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Reference : C300780-001

Sheet: /
File: motherboard.sch

Title: Converted schematics of Atari STE

Size: A4 Date: 2021-07-18

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Rev: 1.0.0.rc3

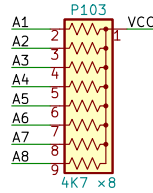
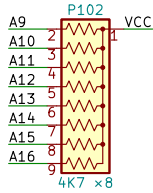
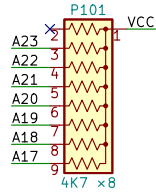
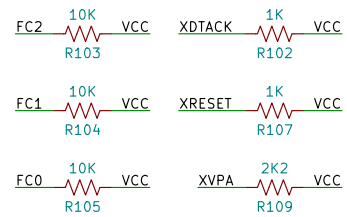
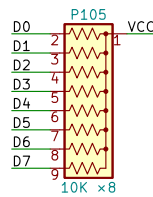
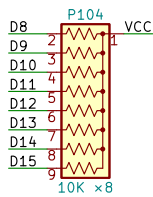
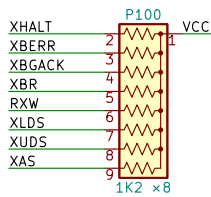
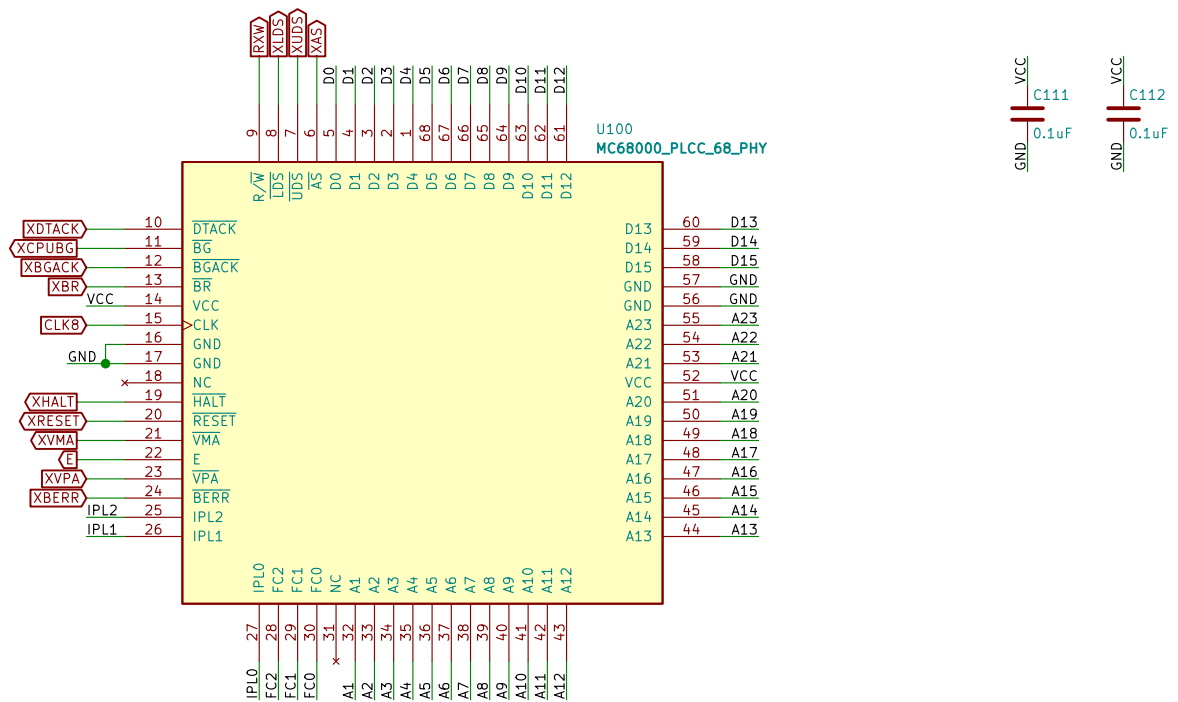
Id: 1/29

X IPL[0..2] IPL[0..2]

A[1..23] ADDR[1..23]

D[0..15] DATA[0..15]

FC[0..2] FC[0..2]



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Reference : C300780-001

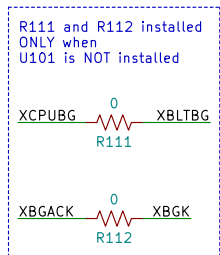
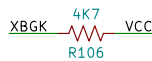
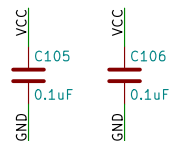
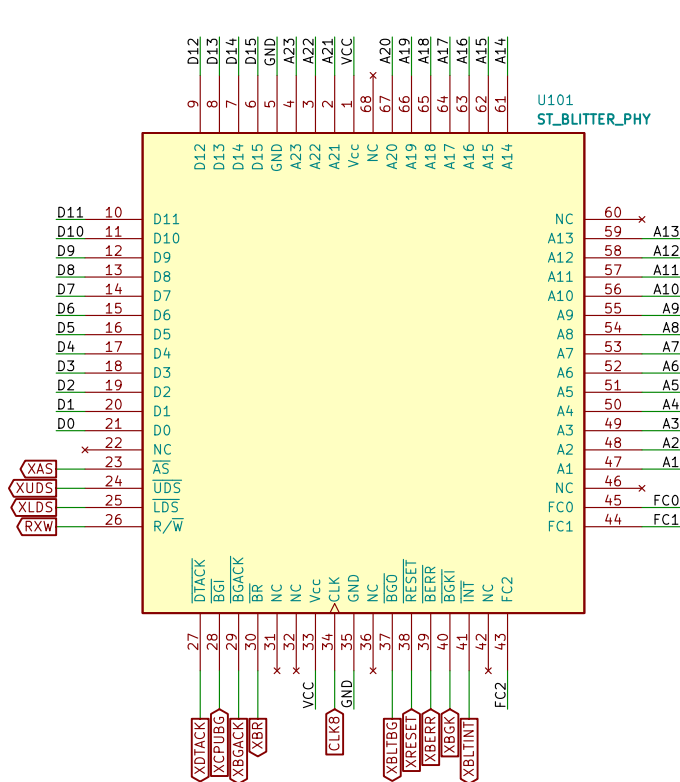
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File: subsheet_100.sch

Title: Converted schematics of Atari STE

Size: A4 Date: 2021-07-18
KiCad E.D.A. kicad 5.1.10-88a1d61d5888ubuntu18.04.1

Rev: 1.0.0.rc3
Id: 2/29

A[1..23] ADDR[1..23] D[0..15] DATA[0..15] FC[0..2] FC[0..2]



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Reference : C300780-001

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

Title: Converted schematics of Atari STE

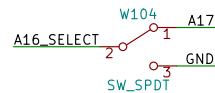
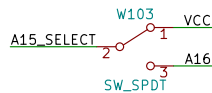
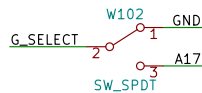
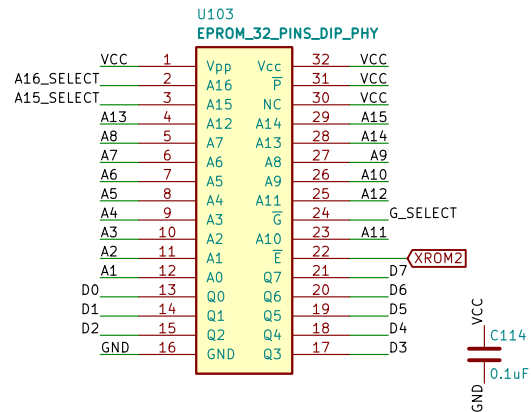
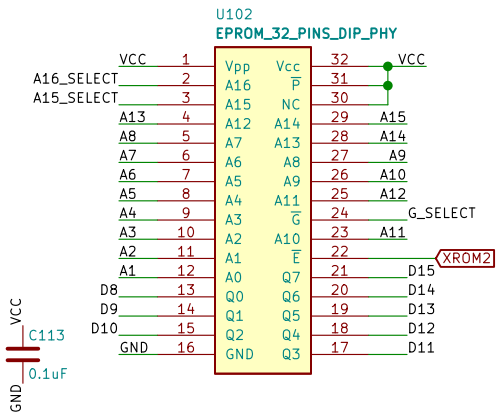
Size: A4 Date: 2021-07-18

KiCad E.D.A. kicad 5.1.10-88a1d61d5888ubuntu18.04.1

Rev: 1.0.0.rc3

Id: 3/29

ADDR[1..23] A[1..23] DATA[0..15] D[0..15]



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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Reference : C300780-001

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

Title: Converted schematics of Atari STE

Size: A4 Date: 2021-07-18

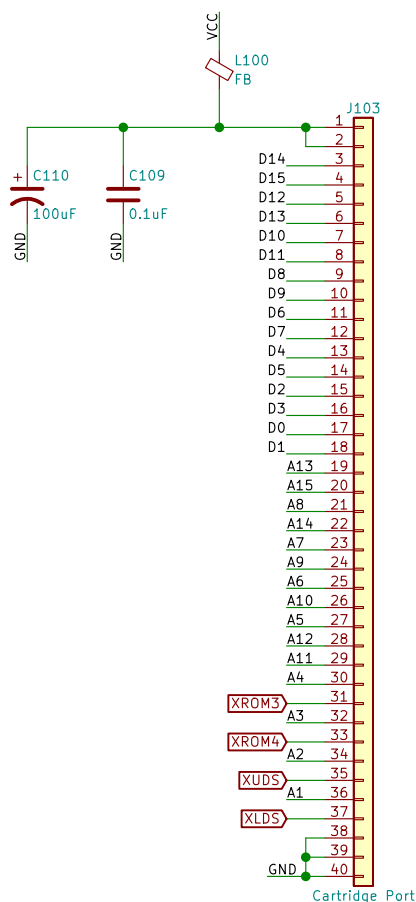
KiCad E.D.A. kicad 5.1.10-88a1d61d5888ubuntu18.04.1

Rev: 1.0.0.rc3

Id: 4/29

ADDR[1..23] A[1..23]

D[0..15] DATA[0..15]



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Reference : C300780-001

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

Title: Converted schematics of Atari STE

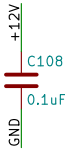
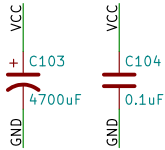
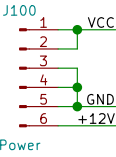
Size: A4 Date: 2021-07-18

KiCad E.D.A. kicad 5.1.10-88a1d61d5888ubuntu18.04.1

Rev: 1.0.0.rc3

Id: 5/29

Collect power from PSU



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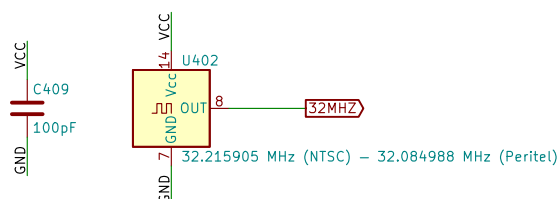
Reference : C300780-001

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

Title: Converted schematics of Atari STE

Size: A4	Date: 2021-07-18	Rev: 1.0.0.rc3
KiCad E.D.A.	kicad 5.1.10-88a1d61d5888ubuntu18.04.1	Id: 7/29

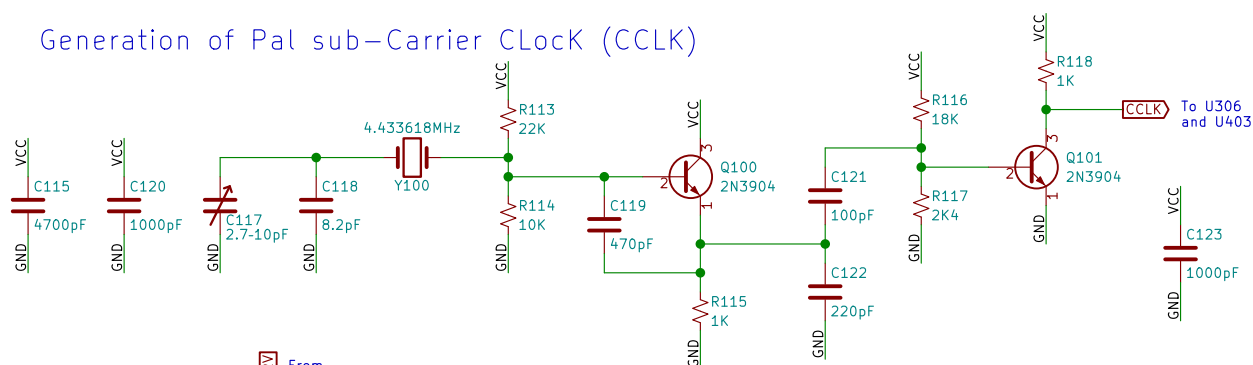
Installed ONLY in non-PAL systems



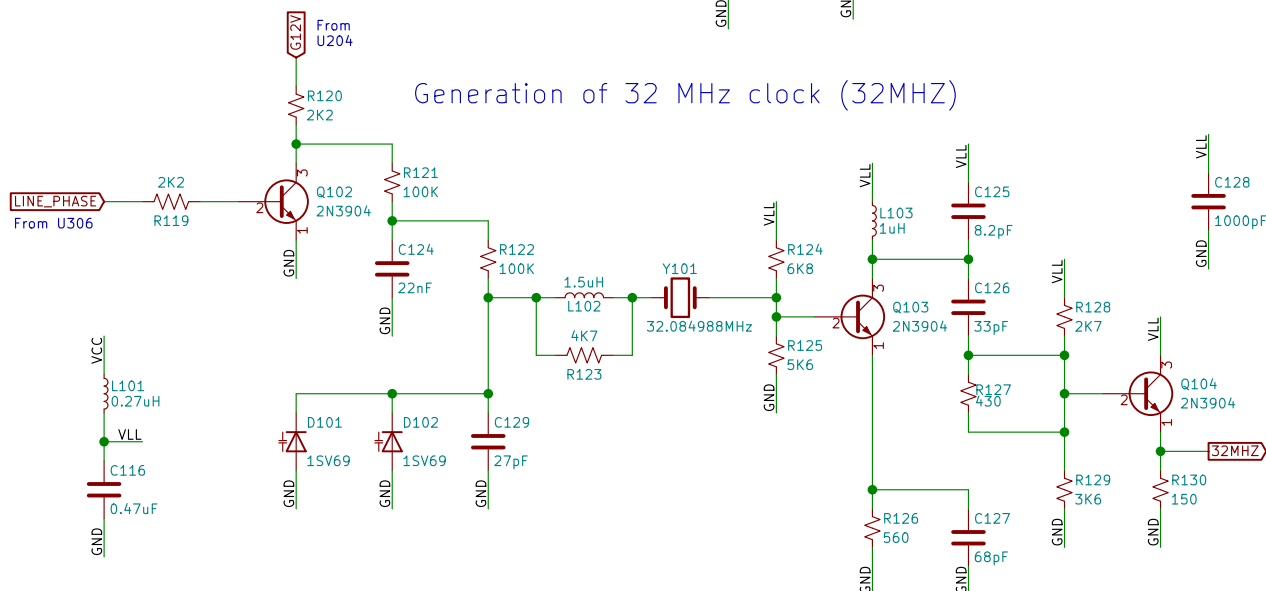
Installed ONLY in PAL systems

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

Generation of Pal sub-Carrier CCLK (CCLK)



Generation of 32 MHz clock (32MHZ)



Diode 15V69 : Electronic tuning for UHF/VHF TV Tuner
<https://pdf1.alldatasheet.com/datasheet-pdf/view/107651/ETC/15V69.html>

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Reference : C300780-001

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

Title: Converted schematics of Atari STE

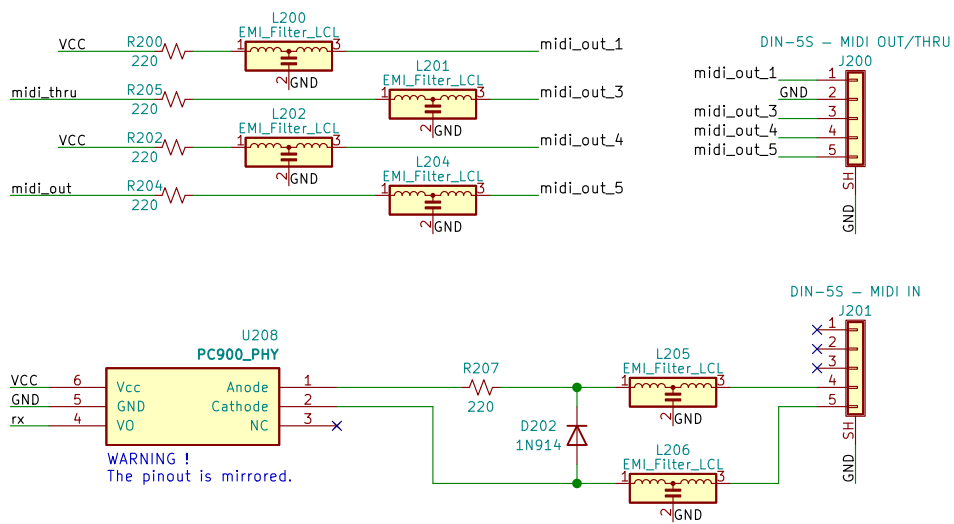
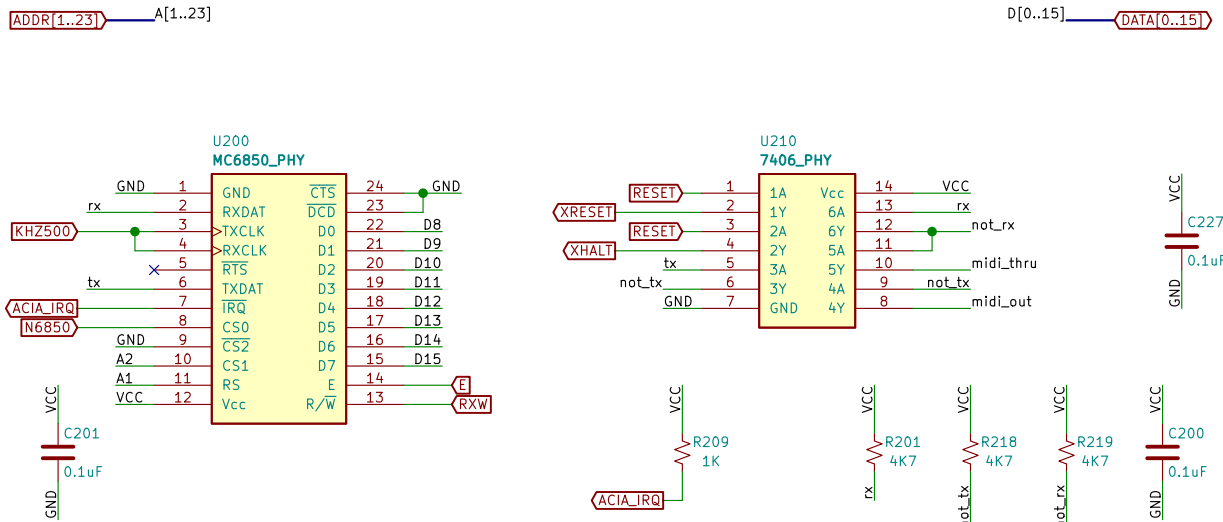
Size: A4

Date: 2021-07-18

Rev: 1.0.0.rc3

KiCad E.D.A. kicad 5.1.10-88a1d61d5888ubuntu18.04.1

Id: 8/29



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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: 2021-07-18

Rev: 1.0.0.rc3

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Id: 9/29

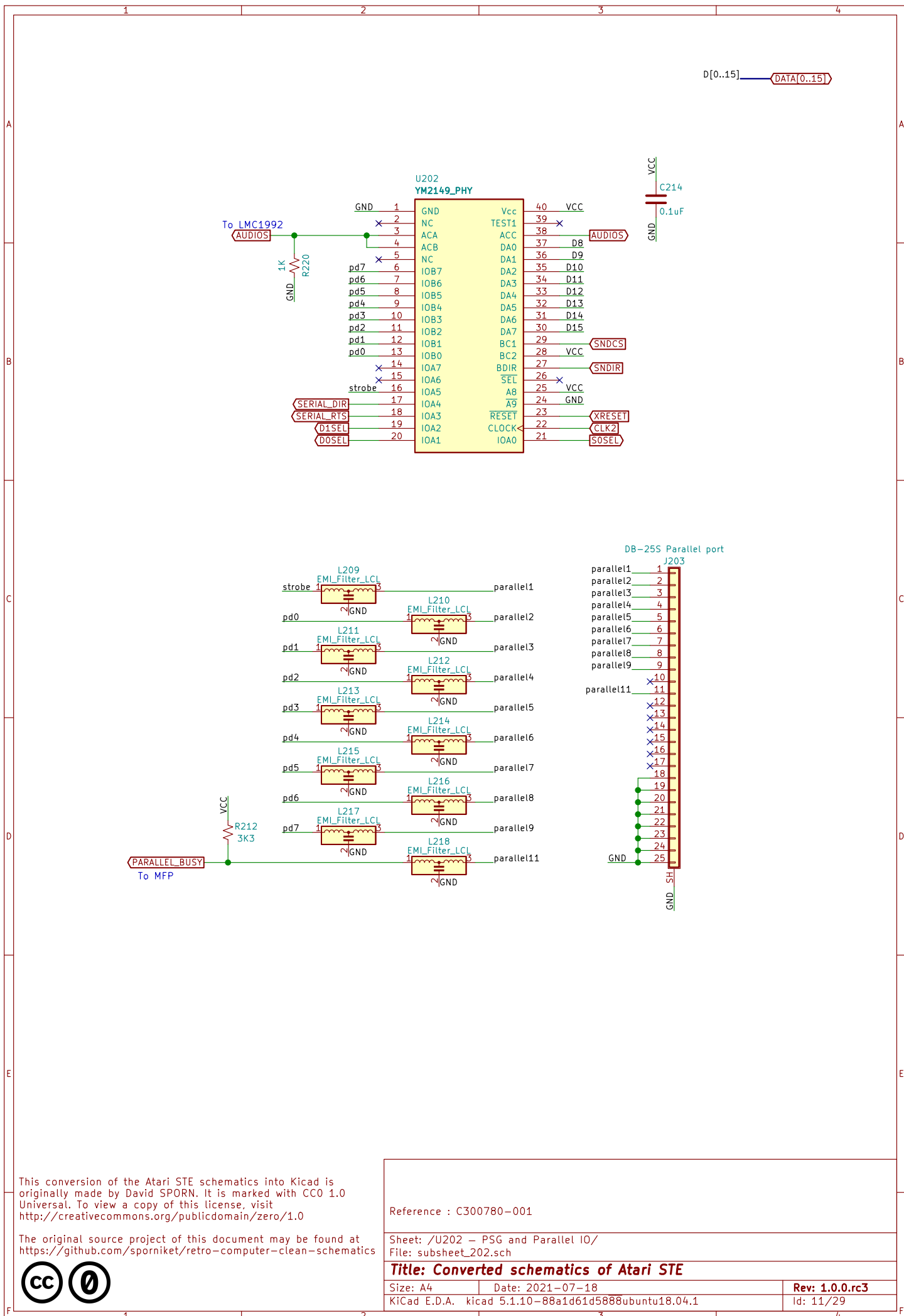


E

11



Id: 10/29



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Reference : C300780-001

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

Title: Converted schematics of Atari STE

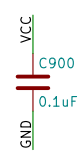
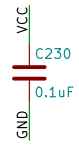
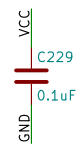
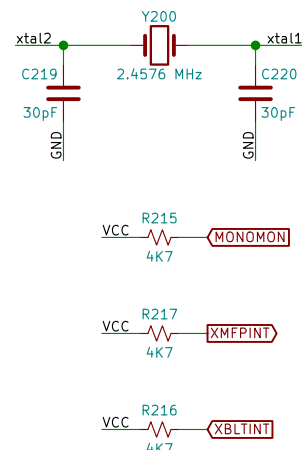
Size: A4

Date: 2021-07-18

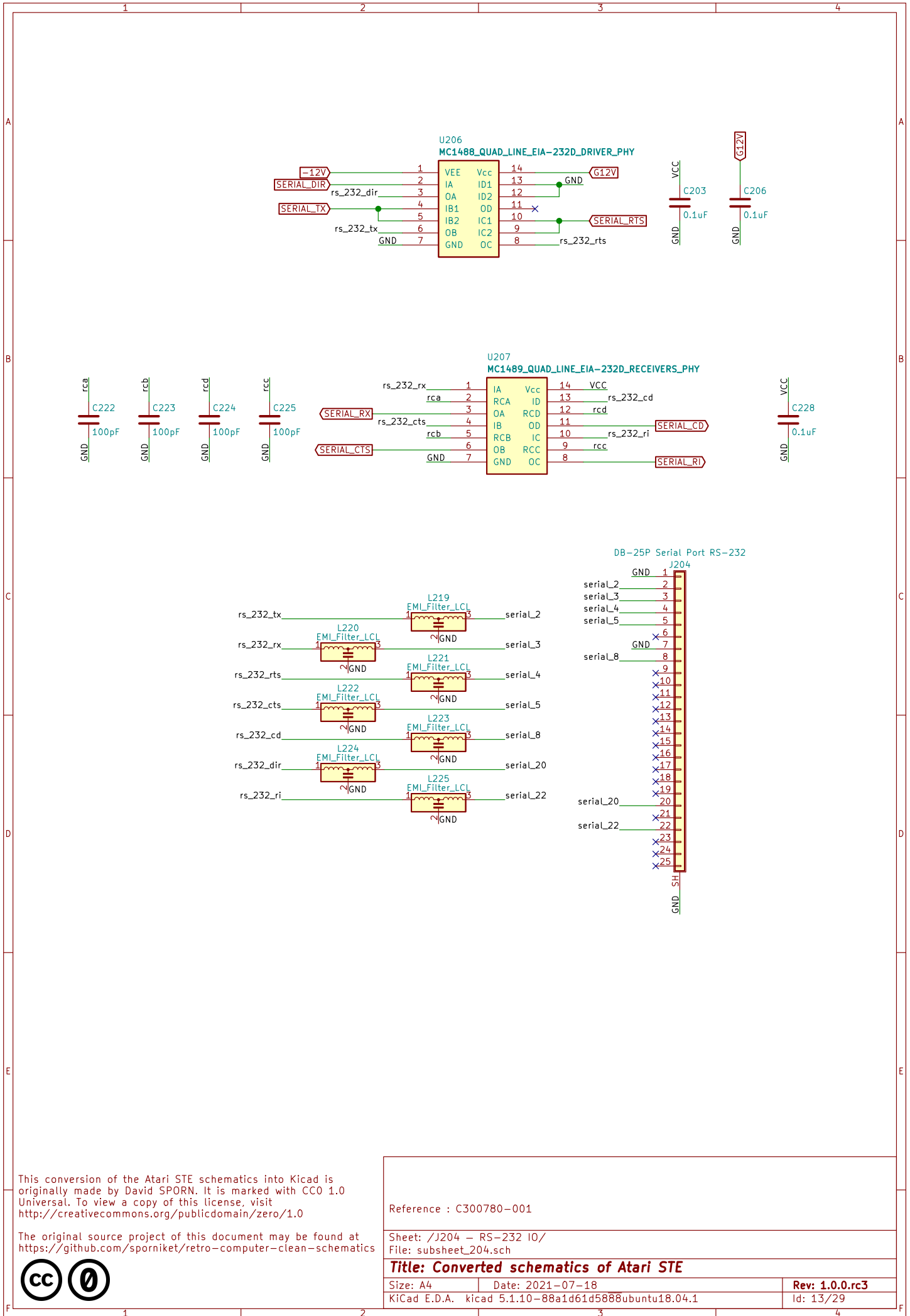
Rev: 1.0.0.rc3

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Id: 11/29

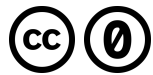


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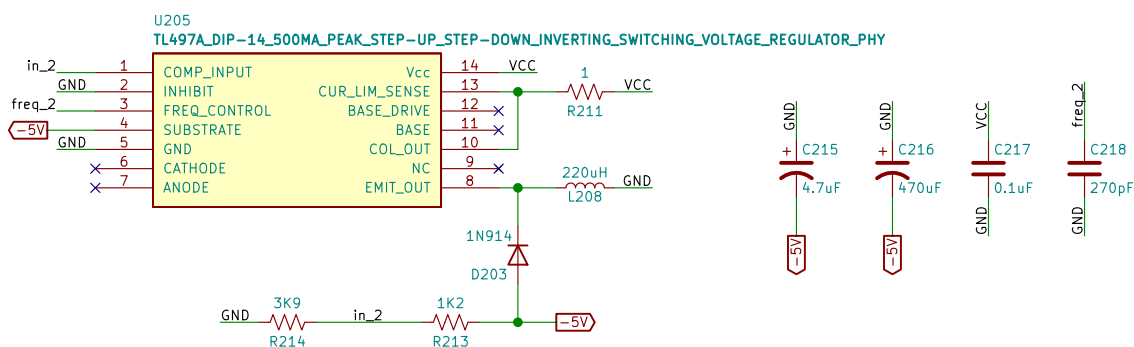
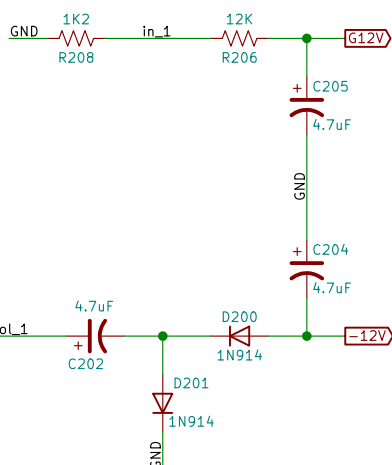


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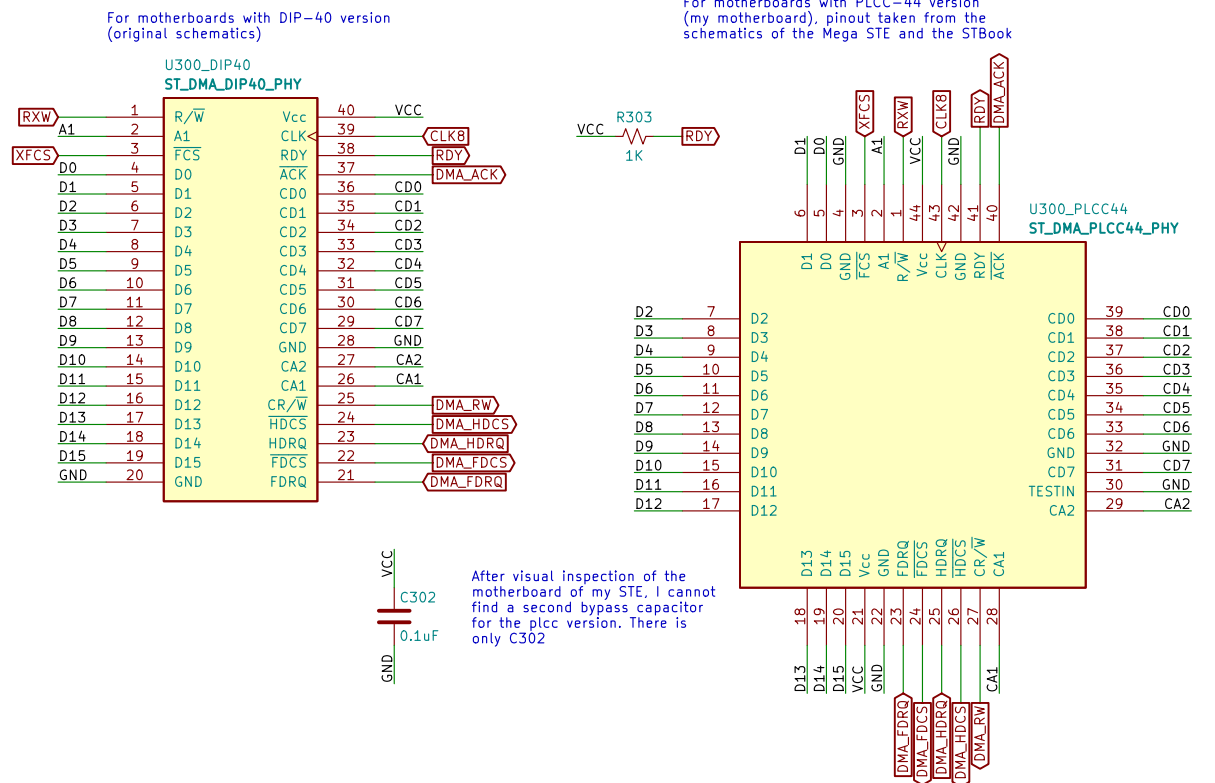


Reference : C300780-001		
Sheet: /J204 - RS-232 IO/ File: subsheet_204.sch		
Title: Converted schematics of Atari STE		
Size: A4	Date: 2021-07-18	Rev: 1.0.0.rc3
Kicad E.D.A. kicad 5.1.10-88a1d61d5888ubuntu18.04.1		Id: 13/29



Id: 14/29

ADDR[1..23] A[1..23] CA[1..2] CADDR[1..2] CD[0..7] CDATA[0..7] D[0..15] DATA[0..15]



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Reference : C300780-001

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

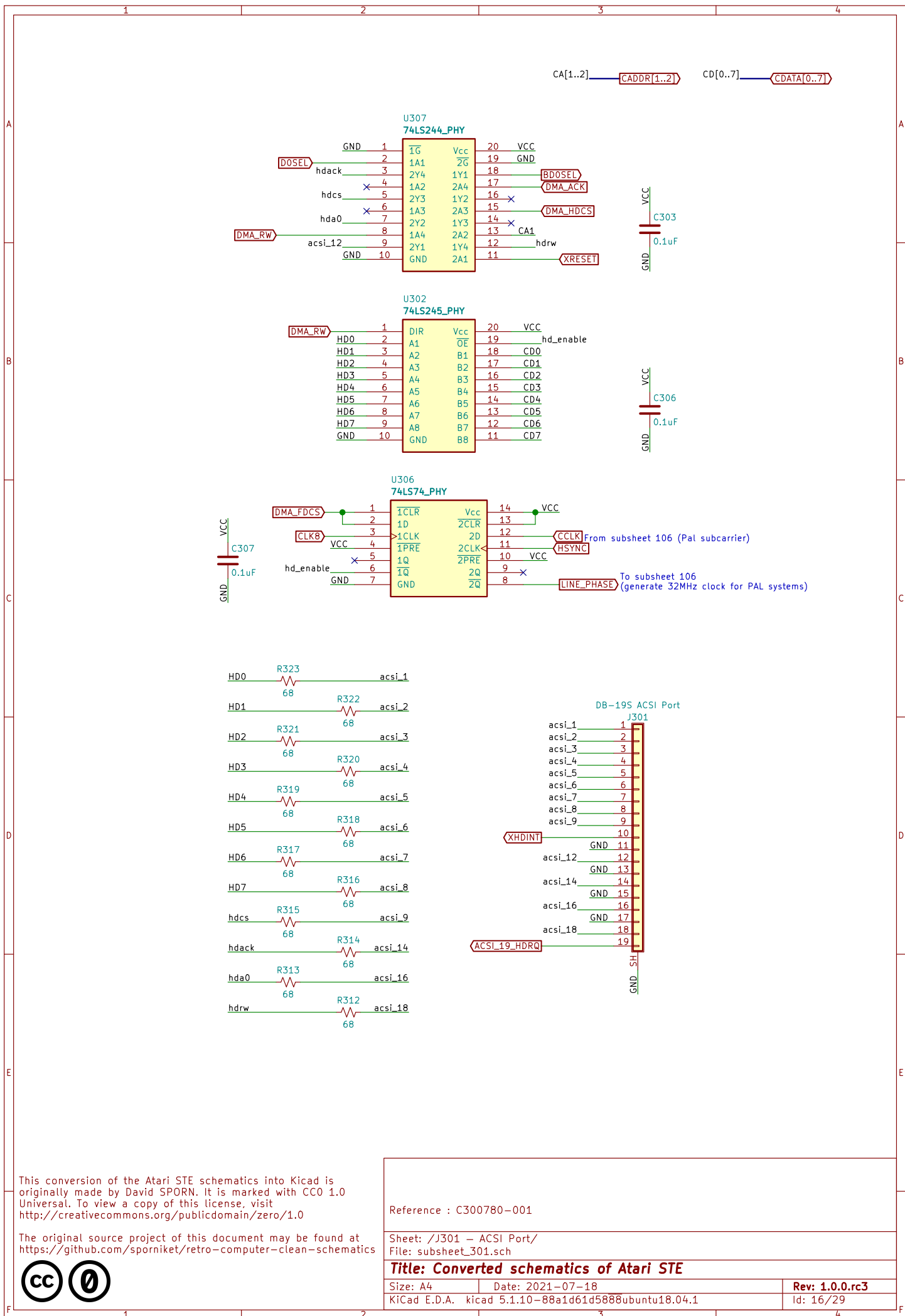
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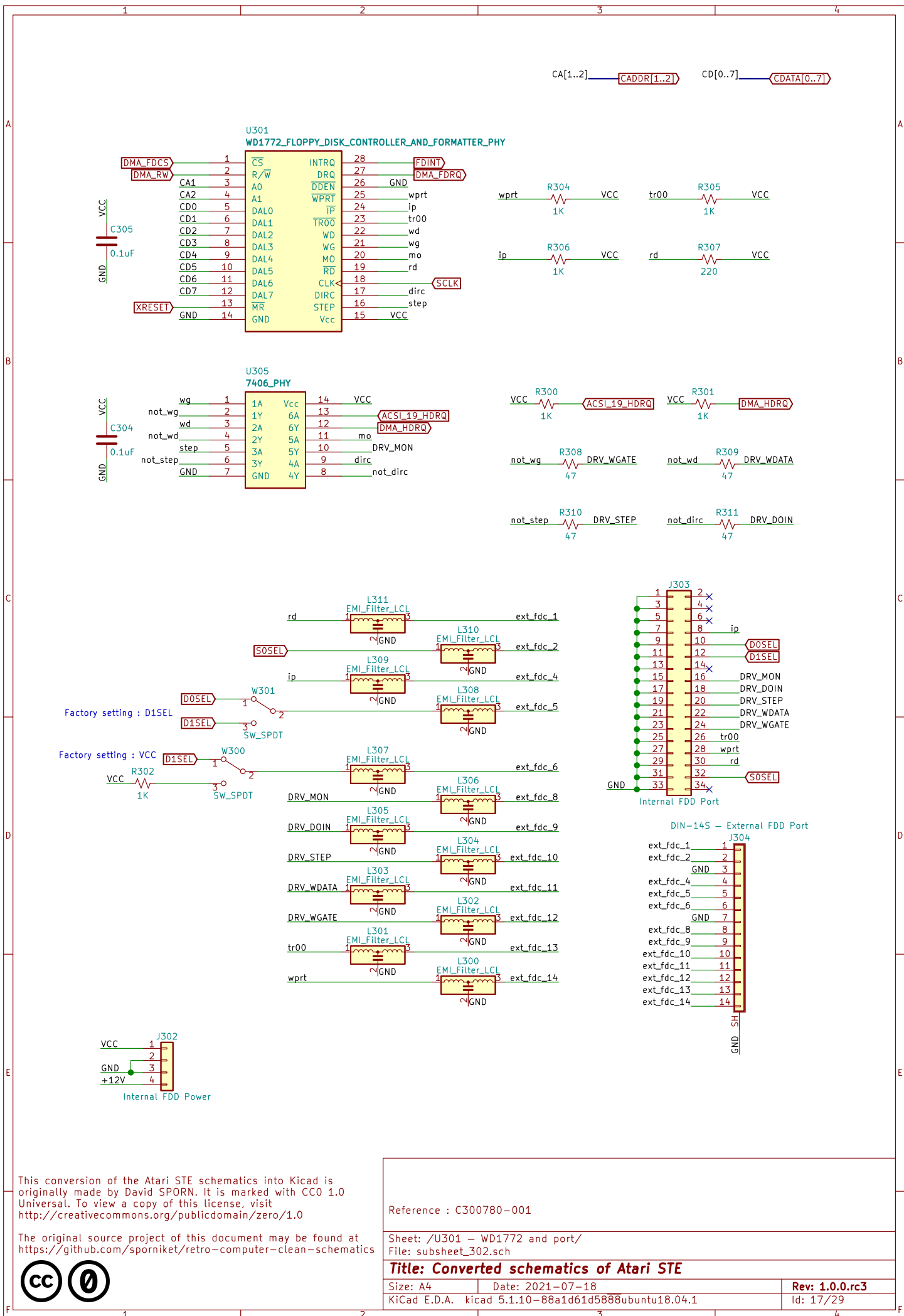
Size: A4 Date: 2021-07-18

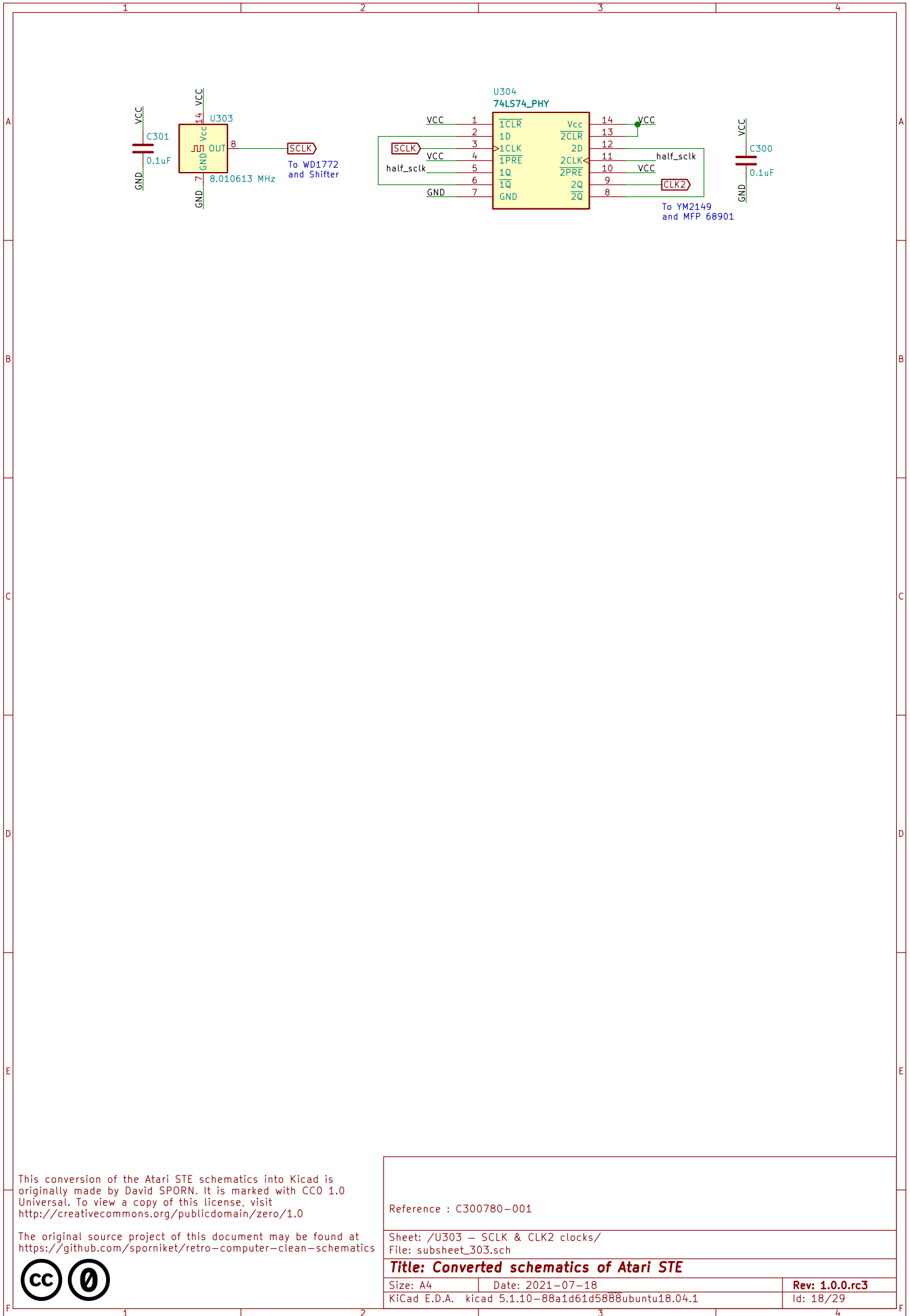
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Rev: 1.0.0.rc3

Id: 15/29





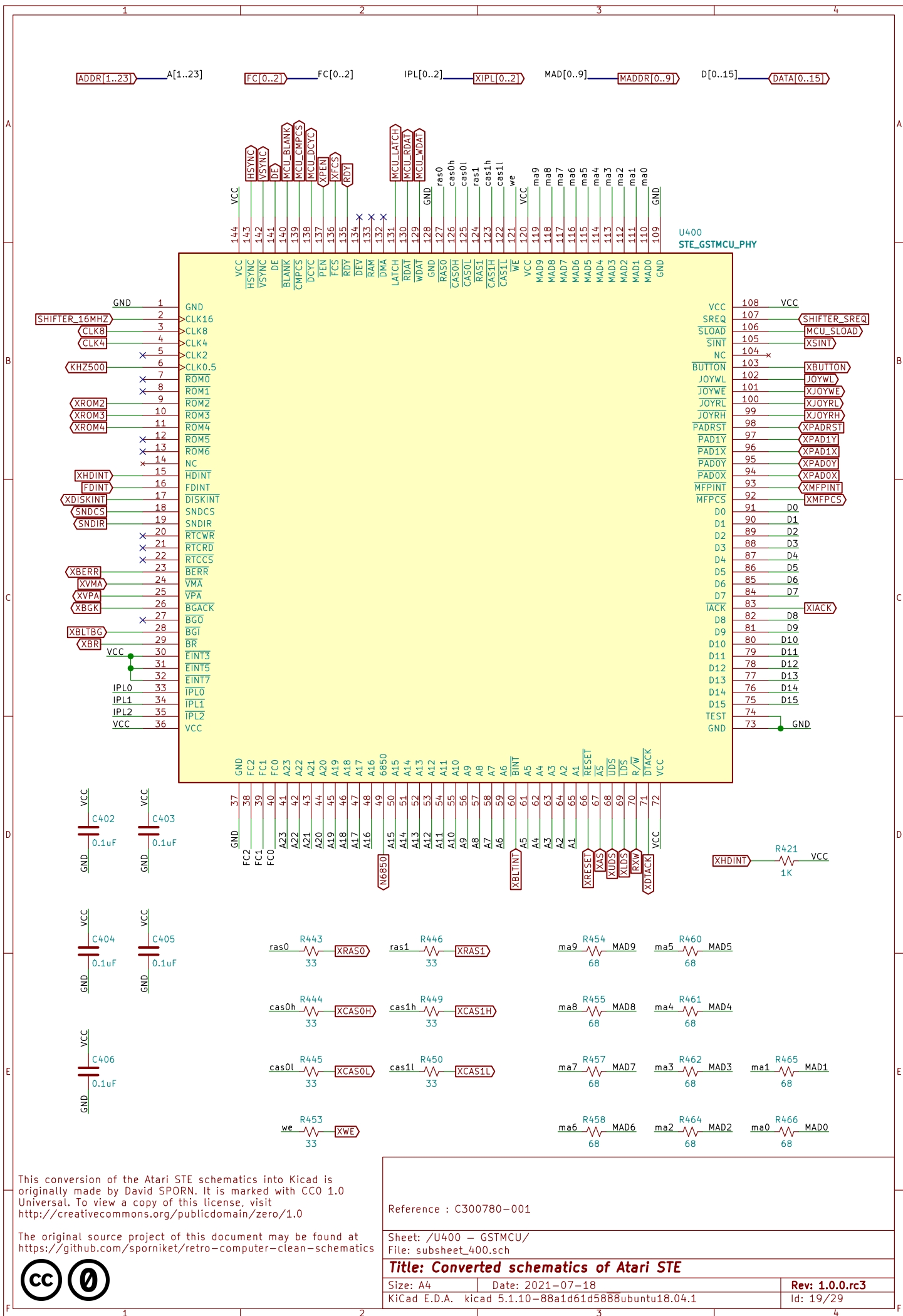


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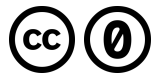


Reference : C300780-001		
Sheet: /U303 - SCLK & CLK2 clocks/ File: subsheet_303.sch		
Title: Converted schematics of Atari STE		
Size: A4	Date: 2021-07-18	Rev: 1.0.0.rc3
KiCad E.D.A.	kiCad 5.1.10-88a1d61d5888ubuntu18.04.1	Id: 18/29

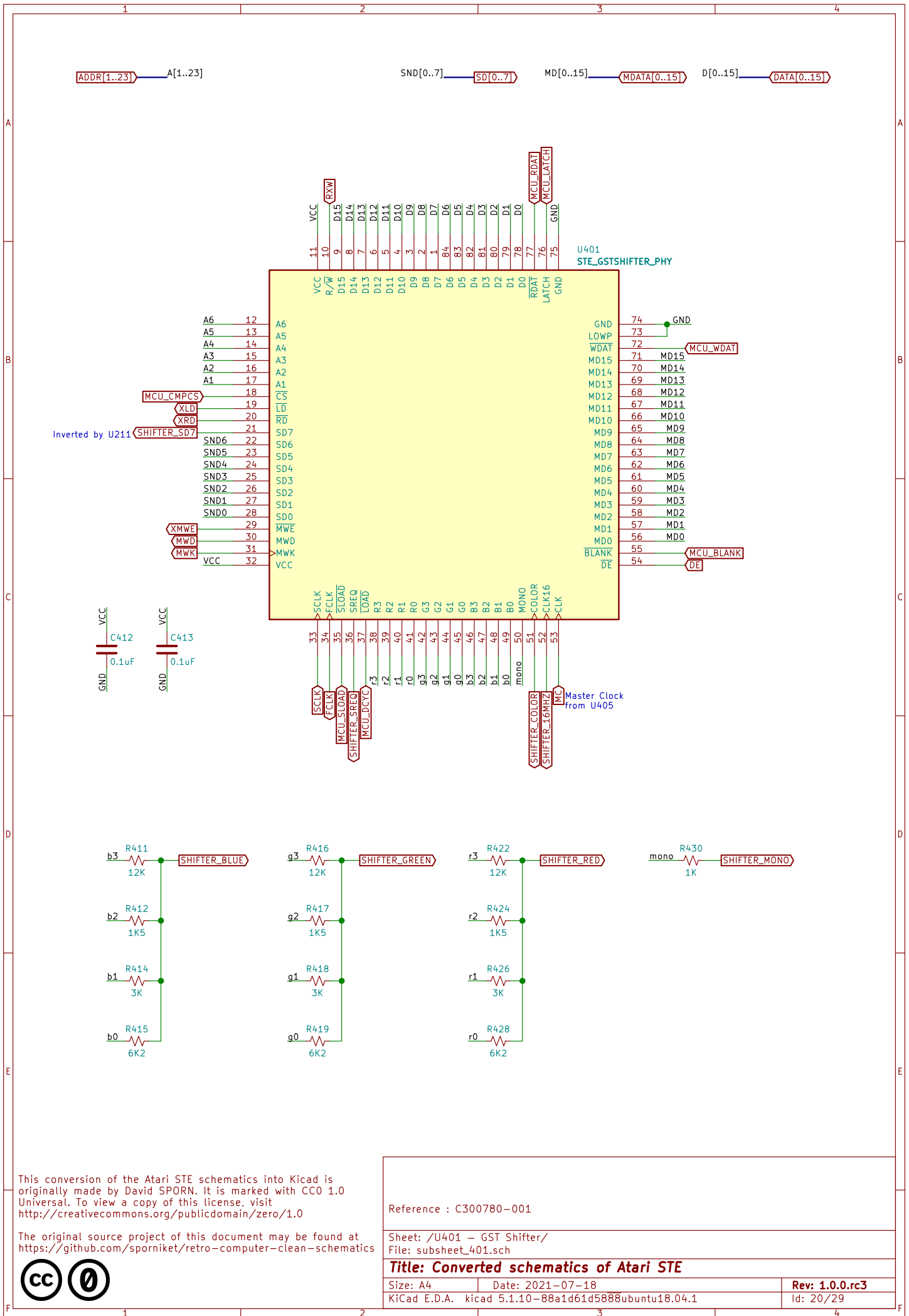


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Reference : C300780-001		
Sheet: /U400 - GSTMCU/		
File: subsheet_400.sch		
Title: Converted schematics of Atari STE		
Size: A4	Date: 2021-07-18	Rev: 1.0.0.rc3
KiCad E.D.A. kicad 5.1.10-88a1d61d5888ubuntu18.04.1		Id: 19/29

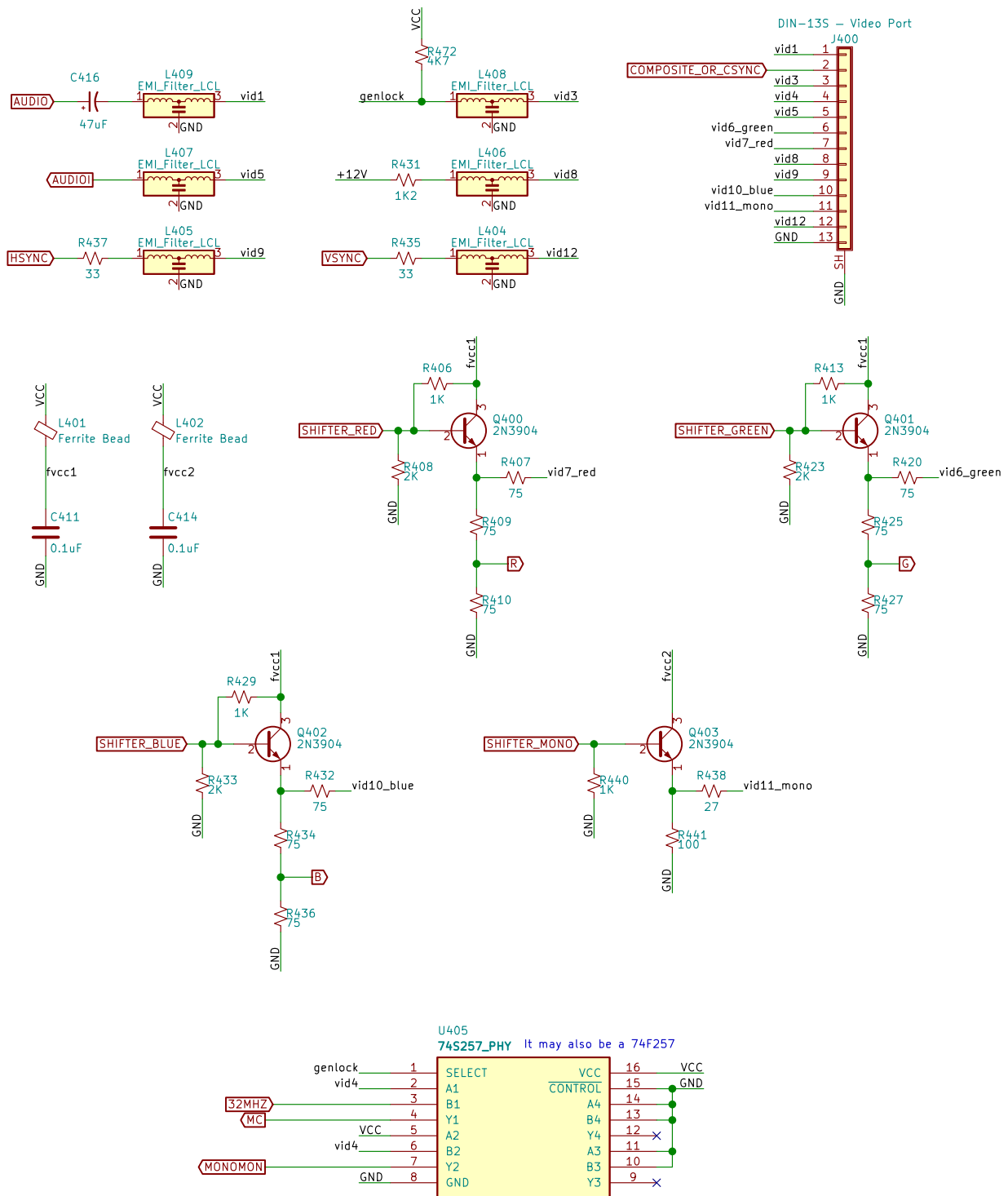


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Reference : C300780-001		
Sheet: /U401 - GST Shifter/ File: subsheet_401.sch		
Title: Converted schematics of Atari STE		
Size: A4	Date: 2021-07-18	Rev: 1.0.0.rc3
KiCad E.D.A. kicad 5.1.10-88a1d61d5888ubuntu18.04.1		Id: 20/29



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: 2021-07-18

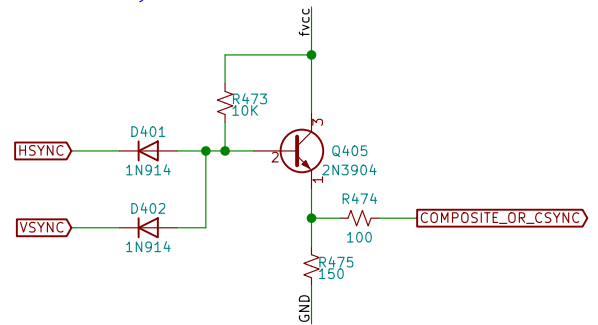
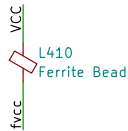
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Rev: 1.0.0.rc3

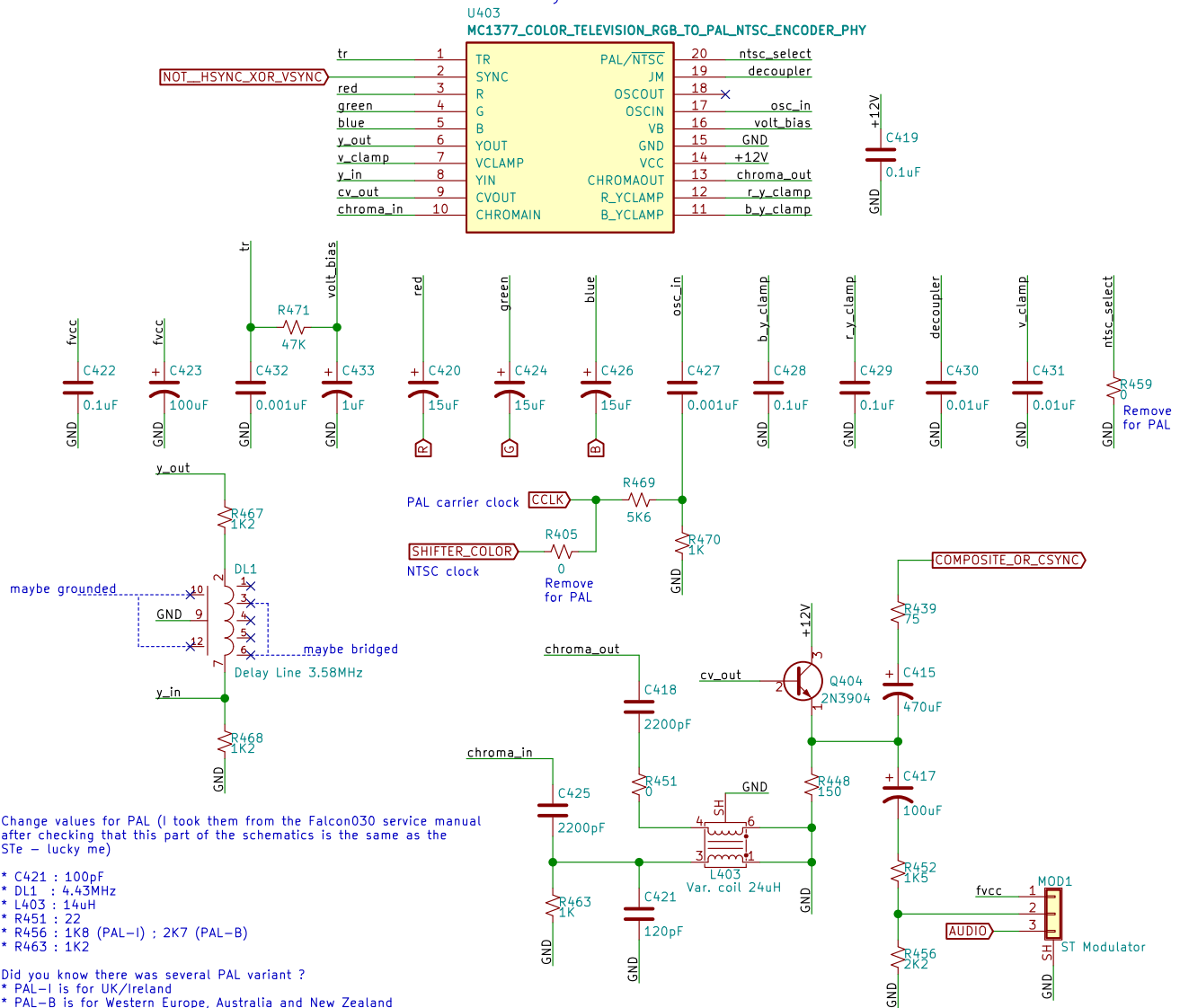
Id: 21/29

Common

Installed ONLY in systems without modulator



Installed ONLY in systems with modulator



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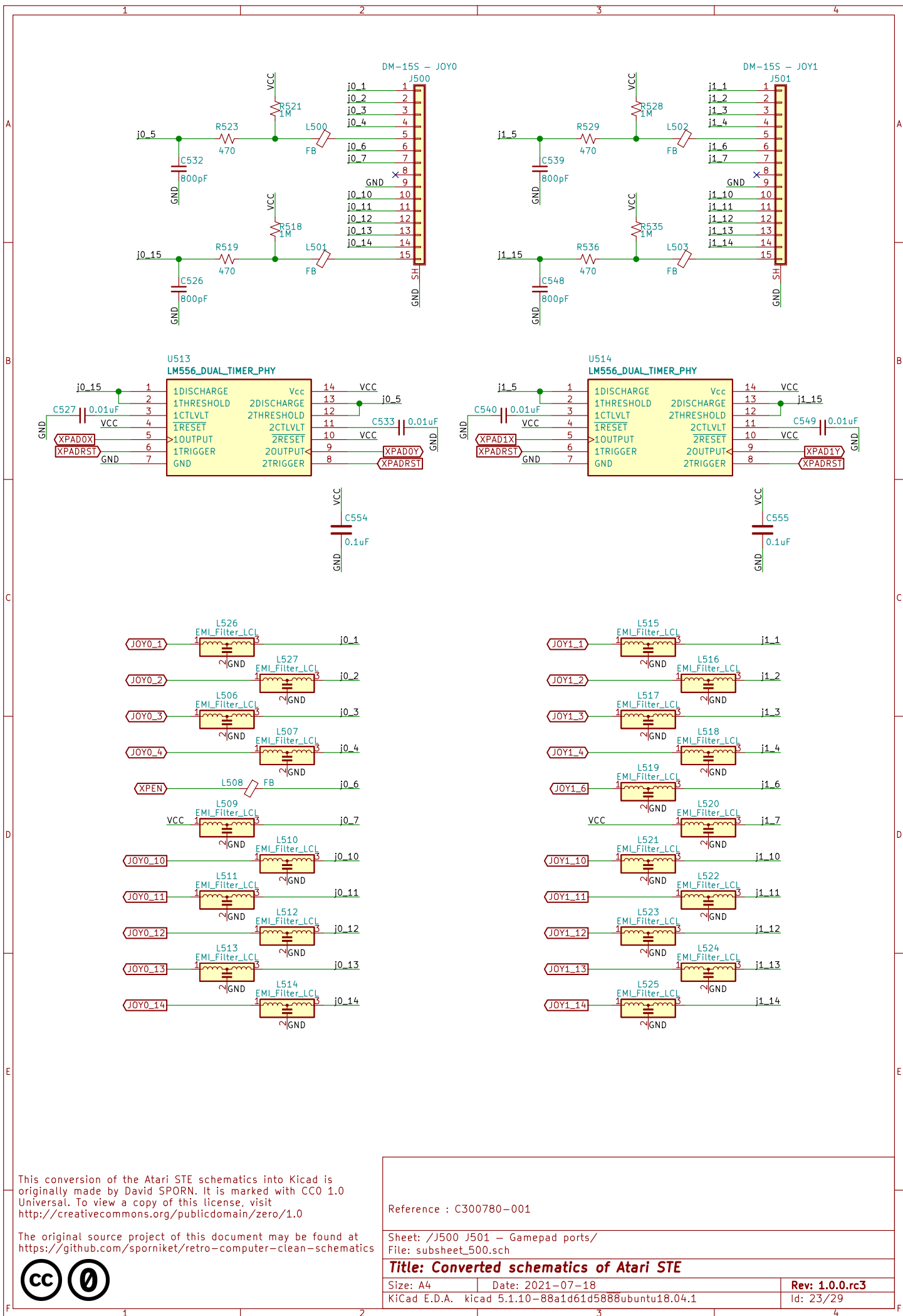
Reference : C300780-001

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

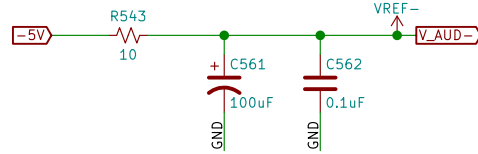
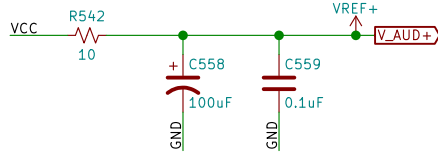
Title: Converted schematics of Atari STE

Size: A4 Date: 2021-07-18
Kicad E.D.A. kicad 5.1.10-88a1d61d5888ubuntu18.04.1

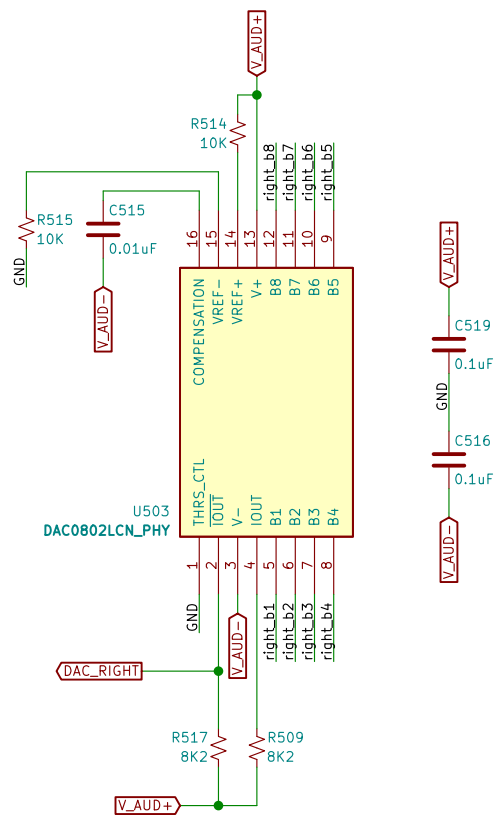
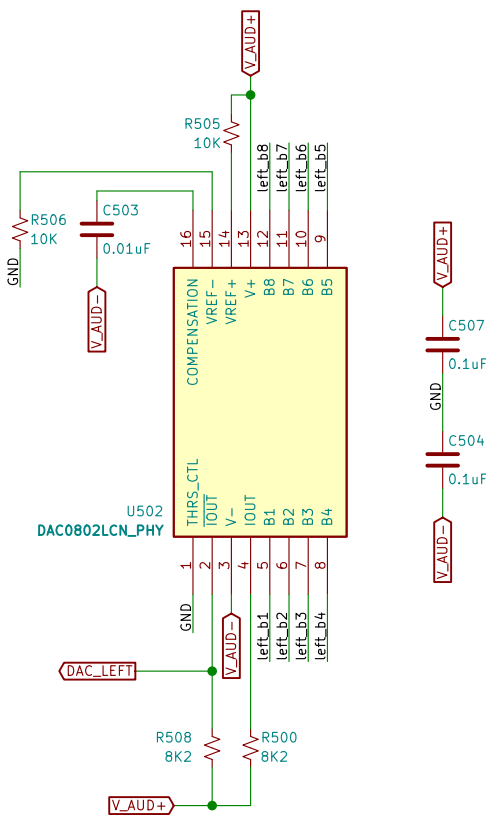
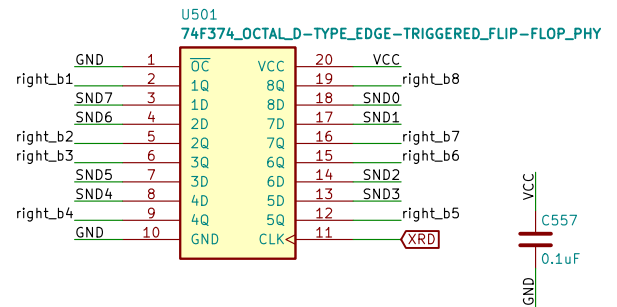
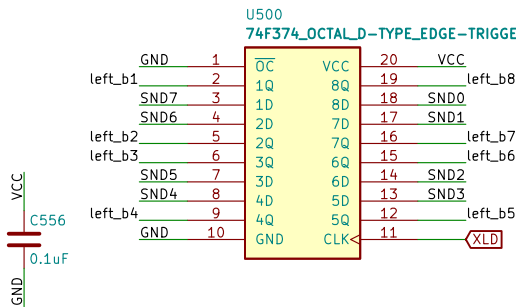
Rev: 1.0.0.rc3
Id: 22/29



SD[0..7] SND[0..7]



Ground plane this area
Use 1% resistors



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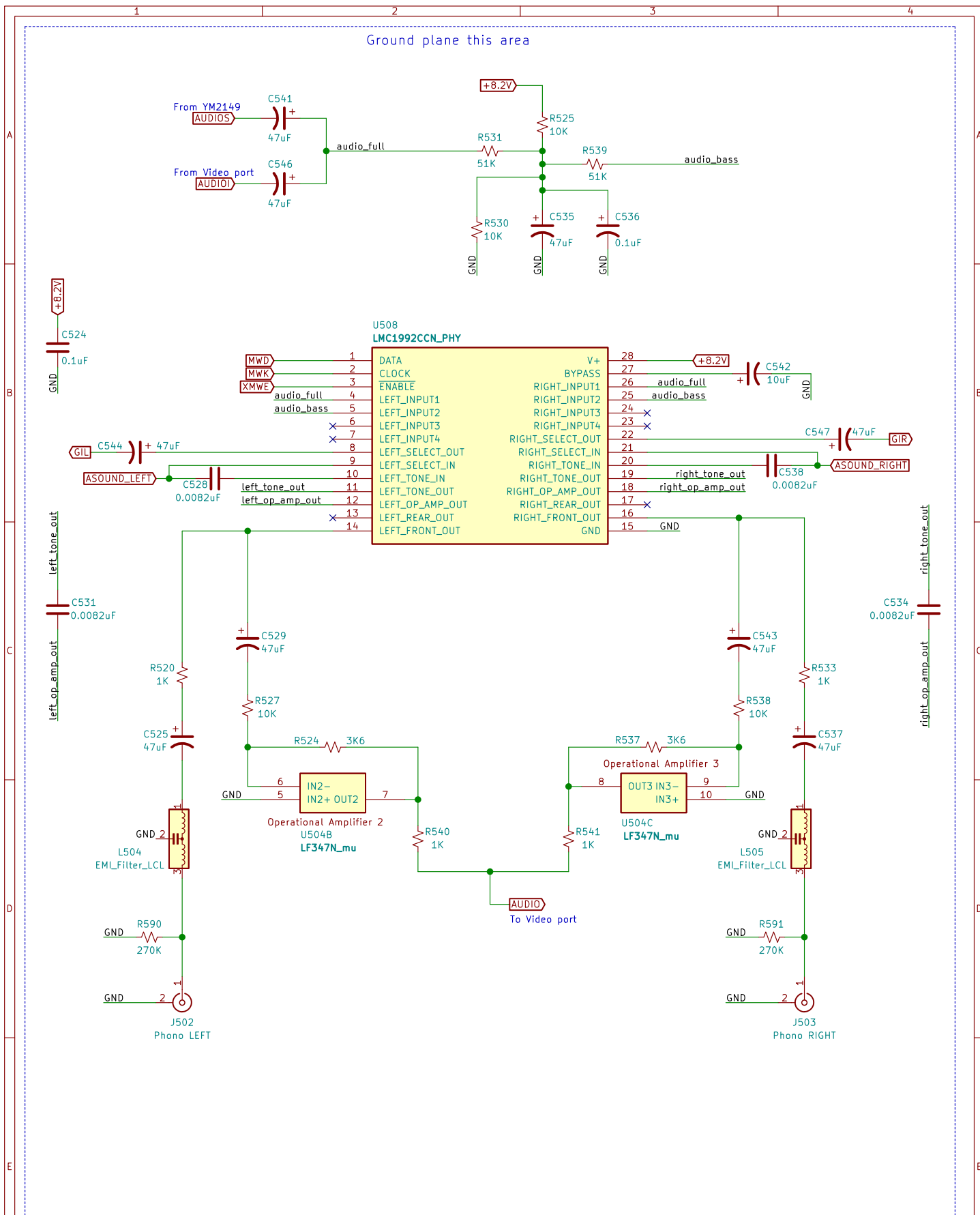
Reference : C300780-001

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

Title: Converted schematics of Atari STE

Size: A4 Date: 2021-07-18
KiCad E.D.A. kicad 5.1.10-88a1d61d5888ubuntu18.04.1

Rev: 1.0.0.rc3
Id: 25/29



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Reference : C300780-001

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

Title: Converted schematics of Atari STE

Size: A4

Date: 2021-07-18

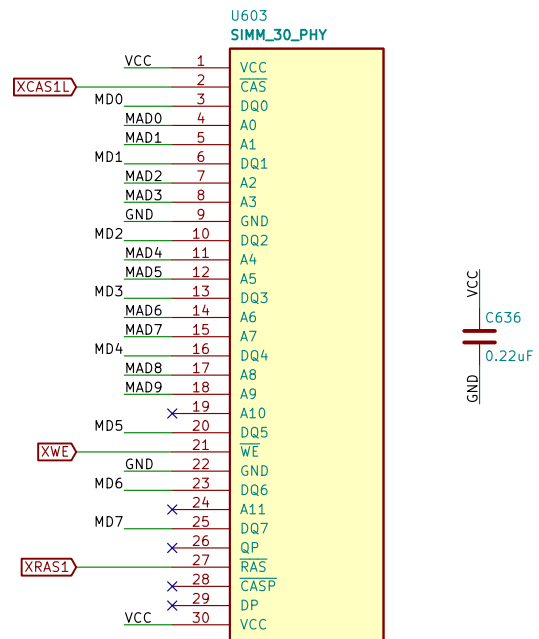
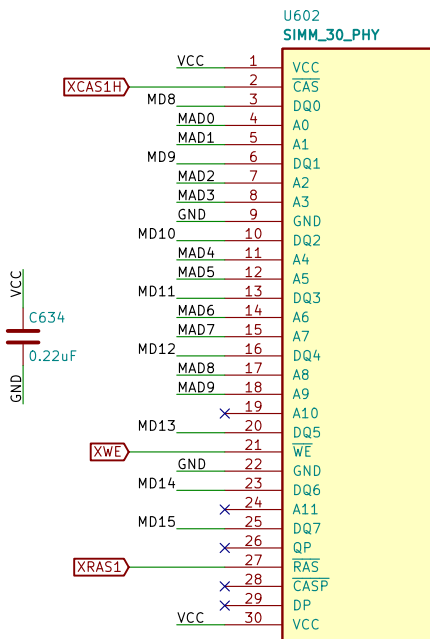
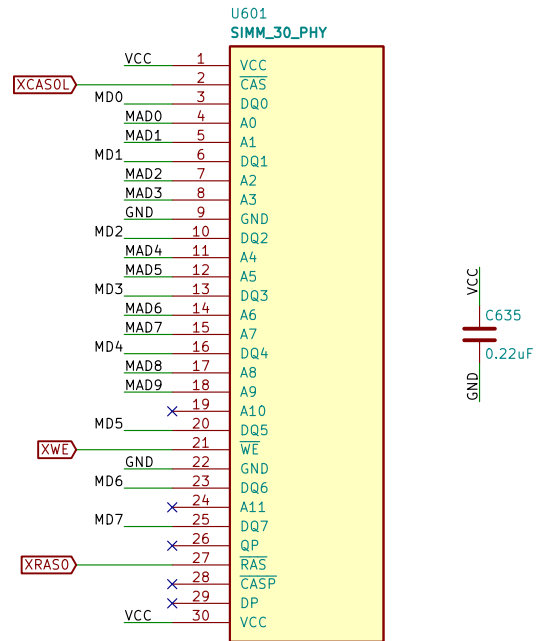
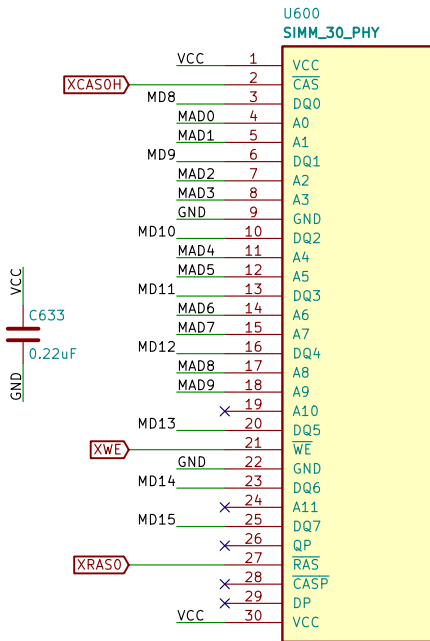
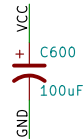
Rev: 1.0.0.rc3

KiCad E.D.A. kicad 5.1.10-88a1d61d5888ubuntu18.04.1

Id: 27/29

MADDR[0..9] → MAD[0..9]

MD[0..15] → MDATA[0..15]



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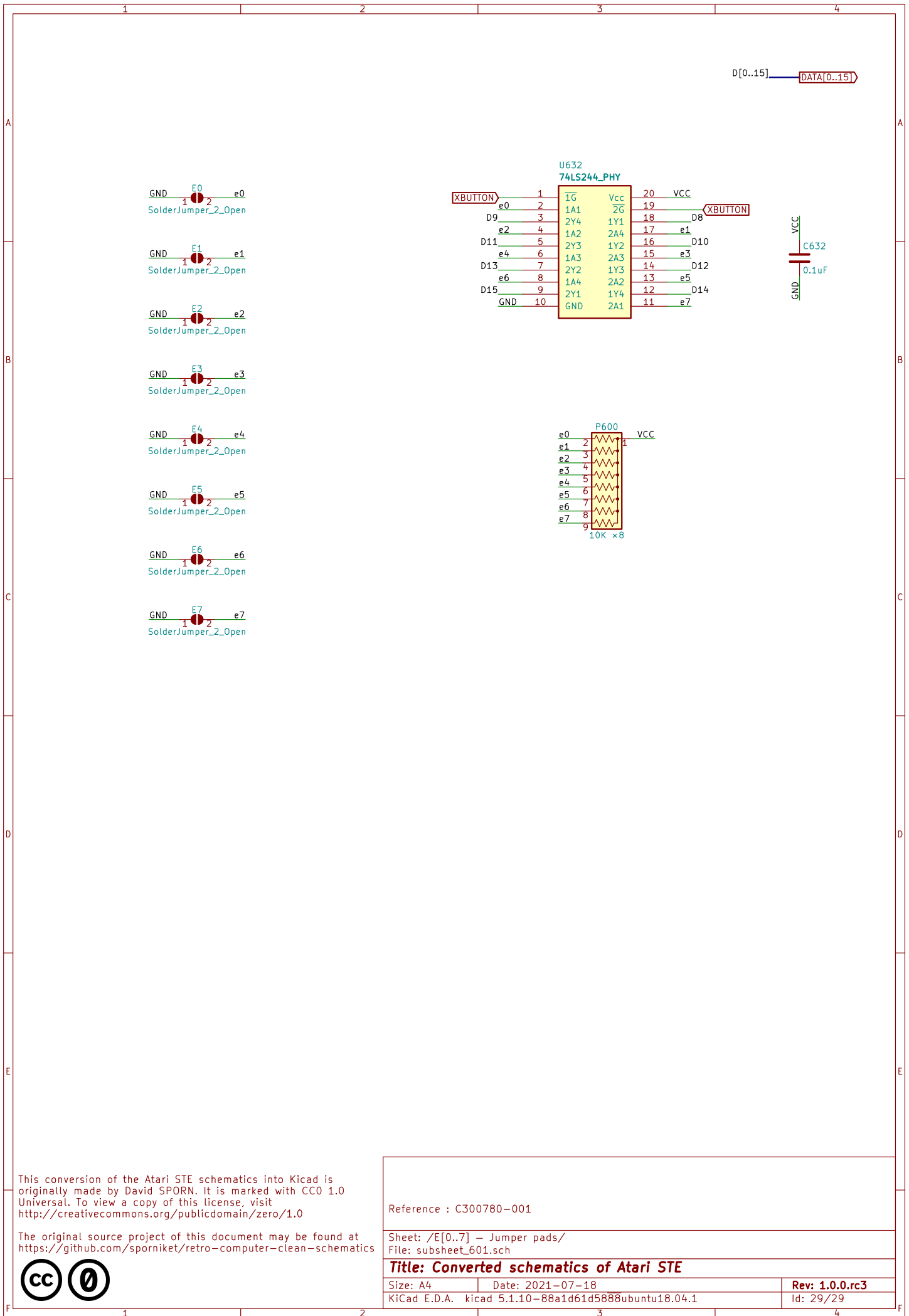
Reference : C300780-001

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

Title: Converted schematics of Atari STE

Size: A4 Date: 2021-07-18
KiCad E.D.A. kicad 5.1.10-88a1d61d5888ubuntu18.04.1

Rev: 1.0.0.rc3
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: 2021-07-18	Rev: 1.0.0.rc3
KiCad E.D.A. kicad 5.1.10-88a1d61d5888ubuntu18.04.1		Id: 29/29