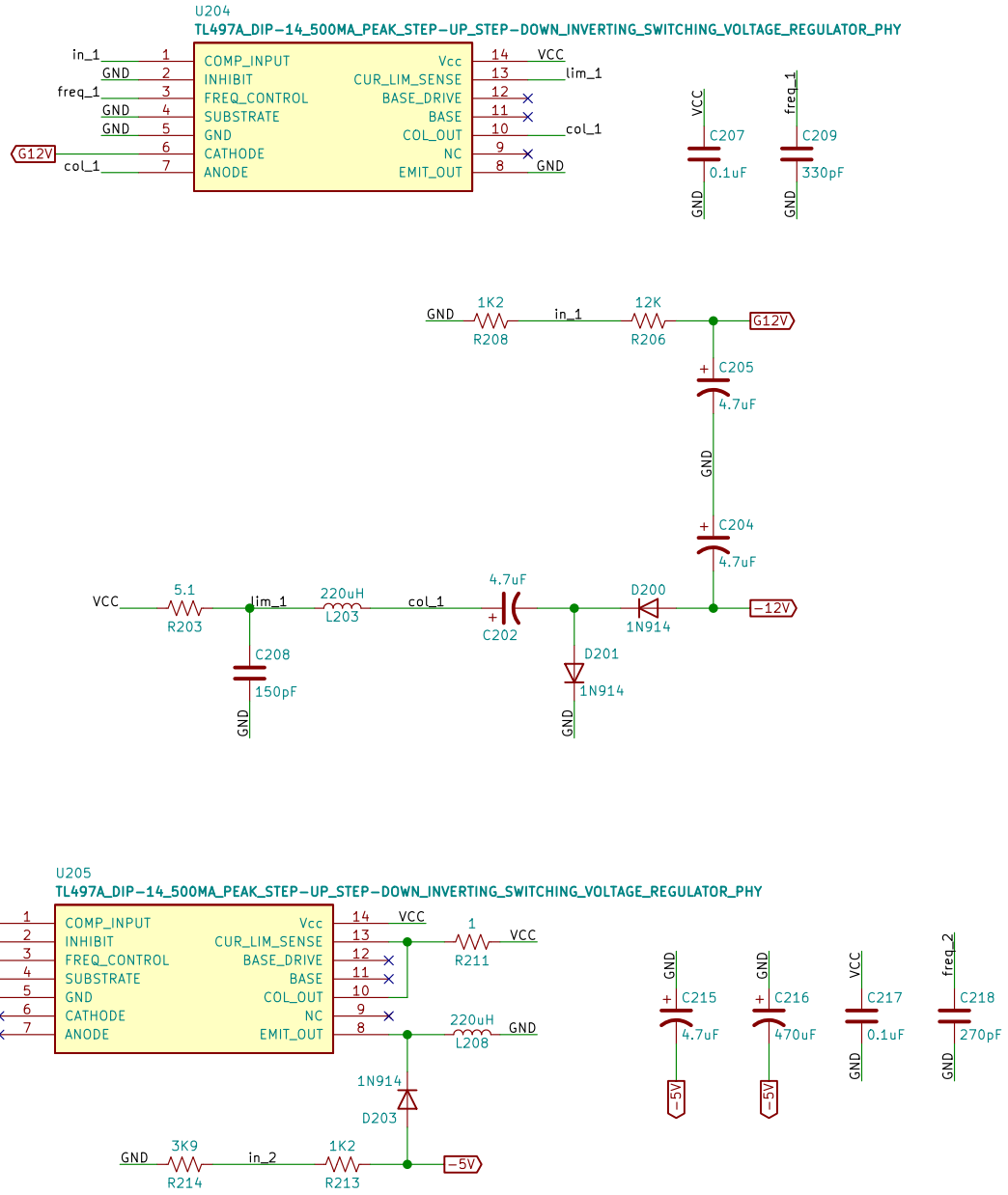
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Reference : C300780-001

Sheet: /J204 - RS-232 IO/
File: subsheet_204.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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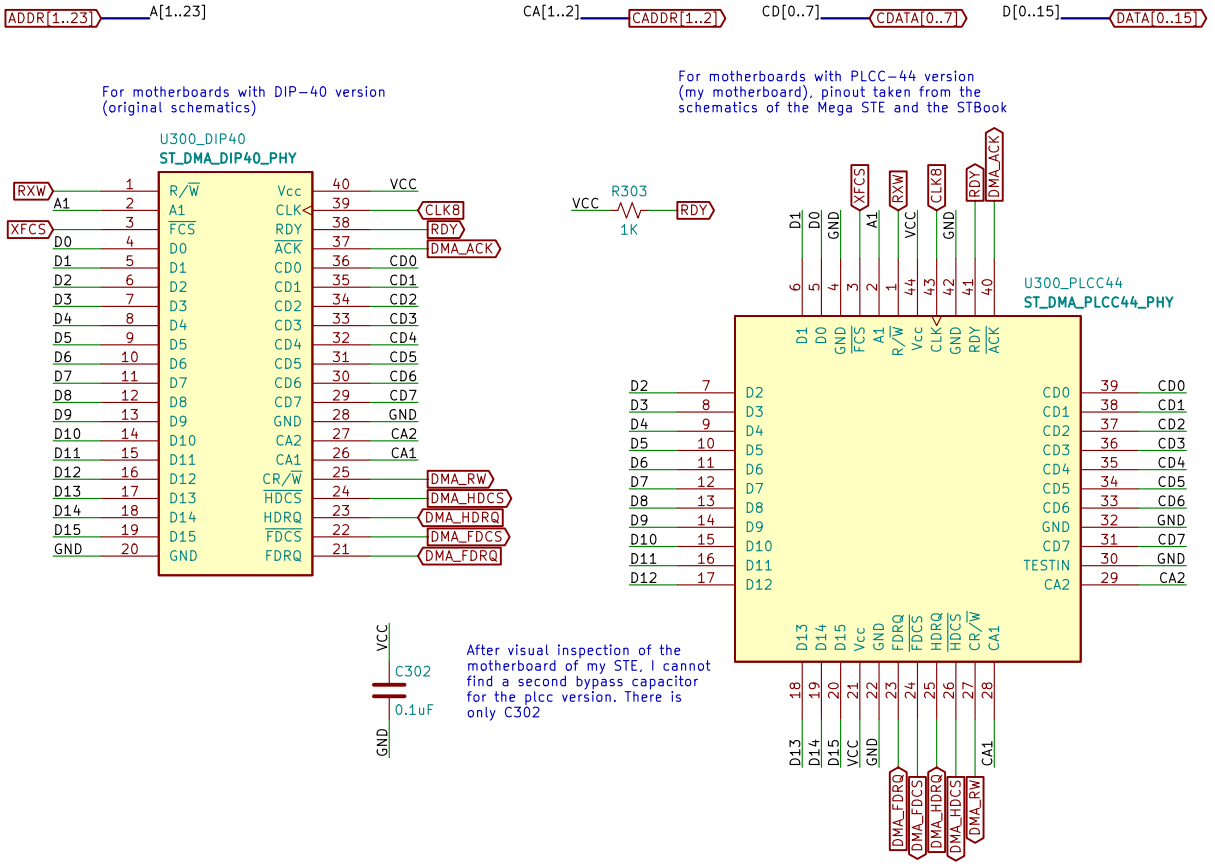
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Reference : C300780-001

Sheet: /U204 U205 - G12V -12V -5V/
File: subsheet_205.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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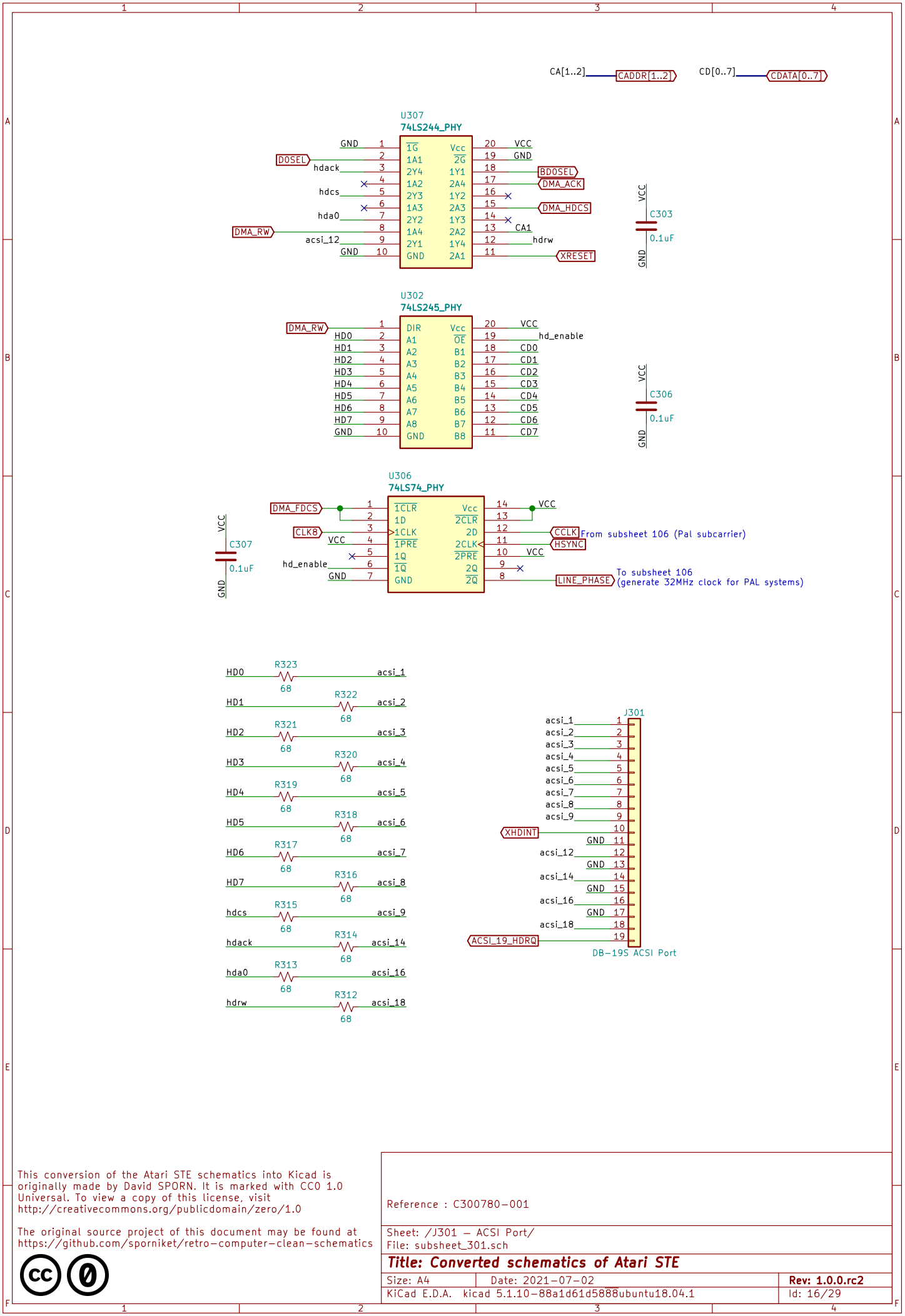
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Reference : C300780-001

Sheet: /U300 - DMA/
File: subsheet_300.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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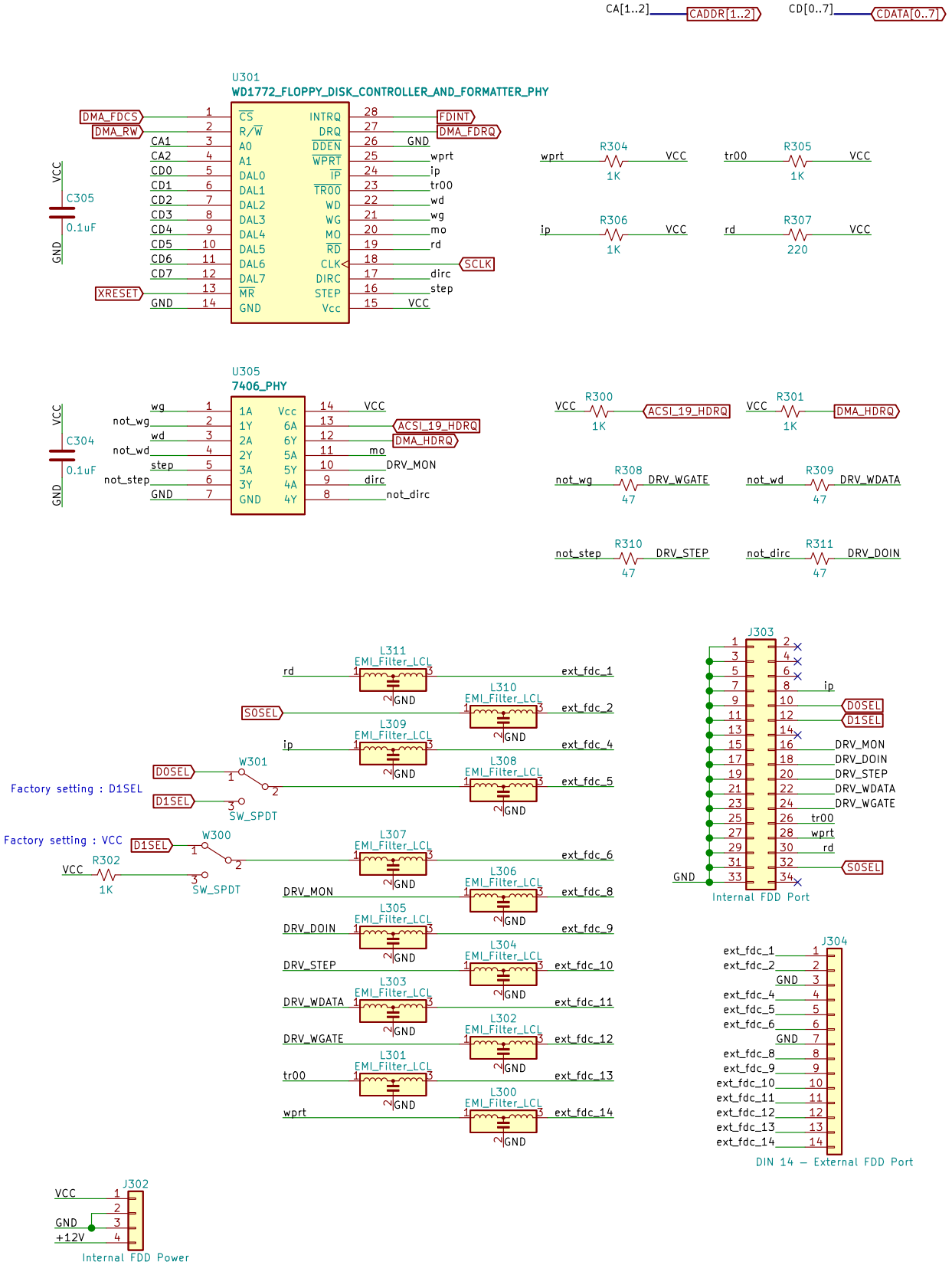
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Reference : C300780-001

Sheet: /J301 - ACSI Port/
File: subsheet_301.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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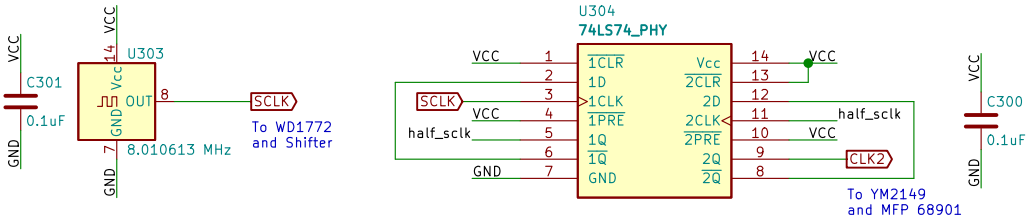
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Reference : C300780-001

Sheet: /U301 – WD1772 and port/
File: subsheet_302.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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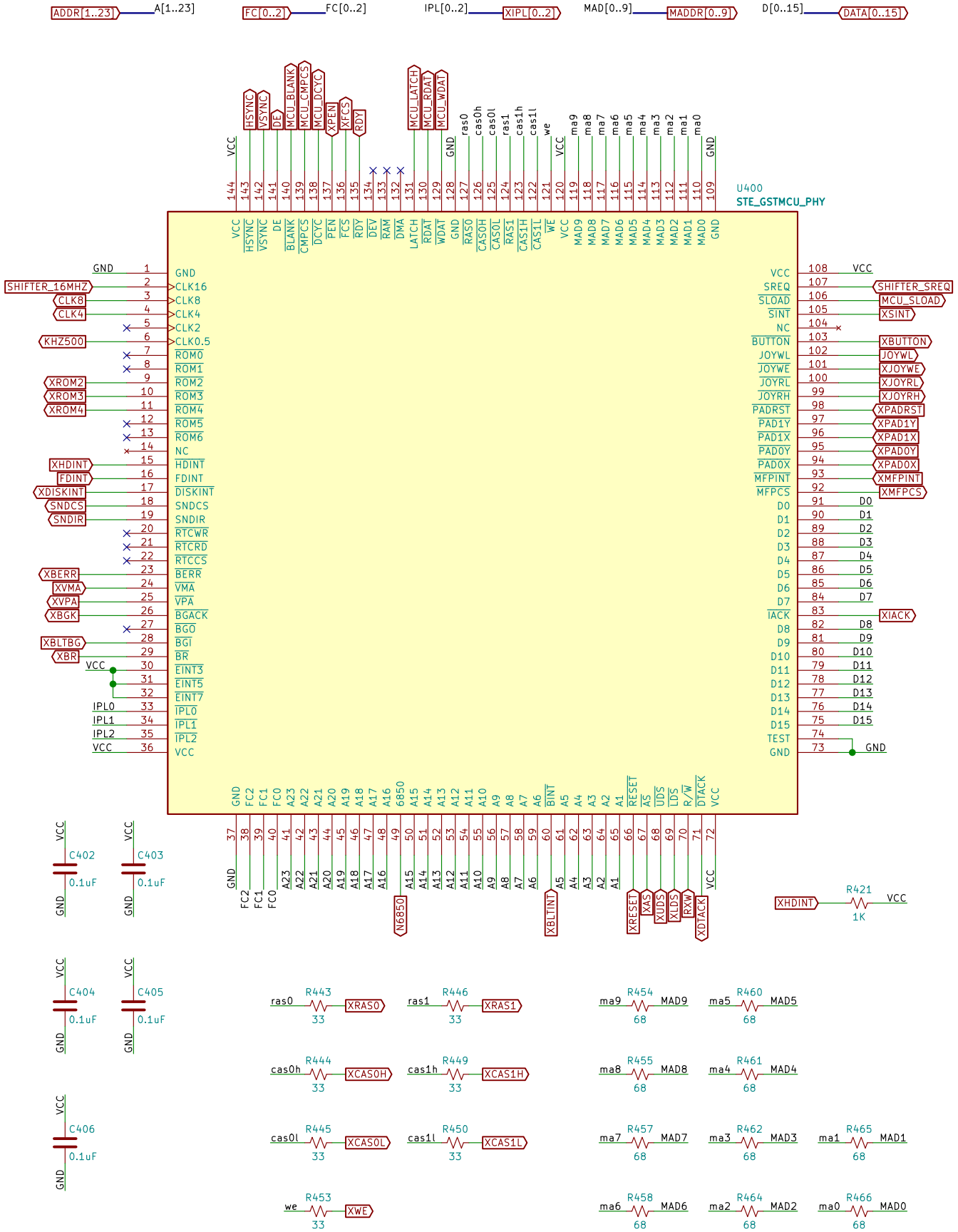
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Reference : C300780-001

Sheet: /U303 - SCLK & CLK2 clocks/
File: subsheet_303.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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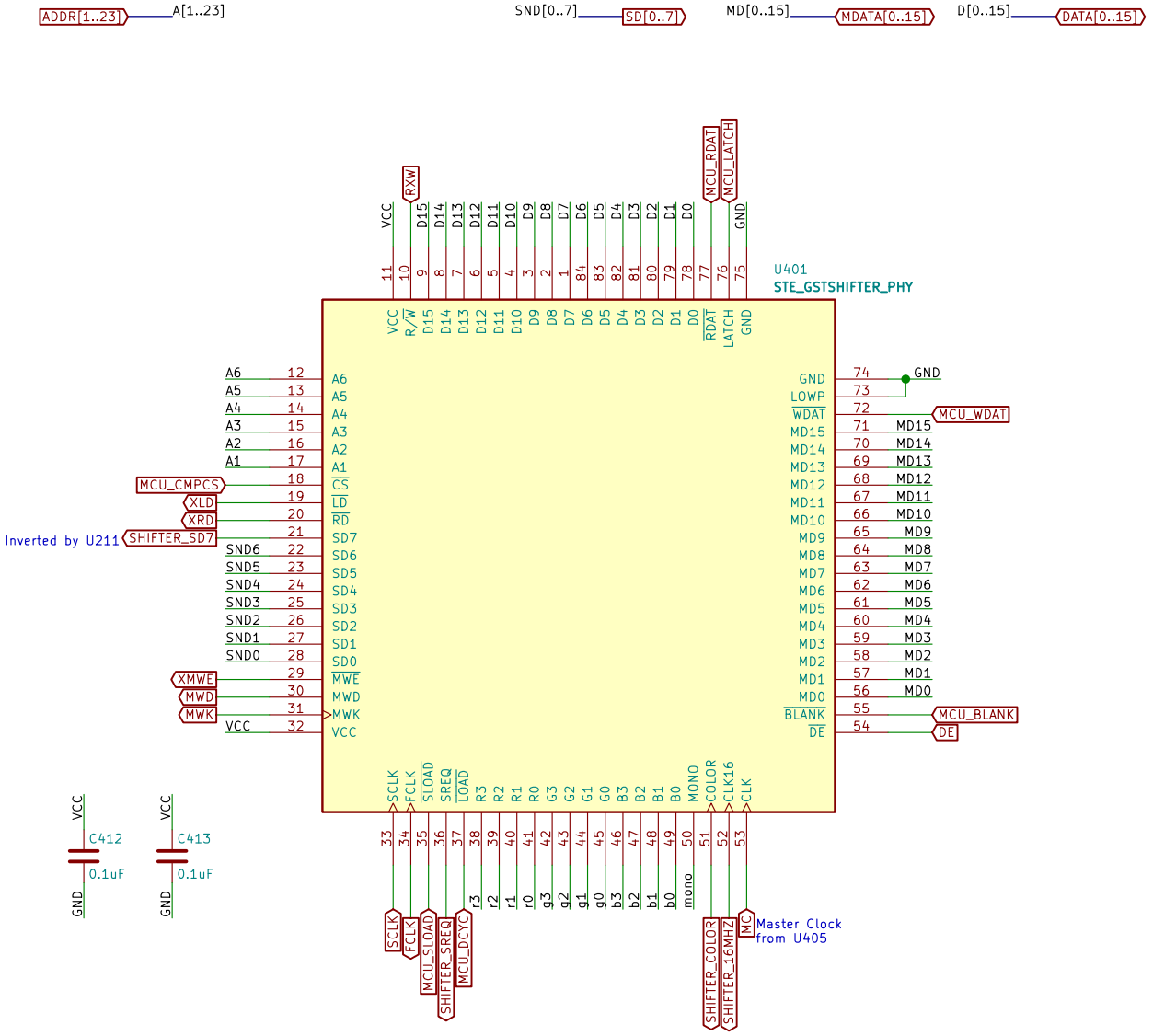
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Reference : C300780-001

Sheet: /U400 - GSTMCU/
File: subsheet_400.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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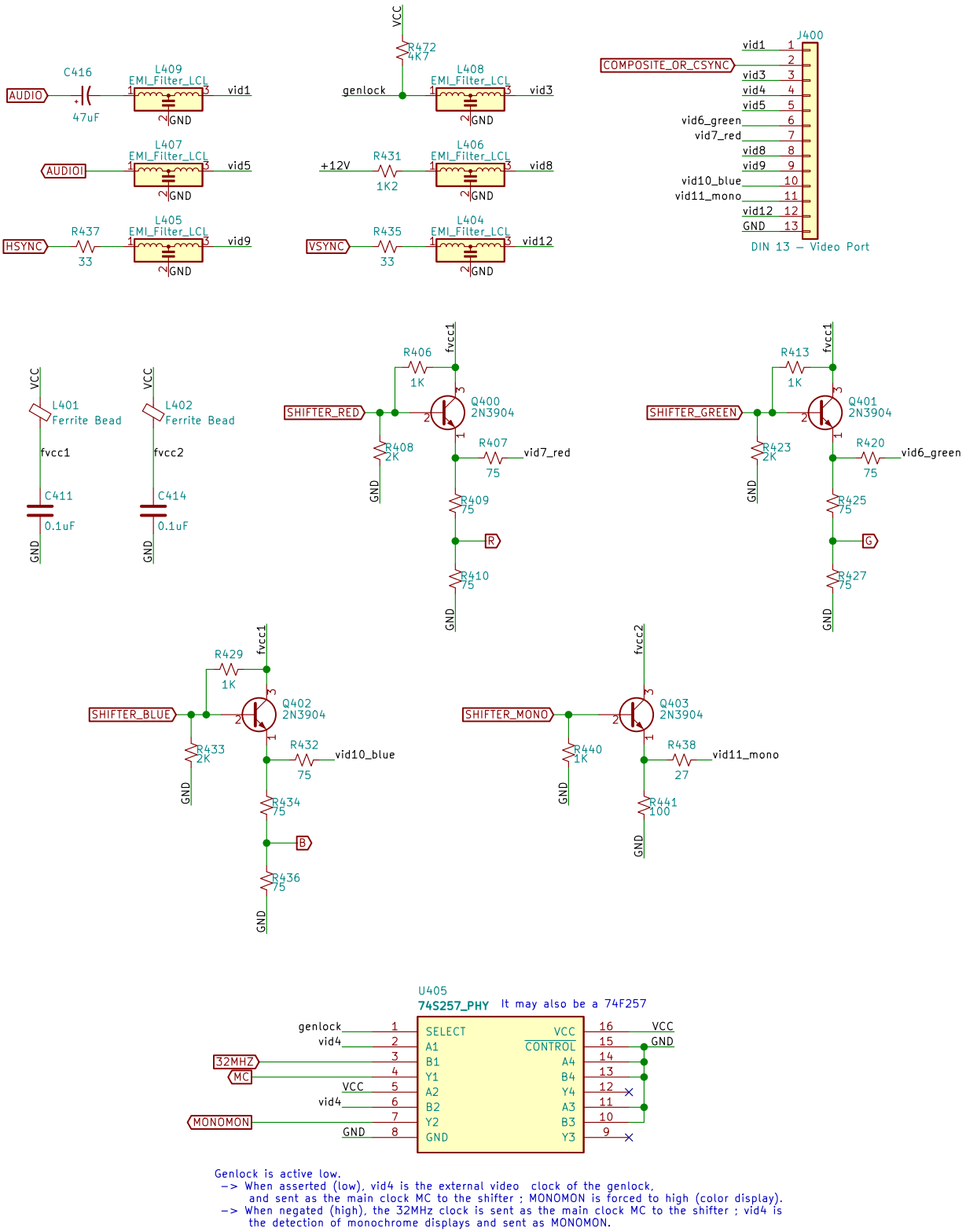
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Reference : C300780-001

Sheet: /U401 - GST Shifter/
File: subsheet_401.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
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Genlock is active low.
-> When asserted (low), vid4 is the external video clock of the genlock, and sent as the main clock MC to the shifter ; MONOMON is forced to high (color display).
-> When negated (high), the 32MHz clock is sent as the main clock MC to the shifter ; vid4 is the detection of monochrome displays and sent as MONOMON.

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Reference : C300780-001

Sheet: /J400 – Video Port/
File: subsheet_402.sch

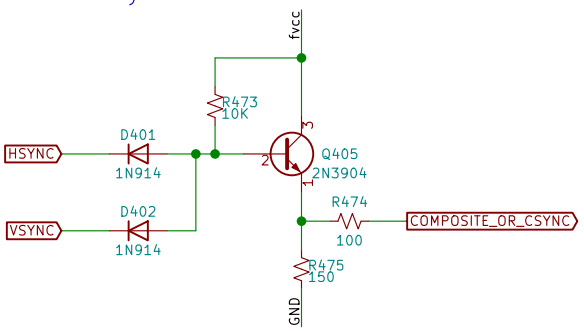
Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
KiCad E.D.A.	kicad 5.1.10-88a1d61d5888ubuntu18.04.1	Id: 21/29

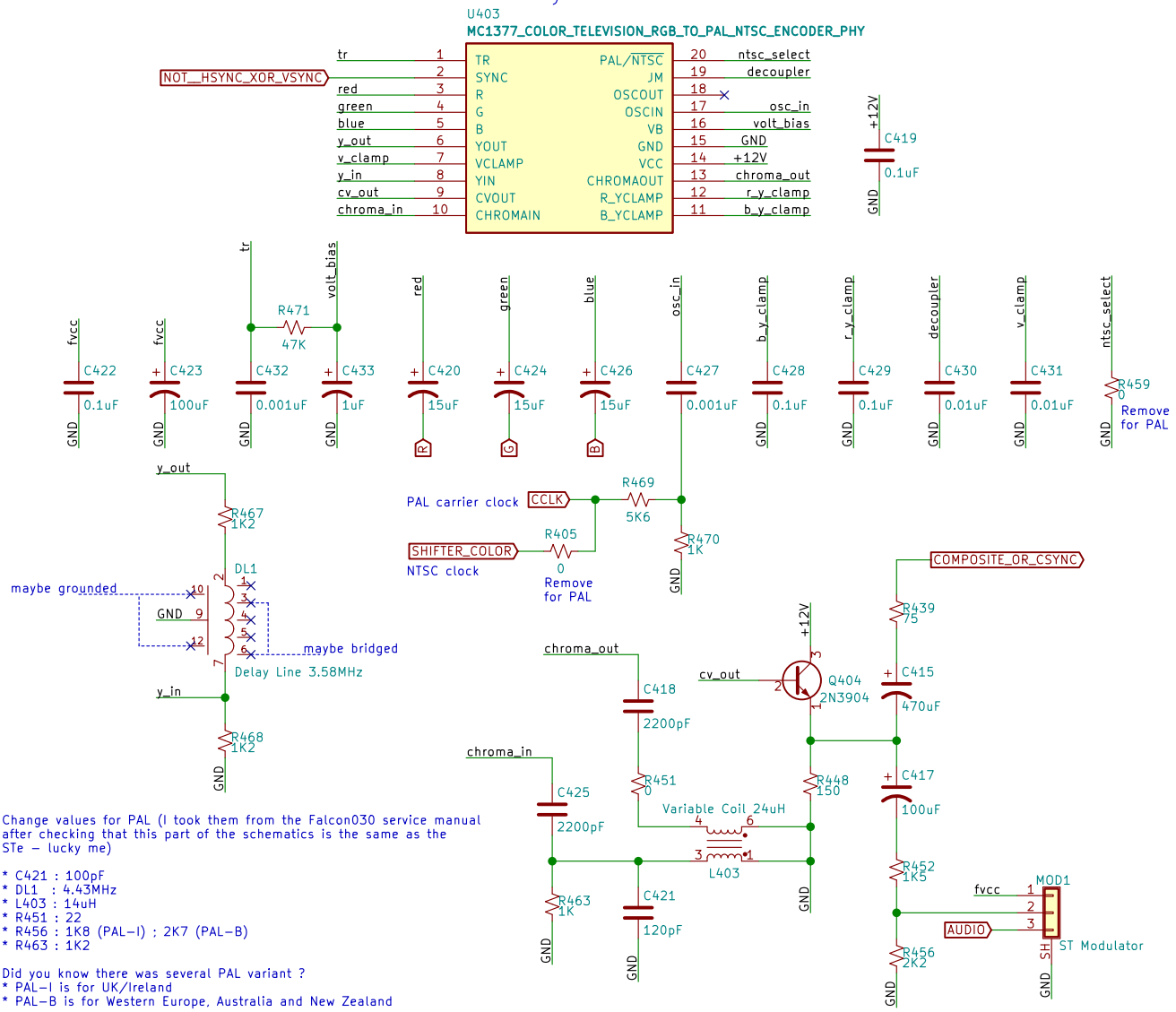
Common



Installed ONLY in systems without modulator



Installed ONLY in systems with modulator



Change values for PAL (I took them from the Falcon030 service manual after checking that this part of the schematics is the same as the STe – lucky me)

* C421 : 100pF
* DL1 : 4.43MHz
* L403 : 14uH
* R451 : 22
* R456 : 1K8 (PAL-I) : 2K7 (PAL-B)
* R463 : 1K2

Did you know there was several PAL variant ?
* PAL-I is for UK/Ireland
* PAL-B is for Western Europe, Australia and New Zealand

About L403 and DL1 : I made custom symbols to match the pins written on the schematics.

For DL1 :

I compared with the schematics of the Atari MegaSTe rev C and of the Falcon030. Pin 12 appears grounded on the former ; on the later, pin 9, 10 and 12 appears grounded, with pin 10 taking the central position, while pin 3 and 6 are bridged together.

In the gerber of the sparrow (found as 'Falcon Gerber' on the Atari Document Archive site), pin 2 and 7 are wired as expected in the schematics, and the pin 3 and 6 are bridged like on the schematics of the Falcon. The pins 9, 10, 12 seems bridged with a fine line (1 mil width).

In the end, I create a symbol with all the pin, and marked to not connect pins that are not of the STe schematics.

I created the footprint of L403 and DL1 after the gerber.

I wish you good luck if you need to replace those components or remake this part of the pcb !

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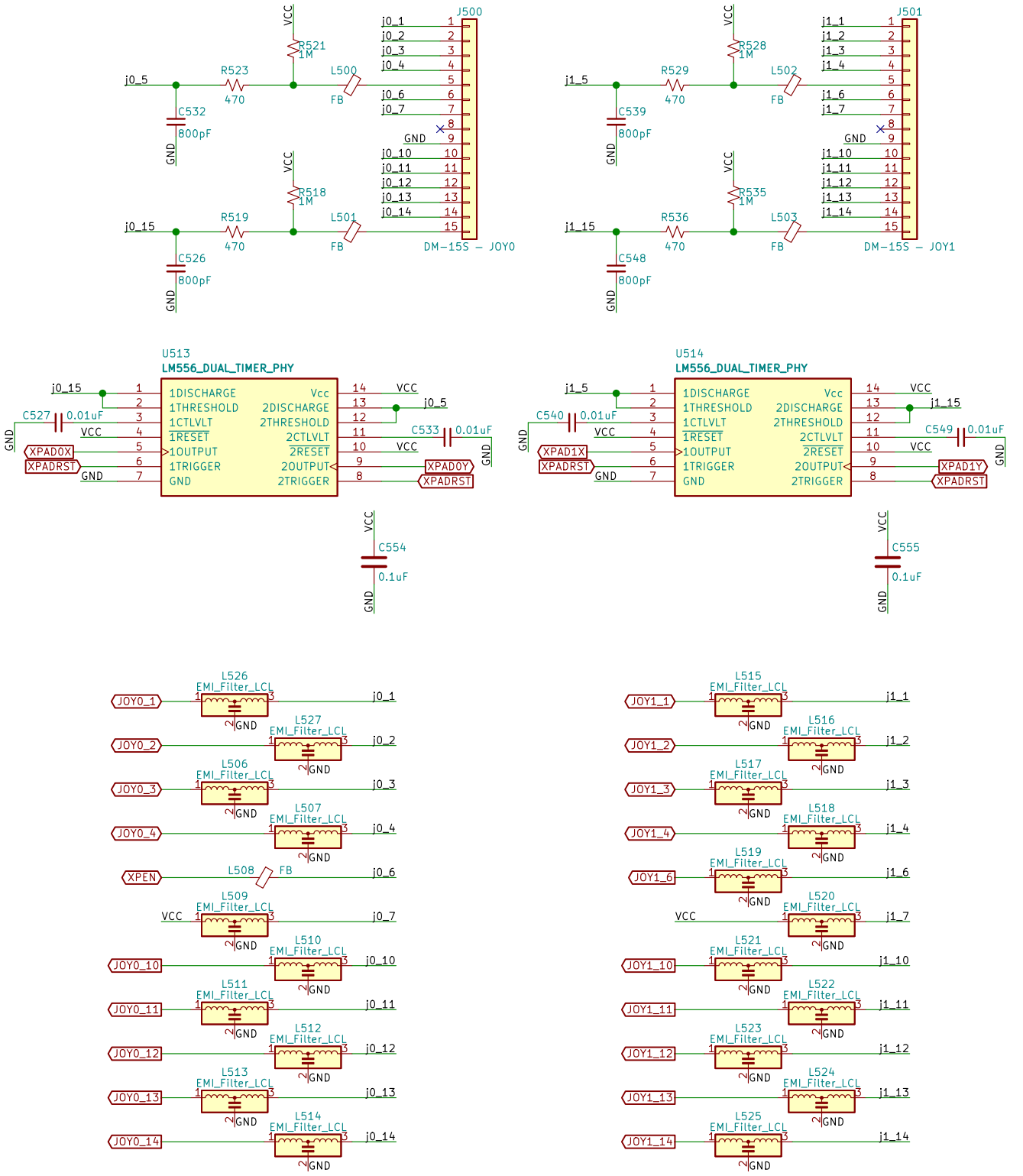
The original source project of this document may be found at https://github.com/sporniket/retro-computer-clean-schematics

Reference : C300780-001

Sheet: /PAL/NTSC encoding or CSYNC/
File: subsheet_403.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
KiCad E.D.A.	kicad 5.1.10-88a1d61d5888ubuntu18.04.1	Id: 22/29



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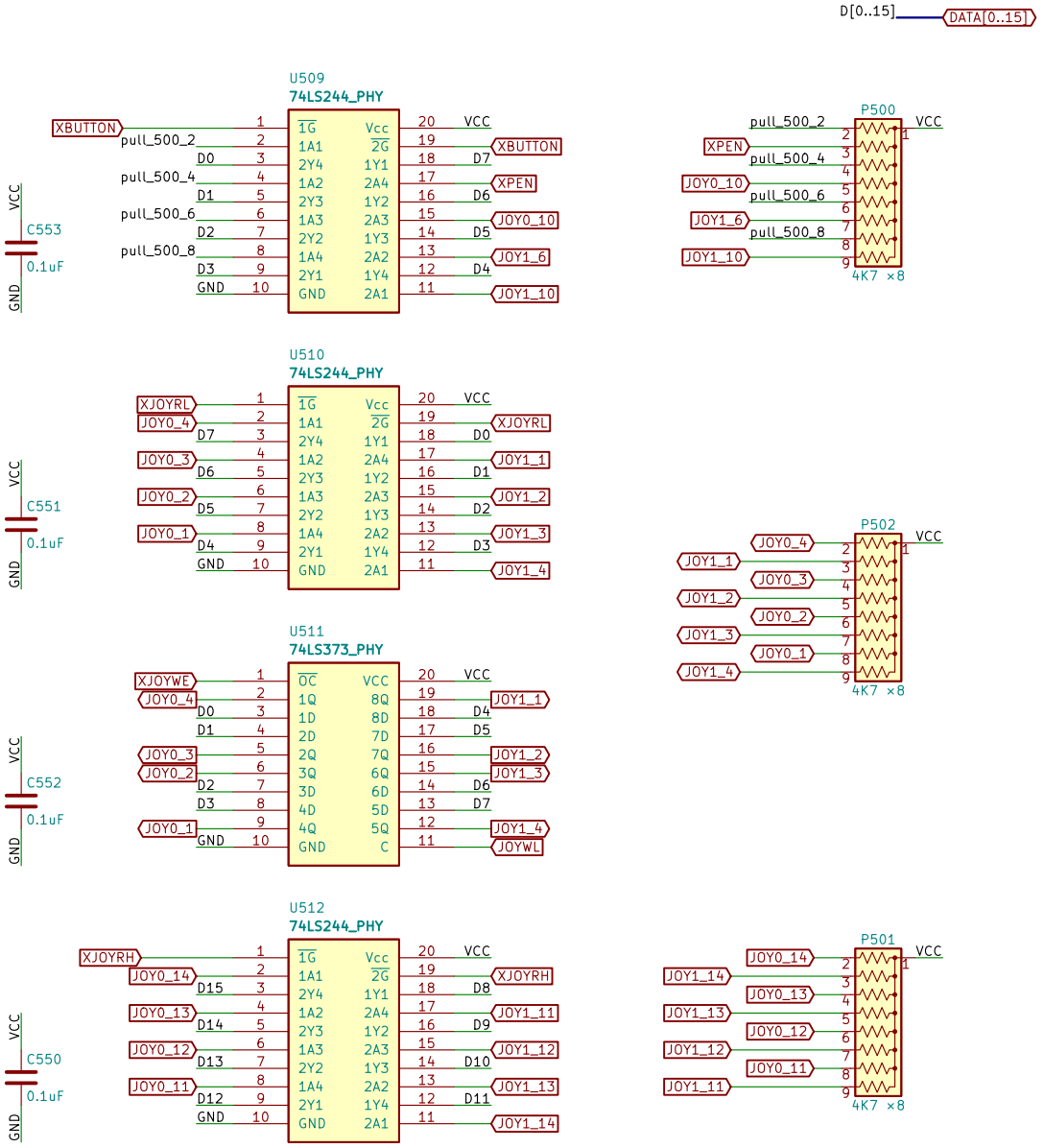
The original source project of this document may be found at https://github.com/sporniket/retro-computer-clean-schematics

Reference : C300780-001

Sheet: /J500 J501 - Gamepad ports/
File: subsheet_500.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
KiCad E.D.A.	kicad 5.1.10-88a1d61d5888ubuntu18.04.1	Id: 23/29



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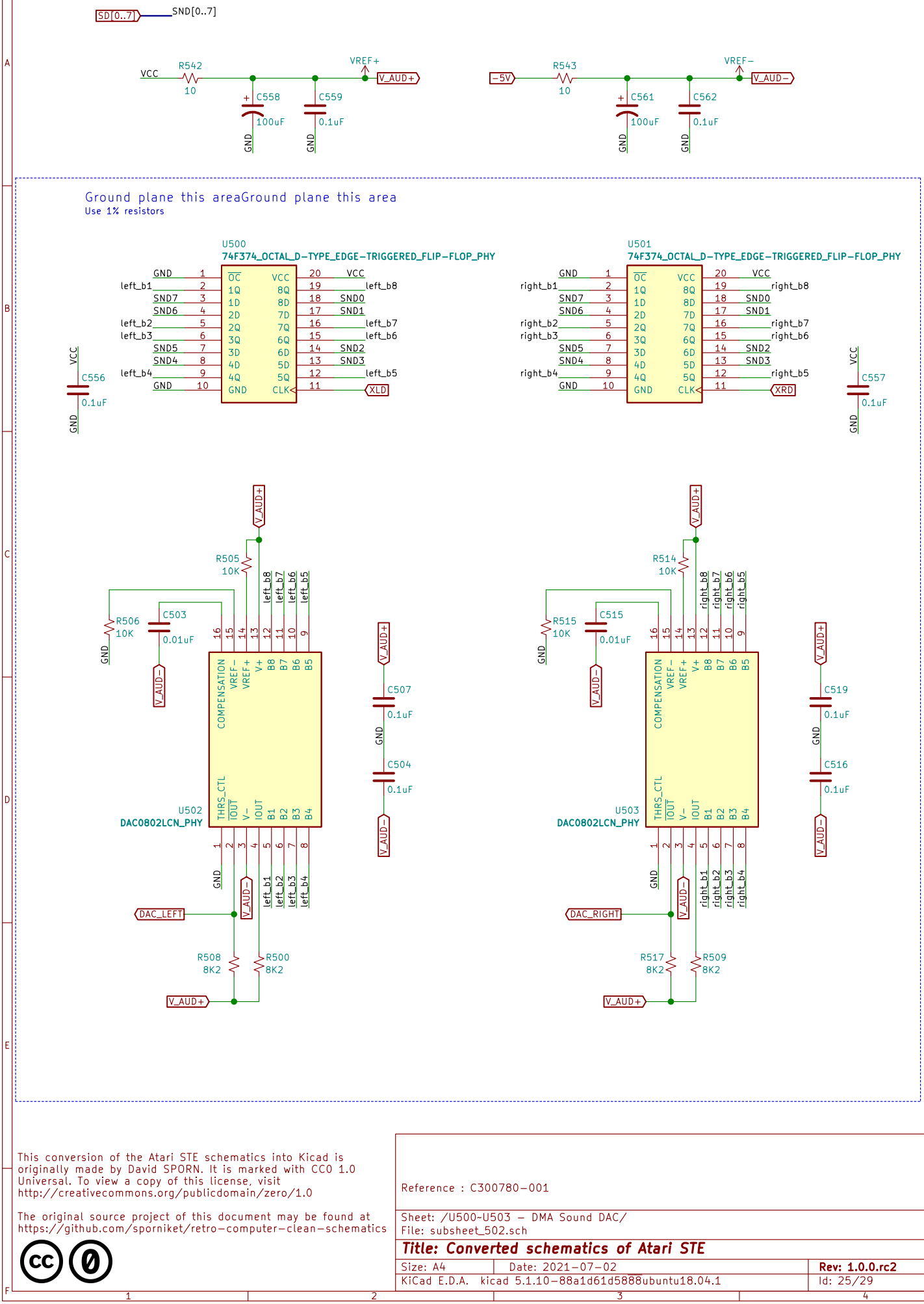
The original source project of this document may be found at https://github.com/sporniket/retro-computer-clean-schematics

Reference : C300780-001

Sheet: /U509-U512 - Gamepad control/
File: subsheet_501.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
KiCad E.D.A.	kicad 5.1.10-88a1d61d5888ubuntu18.04.1	Id: 24/29



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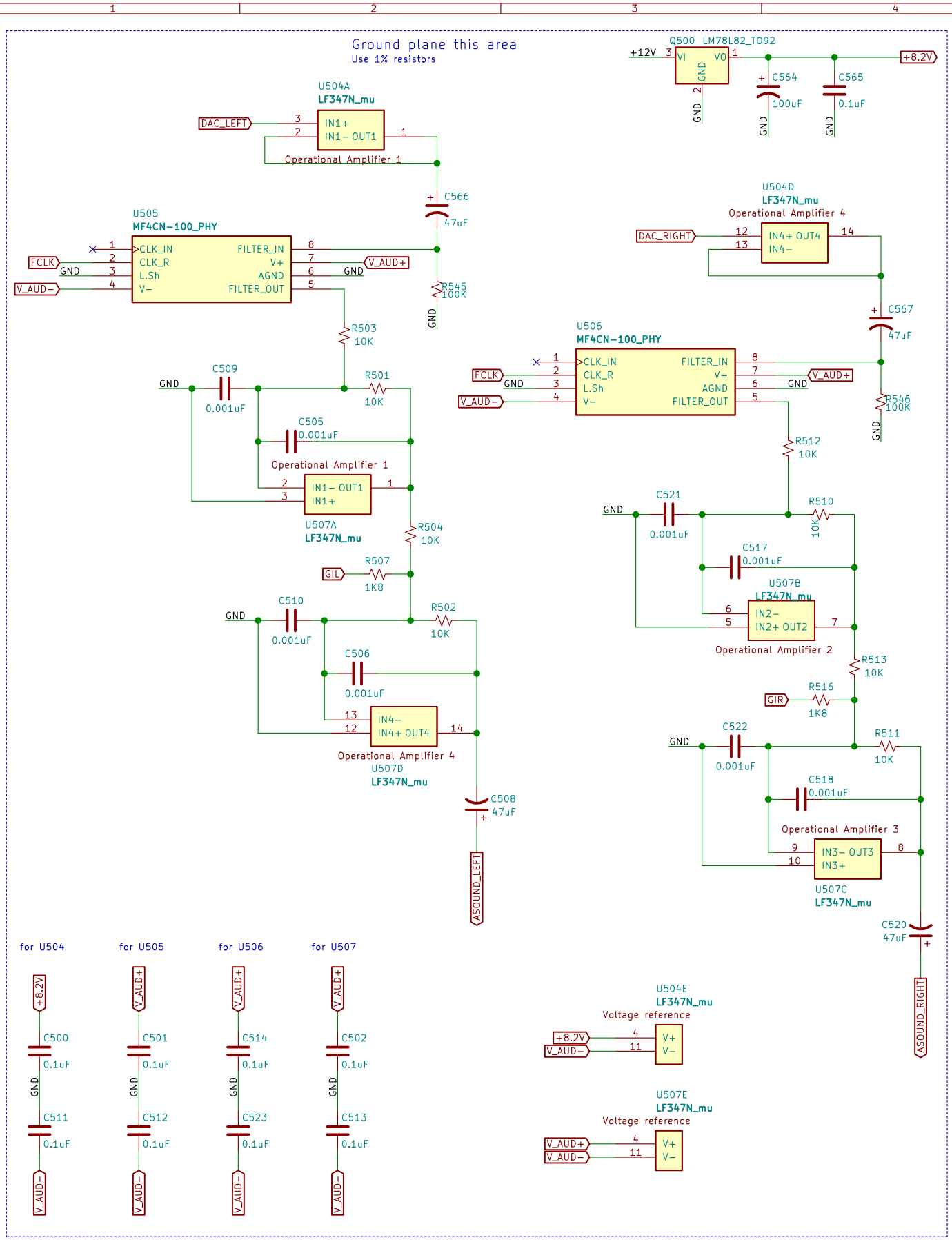
The original source project of this document may be found at https://github.com/sporniket/retro-computer-clean-schematics

Reference : C300780-001

Sheet: /U500-U503 - DMA Sound DAC/
File: subsheet_502.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	Rev: 1.0.0.rc2
KiCad E.D.A. kicad 5.1.10-88a1d61d5888ubuntu18.04.1		Id: 25/29



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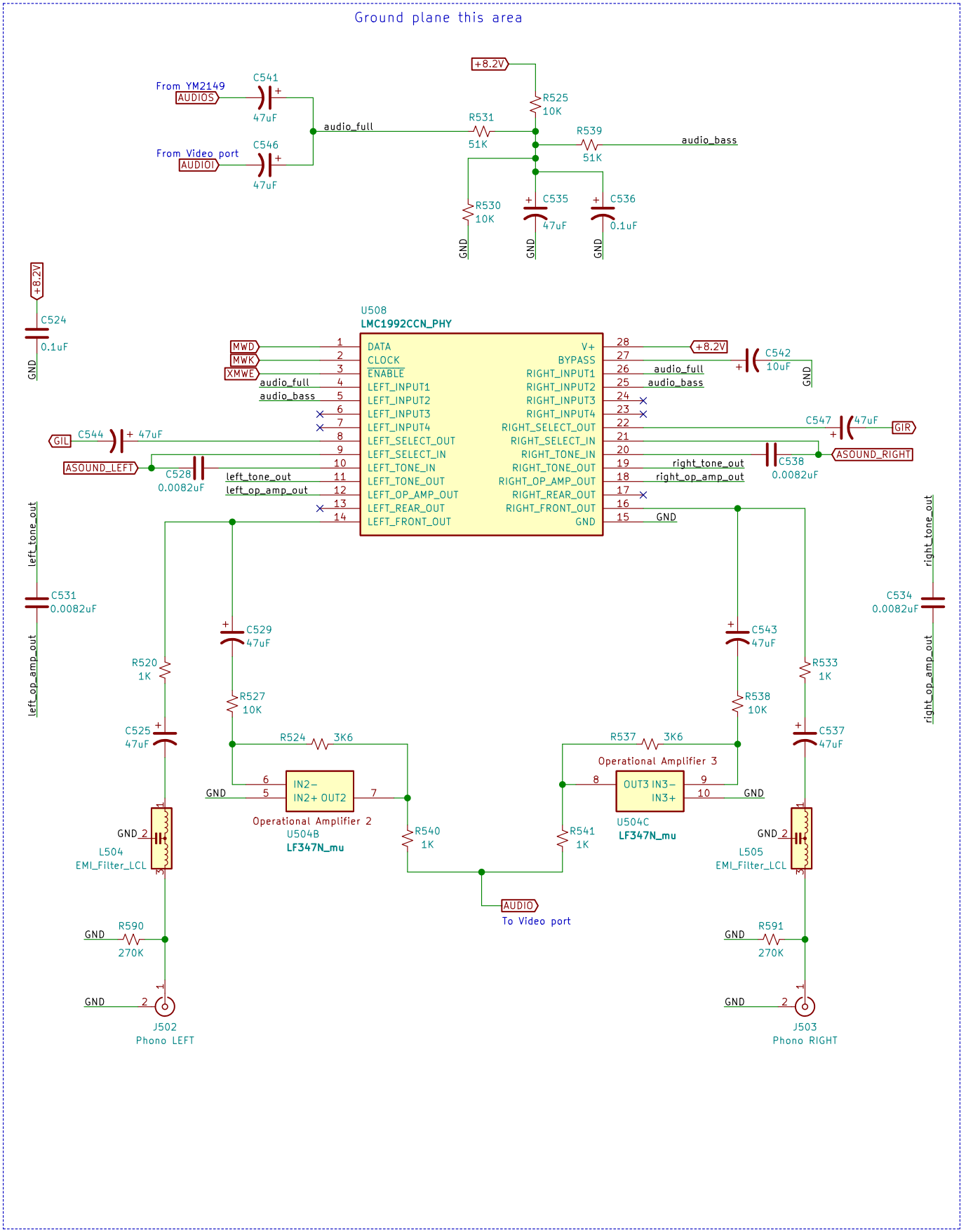
The original source project of this document may be found at https://github.com/sporniket/retro-computer-clean-schematics

Reference : C300780-001

Sheet: /U504-U507 - Sound amp. & filter/
File: subsheet_503.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	Rev: 1.0.0.rc2
KiCad E.D.A.	kicad 5.1.10-88a1d61d5888ubuntu18.04.1	Id: 26/29



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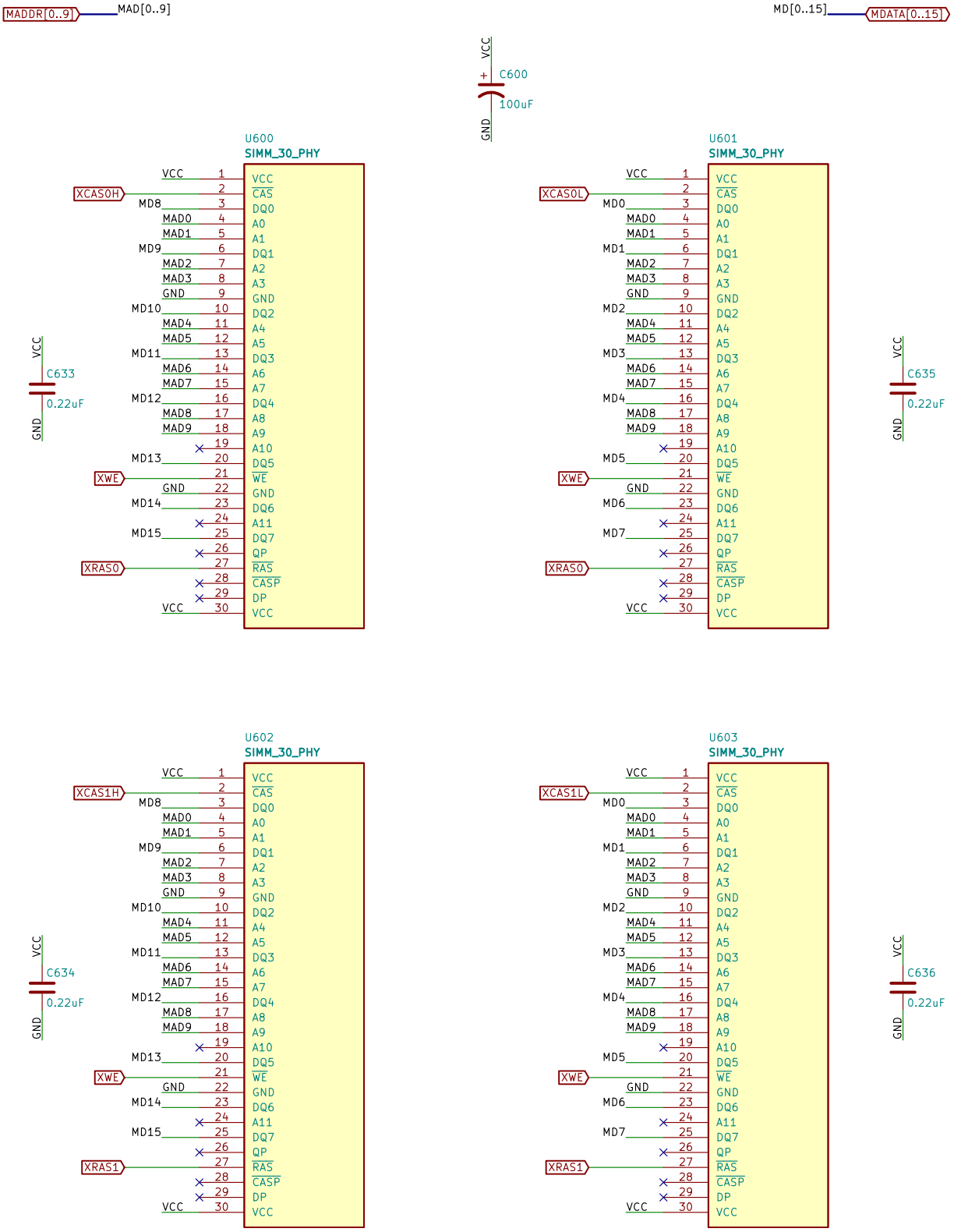
The original source project of this document may be found at https://github.com/sporniket/retro-computer-clean-schematics

Reference : C300780-001

Sheet: /U508 — Sound mix and output/
File: subsheet_504.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
KiCad E.D.A.	kicad 5.1.10-88a1d61d5888ubuntu18.04.1	Id: 27/29



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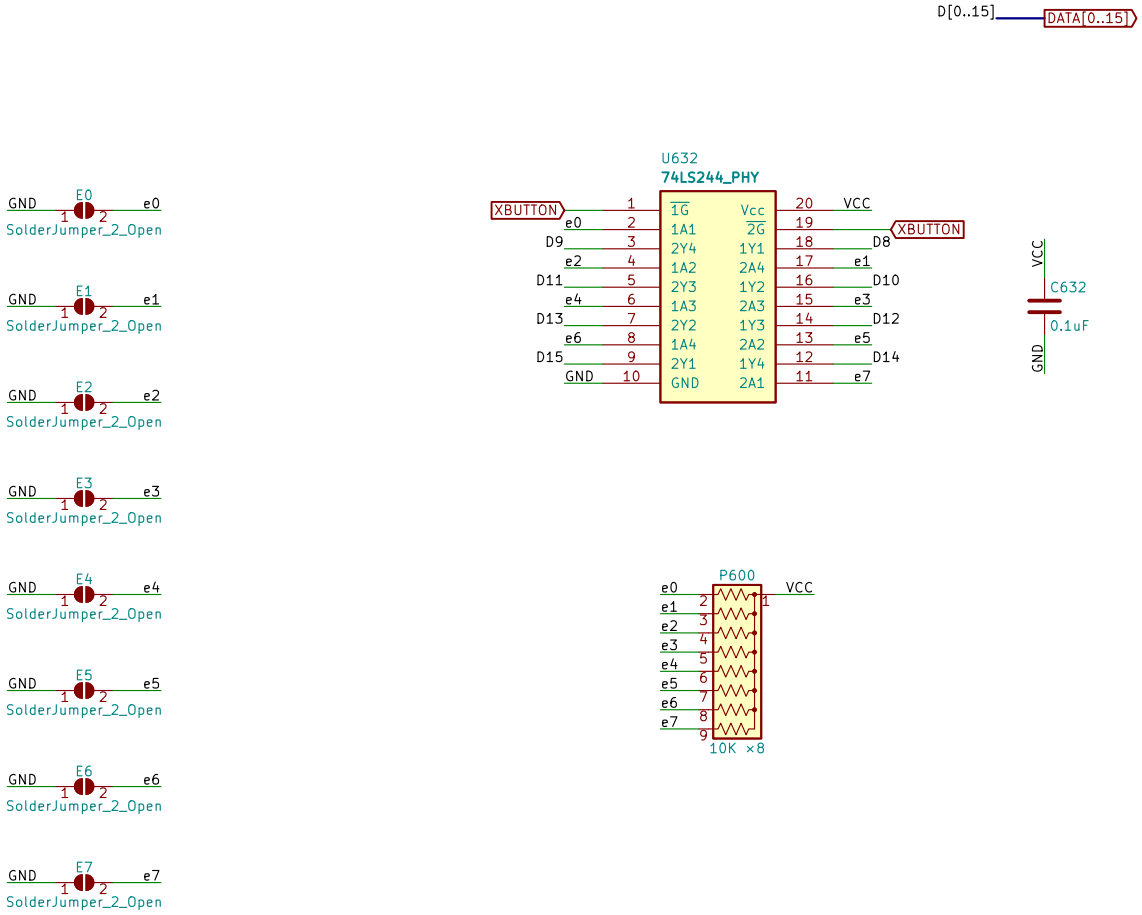
The original source project of this document may be found at https://github.com/sporniket/retro-computer-clean-schematics

Reference : C300780-001

Sheet: /U600-U603 - RAM modules/
File: subsheet_600.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
KiCad E.D.A.	kicad 5.1.10-88a1d61d5888ubuntu18.04.1	Id: 28/29



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Reference : C300780-001

Sheet: /E[0..7] - Jumper pads/
File: subsheet_601.sch

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-02	**Rev: 1.0.0.rc2**
KiCad E.D.A.	kicad 5.1.10-88a1d61d5888ubuntu18.04.1	Id: 29/29