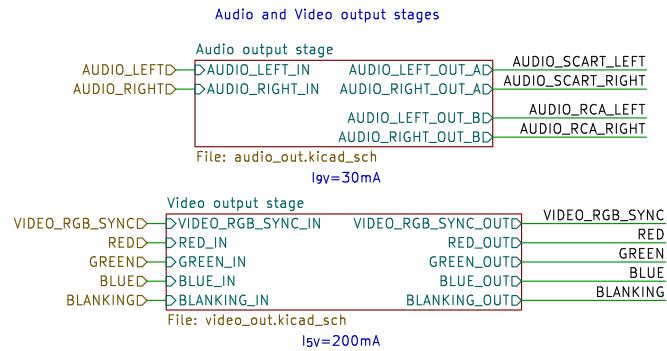
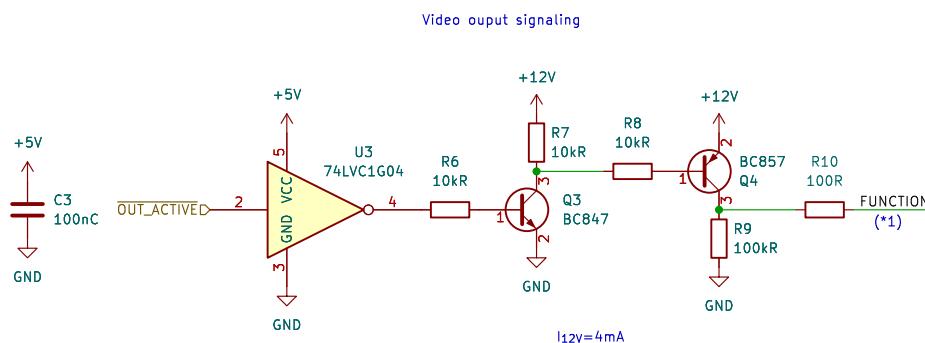


1 2 3 4 5 6

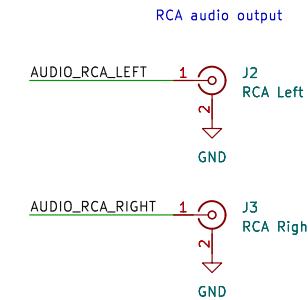
A



B

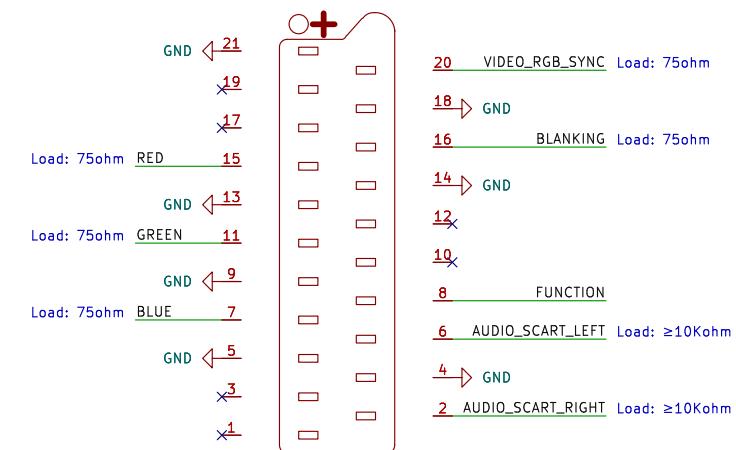


D



SCART output

J4 SCART-F



(*1) FUNCTION pin has the following signaling:
Level 0: 0 V to +2 V (SCART off)
Level 1A: +4.5 V to +7 V (SCART on, 16:9)
Level 1B: +9.5 V to +12 V (SCART on)

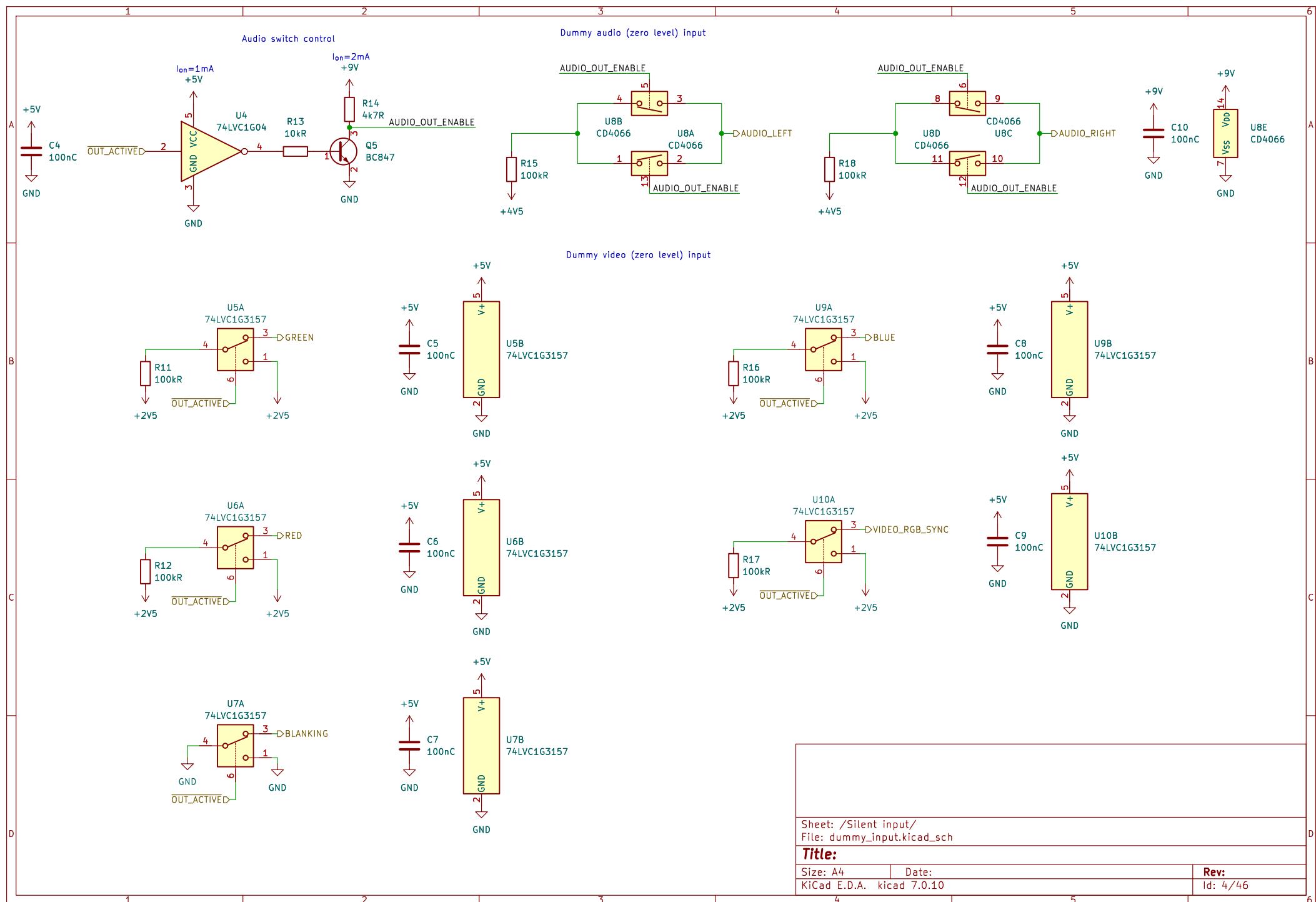
The circuit doesn't distinguish between levels 1A and 1B as these are frequently not respected in consumer products. This way it is simpler to default to 4:3 format (12V) when the video output is active and if needed manually adjust the TV to 16:9.

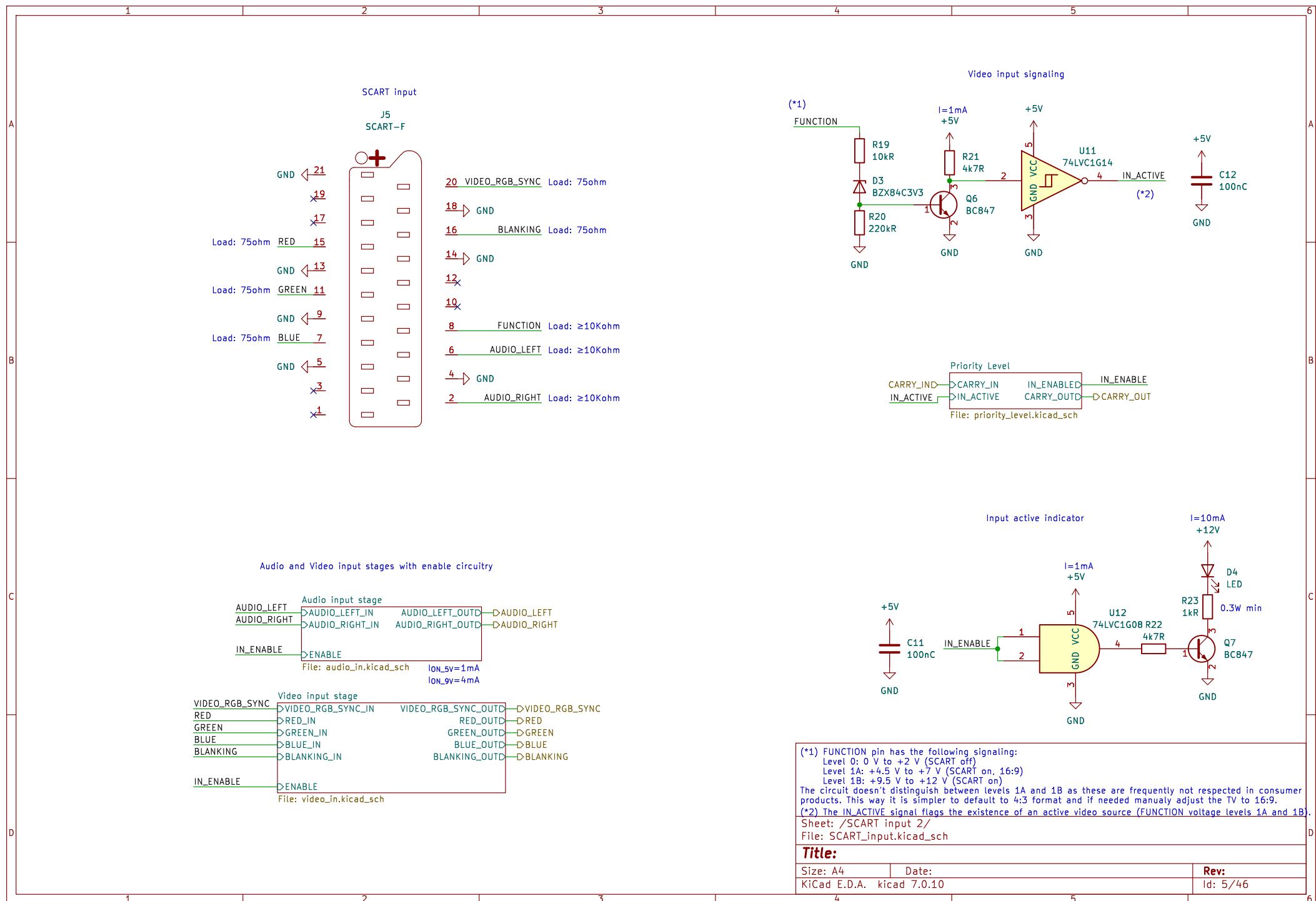
Sheet: /SCART output/
File: SCART_output.kicad_sch

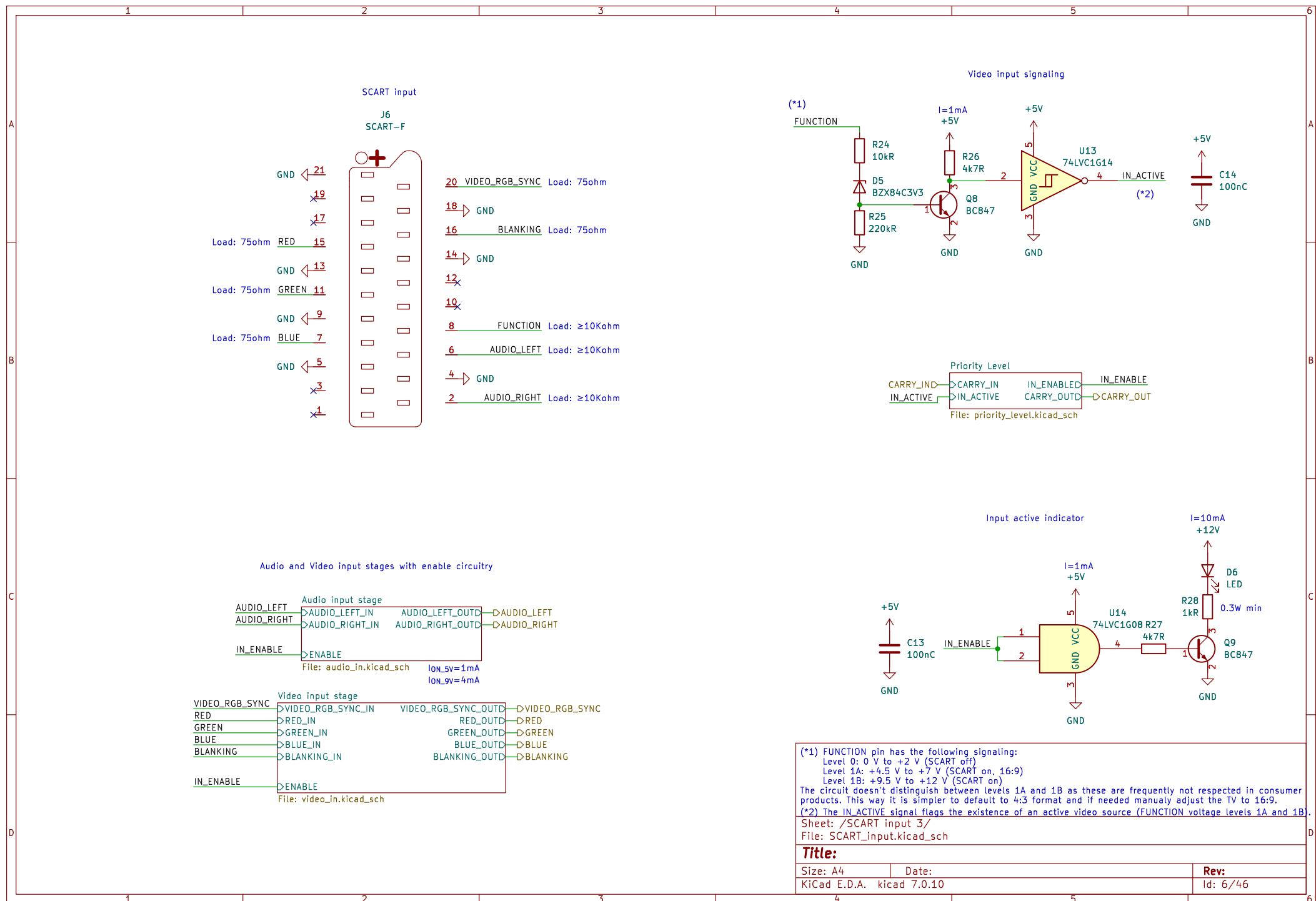
Title:

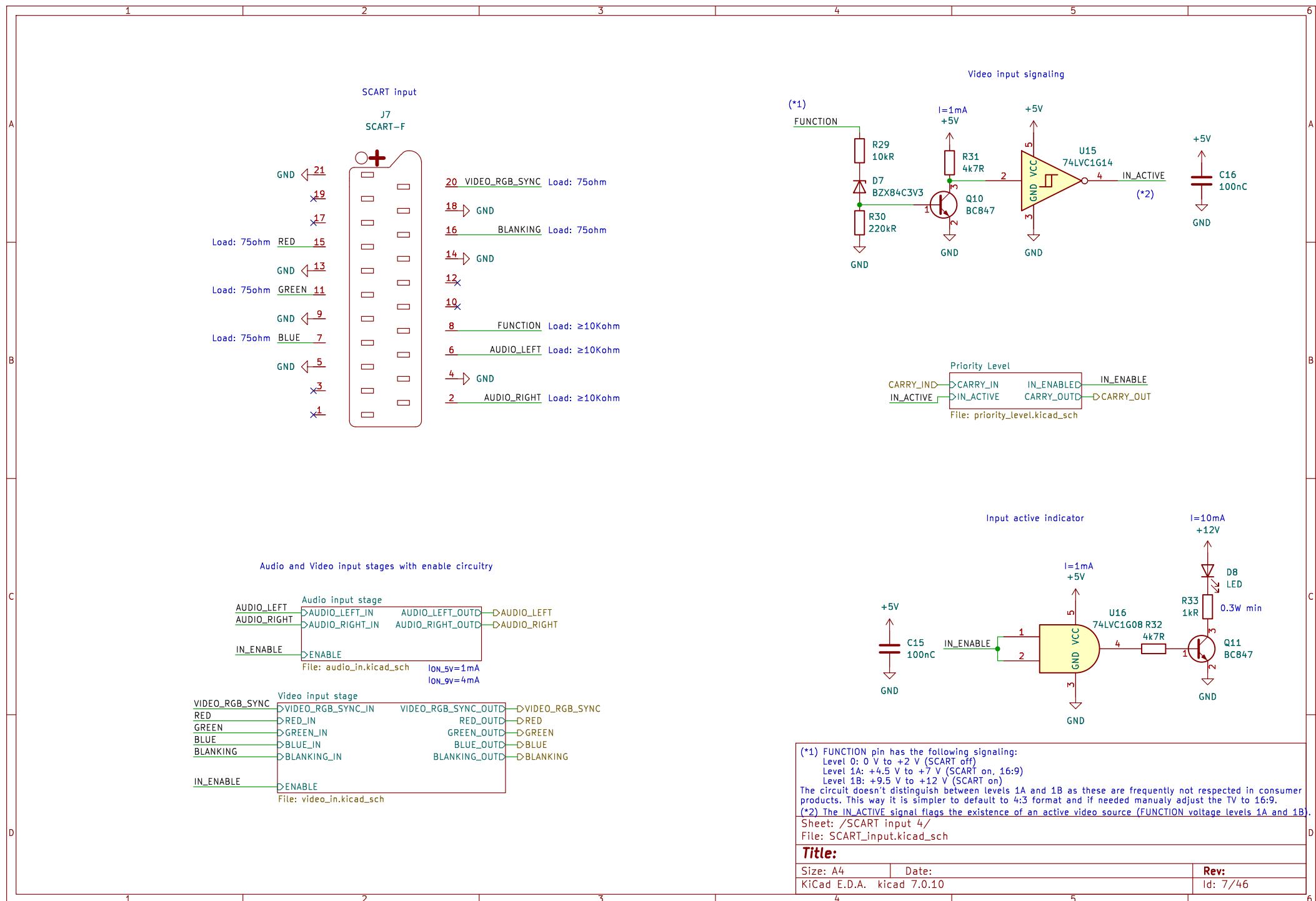
Size: A4	Date:
KiCad E.D.A. kicad 7.0.10	Rev: Id: 3/46

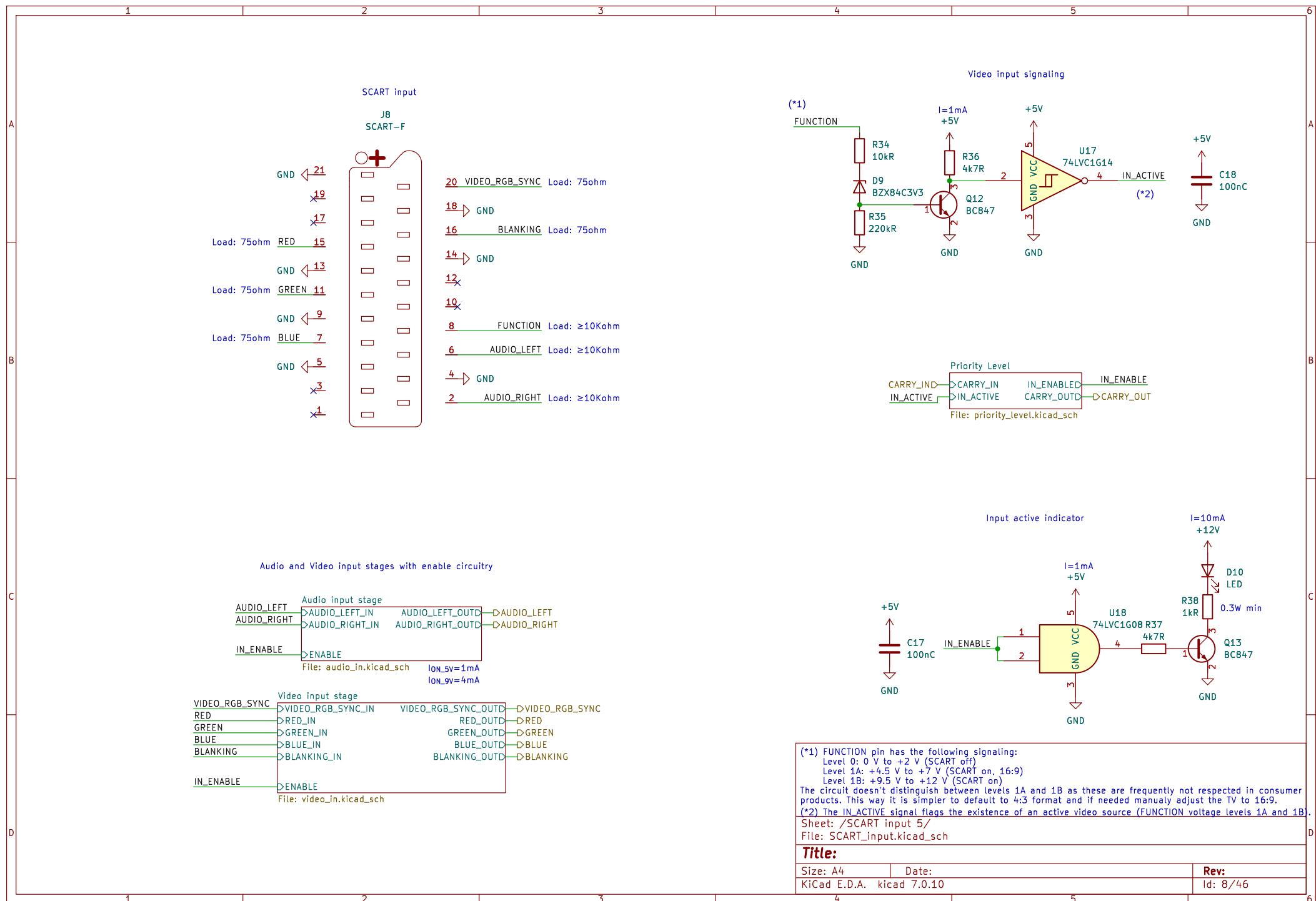
1 2 3 4 5 6

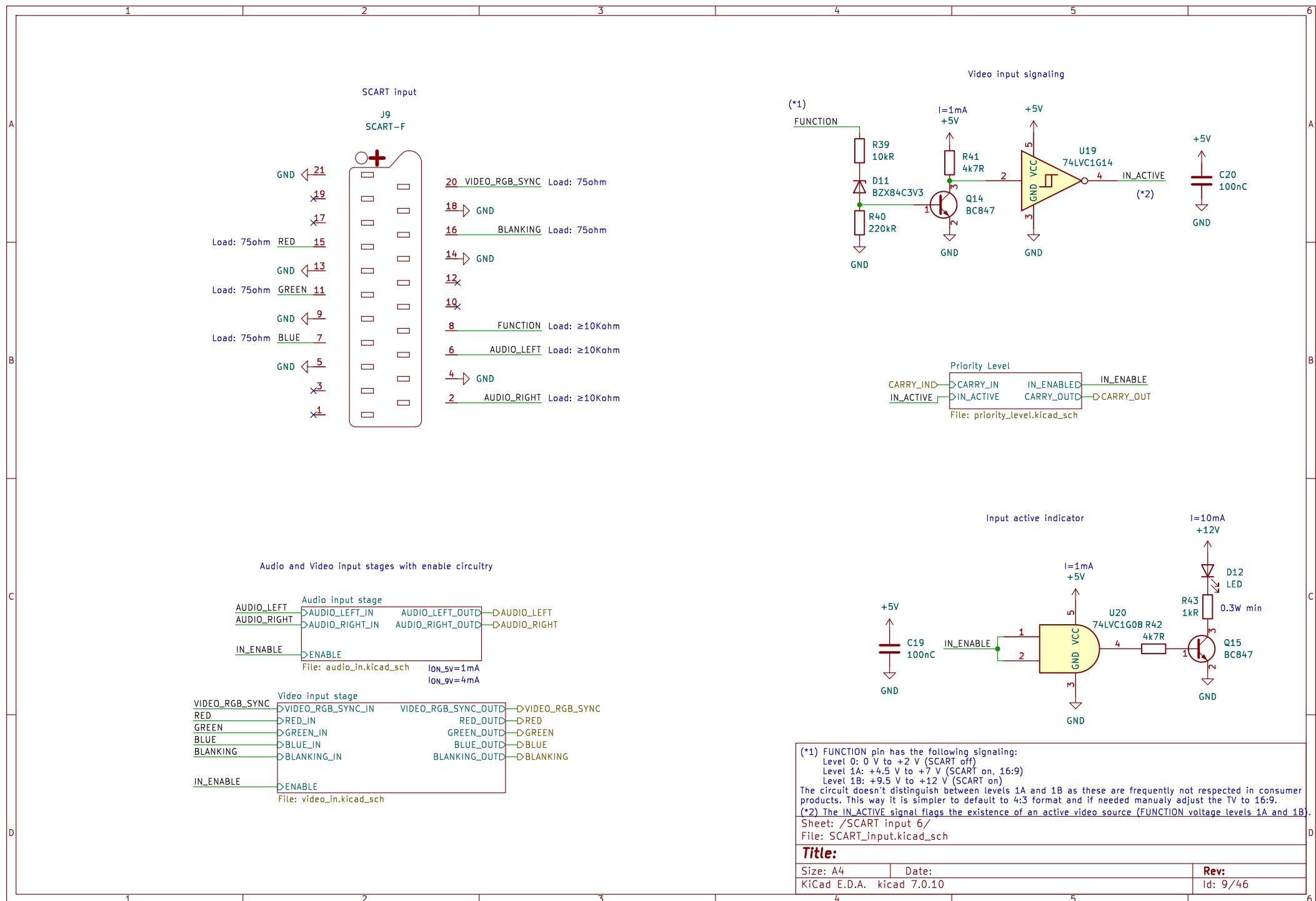


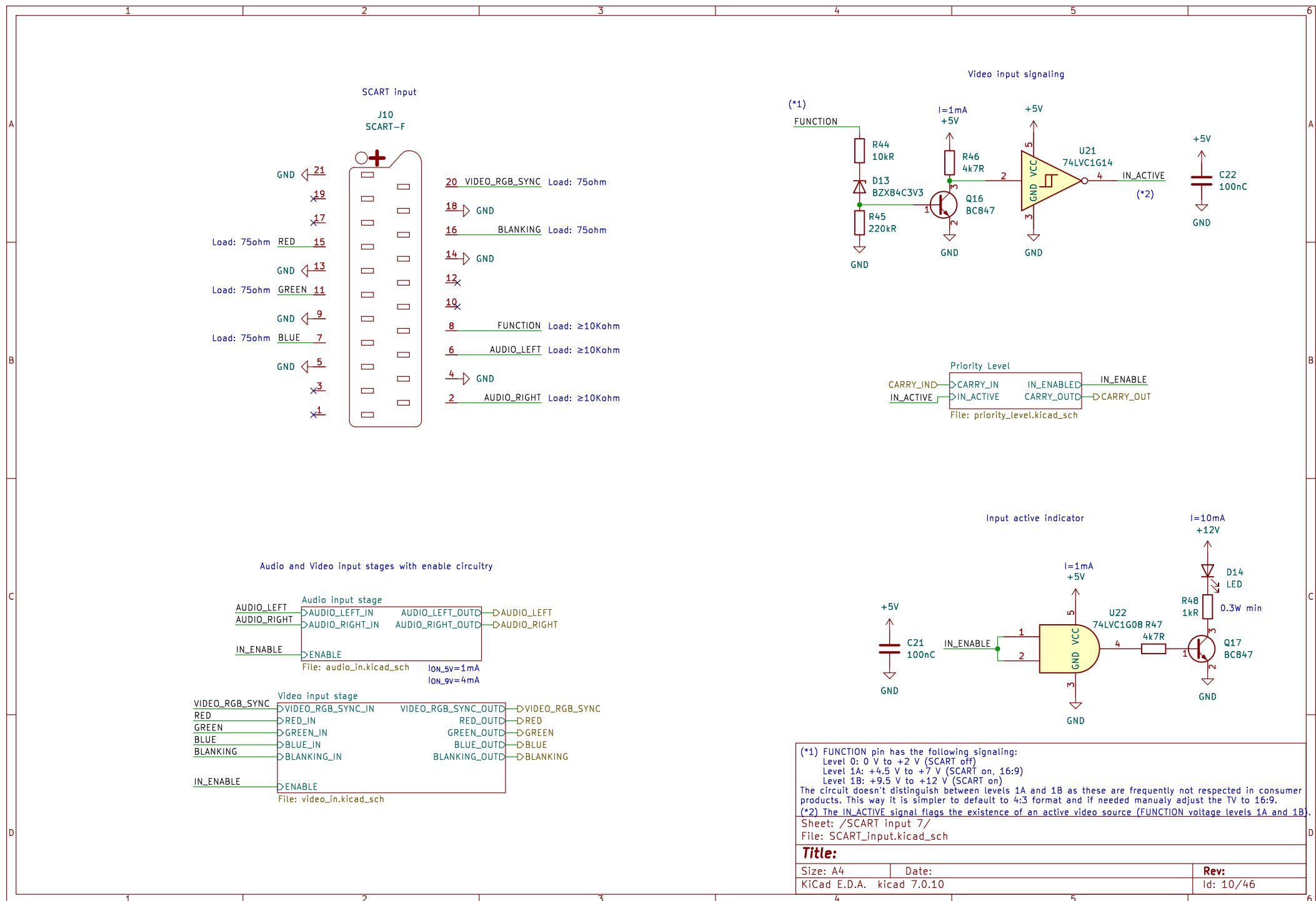


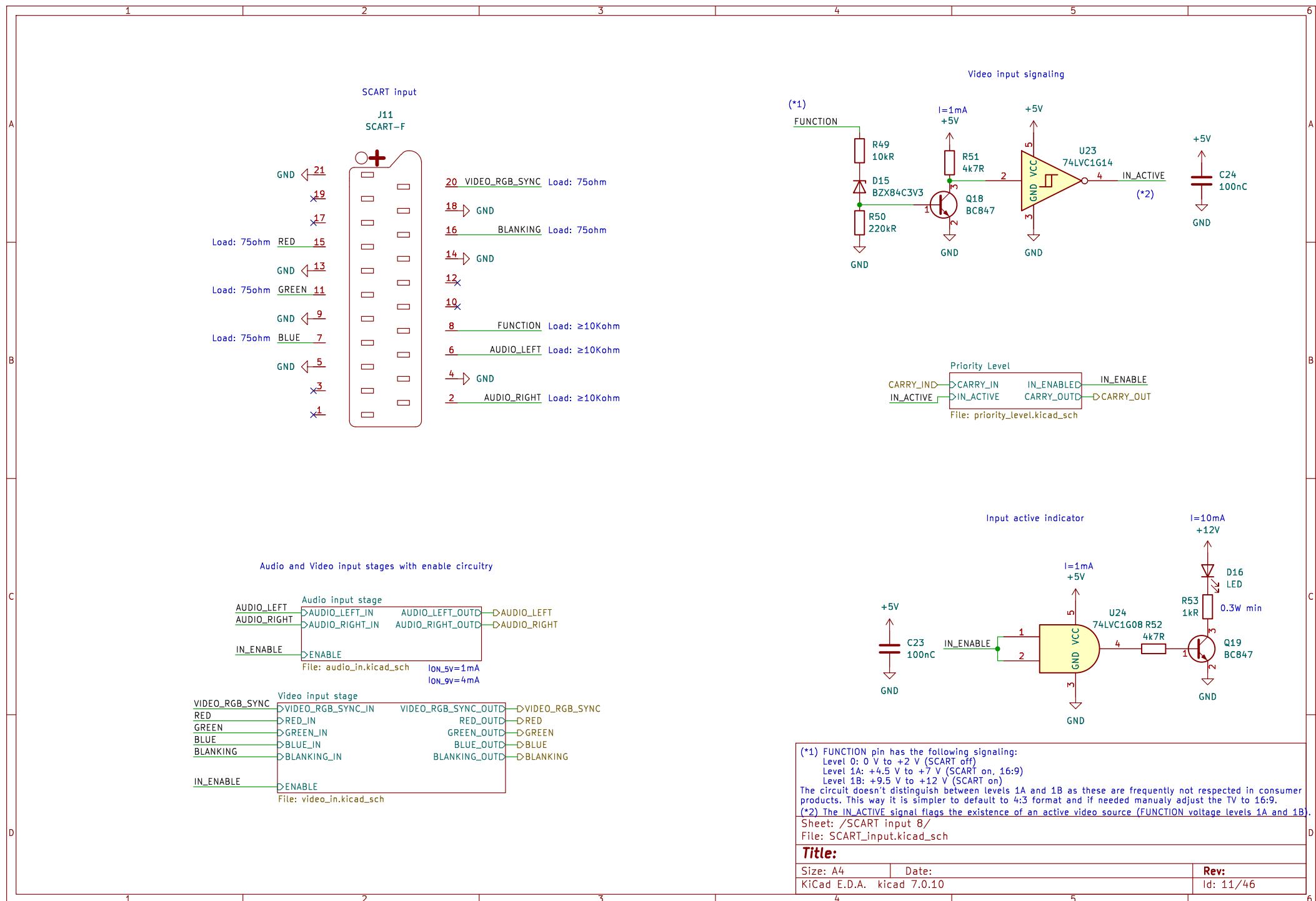


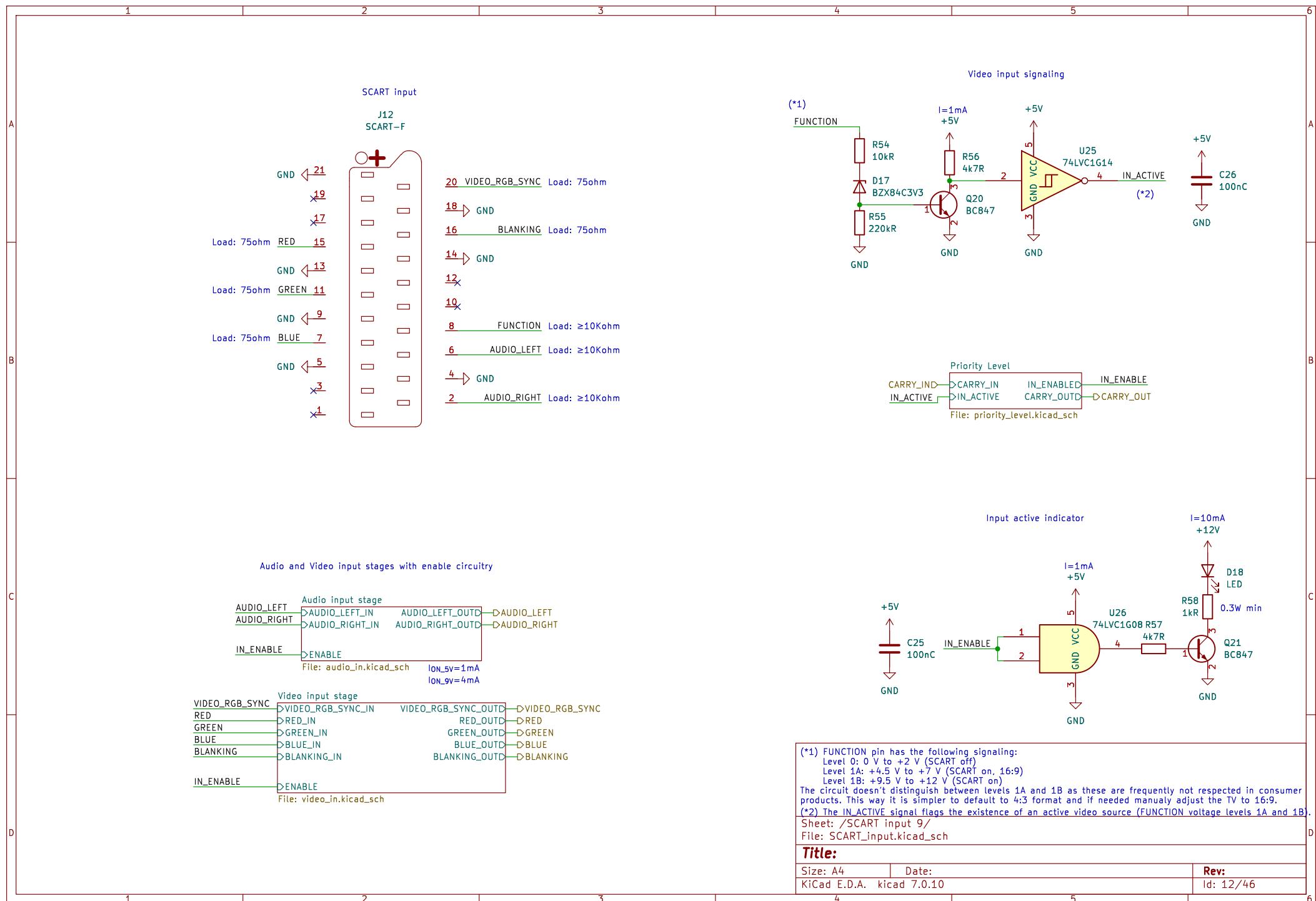


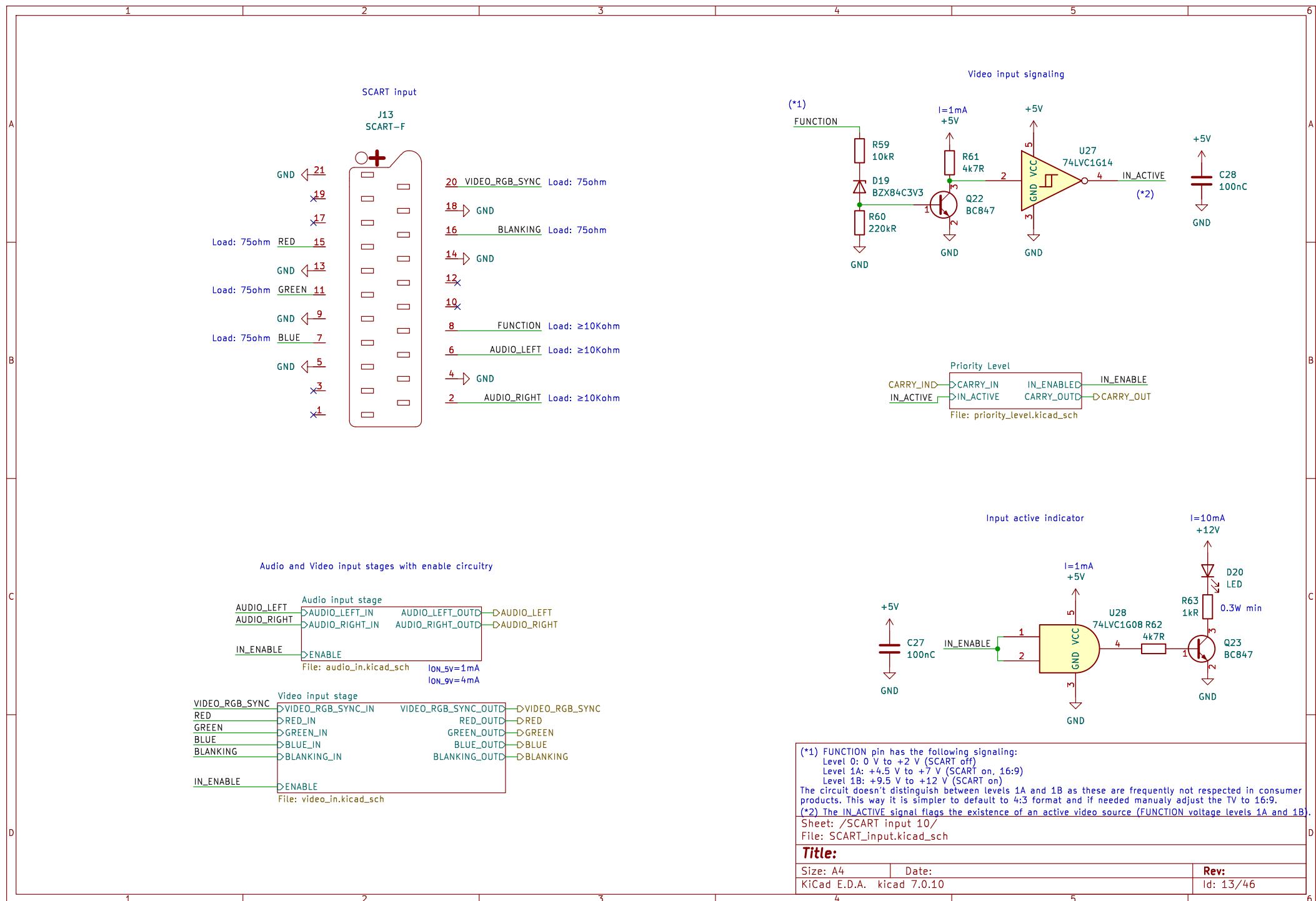


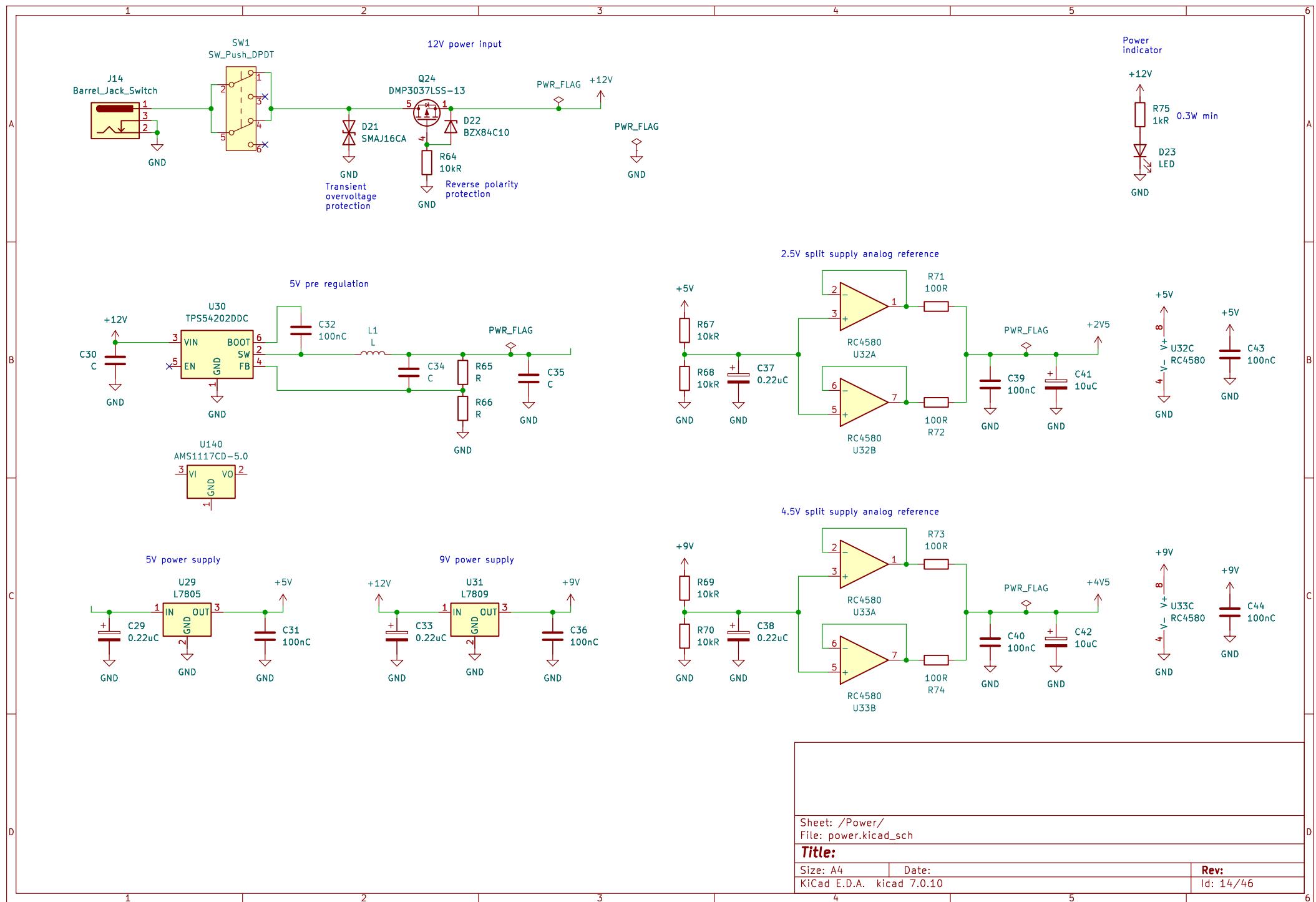






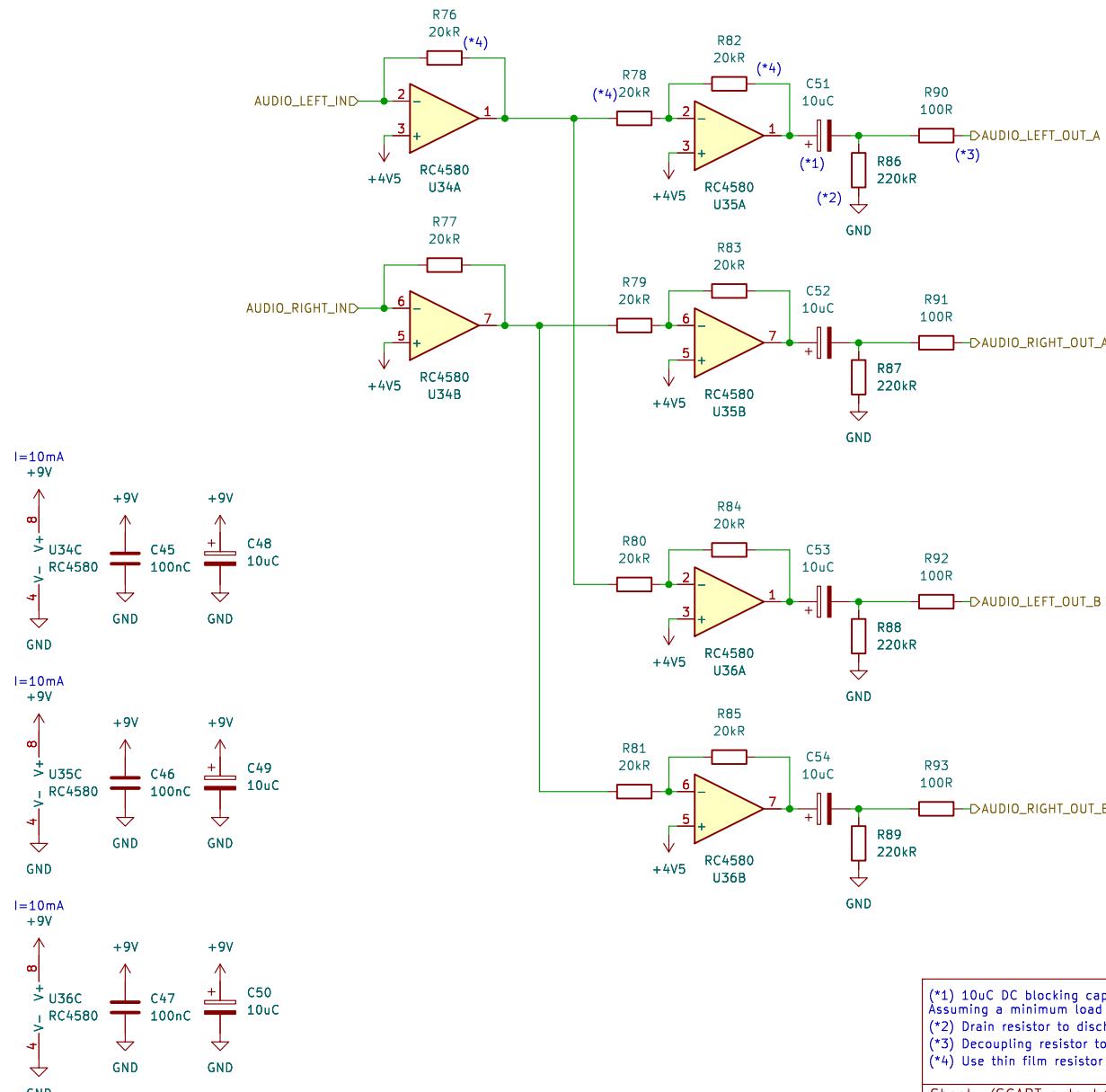






1 2 3 4 5 6

Signal buffering and double line amplifier stage



(*)1) $10\mu C$ DC blocking capacitor.
Assuming a minimum load impedance of $10k\ \Omega$, the cut-off (-3 db point) frequency will be at $1.6Hz$.
(*)2) Drain resistor to discharge the DC blocking capacitor when output not connected to avoid pop sounds.
(*)3) Decoupling resistor to isolate the opamp from the line shunt-capacitance.
(*)4) Use thin film resistor with 1% or better tolerance for lower noise and better gain match.

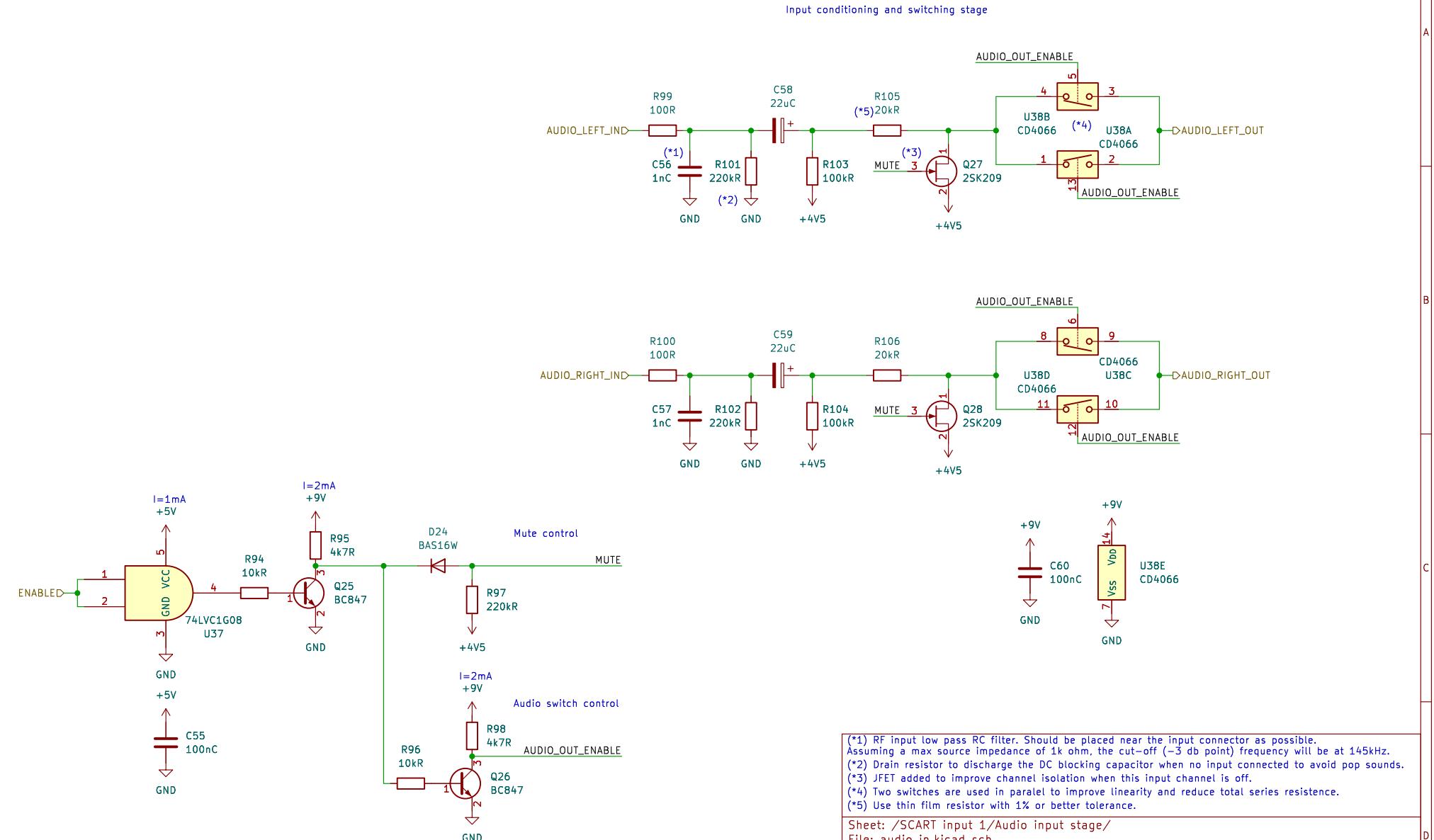
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File: audio_out.kicad_sch

Title:

Size: A4	Date:
KiCad E.D.A.	kicad 7.0.10

Rev:	Id: 25/46
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1 2 3 4 5 6



1 2 3 4 5 6

1 2 3 4 5 6

1 2 3 4 5 6

A

A

B

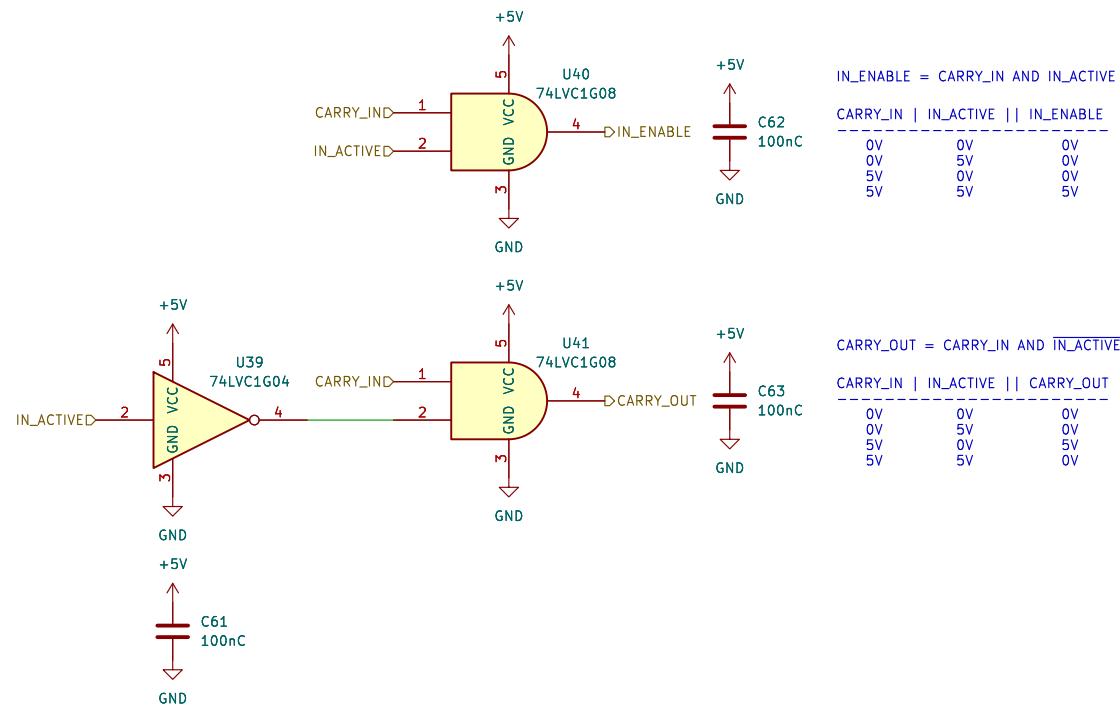
B

C

C

D

D



Sheet: /SCART input 1/Priority Level/
File: priority_level.kicad_sch

Title:

Size: A4 | Date:
KiCad E.D.A. kicad 7.0.10

Rev:
Id: 28/46

1 2 3 4 5 6

1 2 3 4 5 6

A

A

B

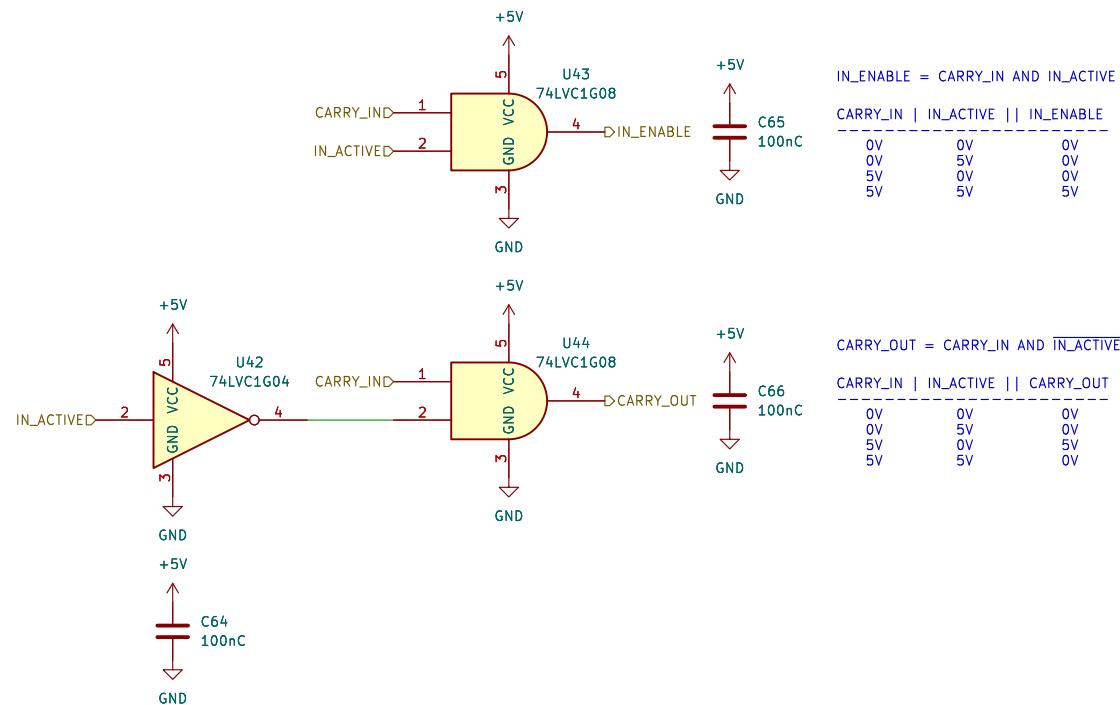
B

C

C

D

D



Sheet: /SCART input 2/Priority Level/
File: priority_level.kicad_sch

Title:

Size: A4 Date:
KiCad E.D.A. kicad 7.0.10

Rev:
Id: 29/46

1 2 3 4 5 6

1 2 3 4 5 6

A

A

B

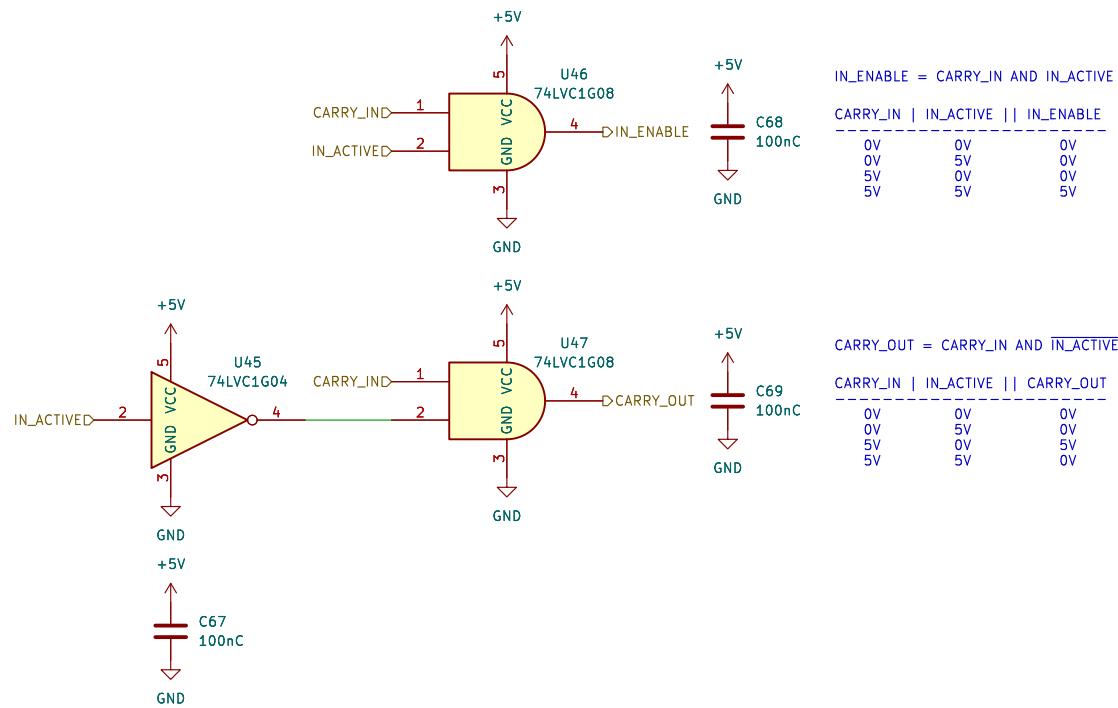
B

C

C

D

D



Sheet: /SCART input 3/Priority Level/
File: priority_level.kicad_sch

Title:

Size: A4 Date:
KiCad E.D.A. kicad 7.0.10

Rev:
Id: 30/46

1 2 3 4 5 6

1 2 3 4 5 6

A

A

B

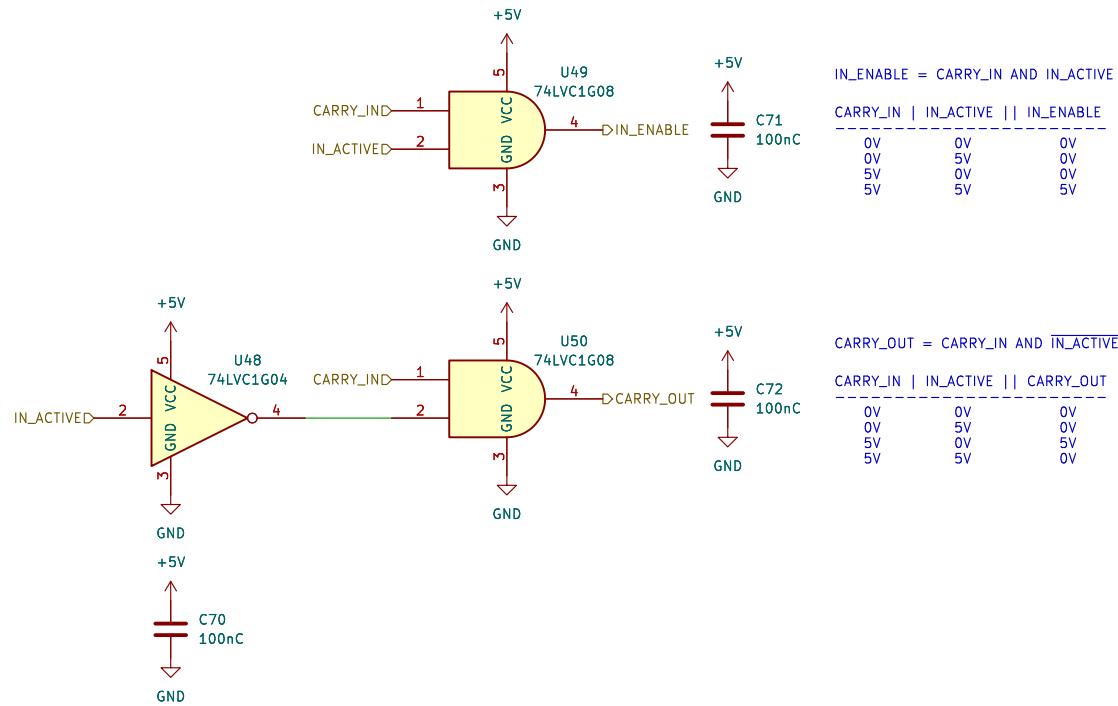
B

C

C

D

D



Sheet: /SCART input 4/Priority Level/
File: priority_level.kicad_sch

Title:

Size: A4 | Date:
KiCad E.D.A. kicad 7.0.10

Rev:
Id: 31/46

1 2 3 4 5 6

1 2 3 4 5 6

A

A

B

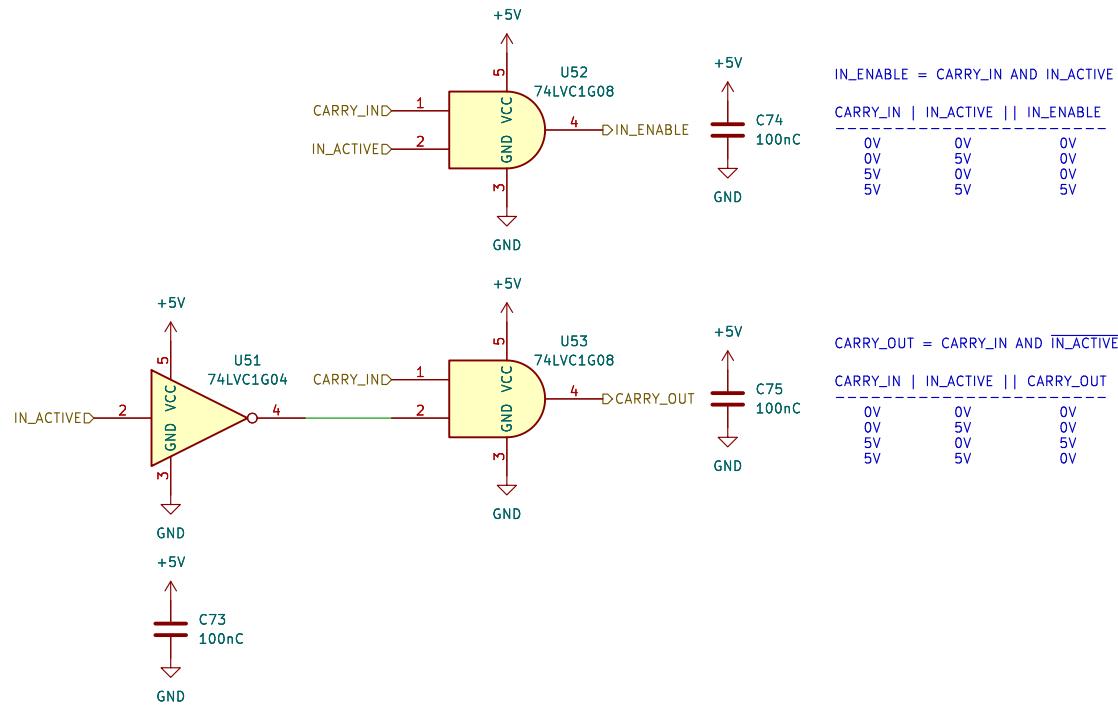
B

C

C

D

D



Sheet: /SCART input 5/Priority Level/
File: priority_level.kicad_sch

Title:

Size: A4 Date:
KiCad E.D.A. kicad 7.0.10

Rev:
Id: 32/46

1 2 3 4 5 6

1 2 3 4 5 6

A

A

B

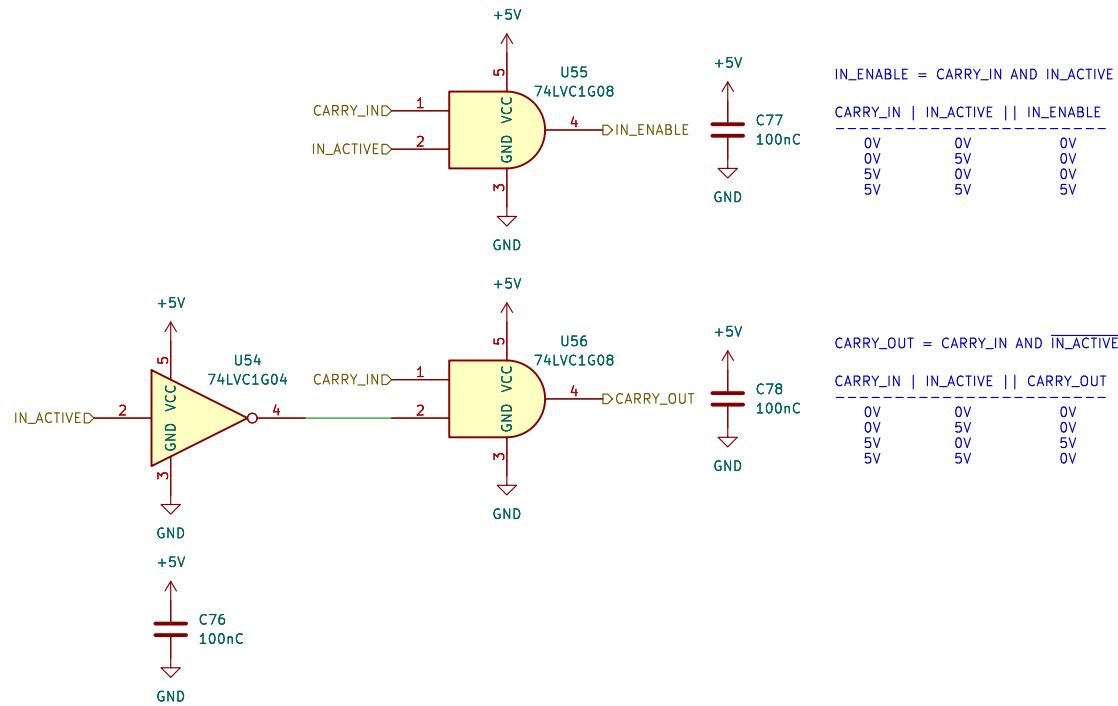
B

C

C

D

D



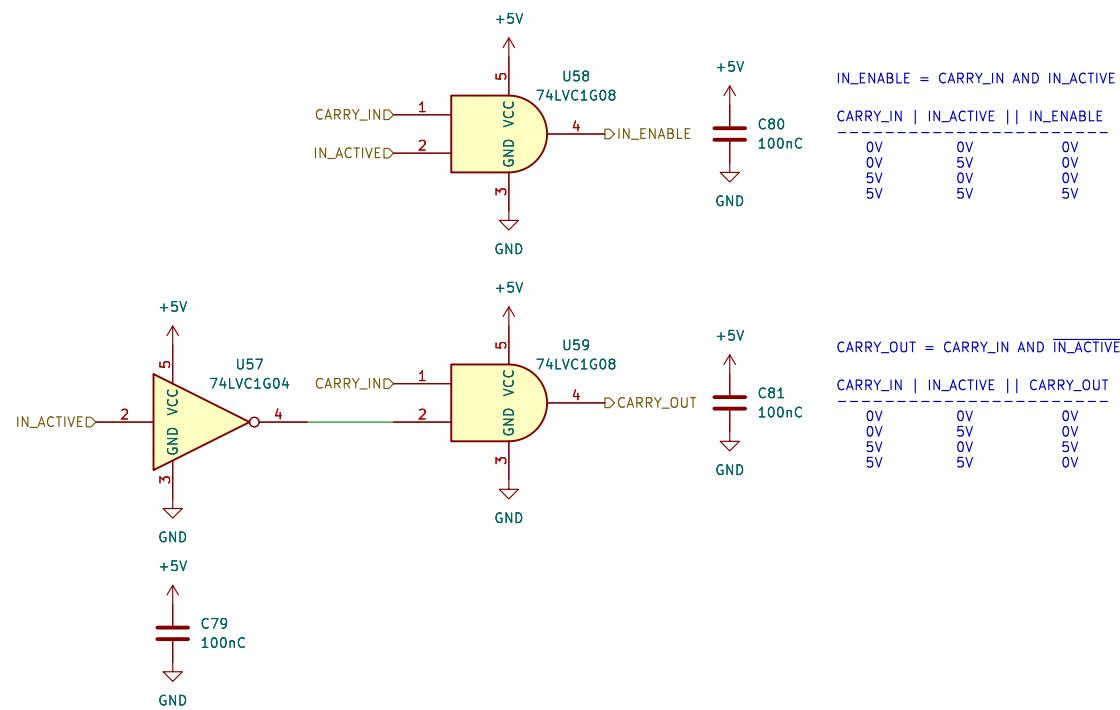
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File: priority_level.kicad_sch

Title:

Size: A4 | Date:
KiCad E.D.A. kicad 7.0.10

Rev:
Id: 33/46

1 2 3 4 5 6



Sheet: /SCART input 7/Priority Level/
File: priority_level.kicad_sch

Title:

Size: A4 | Date:
KiCad E.D.A. kicad 7.0.10

Rev:
Id: 34/46

1 2 3 4 5 6

A

A

B

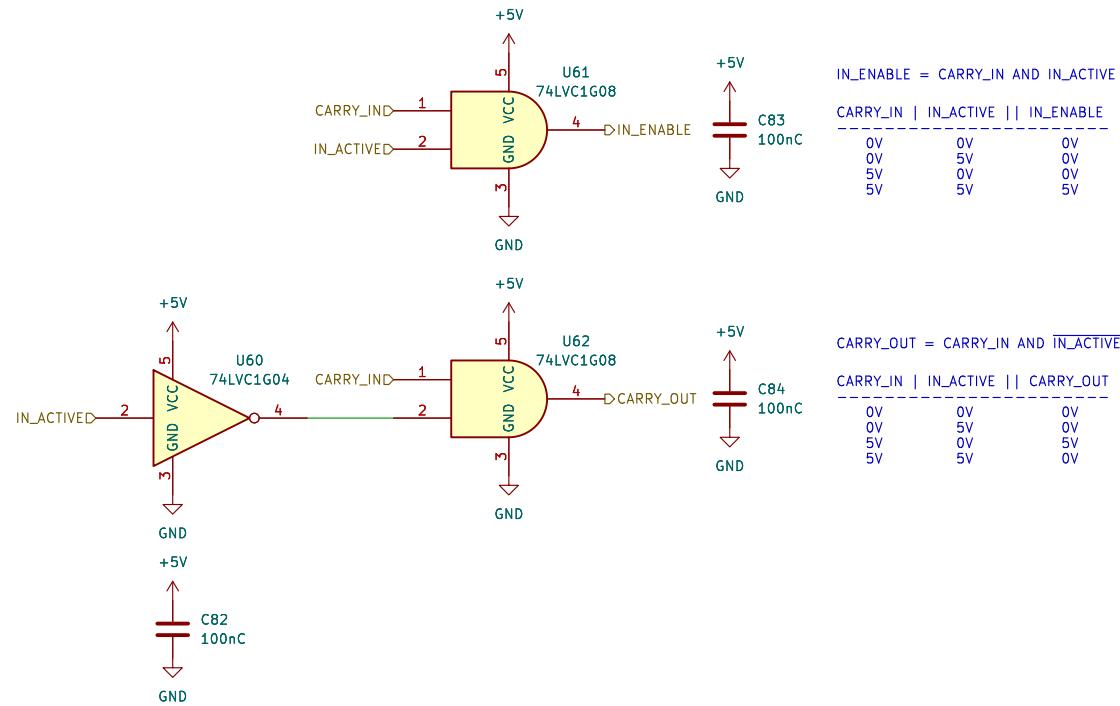
B

C

C

D

D



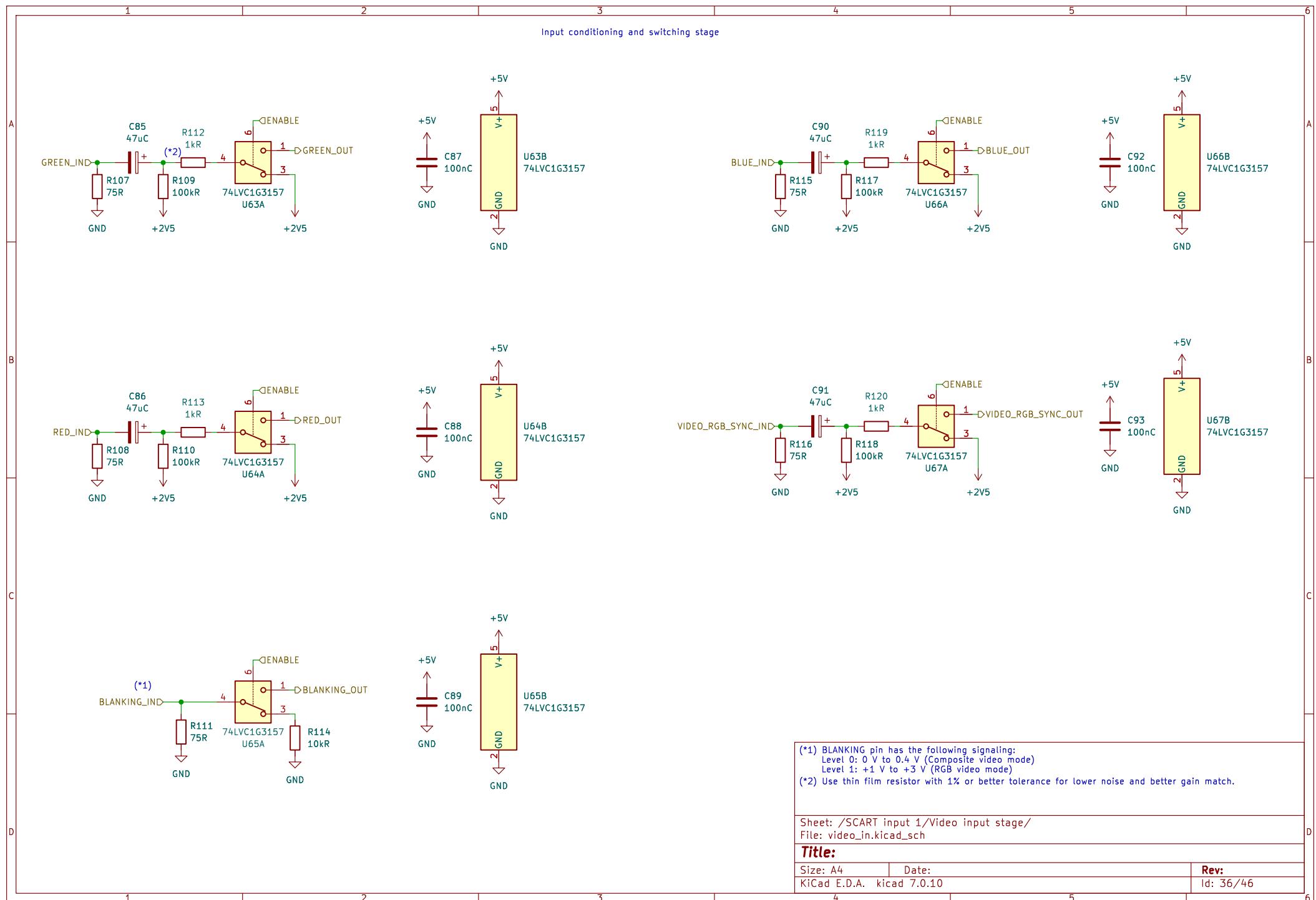
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File: priority_level.kicad_sch

Title:

Size: A4 Date:
KiCad E.D.A. kicad 7.0.10

Rev:
Id: 35/46

1 2 3 4 5 6



1 2 3 4 5 6

A

A

B

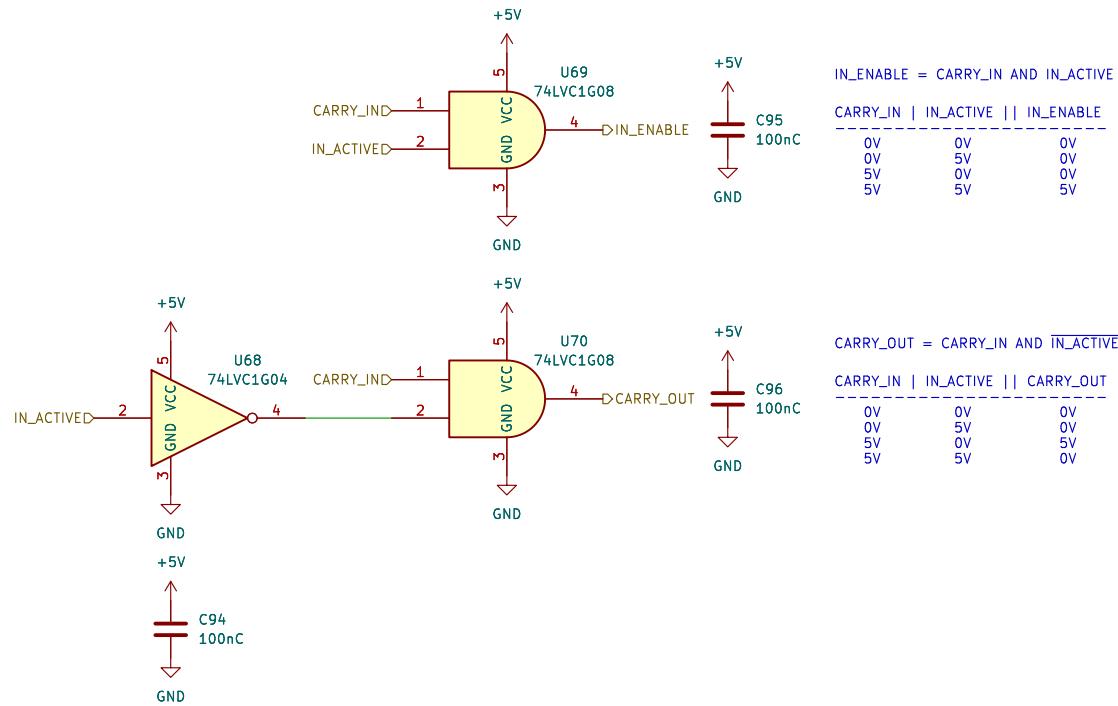
B

C

C

D

D



Sheet: /SCART input 9/Priority Level/
File: priority_level.kicad_sch

Title:

Size: A4 Date:
KiCad E.D.A. kicad 7.0.10

Rev:
Id: 37/46

1 2 3 4 5 6

1 2 3 4 5 6

A

A

B

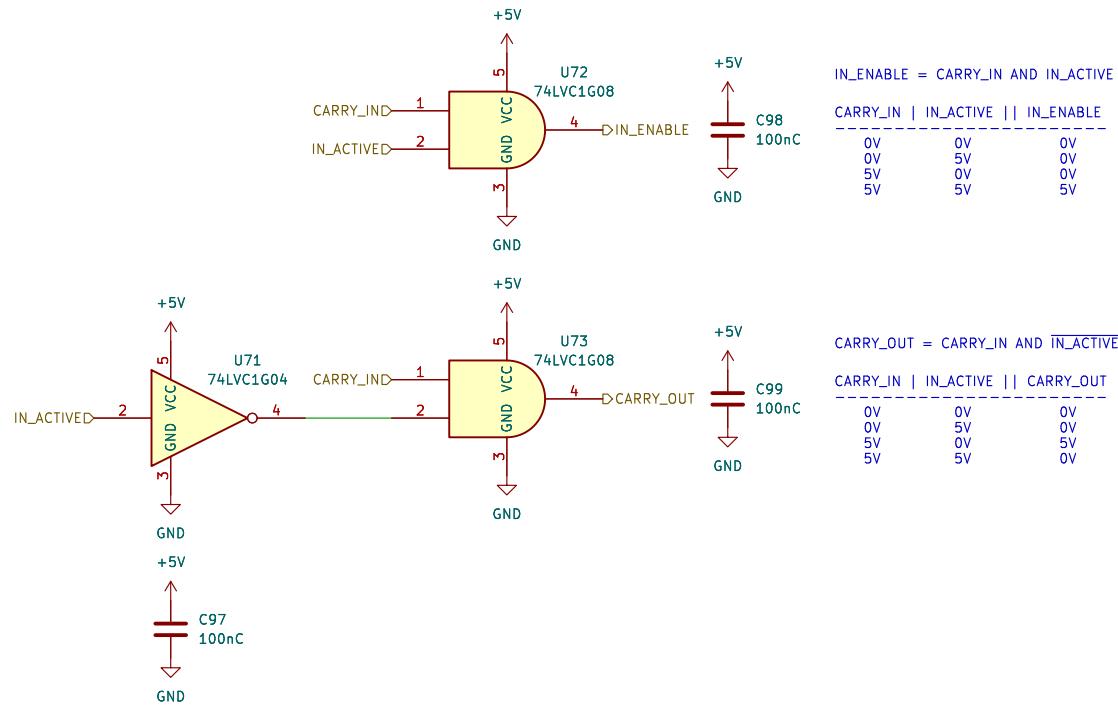
B

C

C

D

D



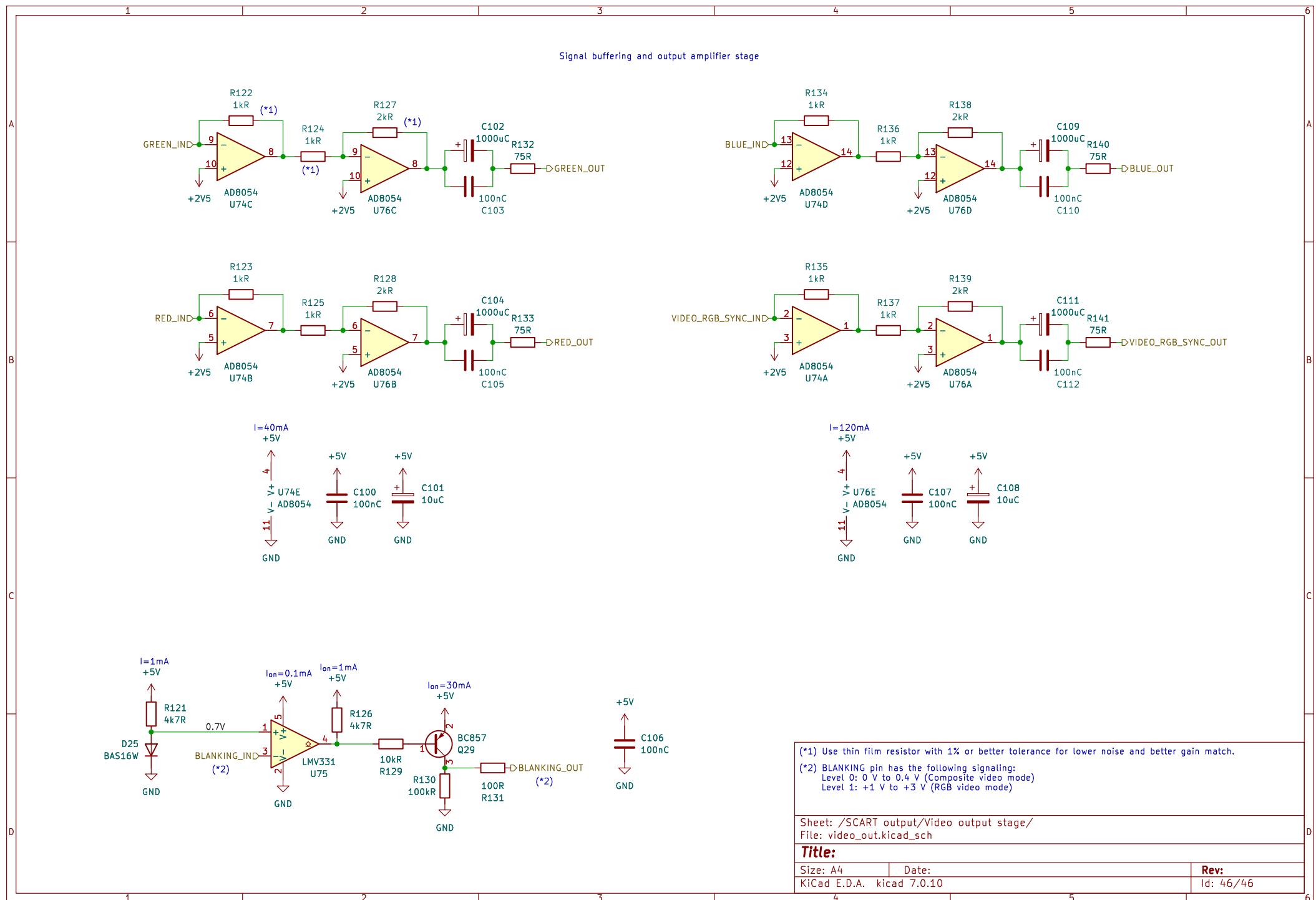
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File: priority_level.kicad_sch

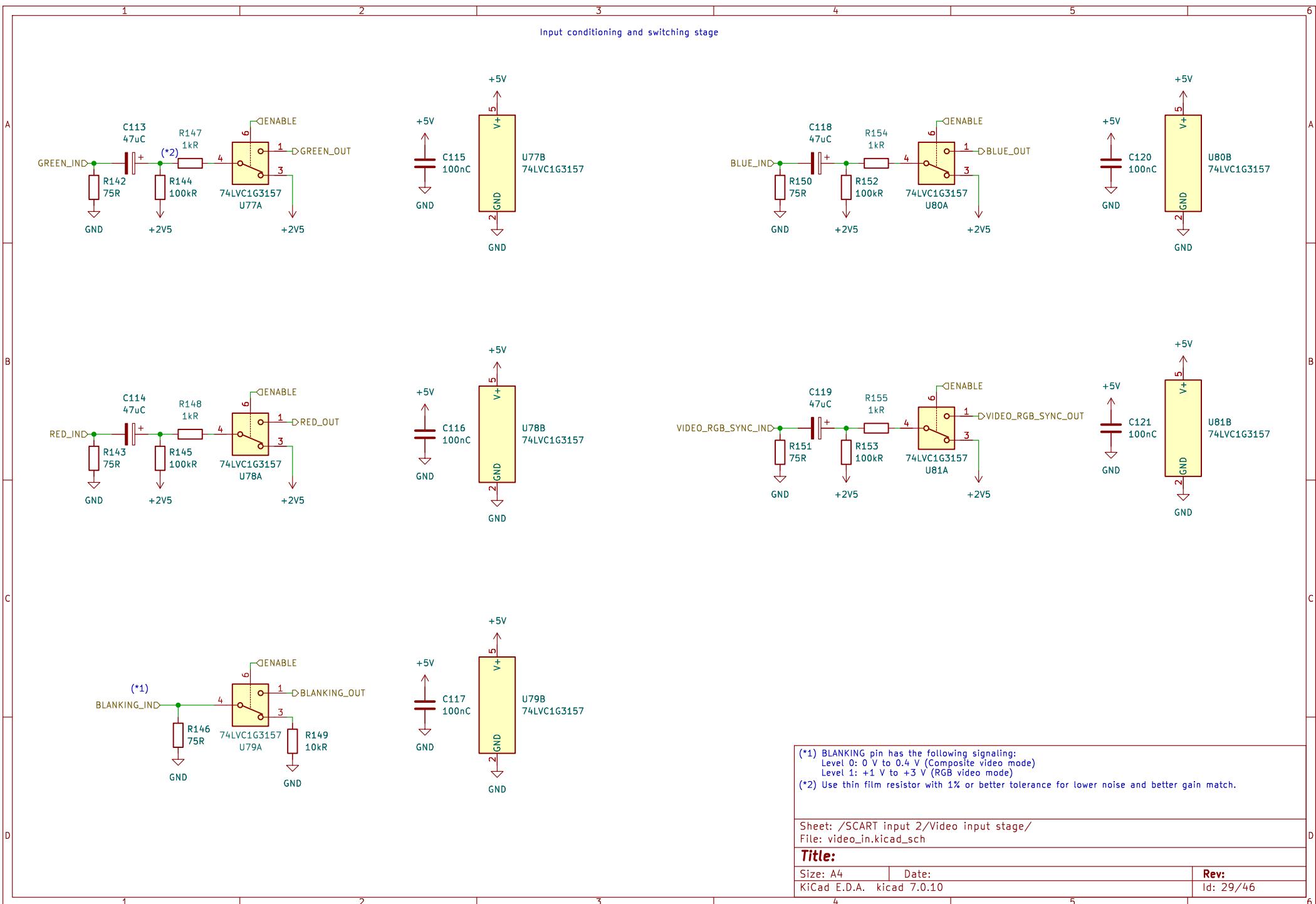
Title:

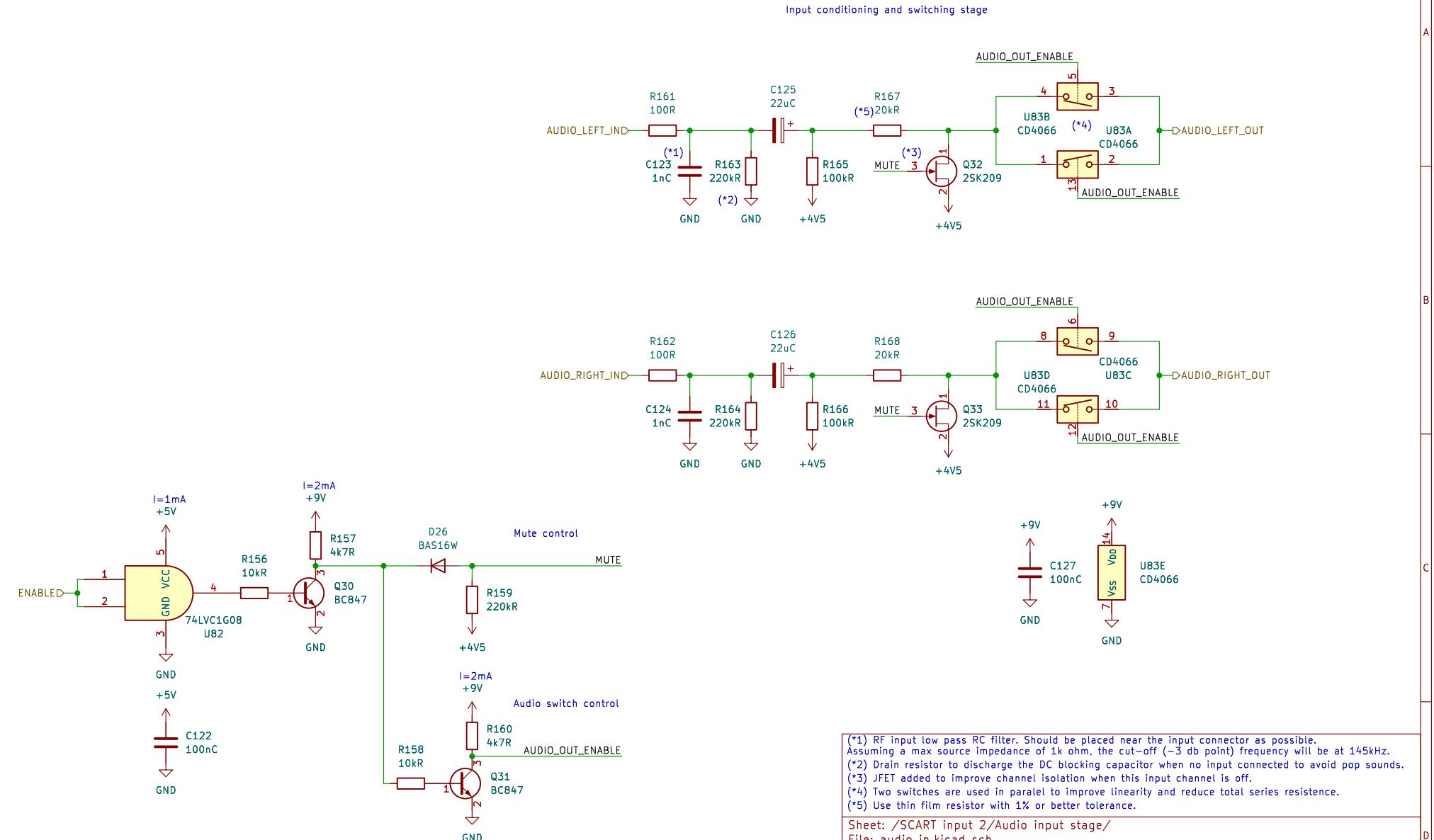
Size: A4 Date:
KiCad E.D.A. kicad 7.0.10

Rev:
Id: 38/46

1 2 3 4 5 6







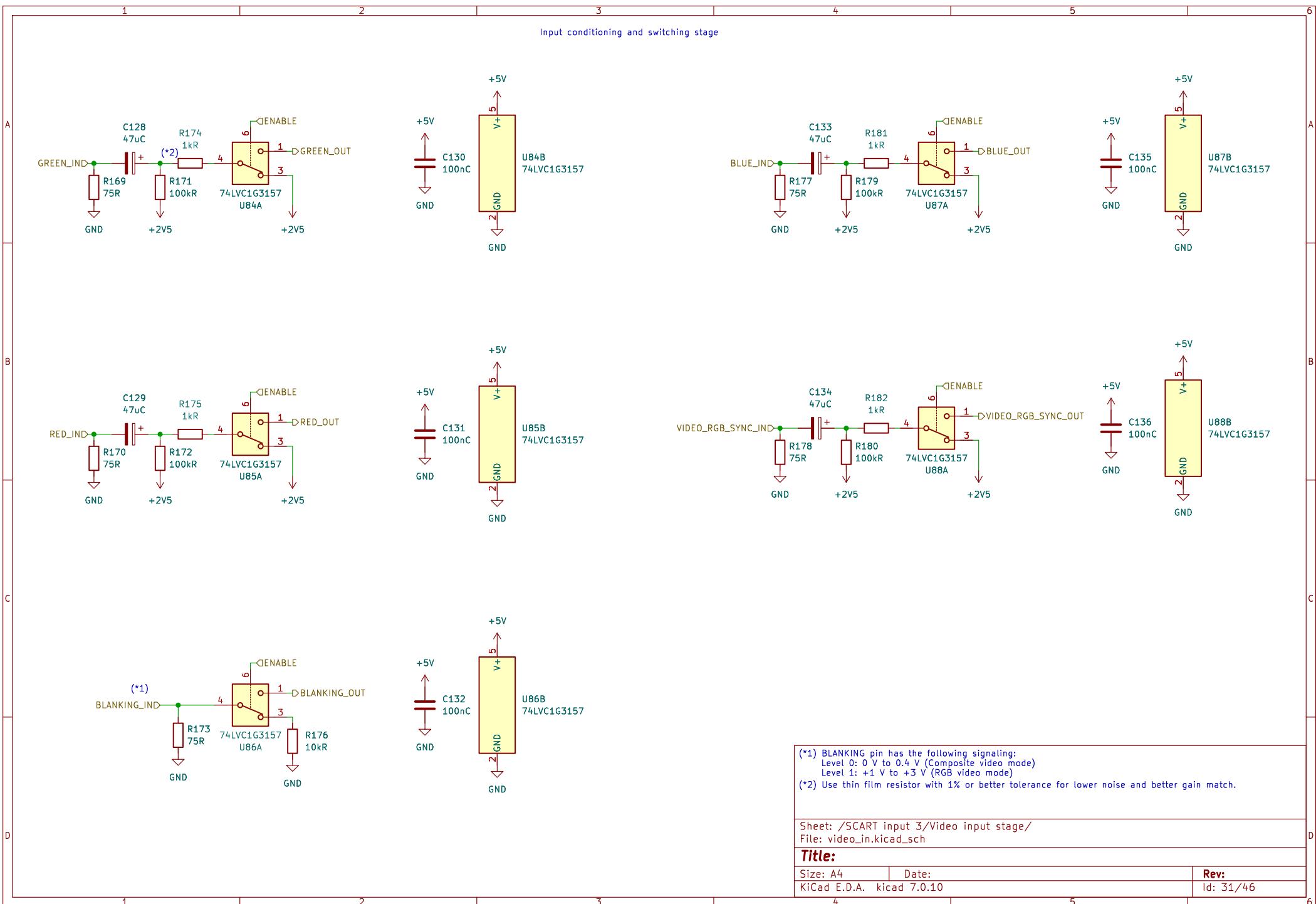
(*1) RF input low pass RC filter. Should be placed near the input connector as possible.
Assuming a max source impedance of 1k ohm, the cut-off (-3 db point) frequency will be at 145kHz.
(*2) Drain resistor to discharge the DC blocking capacitor when no input connected to avoid pop sounds.
(*3) JFET added to improve channel isolation when this input channel is off.
(*4) Two switches are used in parallel to improve linearity and reduce total series resistance.
(*5) Use thin film resistor with 1% or better tolerance.

Sheet: /SCART input 2/ Audio input stage/
File: audio_in.kicad_sch

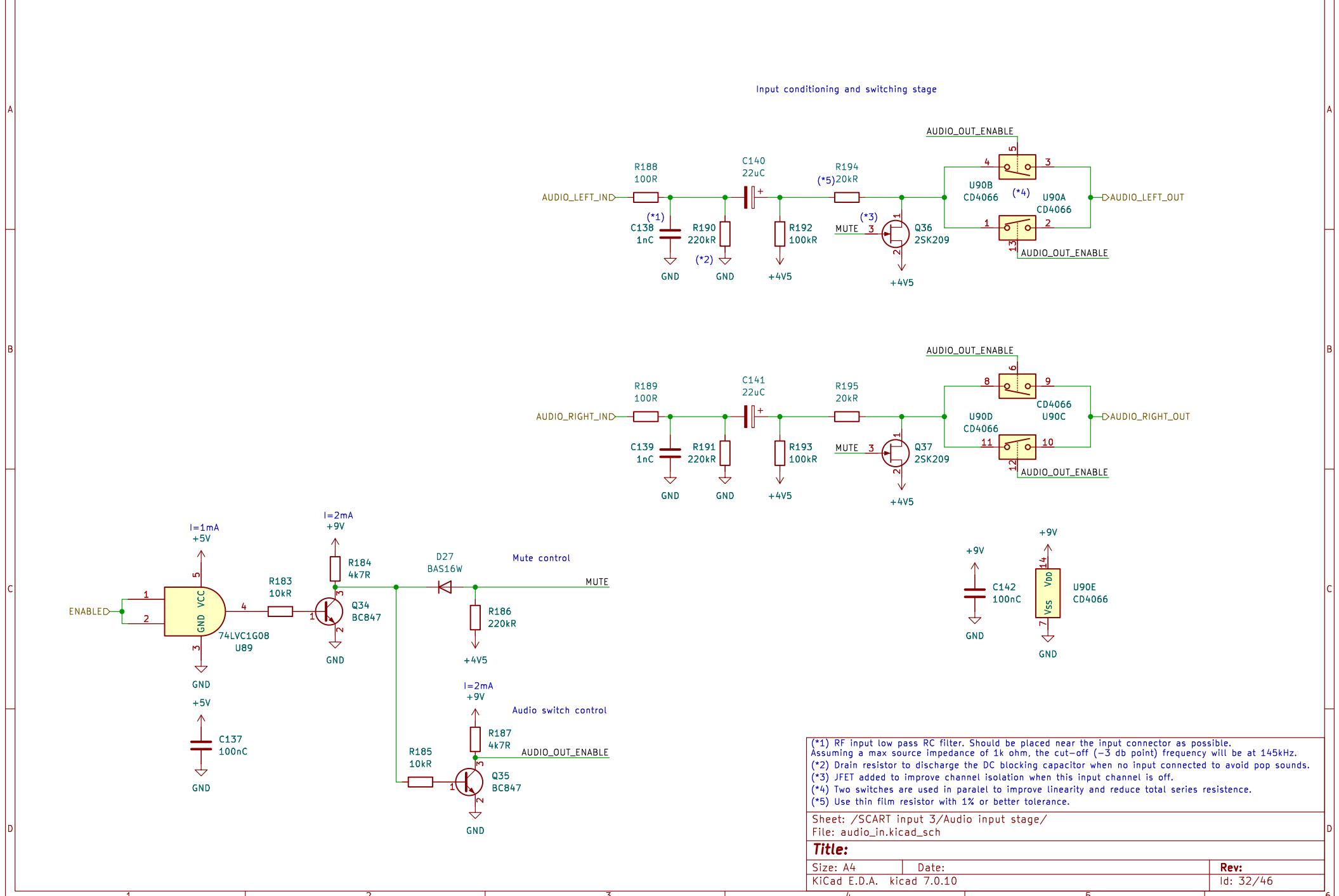
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Size: A4 | Date:
KiCad E.D.A. kicad 7.0.10

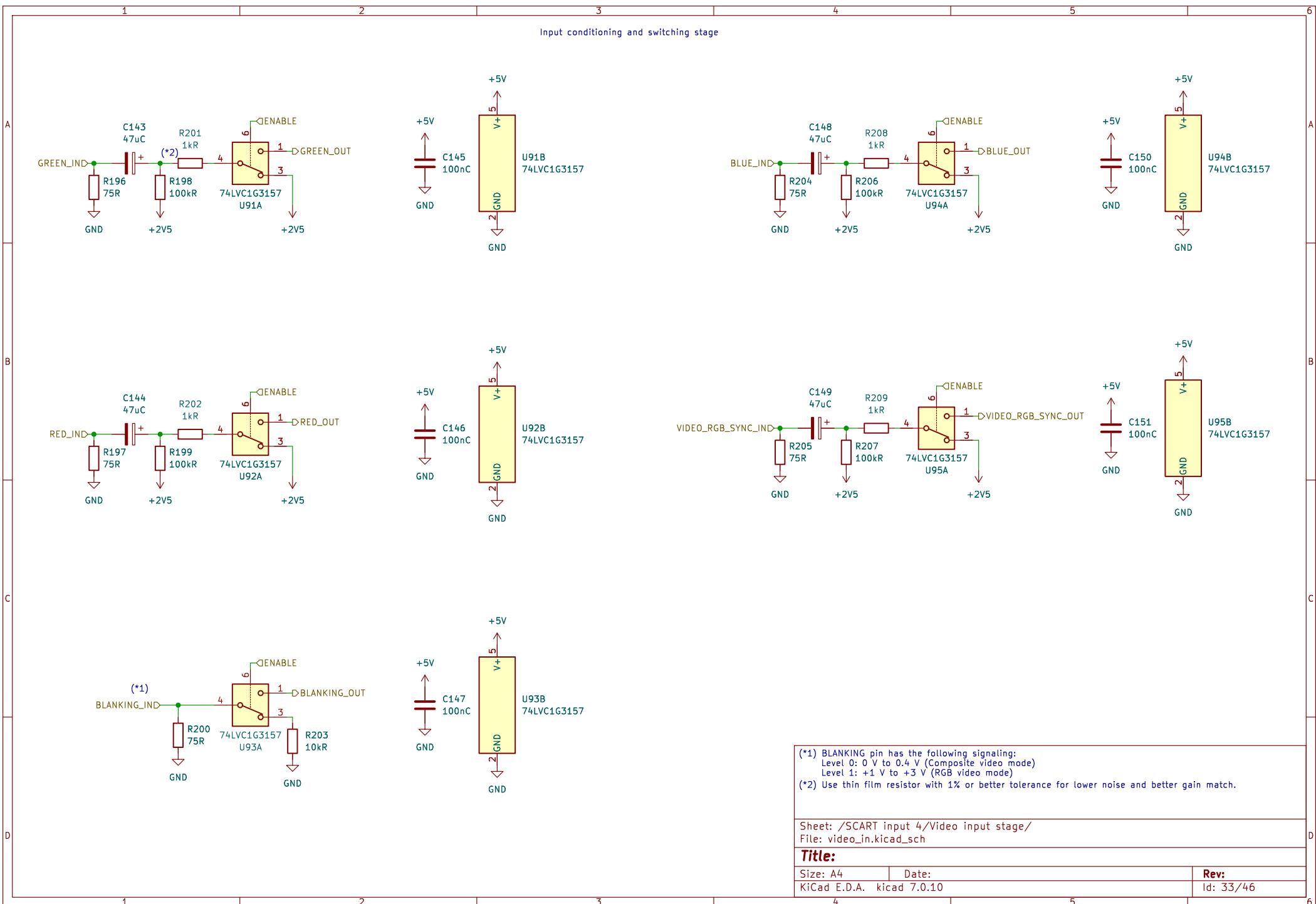
Rev:
Id: 30/46

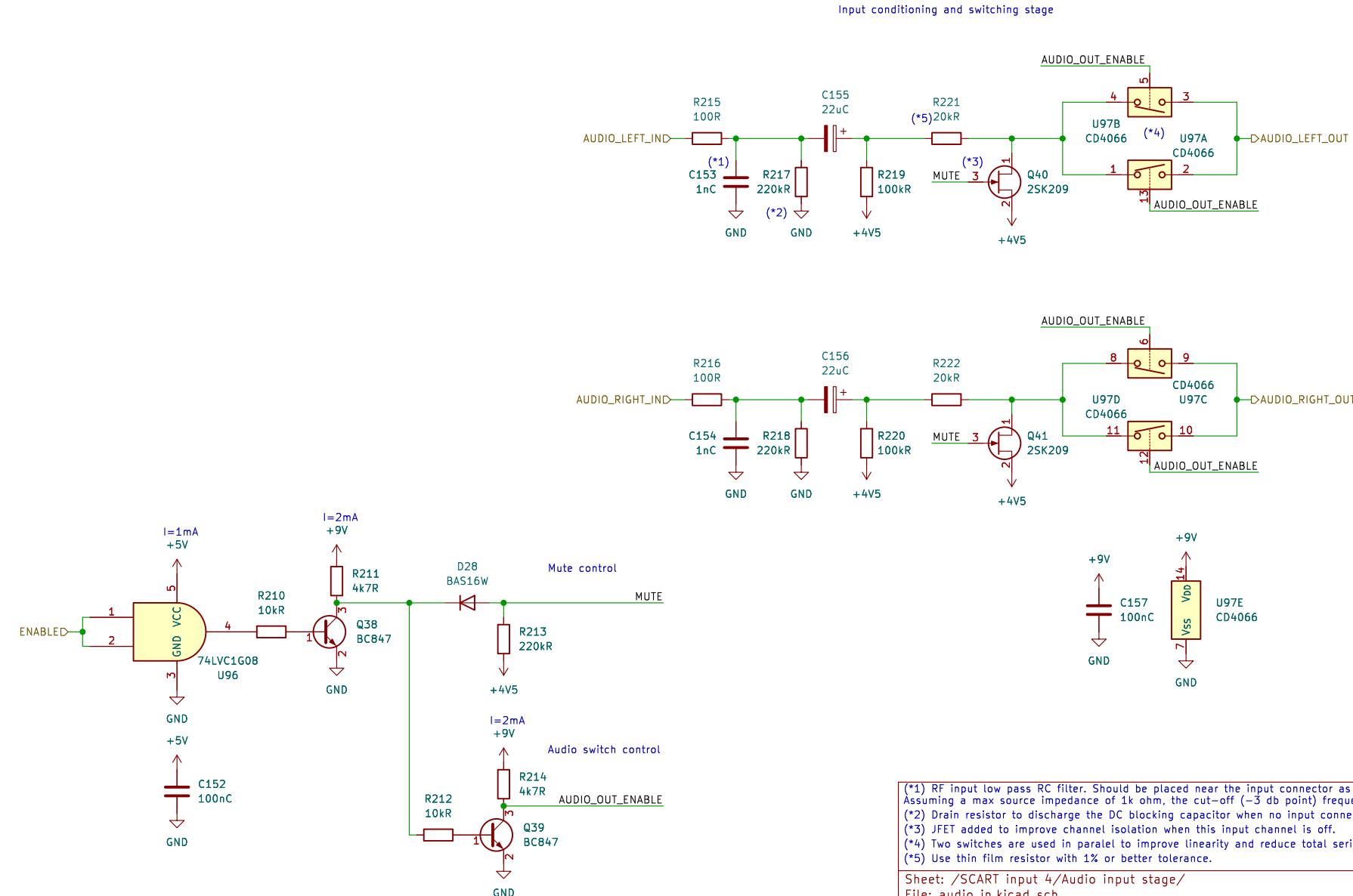


1 2 3 4 5 6



1 2 3 4 5 6





(*1) RF input low pass RC filter. Should be placed near the input connector as possible.
Assuming a max source impedance of 1k ohm, the cut-off (-3 db point) frequency will be at 145kHz.
(*2) Drain resistor to discharge the DC blocking capacitor when no input connected to avoid pop sounds.
(*3) JFET added to improve channel isolation when this input channel is off.
(*4) Two switches are used in parallel to improve linearity and reduce total series resistance.
(*5) Use thin film resistor with 1% or better tolerance.

Sheet: /SCART input 4/ Audio input stage/

File: audio_in.kicad_sch

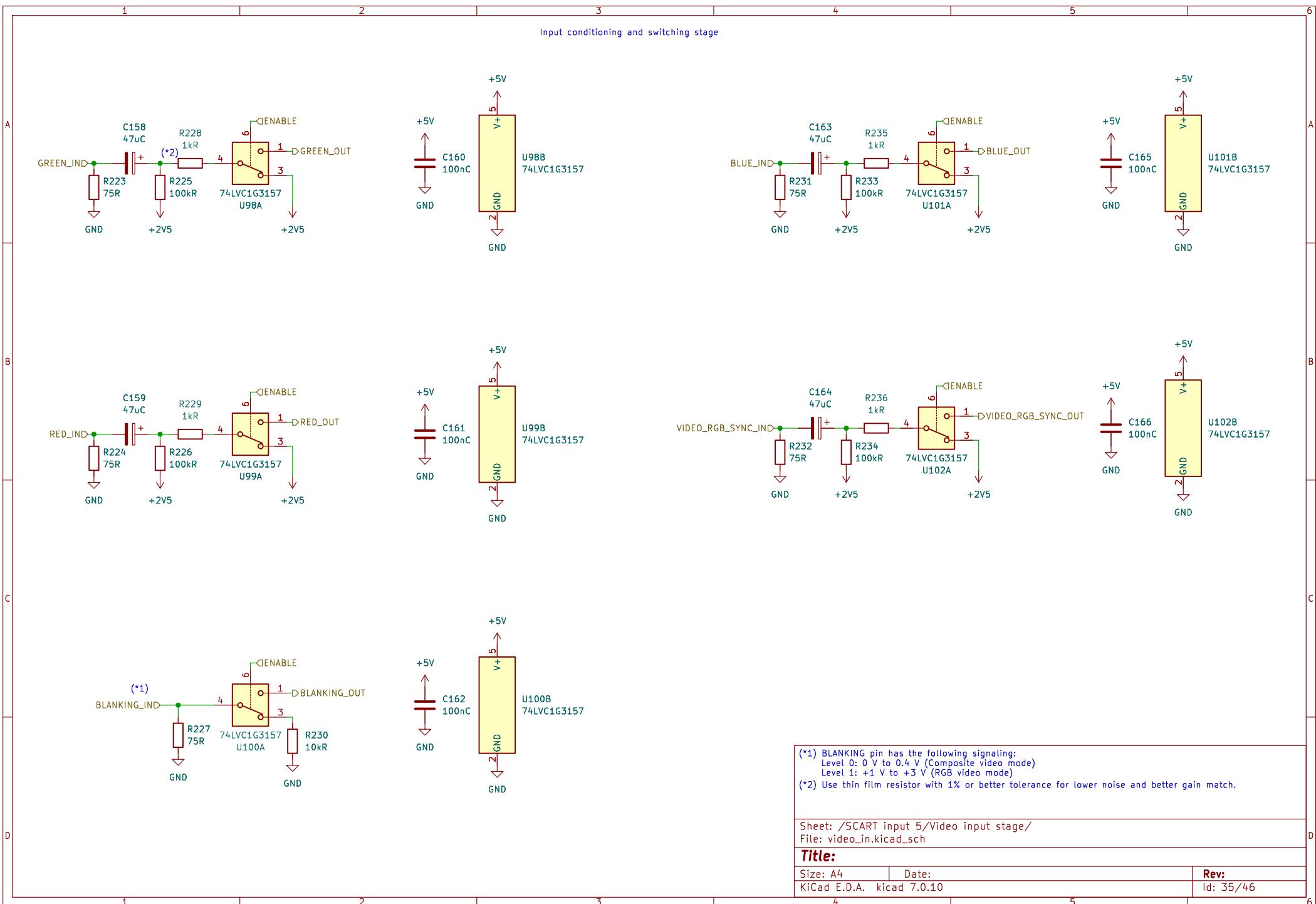
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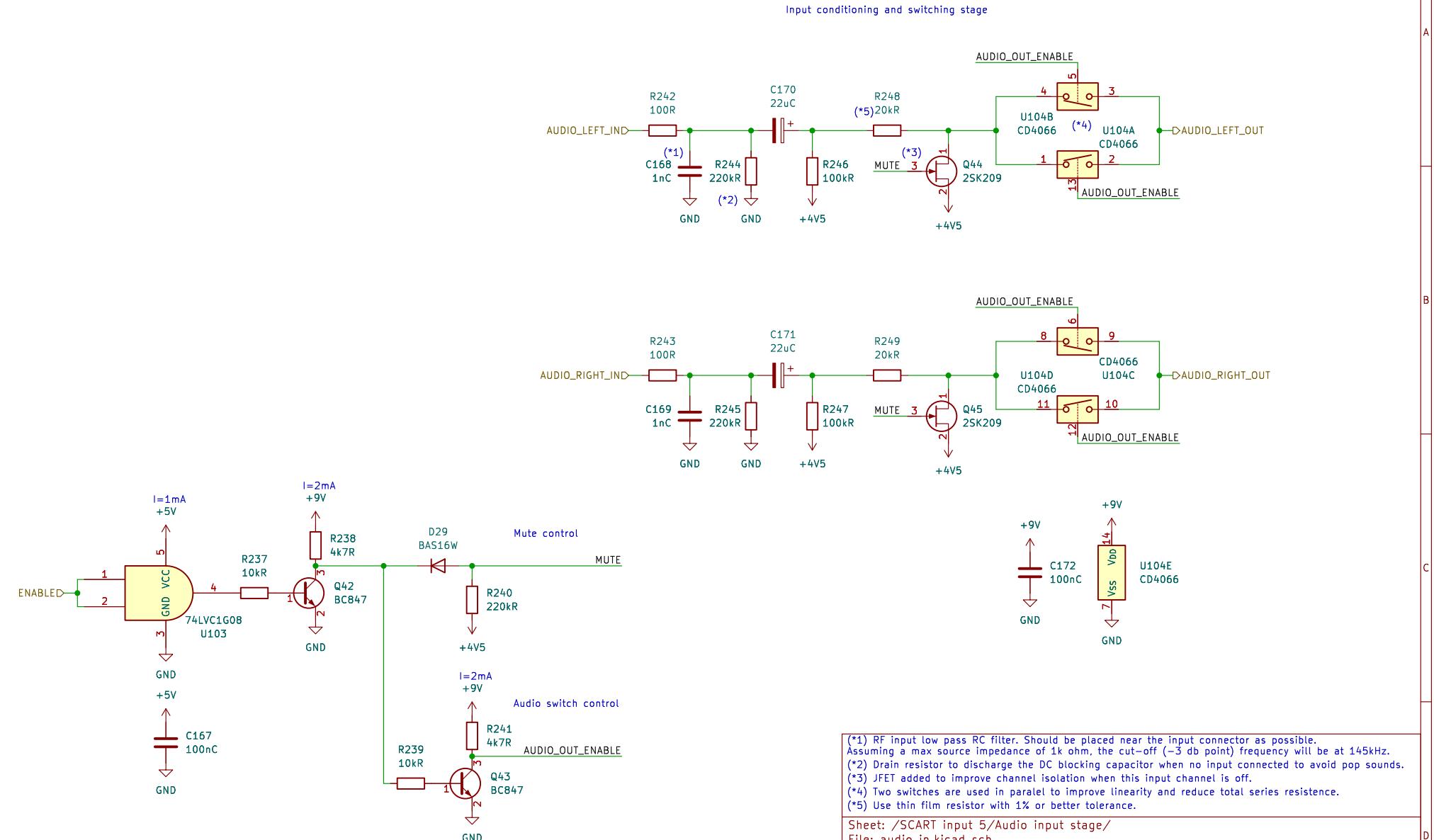
Size: A4 | Date:

KiCad E.D.A. kicad 7.0.10

Rev:

Id: 34/46

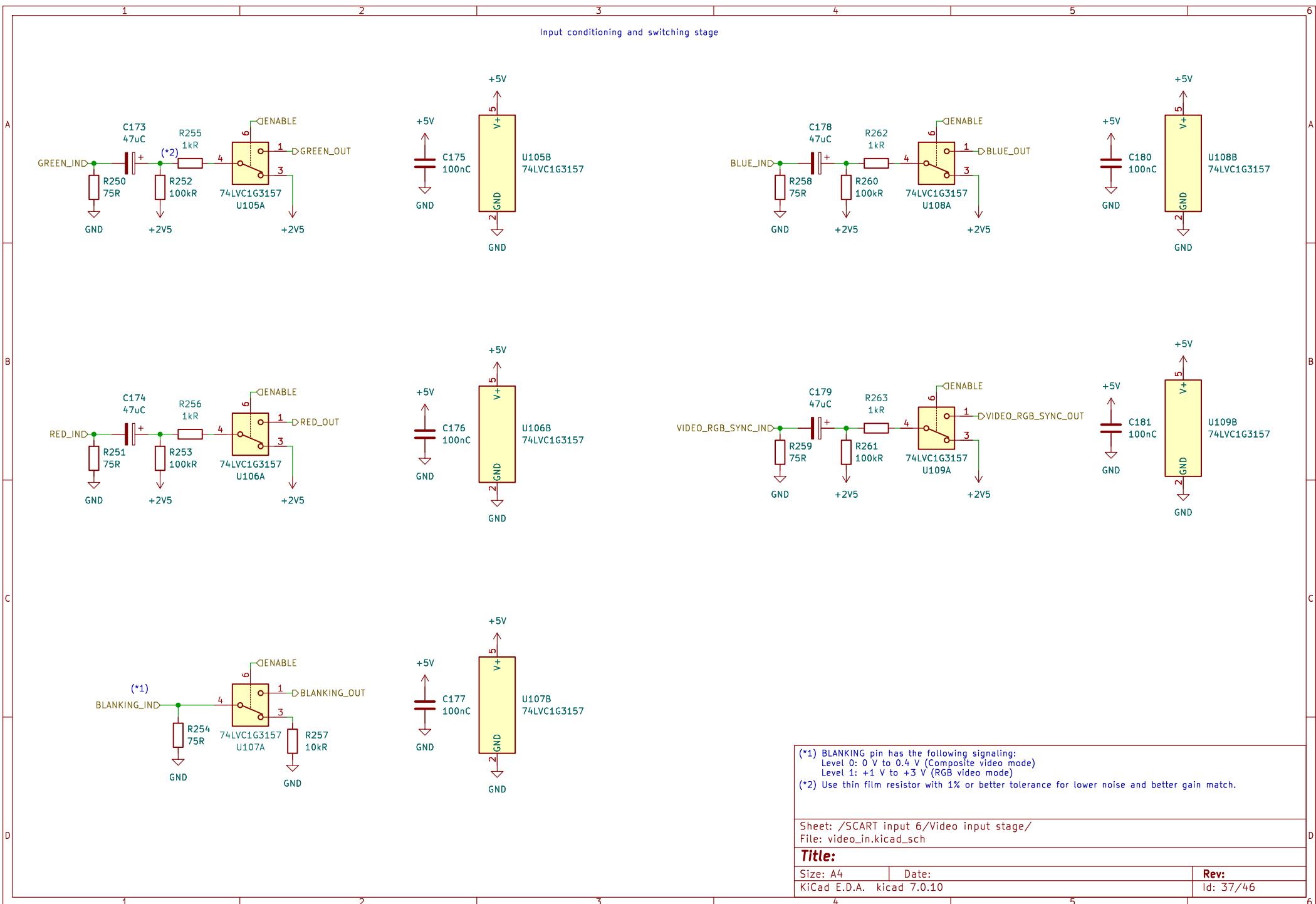




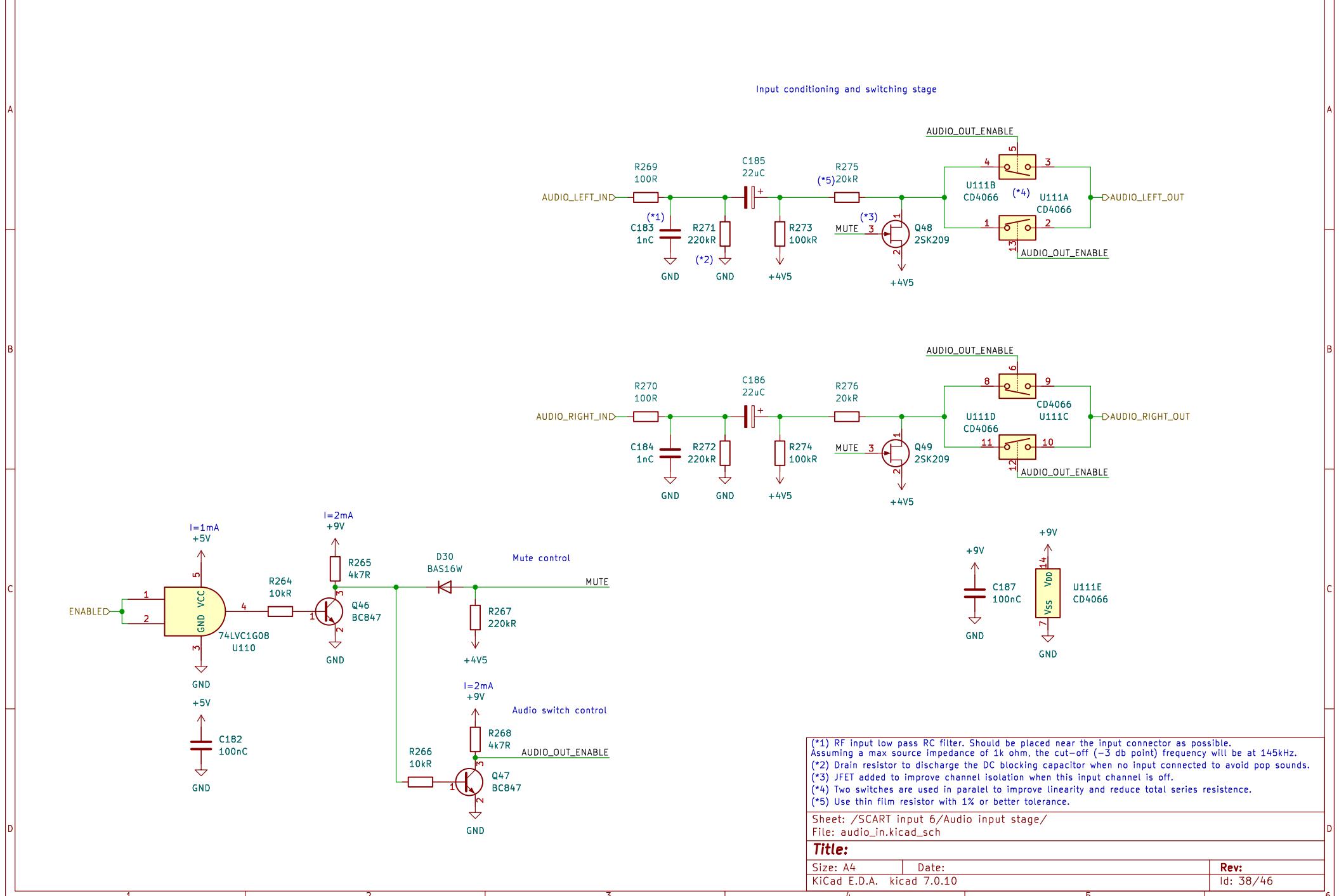
Title:

Size: A4 | Date:
KiCad E.D.A. kicad 7.0.10

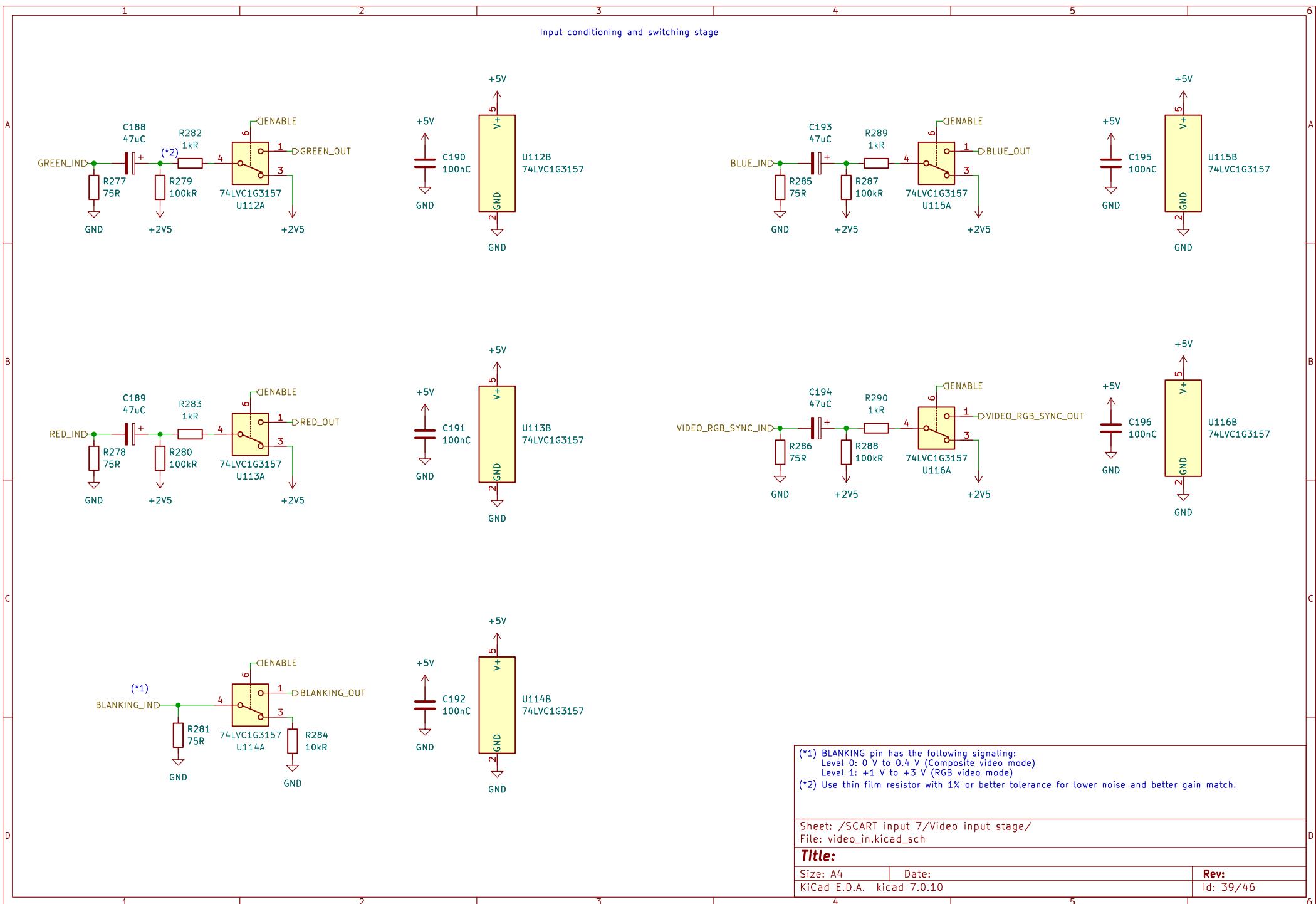
Rev:
Id: 36/46



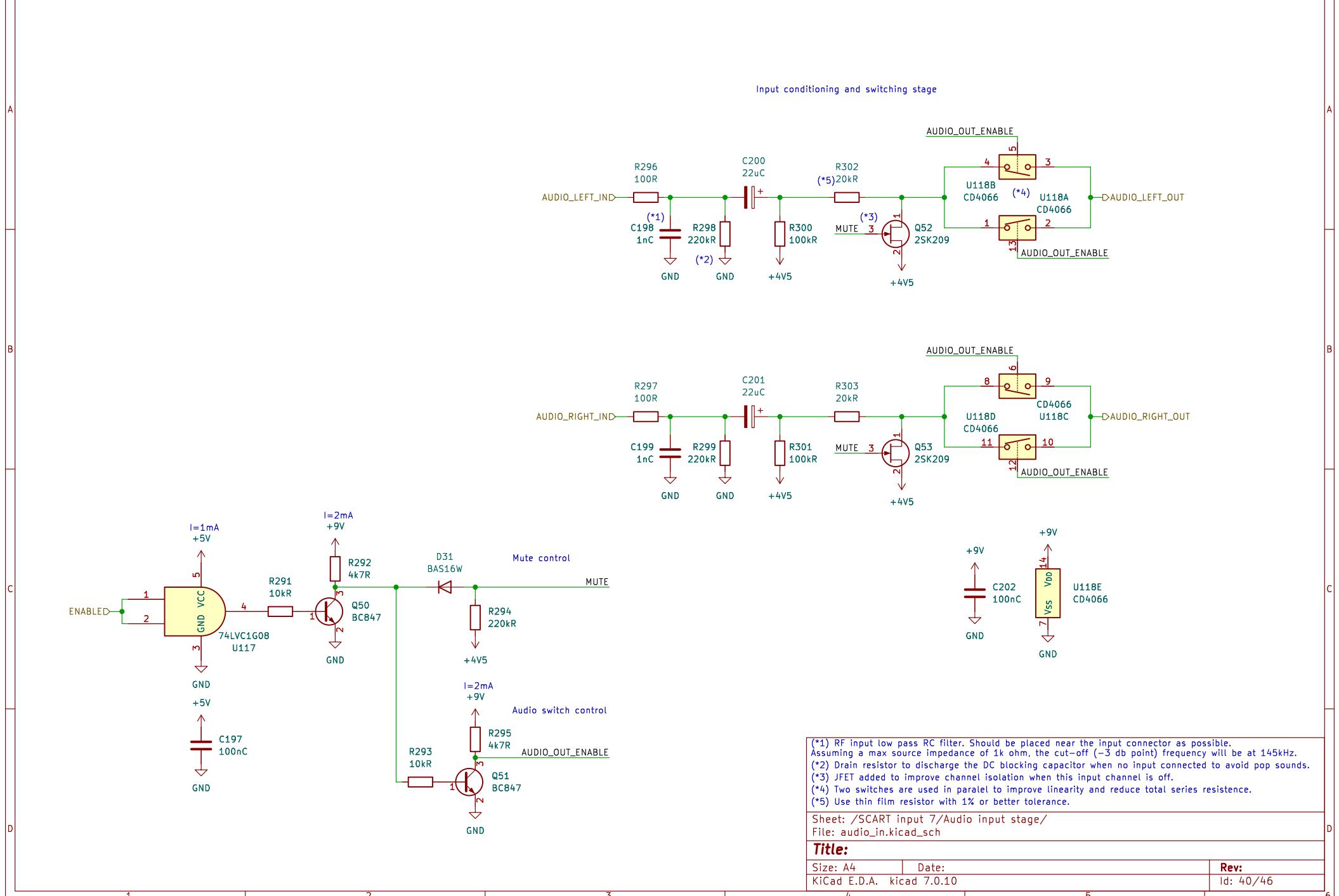
1 2 3 4 5 6



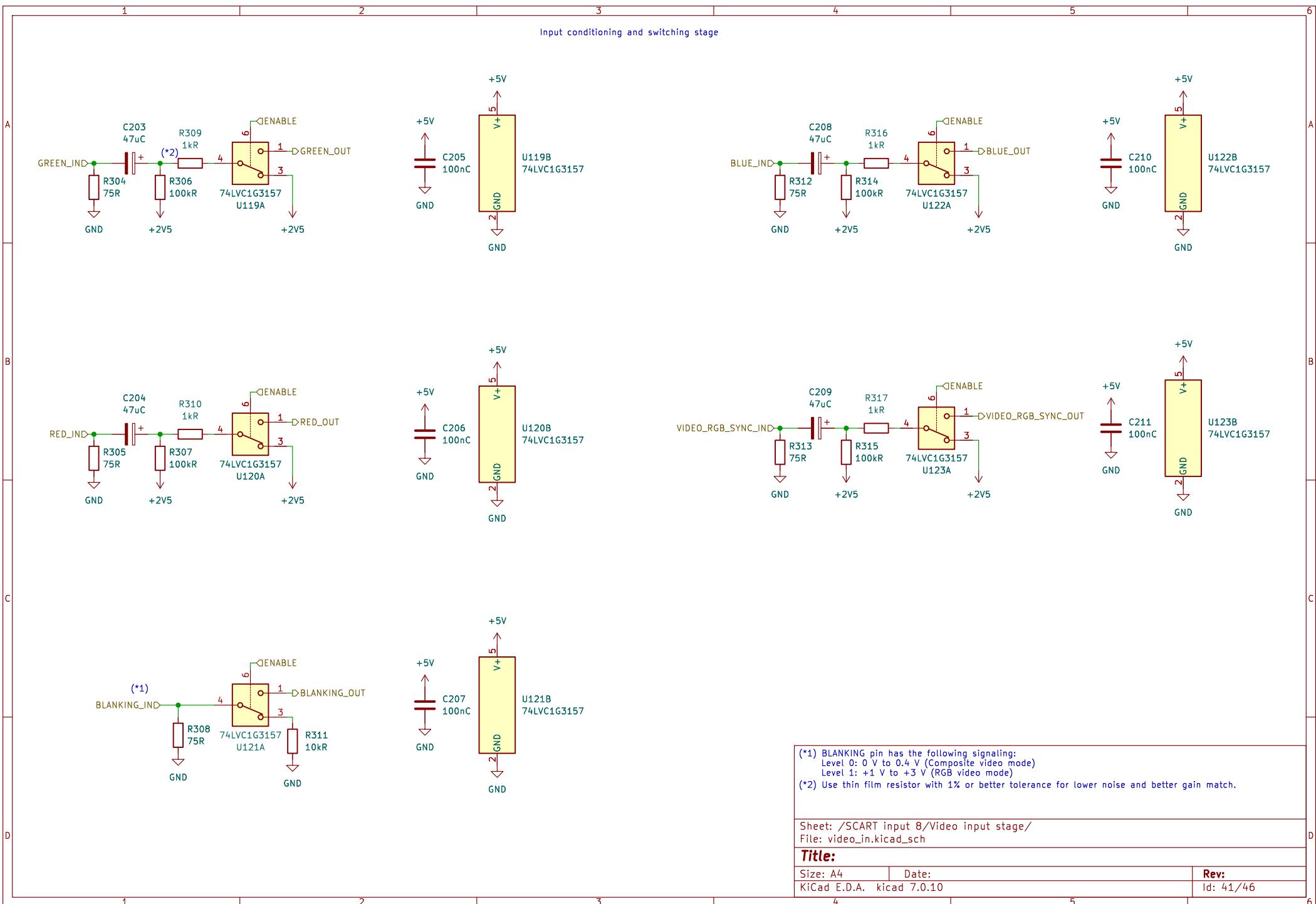
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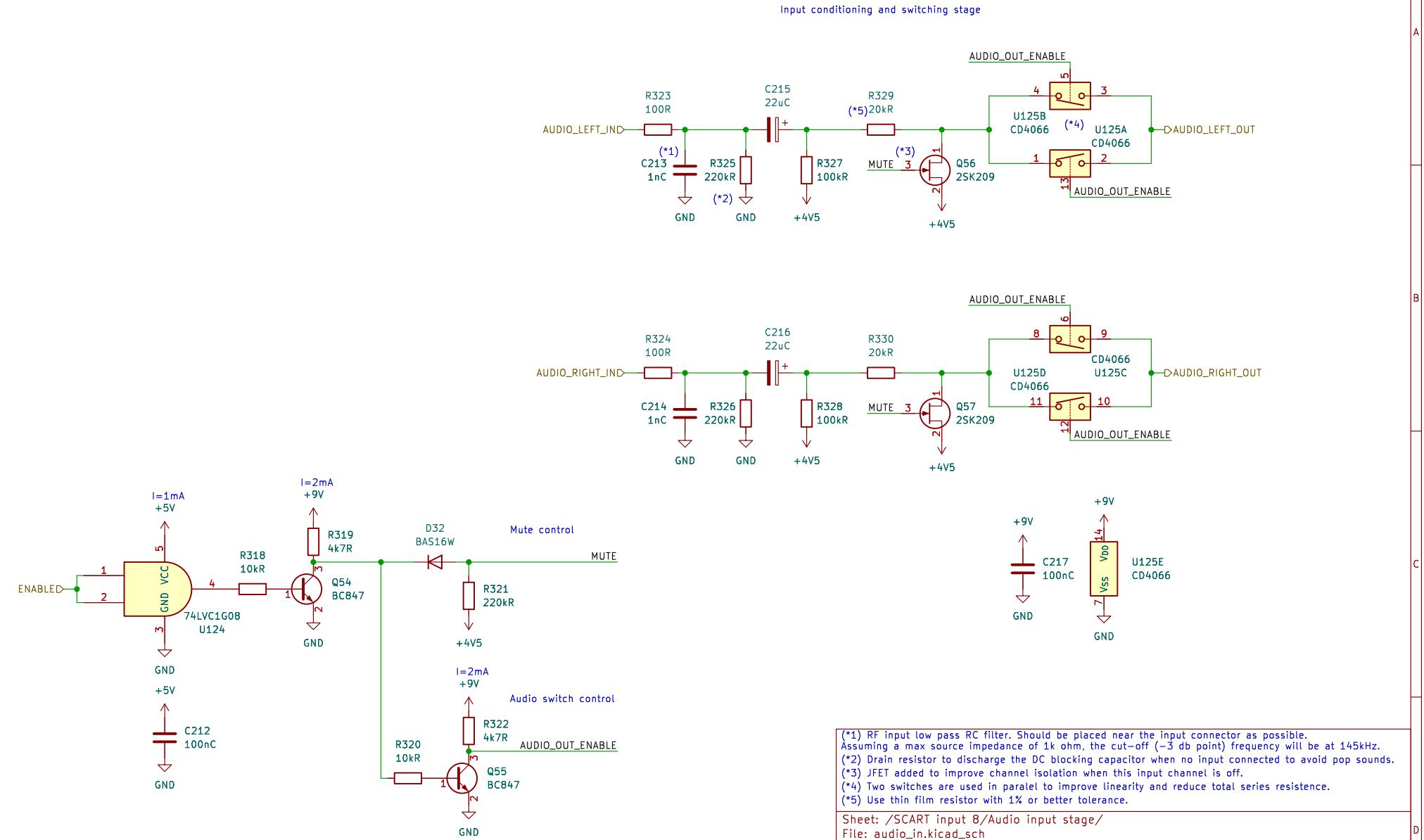


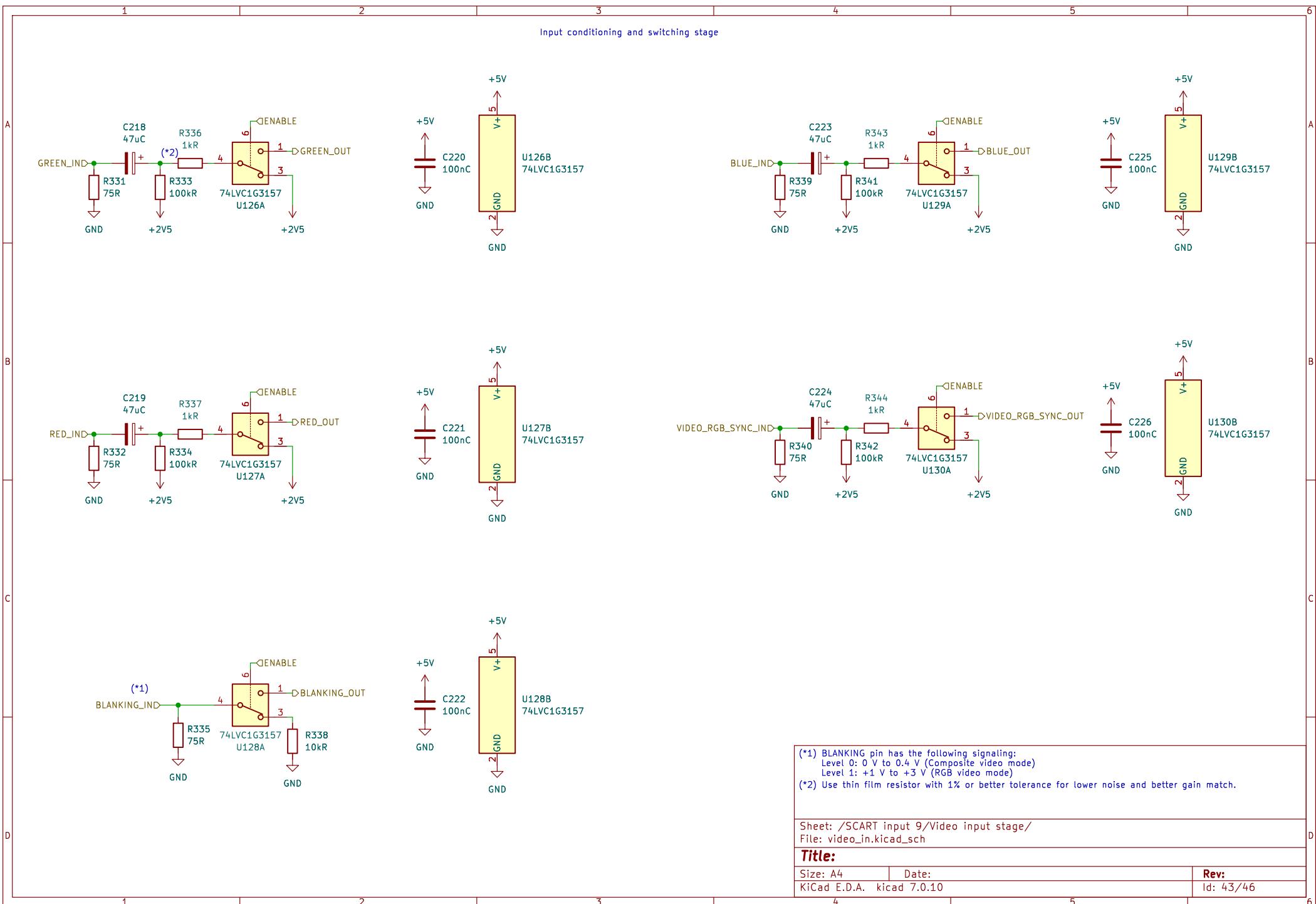
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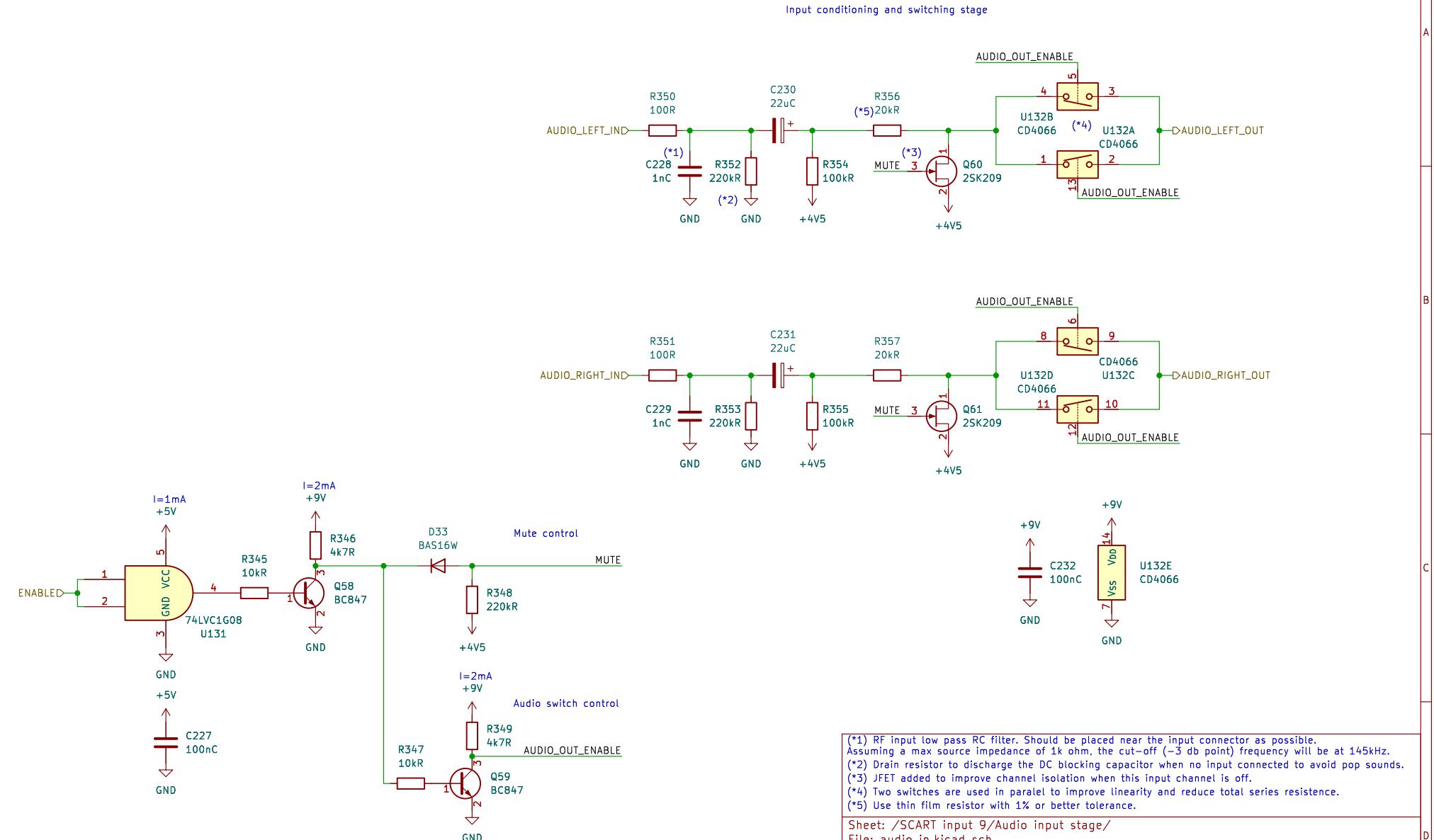


1 2 3 4 5 6









1 2 3 4 5 6

1 2 3 4 5 6

