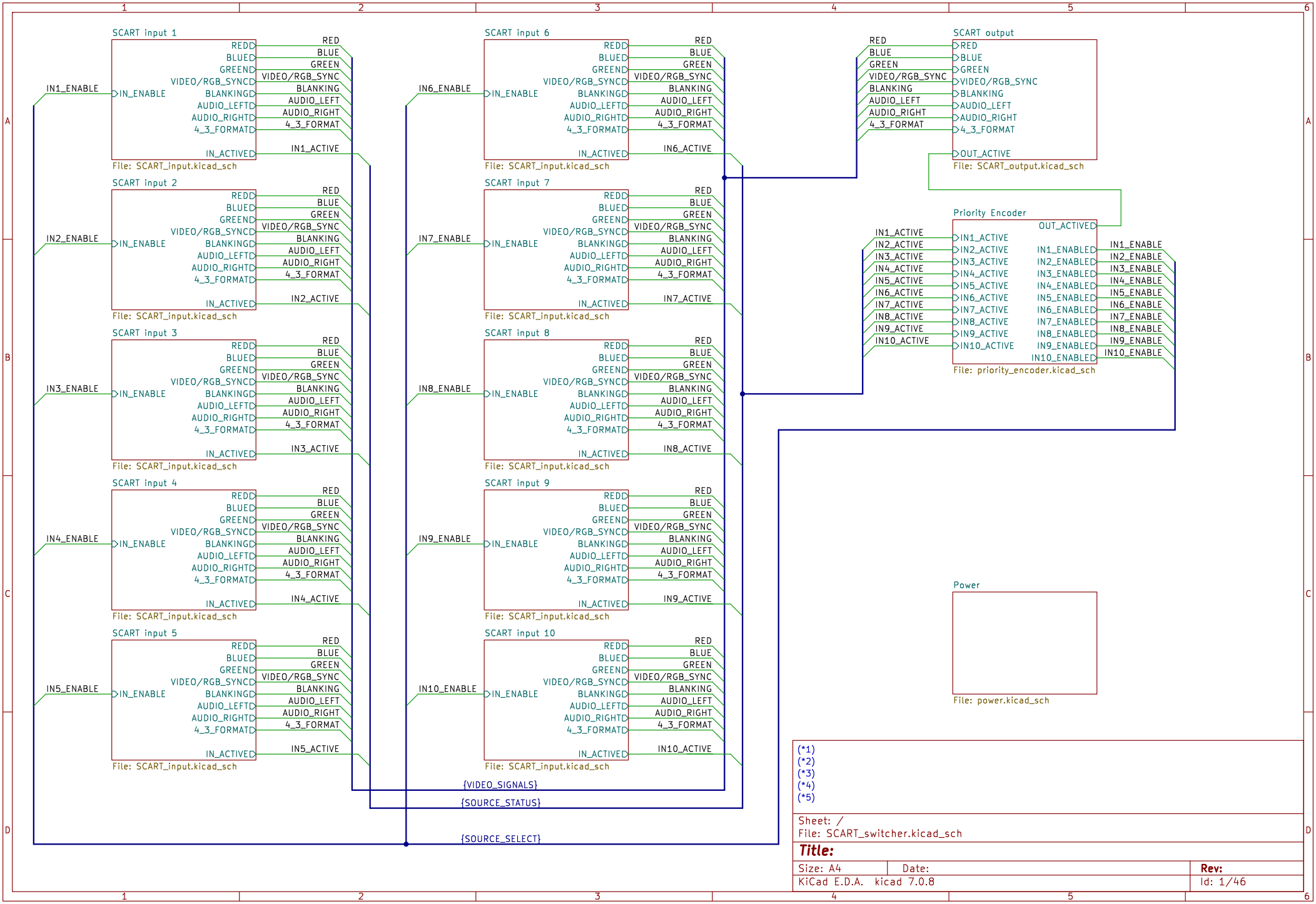

SCART input 1
SCART input 2
SCART input 3
SCART input 4
SCART input 5
SCART input 6
SCART input 7
SCART input 8
SCART input 9
SCART input 10
SCART output
Priority Encoder
Power
File: SCART_input.kicad_sch
File: SCART_output.kicad_sch
File: priority_encoder.kicad_sch
File: power.kicad_sch
IN1_ENABLE
IN2_ENABLE
IN3_ENABLE
IN4_ENABLE
IN5_ENABLE
IN6_ENABLE
IN7_ENABLE
IN8_ENABLE
IN9_ENABLE
IN10_ENABLE
IN_ENABLE
REDD
BLUED
GREEND
VIDEO/RGB_SYNCD
BLANKINGD
AUDIO_LEFTD
AUDIO_RIGHTD
4_3_FORMATD
IN_ACTIVED
RED
BLUE
GREEN
VIDEO/RGB_SYNC
BLANKING
AUDIO_LEFT
AUDIO_RIGHT
4_3_FORMAT
IN1_ACTIVE
IN2_ACTIVE
IN3_ACTIVE
IN4_ACTIVE
IN5_ACTIVE
IN6_ACTIVE
IN7_ACTIVE
IN8_ACTIVE
IN9_ACTIVE
IN10_ACTIVE
OUT_ACTIVE
OUT_ACTIVED
IN1_ENABLED
IN2_ENABLED
IN3_ENABLED
IN4_ENABLED
IN5_ENABLED
IN6_ENABLED
IN7_ENABLED
IN8_ENABLED
IN9_ENABLED
IN10_ENABLED
{VIDEO_SIGNALS}
{SOURCE_STATUS}
{SOURCE_SELECT}
(*1)
(*2)
(*3)
(*4)
(*5)
Sheet: /
File: SCART_switcher.kicad_sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. kicad 7.0.8
Id: 1/46

SCART input

J1
SCART-F

GND 21
19
17
Load: 75ohm RED 15
GND 13
Load: 75ohm GREEN 11
GND 9
Load: 75ohm BLUE 7
GND 5
3
1

20 VIDEO/RGB_SYNC Load: 75ohm
18 GND
16 BLANKING Load: 75ohm (*3)
14 GND
12
10
8 FUNCTION Load: ≤10Kohm (*1)
6 AUDIO_LEFT Load: ≥10Kohm
4 GND
2 AUDIO_RIGHT Load: ≥10Kohm

(*1)
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)

(*2)
The input terminal FUNCTION of the voltage monitoring circuit has one output IN_ACTIVE with voltage of 3.3V when the signal level input FUNCTION of the SCART interface is 0 V to +2 V (SCART off).
When the functional selection control signal level is +4,5 V to +12 V (SCART on), the voltage output terminal IN_ACTIVE is 0V.

(*3)
Level 0: 0 V to 0,4 V (Composite video mode)
Level 1: +1 V to +3 V (RGB video mode)

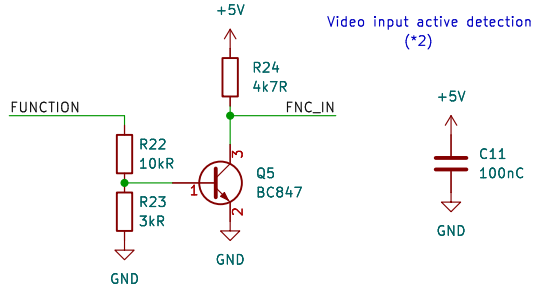
(*4)
The IN_ACTIVE signal flags the existence of an active video source as function of FUNCTION signal voltage levels.

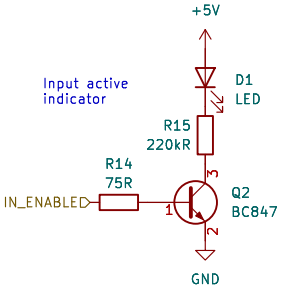
FNC_IN1	FNC_IN2	IN_ACTIVE
0V	0V	3.3V
0V	3.3V	3.3V
3.3V	0V	3.3V
3.3V	3.3V	0V

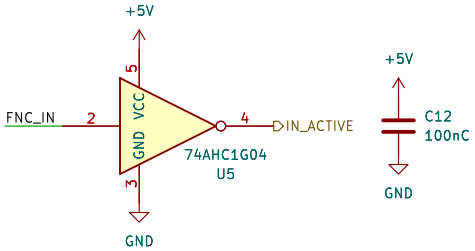
(*5)
The VIDEO_4_3 signal flags whether the video source is configured in the 4:3 format as function of FUNCTION signal voltage levels.

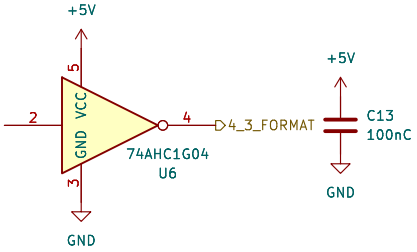
FNC_IN1	FNC_IN2	VIDEO_4_3
0V	0V	3.3V
0V	3.3V	0V
3.3V	0V	0V
3.3V	3.3V	0V

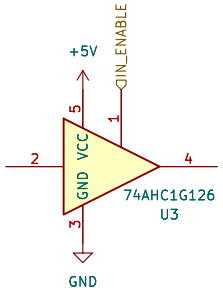
Video input active detection (*2)



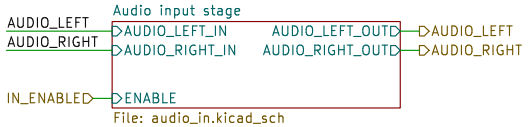


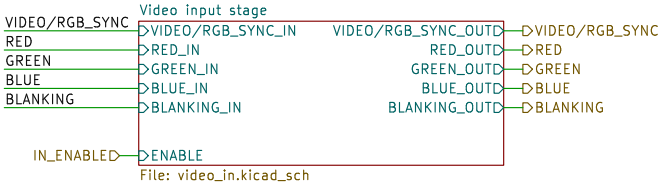






Audio and Video input stages with enable circuitry





Sheet: /SCART input 1/
File: SCART_input.kicad_sch

Title:

Size: A4	Date:	**Rev:**
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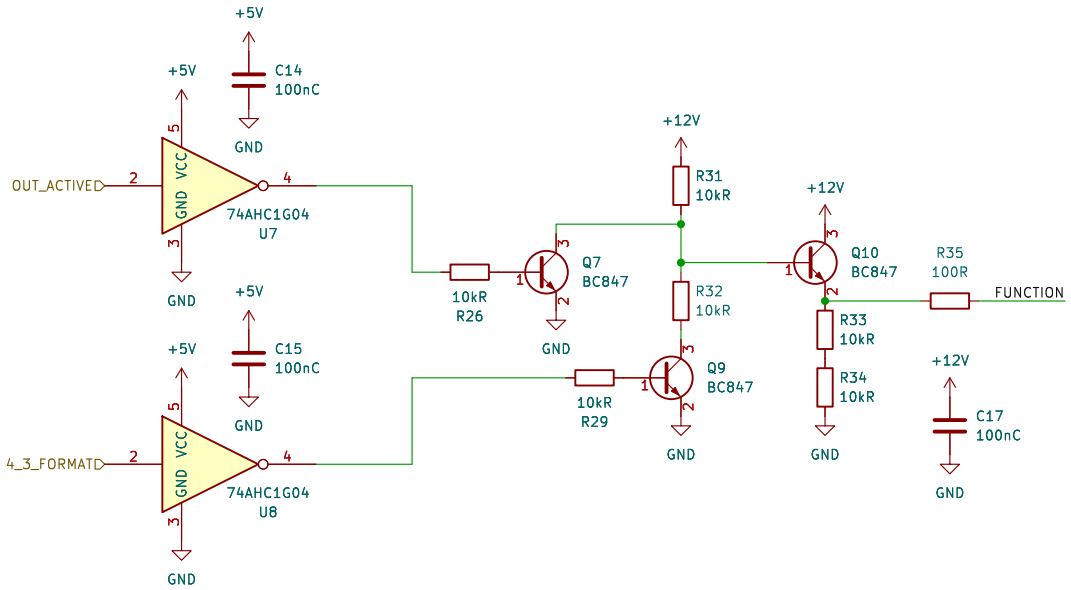
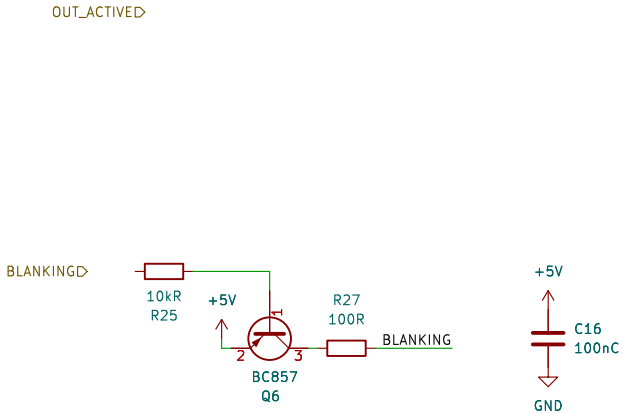
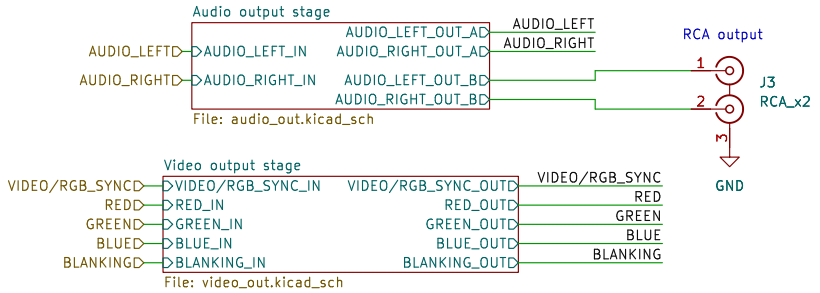
The signals FNC_IN1 and FNC_IN2 are input to the level conversion circuit of the
SCART function selection control to generate the appropriate signal levels.
When the voltage levels of both the first input terminal FNC_IN1 and the second
input terminal FNC_IN2 are 3.3V, the output voltage of the output terminal FUNCTION is 0V (SCART off).
When the voltage level of the first input terminal FNC_IN1 is 0V and the voltage level
of the second input terminal FNC_IN2 is 3.3V, the output voltage of the output terminal
FUNCTION is 7.0V (SCART on, 16:9).
When the voltage levels of both the first input terminal FNC_IN1 and the second input
terminal FNC_IN2 are 0V, the output voltage of the output terminal FUNCTION is 12V (SCART on).

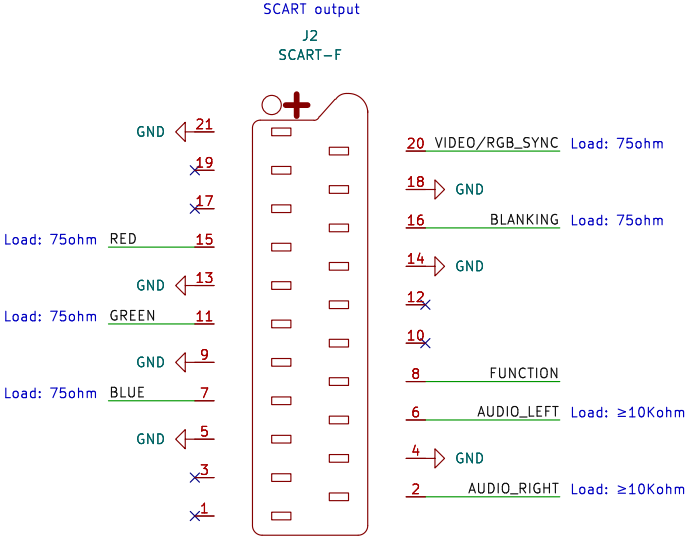




Audio and Video output stages



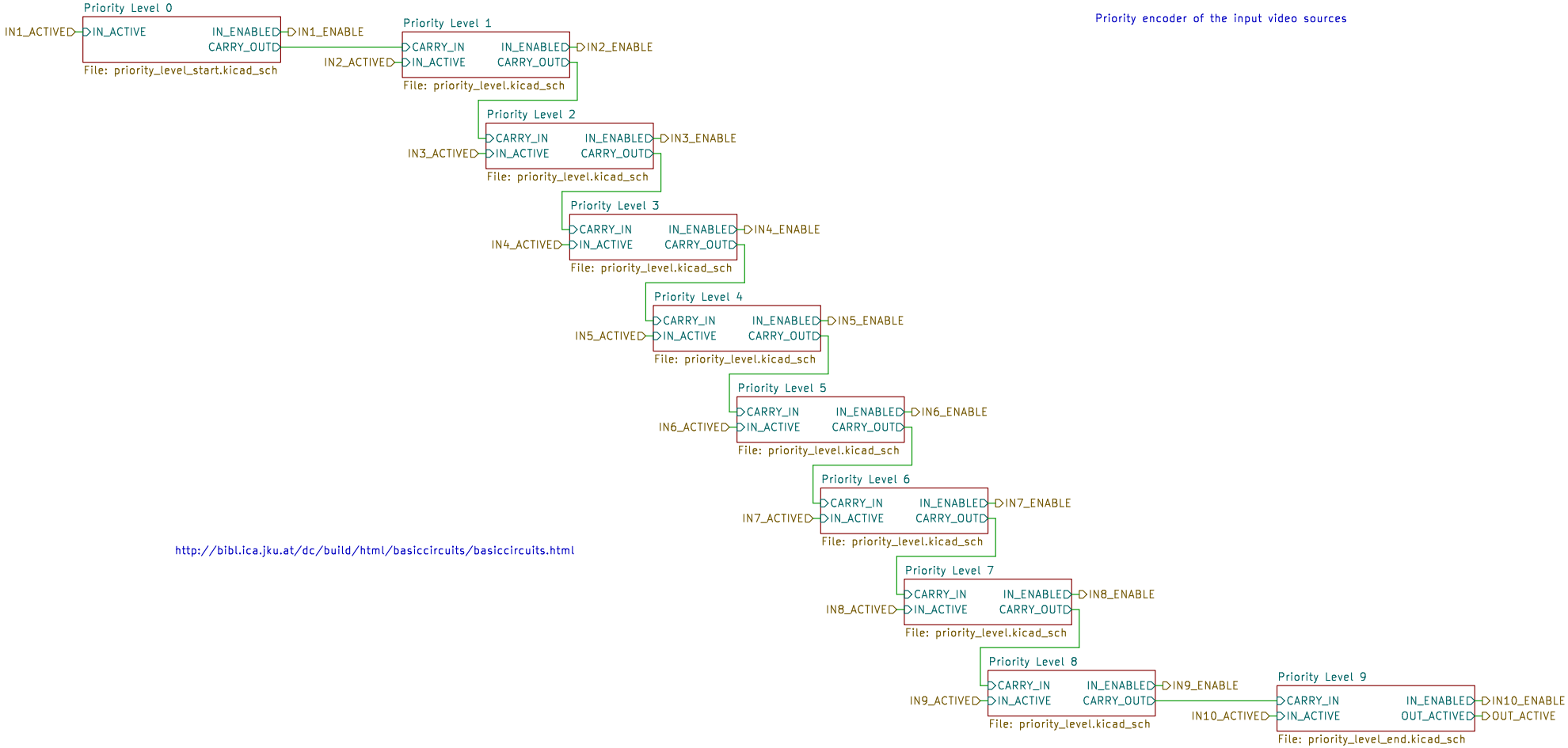
SCART output



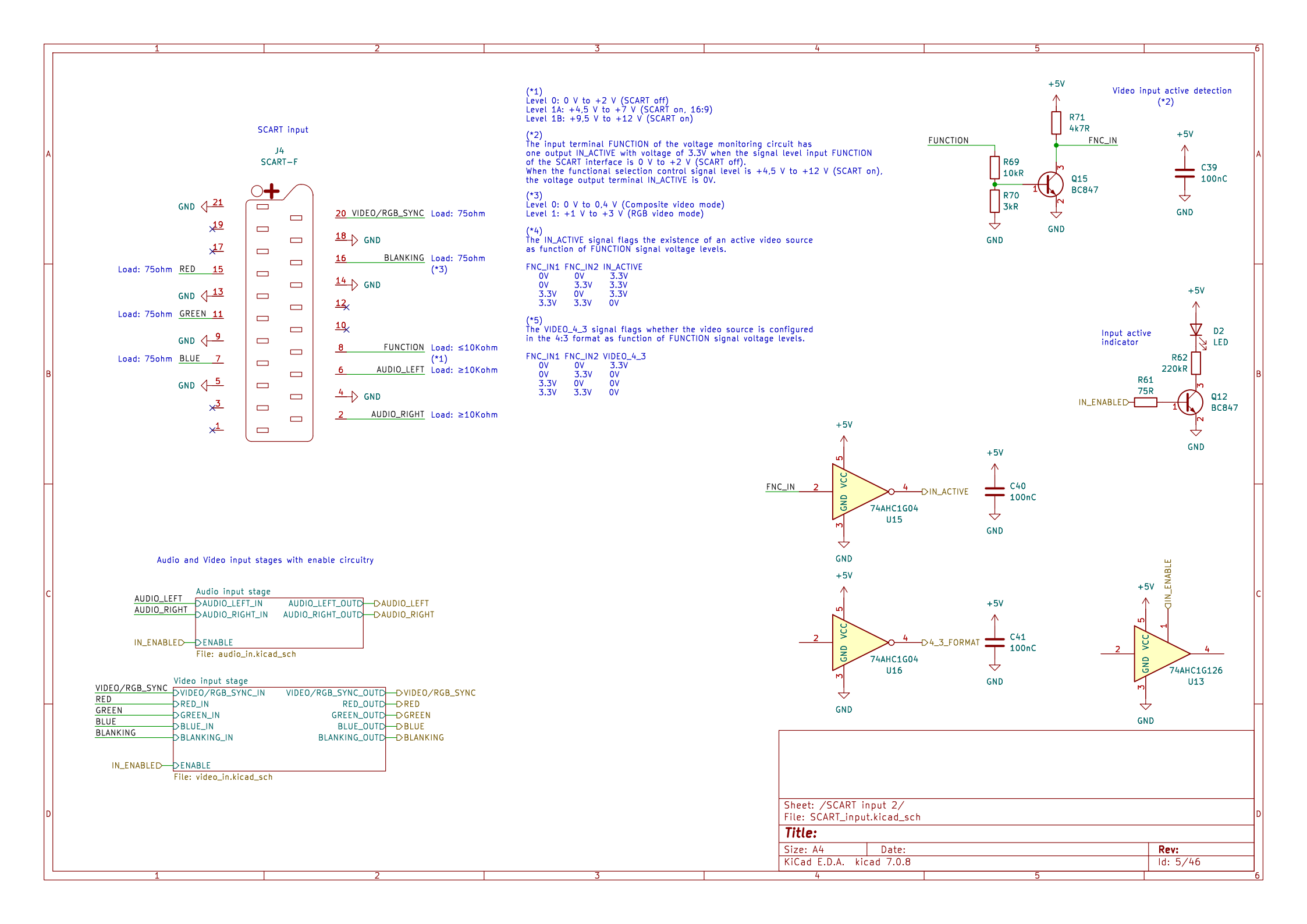
Sheet: /SCART output/
File: SCART_output.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 3/46



Sheet: /Priority Encoder/		
File: priority_encoder.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 4/46


SCART input
J4
SCART-F
GND 21
19
17
Load: 75ohm RED 15
GND 13
Load: 75ohm GREEN 11
GND 9
Load: 75ohm BLUE 7
GND 5
3
1
20 VIDEO/RGB_SYNC Load: 75ohm
18 GND
16 BLANKING Load: 75ohm (*3)
14 GND
12
10
8 FUNCTION Load: ≤10Kohm (*1)
6 AUDIO_LEFT Load: ≥10Kohm
4 GND
2 AUDIO_RIGHT Load: ≥10Kohm
(*1)
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)
(*2)
The input terminal FUNCTION of the voltage monitoring circuit has one output IN_ACTIVE with voltage of 3.3V when the signal level input FUNCTION of the SCART interface is 0 V to +2 V (SCART off).
When the functional selection control signal level is +4,5 V to +12 V (SCART on), the voltage output terminal IN_ACTIVE is 0V.
(*3)
Level 0: 0 V to 0,4 V (Composite video mode)
Level 1: +1 V to +3 V (RGB video mode)
(*4)
The IN_ACTIVE signal flags the existence of an active video source as function of FUNCTION signal voltage levels.
FNC_IN1 FNC_IN2 IN_ACTIVE
0V 0V 3.3V
0V 3.3V 3.3V
3.3V 0V 3.3V
3.3V 3.3V 0V
(*5)
The VIDEO_4_3 signal flags whether the video source is configured in the 4:3 format as function of FUNCTION signal voltage levels.
FNC_IN1 FNC_IN2 VIDEO_4_3
0V 0V 3.3V
0V 3.3V 0V
3.3V 0V 0V
3.3V 3.3V 0V
+5V
Video input active detection (*2)
FUNCTION
R71 4k7R
FNC_IN
R69 10kR
R70 3kR
Q15 BC847
GND
C39 100nC
Input active indicator
D2 LED
R62 220kR
R61 75R
IN_ENABLE
Q12 BC847
FNC_IN
74AHC1G04 U15
IN_ACTIVE
C40 100nC
74AHC1G04 U16
4_3_FORMAT
C41 100nC
74AHC1G126 U13
Audio and Video input stages with enable circuitry
Audio input stage
AUDIO_LEFT
AUDIO_RIGHT
AUDIO_LEFT_IN
AUDIO_RIGHT_IN
AUDIO_LEFT_OUT
AUDIO_RIGHT_OUT
IN_ENABLE
ENABLE
File: audio_in.kicad_sch
Video input stage
VIDEO/RGB_SYNC
RED
GREEN
BLUE
BLANKING
VIDEO/RGB_SYNC_IN
RED_IN
GREEN_IN
BLUE_IN
BLANKING_IN
VIDEO/RGB_SYNC_OUT
RED_OUT
GREEN_OUT
BLUE_OUT
BLANKING_OUT
File: video_in.kicad_sch
Sheet: /SCART input 2/
File: SCART_input.kicad_sch
Title:
Size: A4
Date:
Rev:
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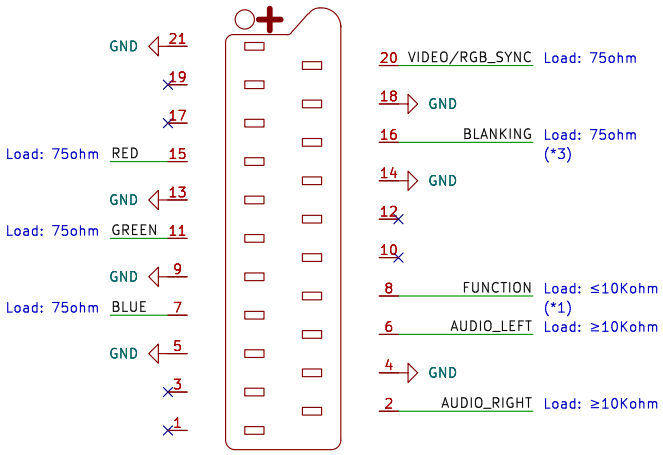
Id: 5/46

SCART input

J5
SCART-F



(*1)
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)

(*2)
The input terminal FUNCTION of the voltage monitoring circuit has one output IN_ACTIVE with voltage of 3.3V when the signal level input FUNCTION of the SCART interface is 0 V to +2 V (SCART off).
When the functional selection control signal level is +4,5 V to +12 V (SCART on), the voltage output terminal IN_ACTIVE is 0V.

(*3)
Level 0: 0 V to 0,4 V (Composite video mode)
Level 1: +1 V to +3 V (RGB video mode)

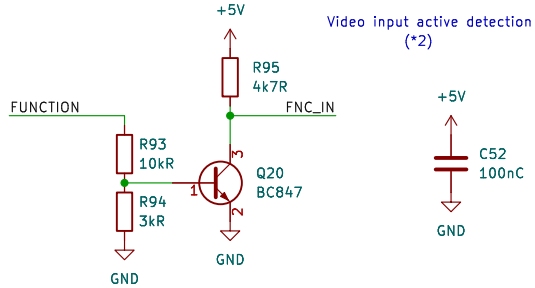
(*4)
The IN_ACTIVE signal flags the existence of an active video source as function of FUNCTION signal voltage levels.

FNC_IN1	FNC_IN2	IN_ACTIVE
0V	0V	3.3V
0V	3.3V	3.3V
3.3V	0V	3.3V
3.3V	3.3V	0V

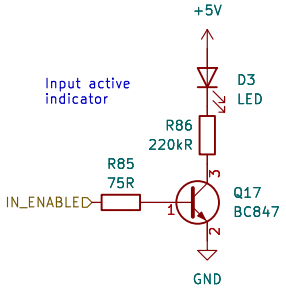
(*5)
The VIDEO_4_3 signal flags whether the video source is configured in the 4:3 format as function of FUNCTION signal voltage levels.

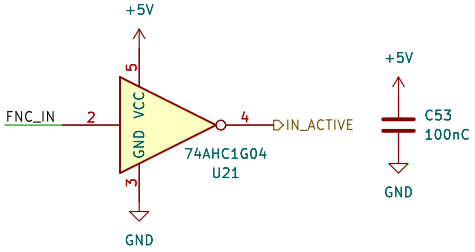
FNC_IN1	FNC_IN2	VIDEO_4_3
0V	0V	3.3V
0V	3.3V	0V
3.3V	0V	0V
3.3V	3.3V	0V

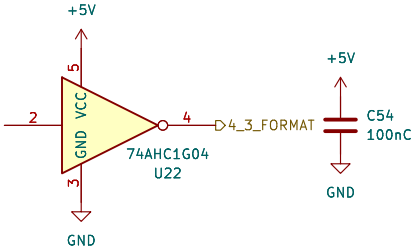
Video input active detection (*2)

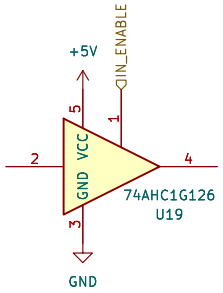


Input active indicator

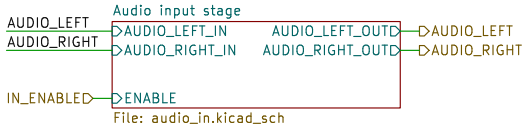


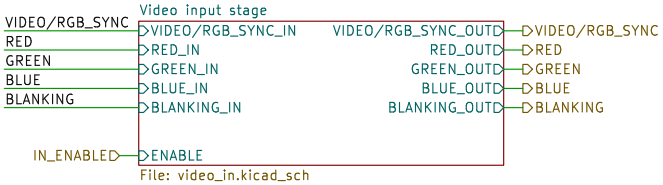






Audio and Video input stages with enable circuitry





Sheet: /SCART input 3/
File: SCART_input.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 6/46

SCART input

J6
SCART-F

GND 21
19
17
Load: 75ohm RED 15
GND 13
Load: 75ohm GREEN 11
GND 9
Load: 75ohm BLUE 7
GND 5
3
1

20 VIDEO/RGB_SYNC Load: 75ohm
18 GND
16 BLANKING Load: 75ohm (*3)
14 GND
12
10
8 FUNCTION Load: ≤10Kohm (*1)
6 AUDIO_LEFT Load: ≥10Kohm
4 GND
2 AUDIO_RIGHT Load: ≥10Kohm

(*1)
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)

(*2)
The input terminal FUNCTION of the voltage monitoring circuit has one output IN_ACTIVE with voltage of 3.3V when the signal level input FUNCTION of the SCART interface is 0 V to +2 V (SCART off).
When the functional selection control signal level is +4,5 V to +12 V (SCART on), the voltage output terminal IN_ACTIVE is 0V.

(*3)
Level 0: 0 V to 0,4 V (Composite video mode)
Level 1: +1 V to +3 V (RGB video mode)

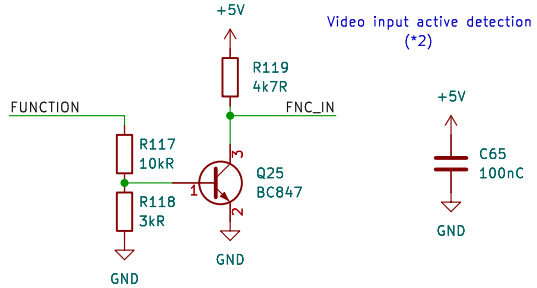
(*4)
The IN_ACTIVE signal flags the existence of an active video source as function of FUNCTION signal voltage levels.

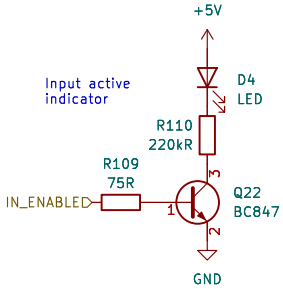
FNC_IN1	FNC_IN2	IN_ACTIVE
0V	0V	3.3V
0V	3.3V	3.3V
3.3V	0V	3.3V
3.3V	3.3V	0V

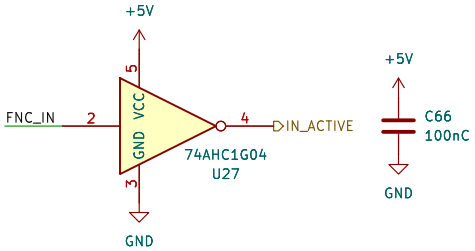
(*5)
The VIDEO_4_3 signal flags whether the video source is configured in the 4:3 format as function of FUNCTION signal voltage levels.

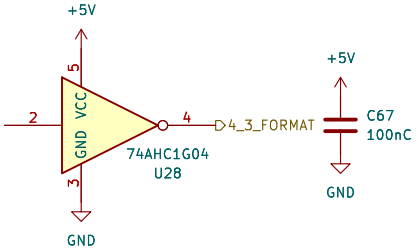
FNC_IN1	FNC_IN2	VIDEO_4_3
0V	0V	3.3V
0V	3.3V	0V
3.3V	0V	0V
3.3V	3.3V	0V

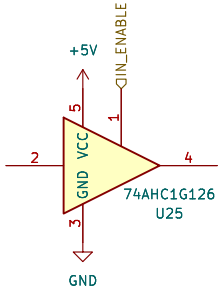
Video input active detection (*2)



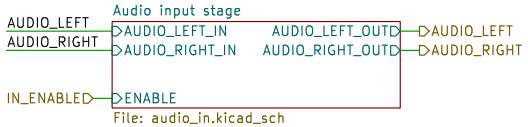


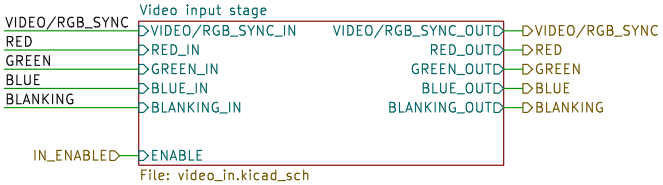






Audio and Video input stages with enable circuitry





Sheet: /SCART input 4/
File: SCART_input.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 7/46

SCART input

J7
SCART-F

GND 21
19
17
Load: 75ohm RED 15
GND 13
Load: 75ohm GREEN 11
GND 9
Load: 75ohm BLUE 7
GND 5
3
1

20 VIDEO/RGB_SYNC Load: 75ohm
18 GND
16 BLANKING Load: 75ohm (*3)
14 GND
12
10
8 FUNCTION Load: ≤10Kohm (*1)
6 AUDIO_LEFT Load: ≥10Kohm
4 GND
2 AUDIO_RIGHT Load: ≥10Kohm

(*1)
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)

(*2)
The input terminal FUNCTION of the voltage monitoring circuit has one output IN_ACTIVE with voltage of 3.3V when the signal level input FUNCTION of the SCART interface is 0 V to +2 V (SCART off).
When the functional selection control signal level is +4,5 V to +12 V (SCART on), the voltage output terminal IN_ACTIVE is 0V.

(*3)
Level 0: 0 V to 0,4 V (Composite video mode)
Level 1: +1 V to +3 V (RGB video mode)

(*4)
The IN_ACTIVE signal flags the existence of an active video source as function of FUNCTION signal voltage levels.

FNC_IN1	FNC_IN2	IN_ACTIVE
0V	0V	3.3V
0V	3.3V	3.3V
3.3V	0V	3.3V
3.3V	3.3V	0V

(*5)
The VIDEO_4_3 signal flags whether the video source is configured in the 4:3 format as function of FUNCTION signal voltage levels.

FNC_IN1	FNC_IN2	VIDEO_4_3
0V	0V	3.3V
0V	3.3V	0V
3.3V	0V	0V
3.3V	3.3V	0V

Video input active detection (*2)

+5V
R143 4k7R
FUNCTION
FNC_IN
R141 10kR
R142 3kR
Q30 BC847
GND
+5V
C78 100nC
GND

Input active indicator

+5V
D5 LED
R134 220kR
R133 75R
IN_ENABLE
Q27 BC847
GND

+5V
FNC_IN
74AHC1G04 U33
IN_ACTIVE
+5V
C79 100nC
GND

+5V
74AHC1G04 U34
4_3_FORMAT
+5V
C80 100nC
GND

+5V
IN_ENABLE
74AHC1G126 U31
GND

Audio and Video input stages with enable circuitry

Audio input stage
AUDIO_LEFT
AUDIO_RIGHT
AUDIO_LEFT_IN
AUDIO_RIGHT_IN
AUDIO_LEFT_OUT
AUDIO_RIGHT_OUT
AUDIO_LEFT
AUDIO_RIGHT
IN_ENABLED
ENABLE
File: audio_in.kicad_sch

Video input stage
VIDEO/RGB_SYNC
RED
GREEN
BLUE
BLANKING
VIDEO/RGB_SYNC_IN
RED_IN
GREEN_IN
BLUE_IN
BLANKING_IN
VIDEO/RGB_SYNC_OUT
RED_OUT
GREEN_OUT
BLUE_OUT
BLANKING_OUT
VIDEO/RGB_SYNC
RED
GREEN
BLUE
BLANKING
IN_ENABLED
ENABLE
File: video_in.kicad_sch

Sheet: /SCART input 5/
File: SCART_input.kicad_sch

Title:

Size: A4 | Date: | **Rev:**
KiCad E.D.A. kicad 7.0.8 | Id: 8/46

SCART input

J8
SCART-F

GND 21
19
17
Load: 75ohm RED 15
GND 13
Load: 75ohm GREEN 11
GND 9
Load: 75ohm BLUE 7
GND 5
3
1

20 VIDEO/RGB_SYNC Load: 75ohm
18 GND
16 BLANKING Load: 75ohm (*3)
14 GND
12
10
8 FUNCTION Load: ≤10Kohm (*1)
6 AUDIO_LEFT Load: ≥10Kohm
4 GND
2 AUDIO_RIGHT Load: ≥10Kohm

(*1)
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)

(*2)
The input terminal FUNCTION of the voltage monitoring circuit has one output IN_ACTIVE with voltage of 3.3V when the signal level input FUNCTION of the SCART interface is 0 V to +2 V (SCART off).
When the functional selection control signal level is +4,5 V to +12 V (SCART on), the voltage output terminal IN_ACTIVE is 0V.

(*3)
Level 0: 0 V to 0,4 V (Composite video mode)
Level 1: +1 V to +3 V (RGB video mode)

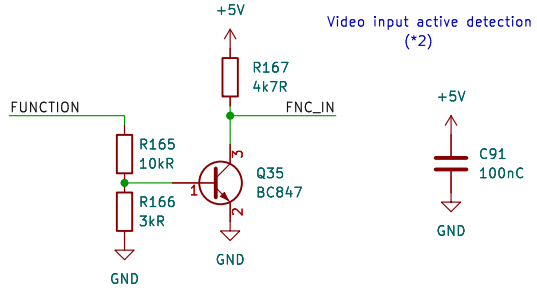
(*4)
The IN_ACTIVE signal flags the existence of an active video source as function of FUNCTION signal voltage levels.

FNC_IN1	FNC_IN2	IN_ACTIVE
0V	0V	3.3V
0V	3.3V	3.3V
3.3V	0V	3.3V
3.3V	3.3V	0V

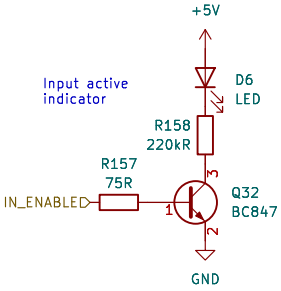
(*5)
The VIDEO_4_3 signal flags whether the video source is configured in the 4:3 format as function of FUNCTION signal voltage levels.

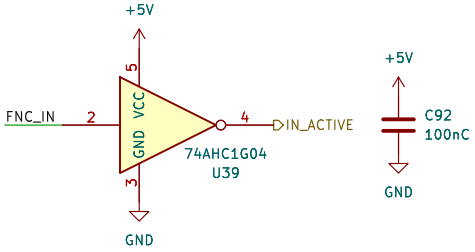
FNC_IN1	FNC_IN2	VIDEO_4_3
0V	0V	3.3V
0V	3.3V	0V
3.3V	0V	0V
3.3V	3.3V	0V

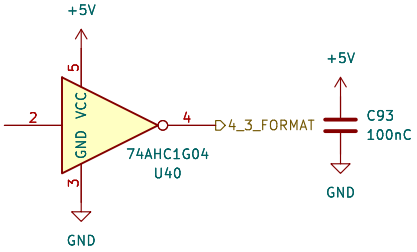
Video input active detection (*2)

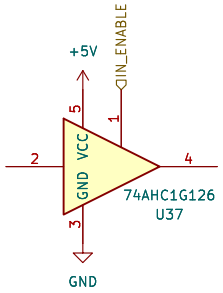


Input active indicator

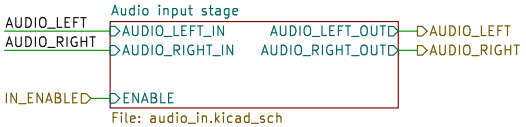


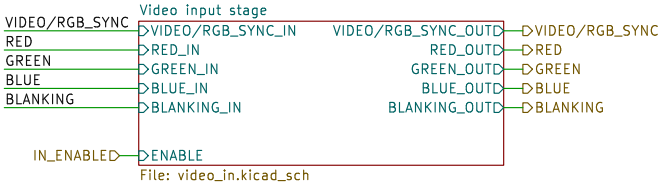






Audio and Video input stages with enable circuitry





Sheet: /SCART input 6/
File: SCART_input.kicad_sch

Title:

Size: A4	Date:	**Rev:**
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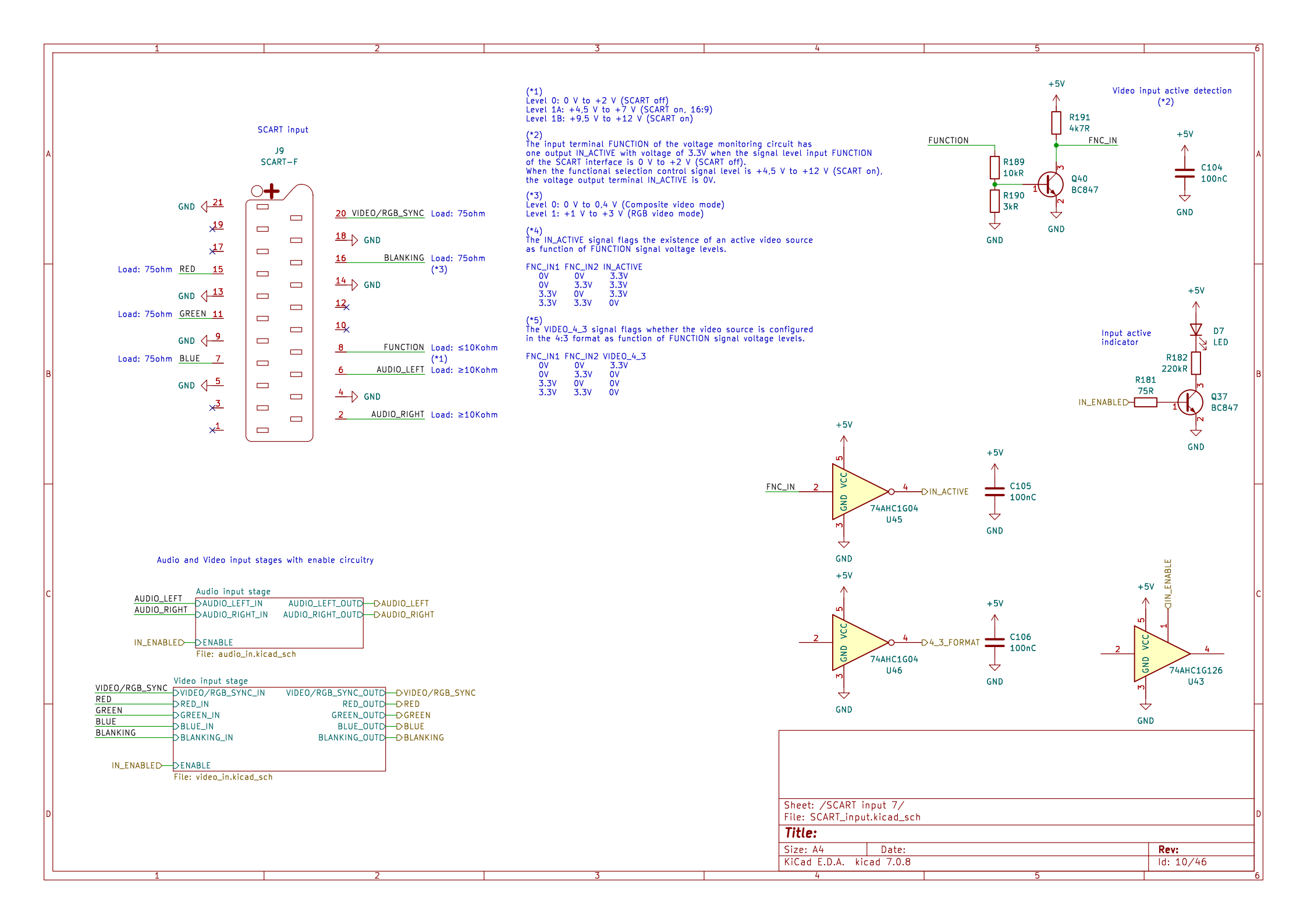
SCART input
J9
SCART-F
GND 21
19
17
Load: 75ohm RED 15
GND 13
Load: 75ohm GREEN 11
GND 9
Load: 75ohm BLUE 7
GND 5
3
1
20 VIDEO/RGB_SYNC Load: 75ohm
18 GND
16 BLANKING Load: 75ohm (*3)
14 GND
12
10
8 FUNCTION Load: ≤10Kohm (*1)
6 AUDIO_LEFT Load: ≥10Kohm
4 GND
2 AUDIO_RIGHT Load: ≥10Kohm
(*1)
Level 0: 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)
(*2)
The input terminal FUNCTION of the voltage monitoring circuit has one output IN_ACTIVE with voltage of 3.3V when the signal level input FUNCTION of the SCART interface is 0 V to +2 V (SCART off).
When the functional selection control signal level is +4,5 V to +12 V (SCART on), the voltage output terminal IN_ACTIVE is 0V.
(*3)
Level 0: 0 V to 0,4 V (Composite video mode)
Level 1: +1 V to +3 V (RGB video mode)
(*4)
The IN_ACTIVE signal flags the existence of an active video source as function of FUNCTION signal voltage levels.
FNC_IN1 FNC_IN2 IN_ACTIVE
0V 0V 3.3V
0V 3.3V 3.3V
3.3V 0V 3.3V
3.3V 3.3V 0V
(*5)
The VIDEO_4_3 signal flags whether the video source is configured in the 4:3 format as function of FUNCTION signal voltage levels.
FNC_IN1 FNC_IN2 VIDEO_4_3
0V 0V 3.3V
0V 3.3V 0V
3.3V 0V 0V
3.3V 3.3V 0V
+5V
Video input active detection (*2)
FUNCTION
R191 4k7R
FNC_IN
R189 10kR
R190 3kR
Q40 BC847
GND
C104 100nC
Input active indicator
D7 LED
R182 220kR
R181 75R
IN_ENABLE
Q37 BC847
FNC_IN
74AHC1G04 U45
IN_ACTIVE
C105 100nC
4_3_FORMAT
74AHC1G04 U46
C106 100nC
74AHC1G126 U43
Audio and Video input stages with enable circuitry
Audio input stage
AUDIO_LEFT
AUDIO_RIGHT
AUDIO_LEFT_IN
AUDIO_RIGHT_IN
AUDIO_LEFT_OUT
AUDIO_RIGHT_OUT
IN_ENABLED
ENABLE
File: audio_in.kicad_sch
Video input stage
VIDEO/RGB_SYNC
RED
GREEN
BLUE
BLANKING
VIDEO/RGB_SYNC_IN
RED_IN
GREEN_IN
BLUE_IN
BLANKING_IN
VIDEO/RGB_SYNC_OUT
RED_OUT
GREEN_OUT
BLUE_OUT
BLANKING_OUT
File: video_in.kicad_sch
Sheet: /SCART input 7/
File: SCART_input.kicad_sch
Title:
Size: A4
Date:
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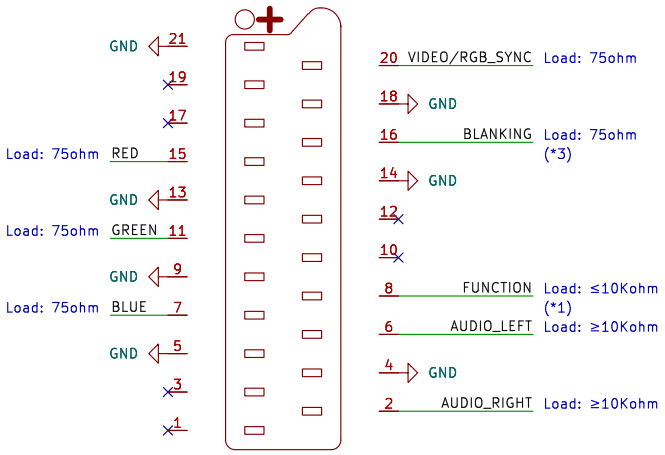
Id: 10/46

SCART input

J10
SCART-F



(*1)
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)

(*2)
The input terminal FUNCTION of the voltage monitoring circuit has one output IN_ACTIVE with voltage of 3.3V when the signal level input FUNCTION of the SCART interface is 0 V to +2 V (SCART off).
When the functional selection control signal level is +4,5 V to +12 V (SCART on), the voltage output terminal IN_ACTIVE is 0V.

(*3)
Level 0: 0 V to 0,4 V (Composite video mode)
Level 1: +1 V to +3 V (RGB video mode)

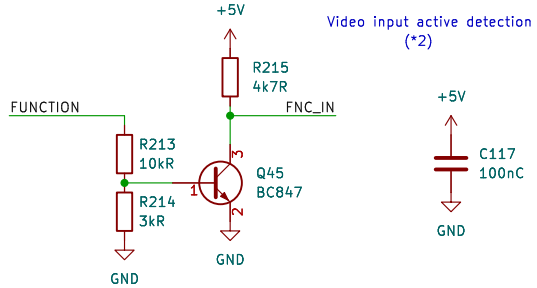
(*4)
The IN_ACTIVE signal flags the existence of an active video source as function of FUNCTION signal voltage levels.

FNC_IN1	FNC_IN2	IN_ACTIVE
0V	0V	3.3V
0V	3.3V	3.3V
3.3V	0V	3.3V
3.3V	3.3V	0V

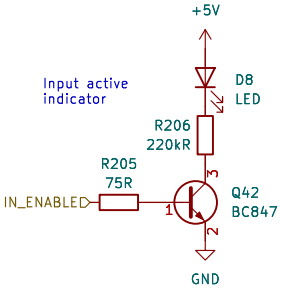
(*5)
The VIDEO_4_3 signal flags whether the video source is configured in the 4:3 format as function of FUNCTION signal voltage levels.

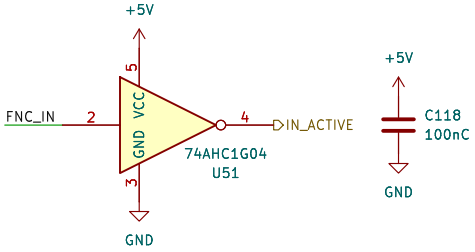
FNC_IN1	FNC_IN2	VIDEO_4_3
0V	0V	3.3V
0V	3.3V	0V
3.3V	0V	0V
3.3V	3.3V	0V

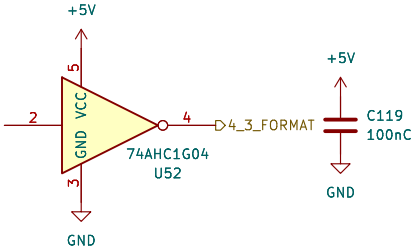
Video input active detection (*2)

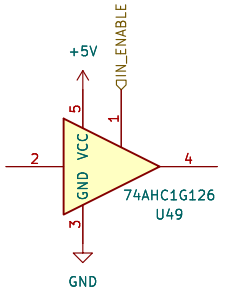


Input active indicator

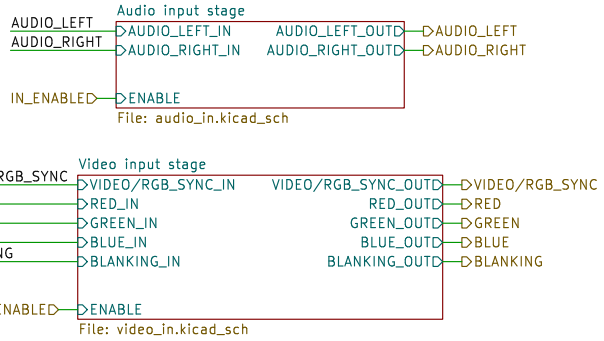








Audio and Video input stages with enable circuitry



Sheet: /SCART input 8/		
File: SCART_input.kicad_sch		
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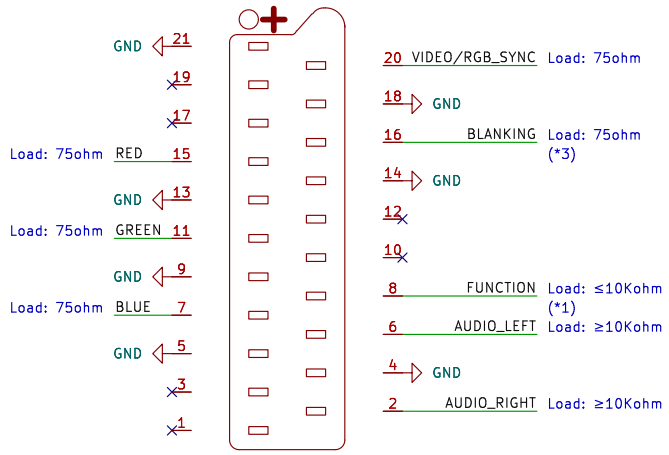
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 11/46

SCART input

J11
SCART-F



(*1)
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)

(*2)
The input terminal FUNCTION of the voltage monitoring circuit has one output IN_ACTIVE with voltage of 3.3V when the signal level input FUNCTION of the SCART interface is 0 V to +2 V (SCART off).
When the functional selection control signal level is +4,5 V to +12 V (SCART on), the voltage output terminal IN_ACTIVE is 0V.

(*3)
Level 0: 0 V to 0,4 V (Composite video mode)
Level 1: +1 V to +3 V (RGB video mode)

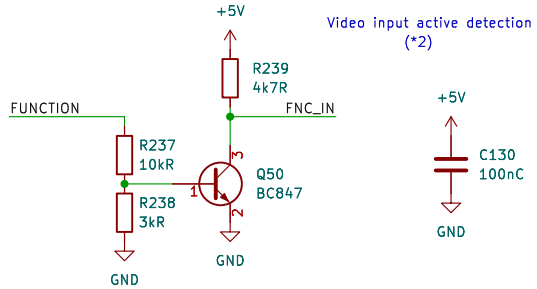
(*4)
The IN_ACTIVE signal flags the existence of an active video source as function of FUNCTION signal voltage levels.

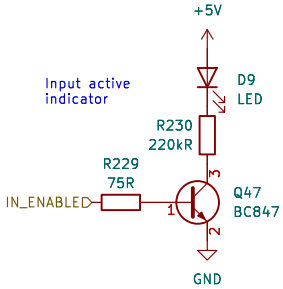
FNC_IN1	FNC_IN2	IN_ACTIVE
0V	0V	3.3V
0V	3.3V	3.3V
3.3V	0V	3.3V
3.3V	3.3V	0V

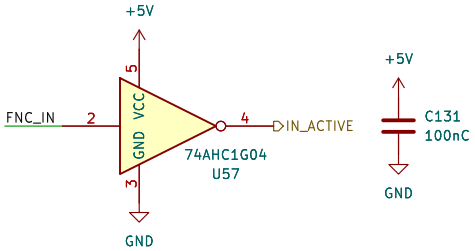
(*5)
The VIDEO_4_3 signal flags whether the video source is configured in the 4:3 format as function of FUNCTION signal voltage levels.

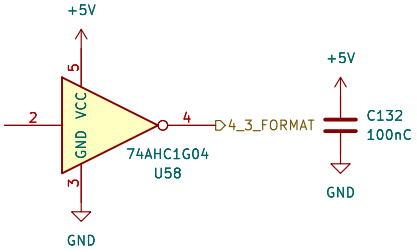
FNC_IN1	FNC_IN2	VIDEO_4_3
0V	0V	3.3V
0V	3.3V	0V
3.3V	0V	0V
3.3V	3.3V	0V

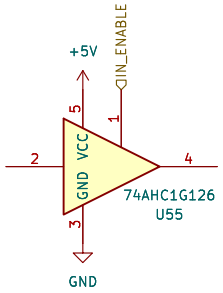
Video input active detection (*2)



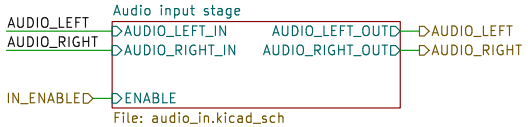


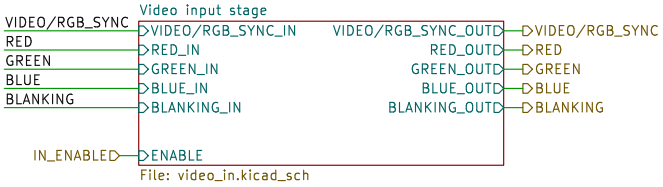






Audio and Video input stages with enable circuitry





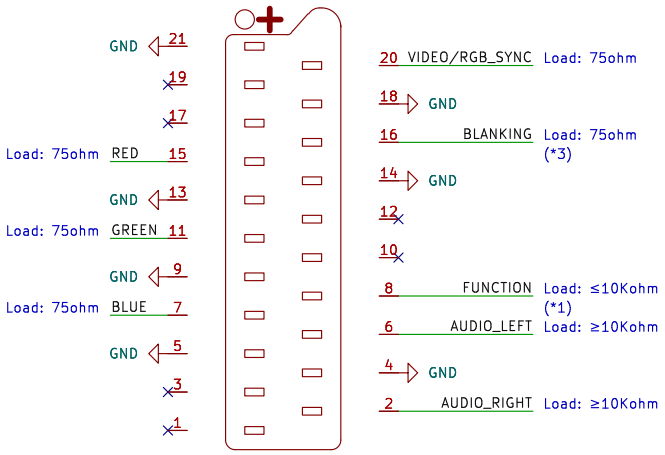
Sheet: /SCART input 9/
File: SCART_input.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 12/46

SCART input

J12
SCART-F



(*1)
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)

(*2)
The input terminal FUNCTION of the voltage monitoring circuit has one output IN_ACTIVE with voltage of 3.3V when the signal level input FUNCTION of the SCART interface is 0 V to +2 V (SCART off).
When the functional selection control signal level is +4,5 V to +12 V (SCART on), the voltage output terminal IN_ACTIVE is 0V.

(*3)
Level 0: 0 V to 0,4 V (Composite video mode)
Level 1: +1 V to +3 V (RGB video mode)

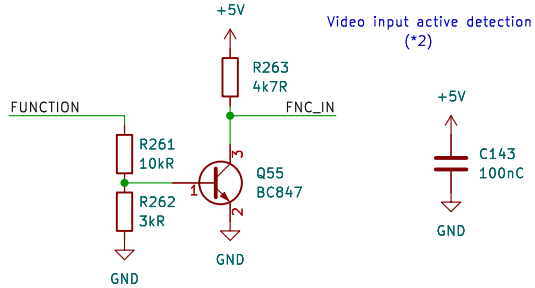
(*4)
The IN_ACTIVE signal flags the existence of an active video source as function of FUNCTION signal voltage levels.

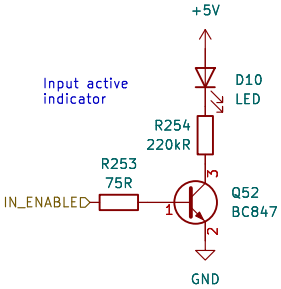
FNC_IN1	FNC_IN2	IN_ACTIVE
0V	0V	3.3V
0V	3.3V	3.3V
3.3V	0V	3.3V
3.3V	3.3V	0V

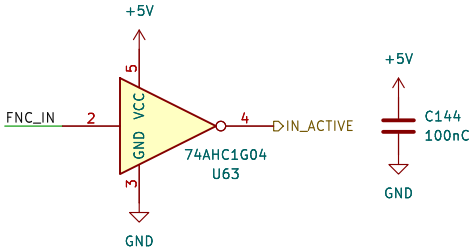
(*5)
The VIDEO_4_3 signal flags whether the video source is configured in the 4:3 format as function of FUNCTION signal voltage levels.

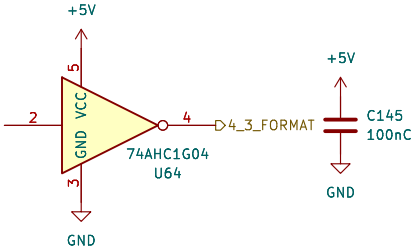
FNC_IN1	FNC_IN2	VIDEO_4_3
0V	0V	3.3V
0V	3.3V	0V
3.3V	0V	0V
3.3V	3.3V	0V

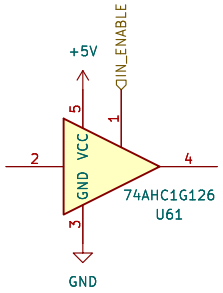
Video input active detection (*2)



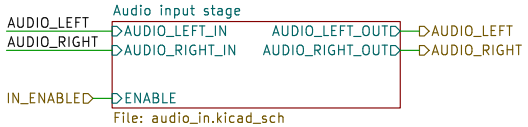


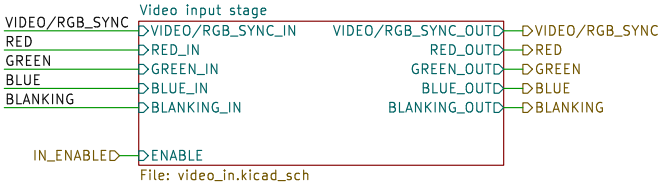






Audio and Video input stages with enable circuitry

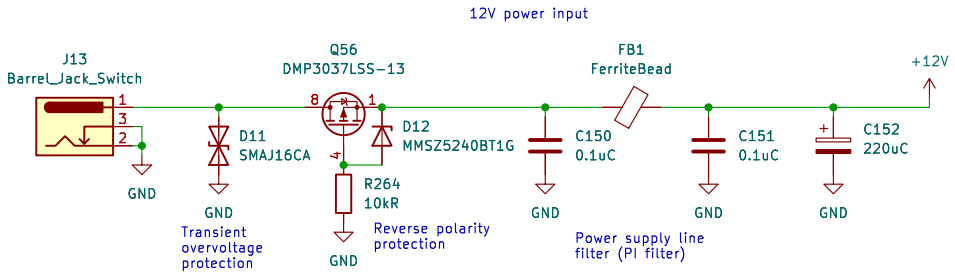


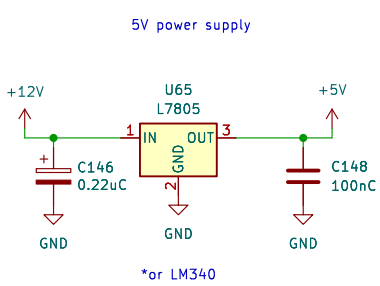


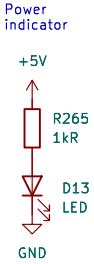
Sheet: /SCART input 10/
File: SCART_input.kicad_sch

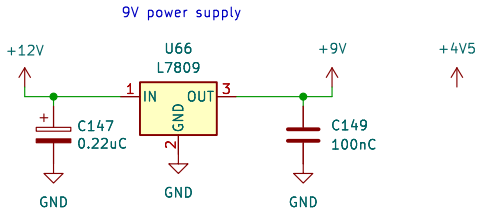
Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 13/46

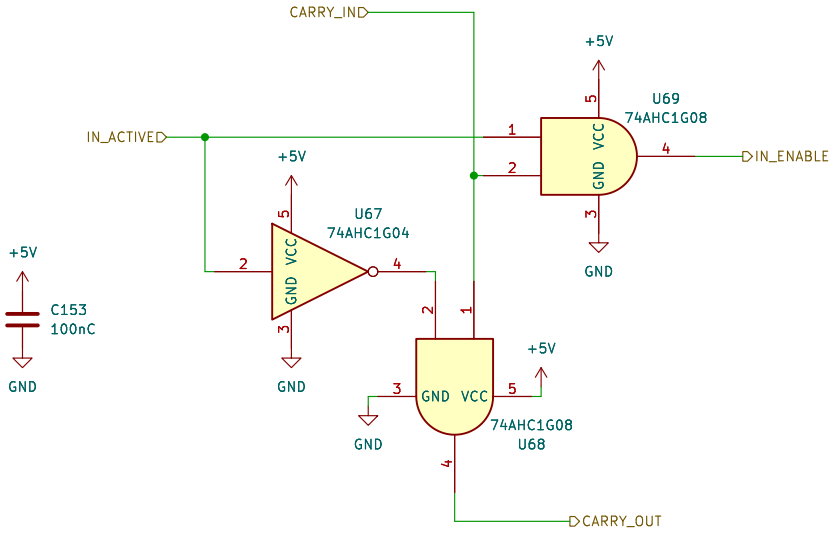








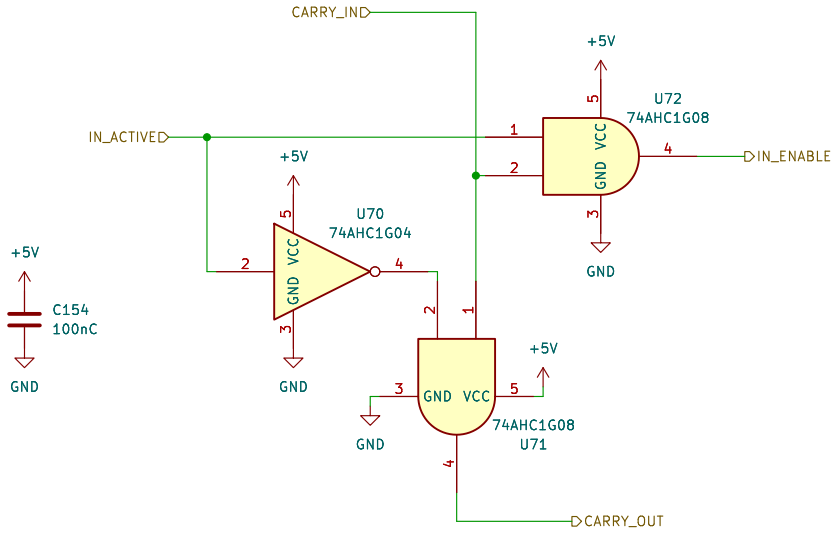
Sheet: /Power/		
File: power.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 14/46



Sheet: /Priority Encoder/Priority Level 1/
File: priority_level.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 15/46



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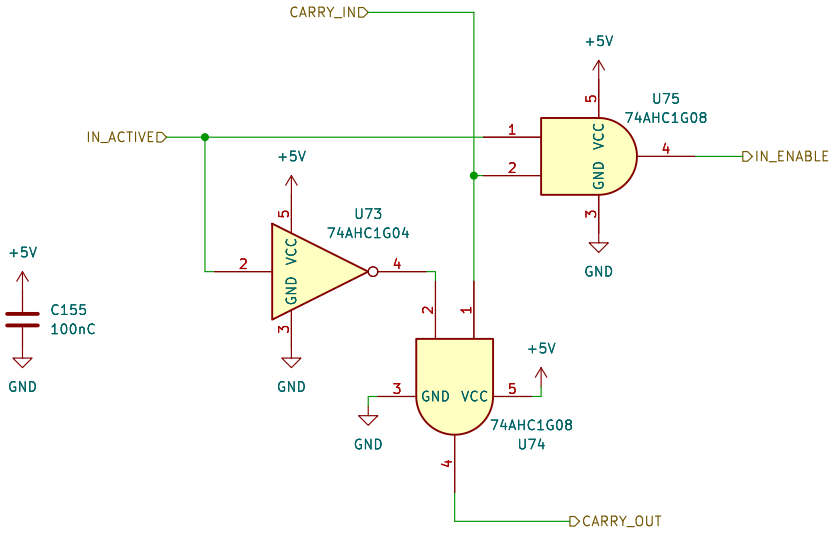
File: priority_level.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 16/46



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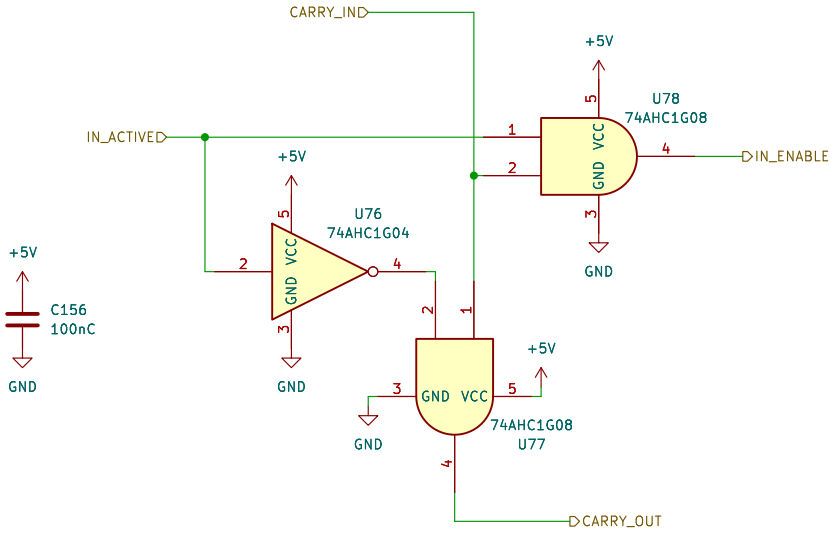
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 17/46



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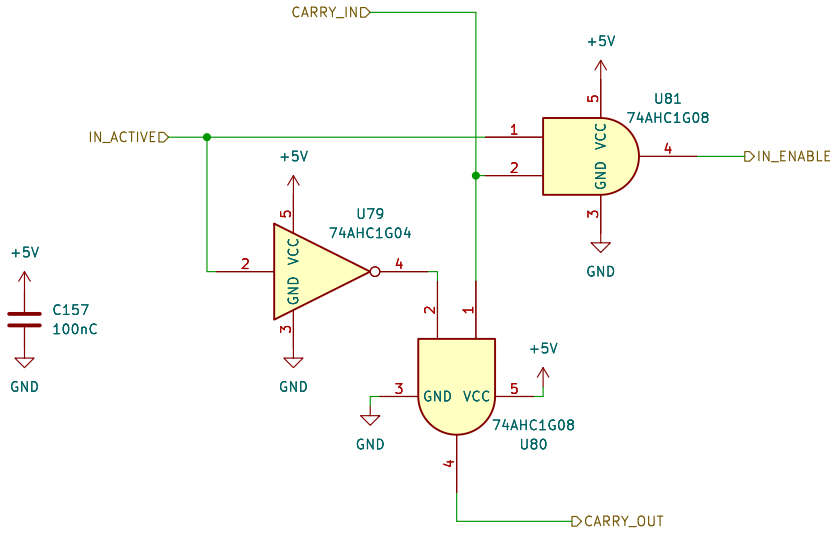
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 18/46



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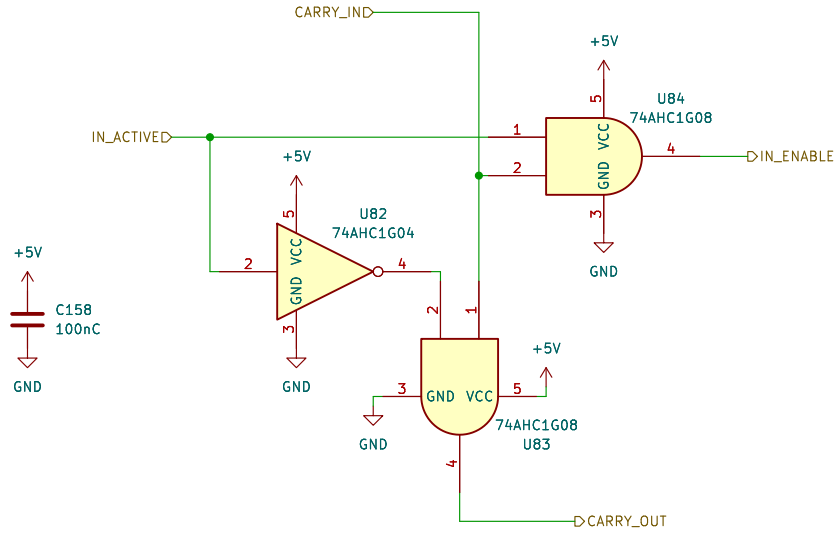
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 19/46



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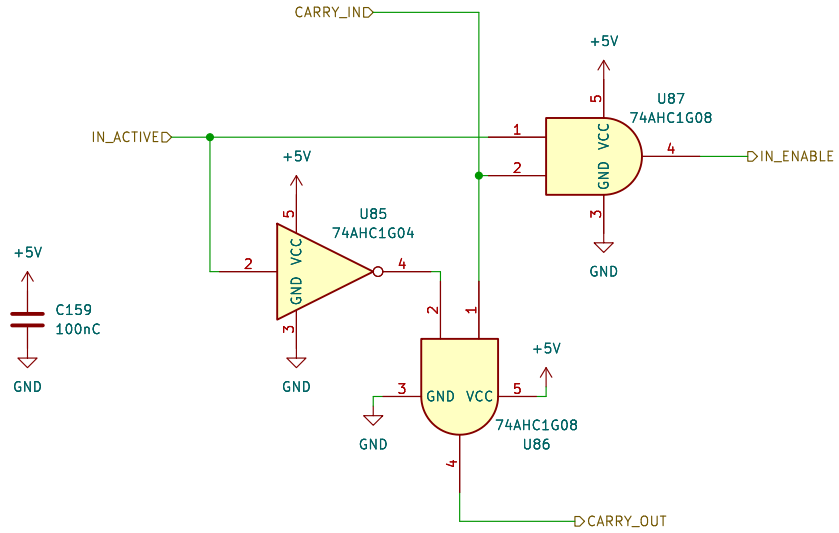
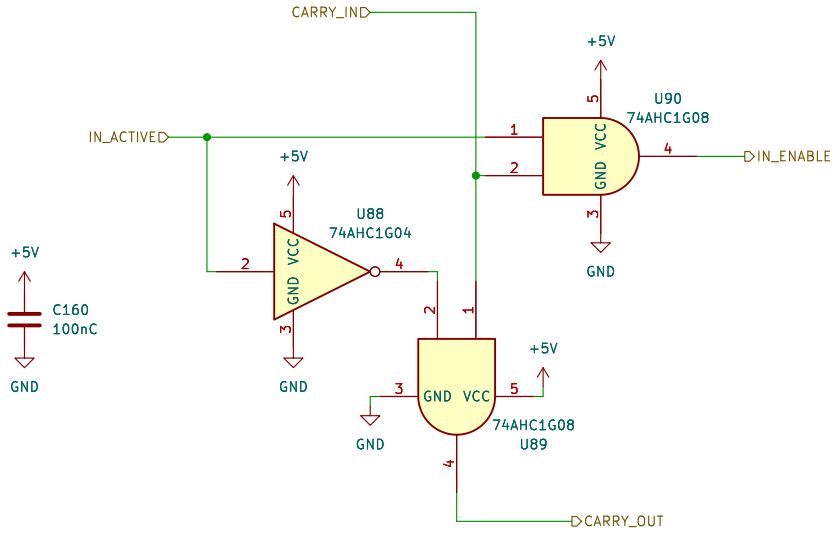
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 20/46



Sheet: /Priority Encoder/Priority Level 7/
File: priority_level.kicad_sch

Title:

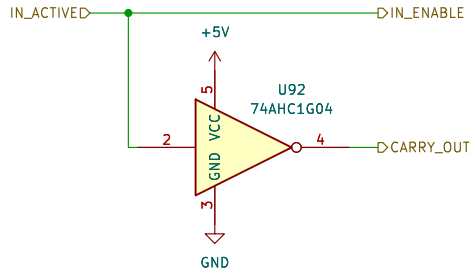
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 21/46

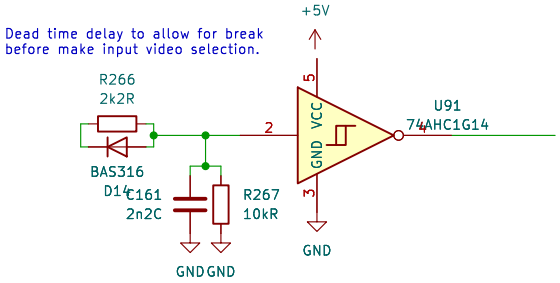


Sheet: /Priority Encoder/Priority Level 8/
File: priority_level.kicad_sch

Title:

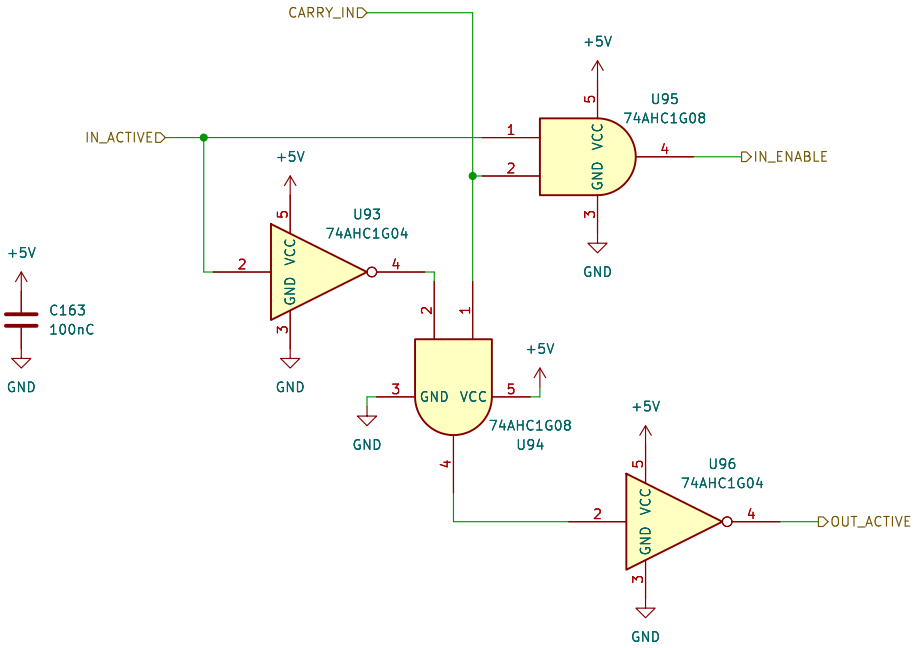
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 22/46





tbd: add delay to the enable case such that "break before make"
type of behaviour is built.

Sheet: /Priority Encoder/Priority Level 0/		
File: priority_level_start.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 23/46



Sheet: /Priority Encoder/Priority Level 9/		
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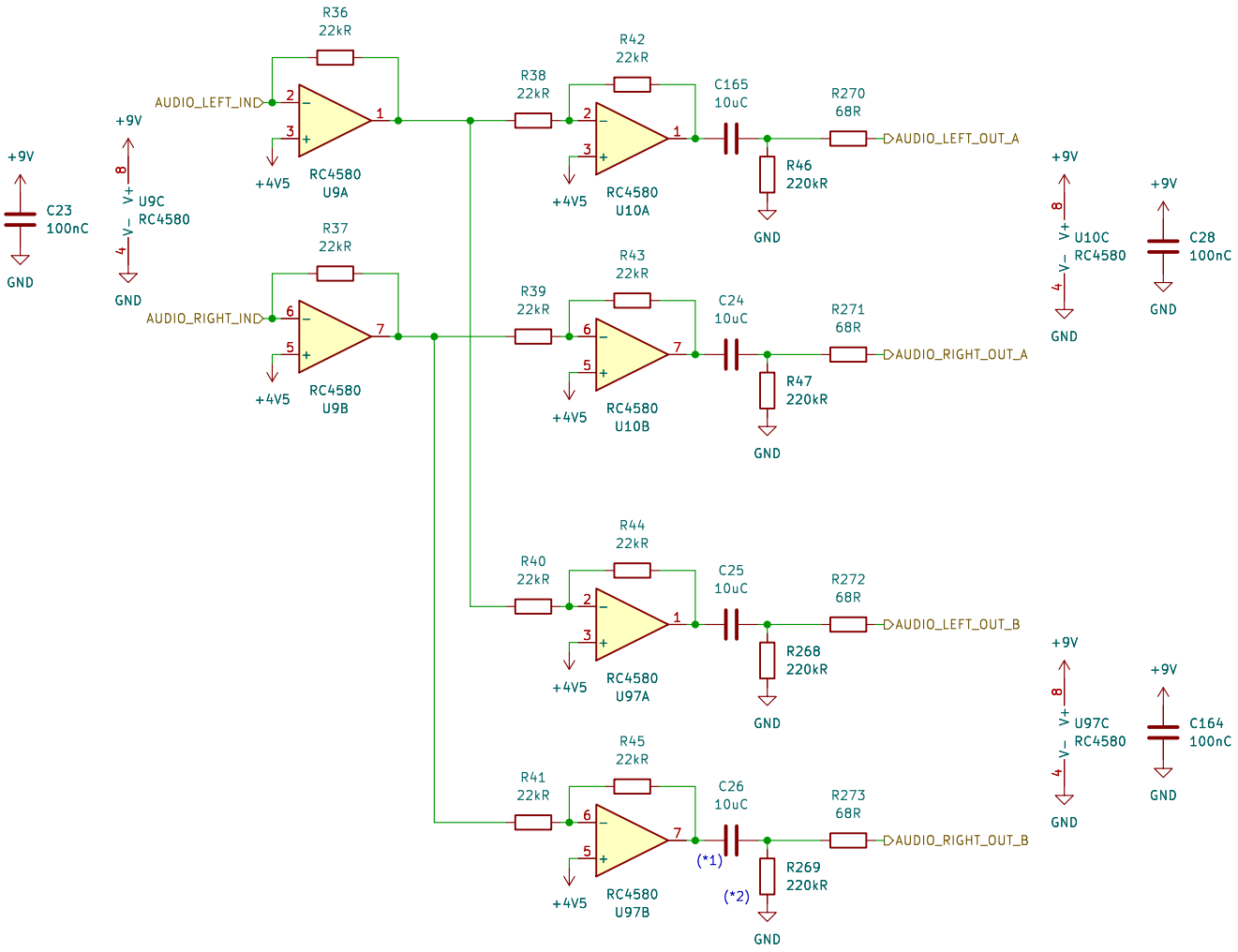
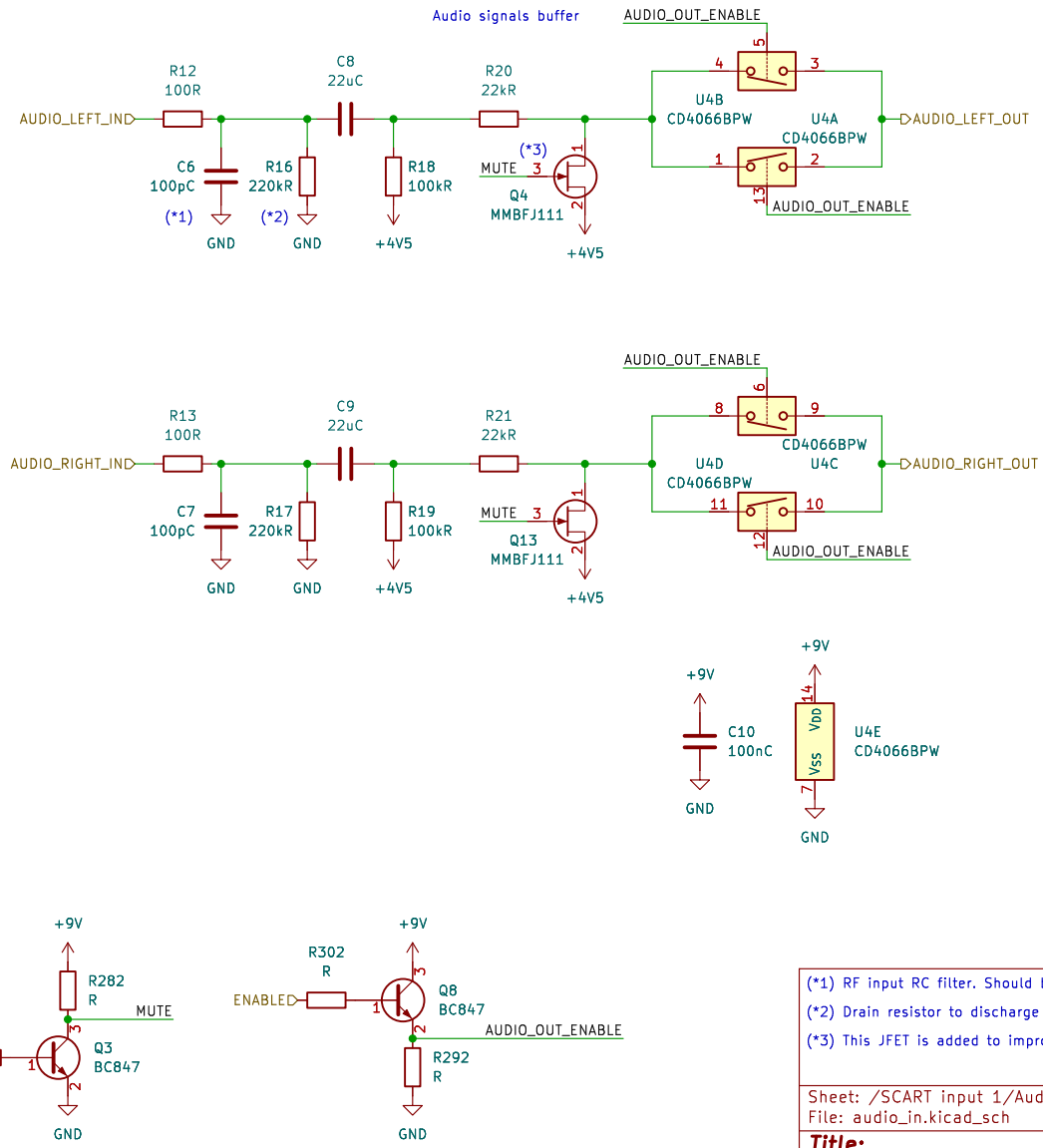
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 24/46



(*1) 10uC DC blocking capacitor chosen assuming a load impedance of 10k ohm.
Cut-off frequency at 1.6Hz.

(*2) Drain resistor to discharge the DC blocking capacitor.

Sheet: /SCART output/Audio output stage/	
File: audio_out.kicad_sch	
Title:	
Size: A4	Date:
KiCad E.D.A. kicad 7.0.8	Rev:
	Id: 25/46



(*1) RF input RC filter. Should be placed near the input connector as possible.

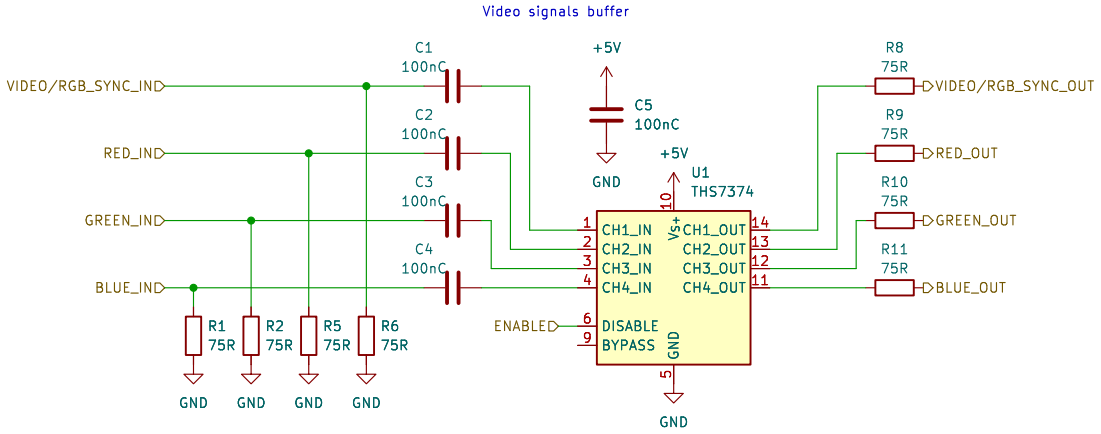
(*2) Drain resistor to discharge the DC blocking capacitor.

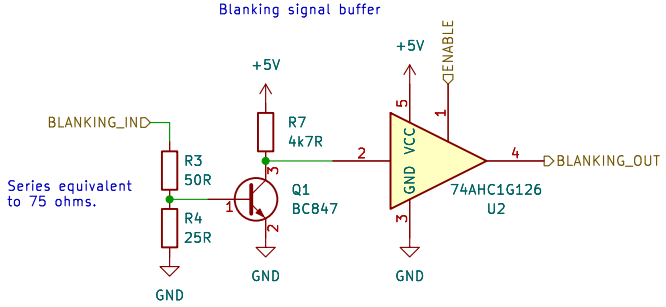
(*3) This JFET is added to improve channel isolation when this channel is off.

Sheet: /SCART input 1/Audio input stage/
File: audio_in.kicad_sch

Title:

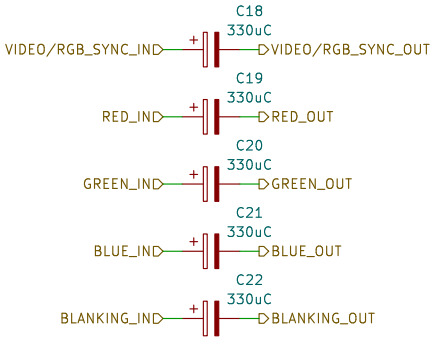
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 26/46



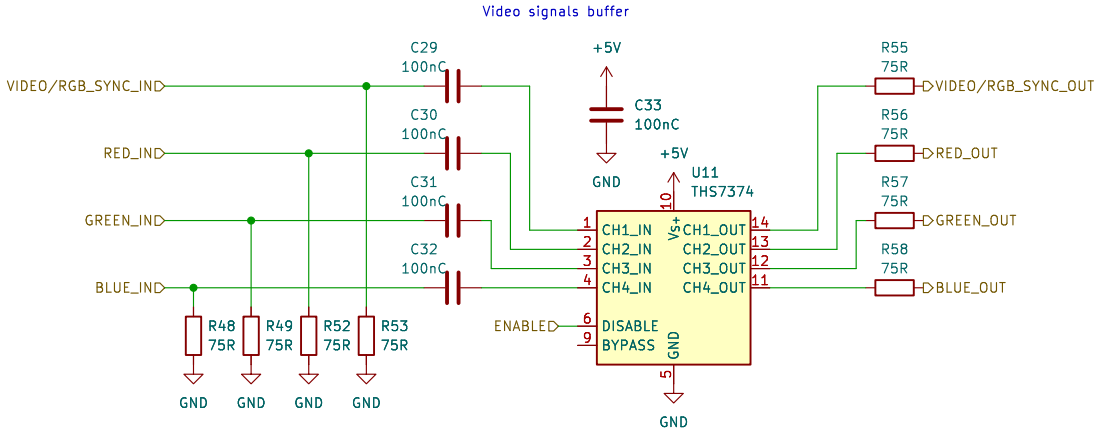


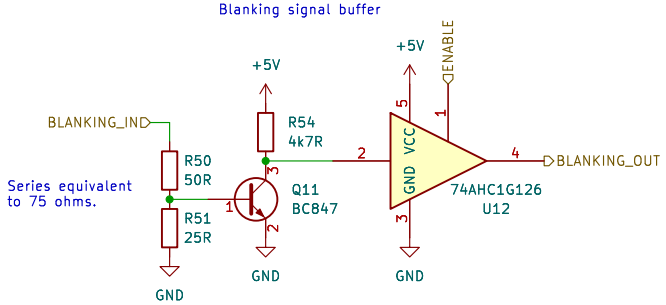
Sheet: /SCART input 1/Video input stage/		
File: video_in.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 36/46

Output capacitors

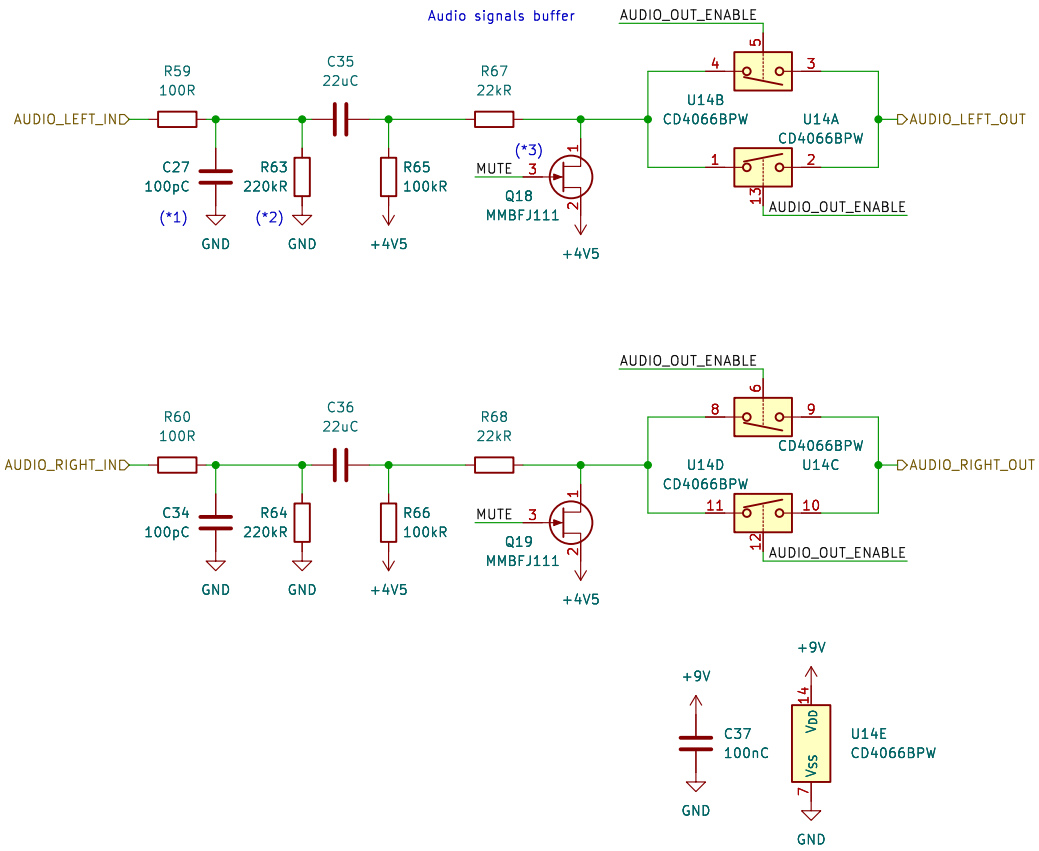


Sheet: /SCART output/Video output stage/		
File: video_out.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 46/46





Sheet: /SCART input 2/Video input stage/		
File: video_in.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 29/46



(*1) RF input RC filter. Should be placed near the input connector as possible.

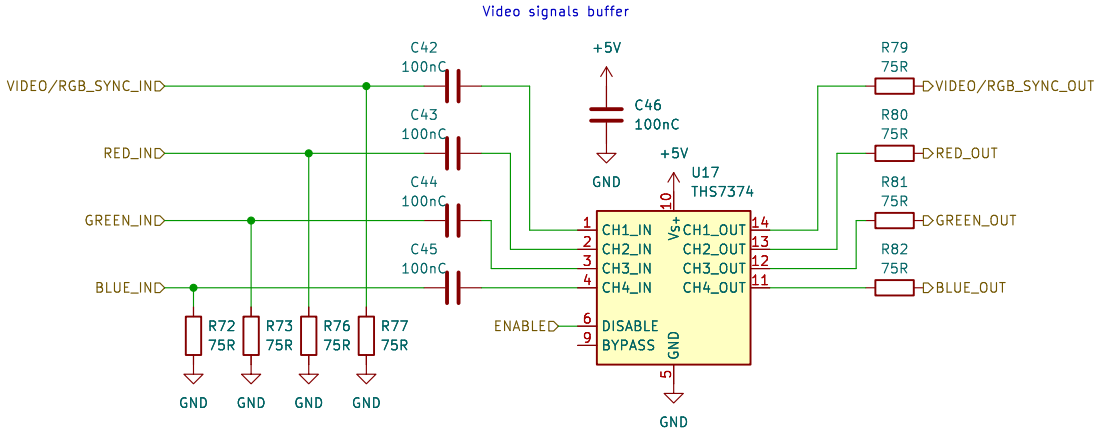
(*2) Drain resistor to discharge the DC blocking capacitor.

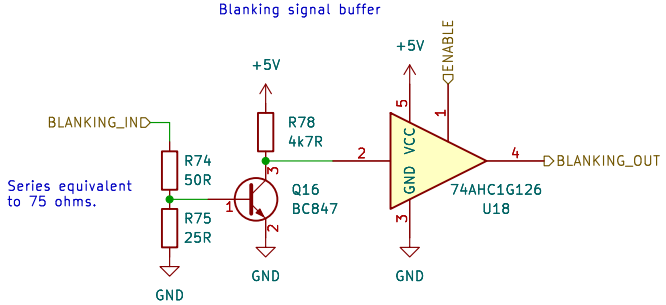
(*3) This JFET is added to improve channel isolation when this channel is off.

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

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 30/46



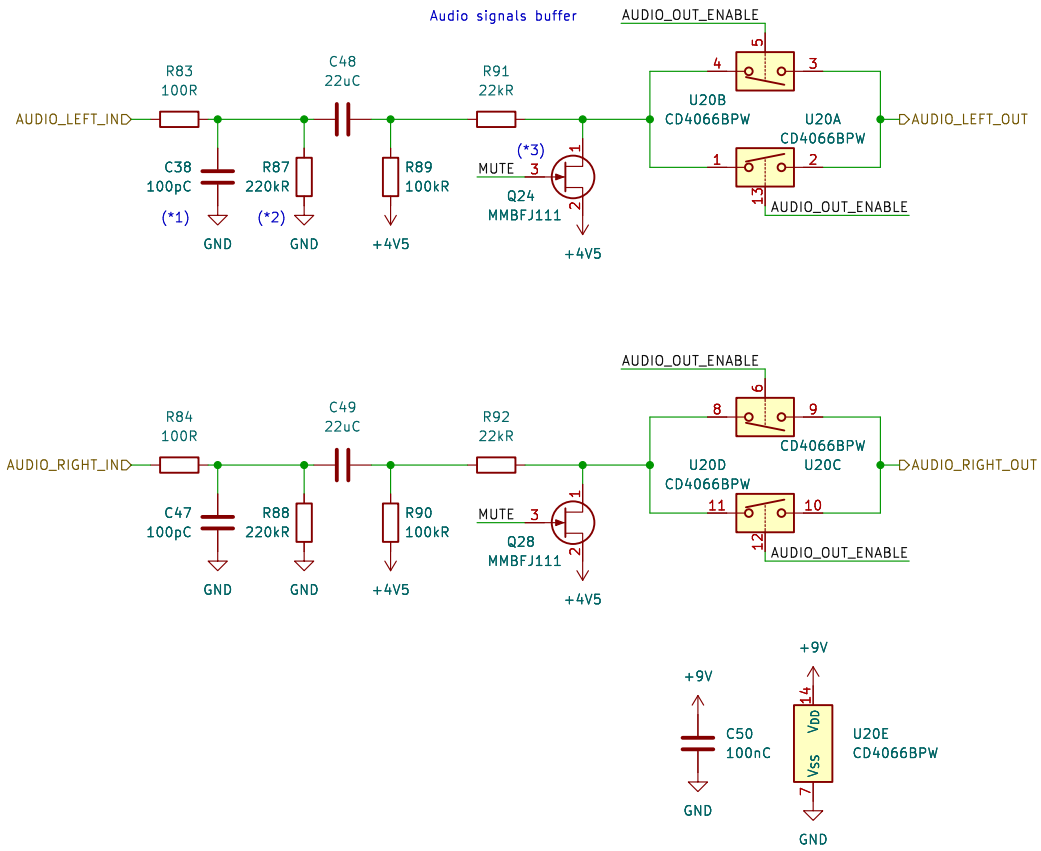


Sheet: /SCART input 3/Video input stage/
File: video_in.kicad_sch

Title:

Size: A4 | Date: | **Rev:**

KiCad E.D.A. kicad 7.0.8 | Id: 31/46



(*1) RF input RC filter. Should be placed near the input connector as possible.

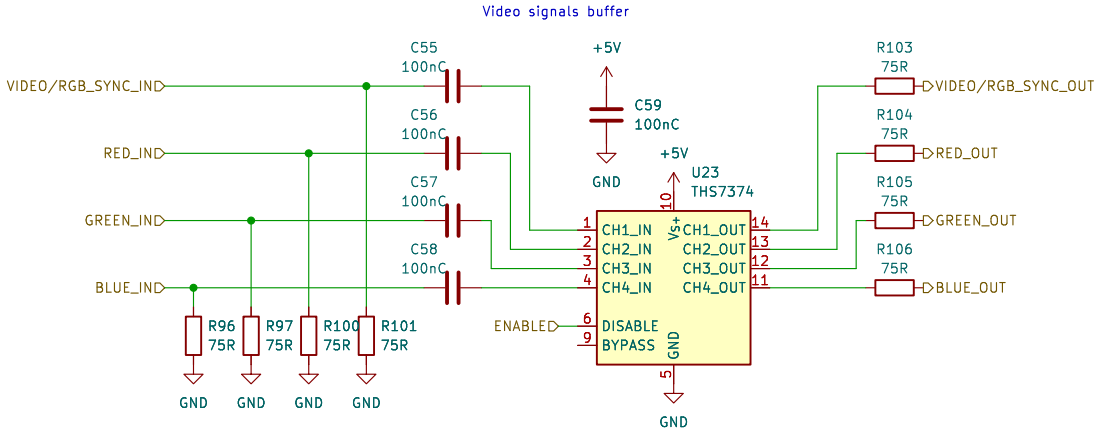
(*2) Drain resistor to discharge the DC blocking capacitor.

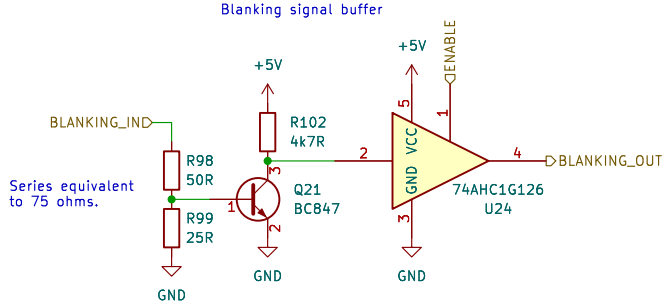
(*3) This JFET is added to improve channel isolation when this channel is off.

Sheet: /SCART input 3/Audio input stage/
File: audio_in.kicad_sch

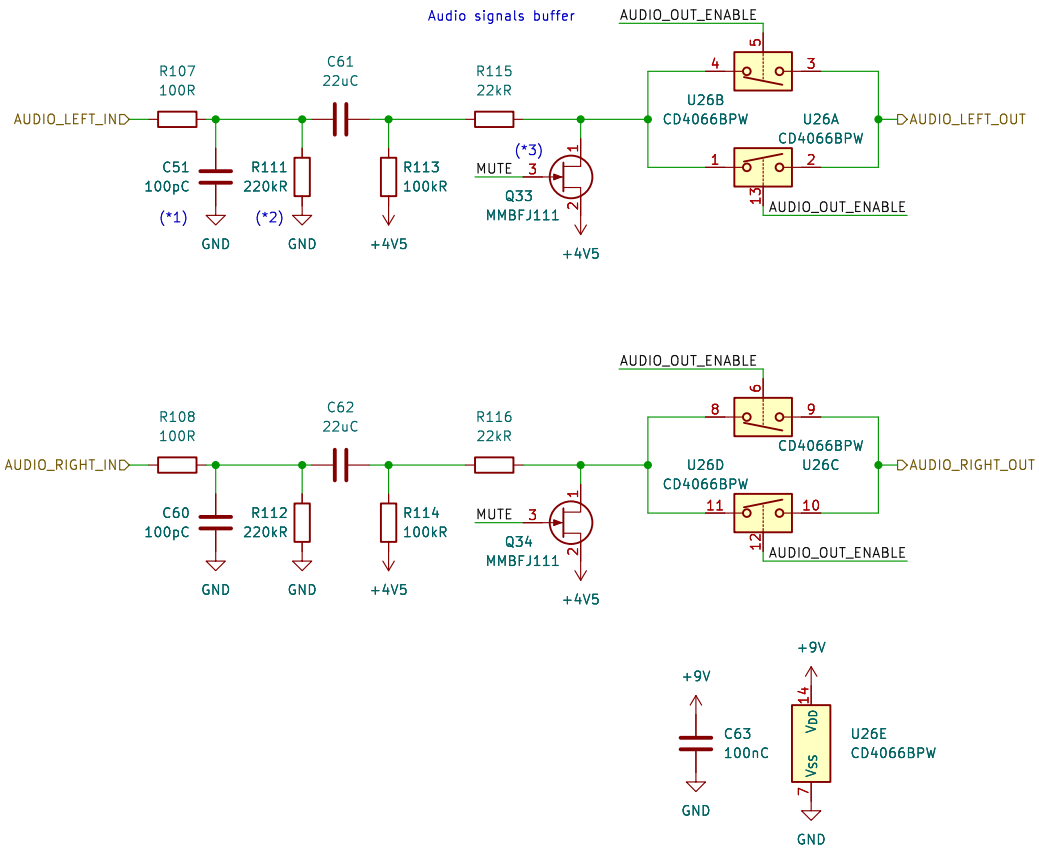
Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 32/46





Sheet: /SCART input 4/Video input stage/		
File: video_in.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 33/46



(*1) RF input RC filter. Should be placed near the input connector as possible.

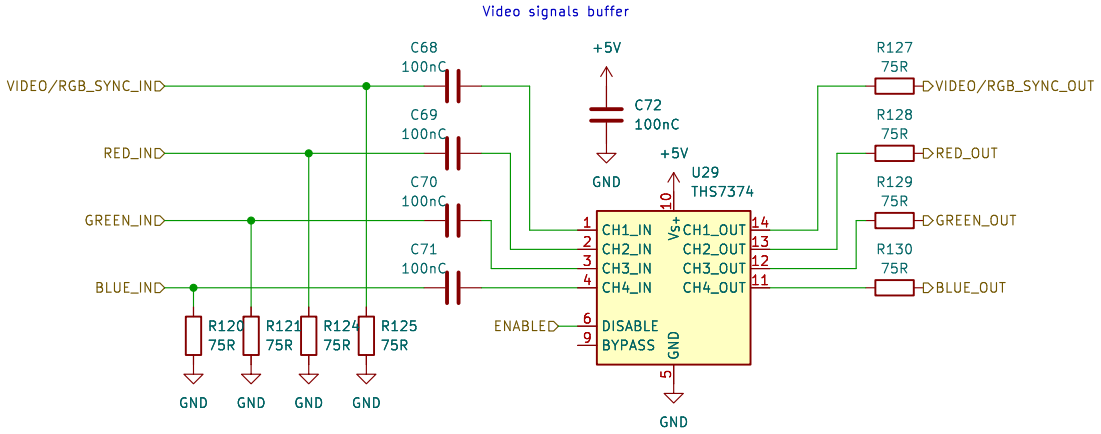
(*2) Drain resistor to discharge the DC blocking capacitor.

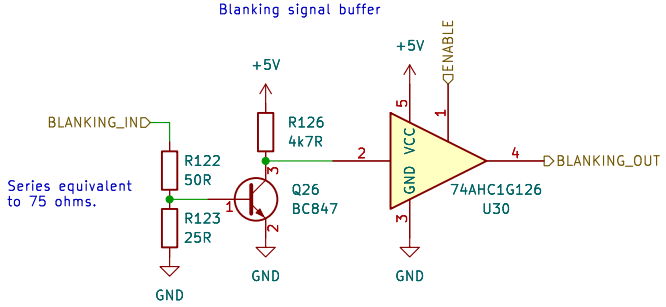
(*3) This JFET is added to improve channel isolation when this channel is off.

Sheet: /SCART input 4/Audio input stage/
File: audio_in.kicad_sch

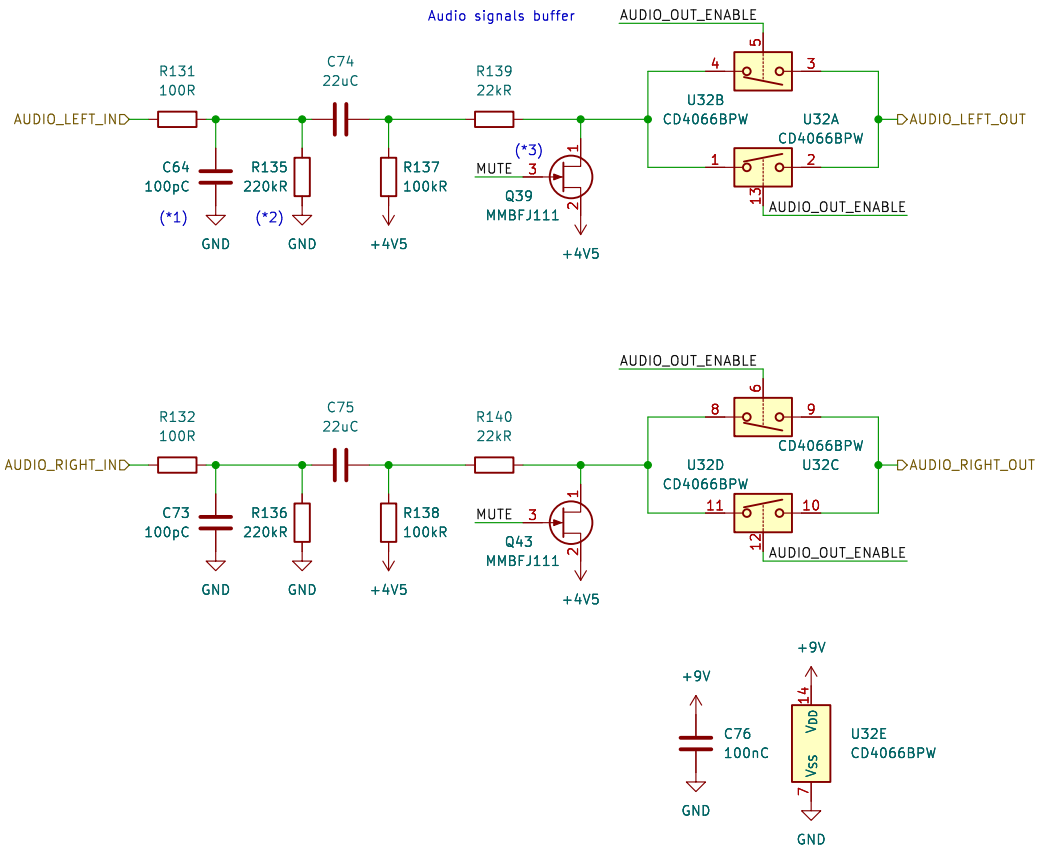
Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 34/46





Sheet: /SCART input 5/Video input stage/		
File: video_in.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 35/46



(*1) RF input RC filter. Should be placed near the input connector as possible.

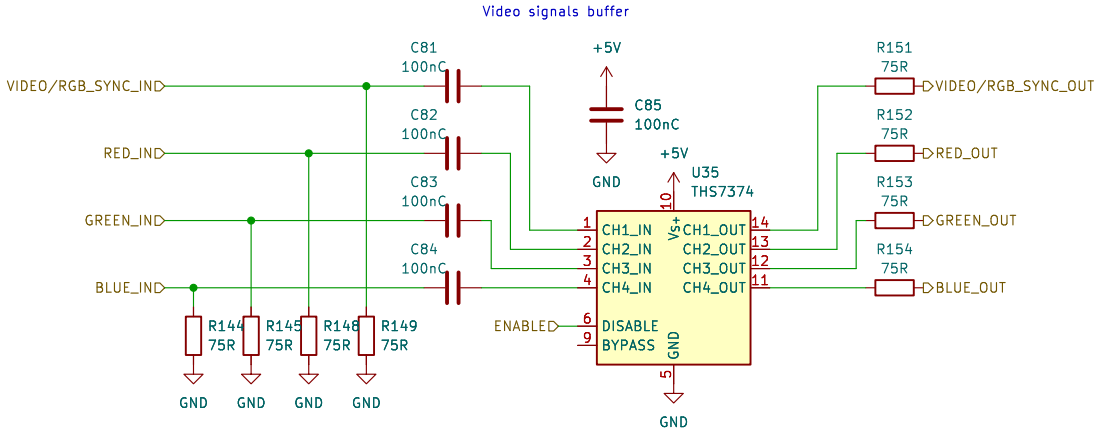
(*2) Drain resistor to discharge the DC blocking capacitor.

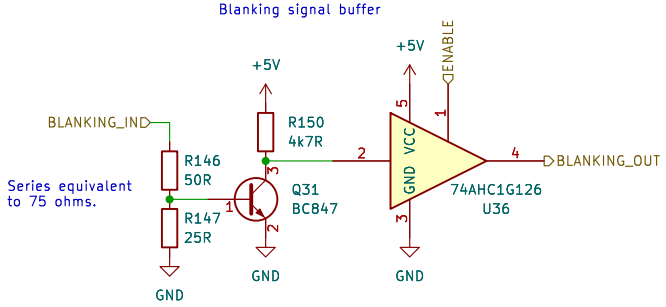
(*3) This JFET is added to improve channel isolation when this channel is off.

Sheet: /SCART input 5/Audio input stage/
File: audio_in.kicad_sch

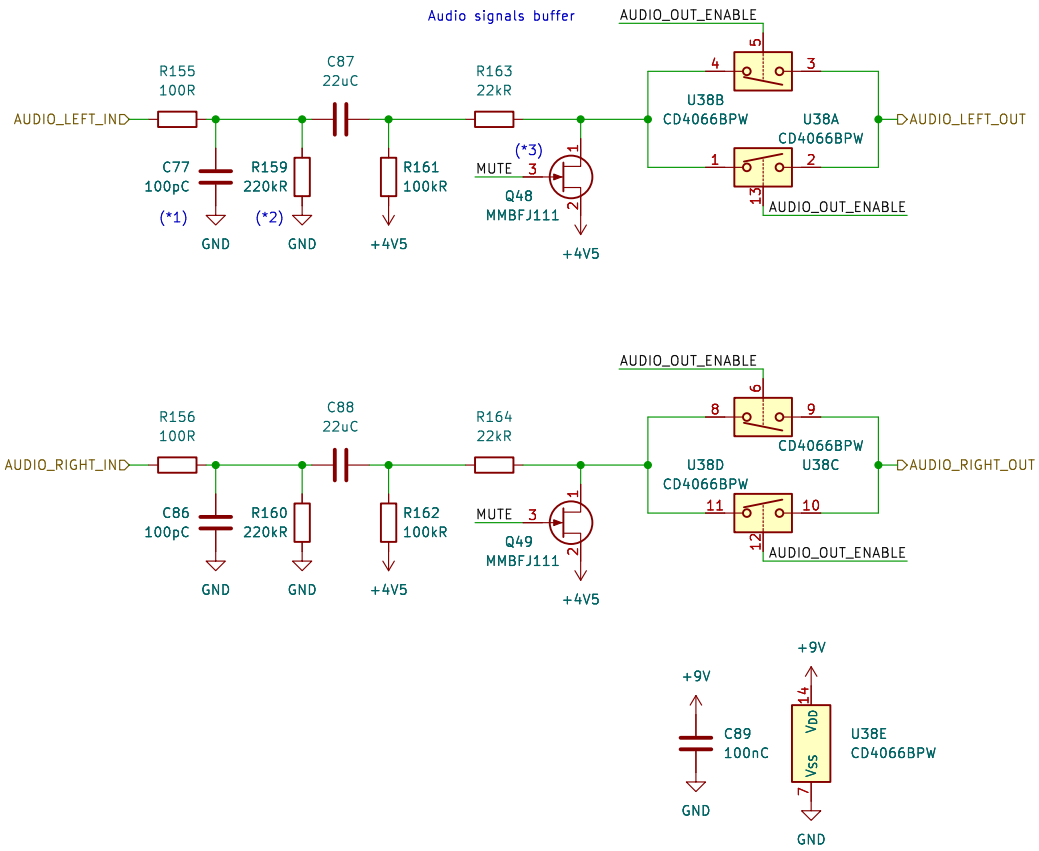
Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 36/46





Sheet: /SCART input 6/Video input stage/		
File: video_in.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 37/46



(*1) RF input RC filter. Should be placed near the input connector as possible.

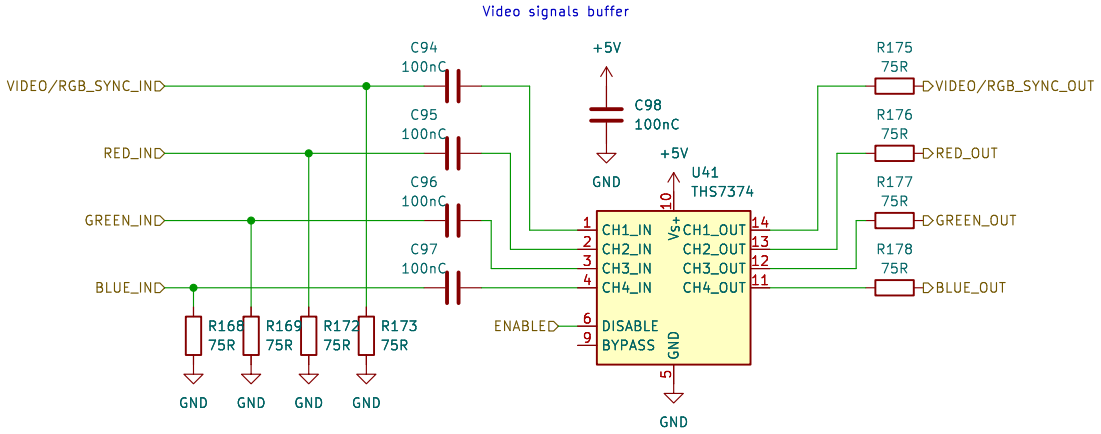
(*2) Drain resistor to discharge the DC blocking capacitor.

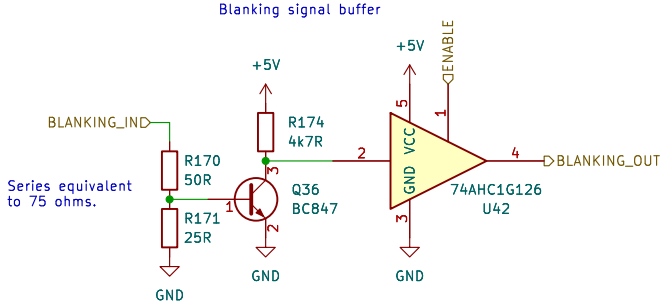
(*3) This JFET is added to improve channel isolation when this channel is off.

Sheet: /SCART input 6/Audio input stage/
File: audio_in.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 38/46

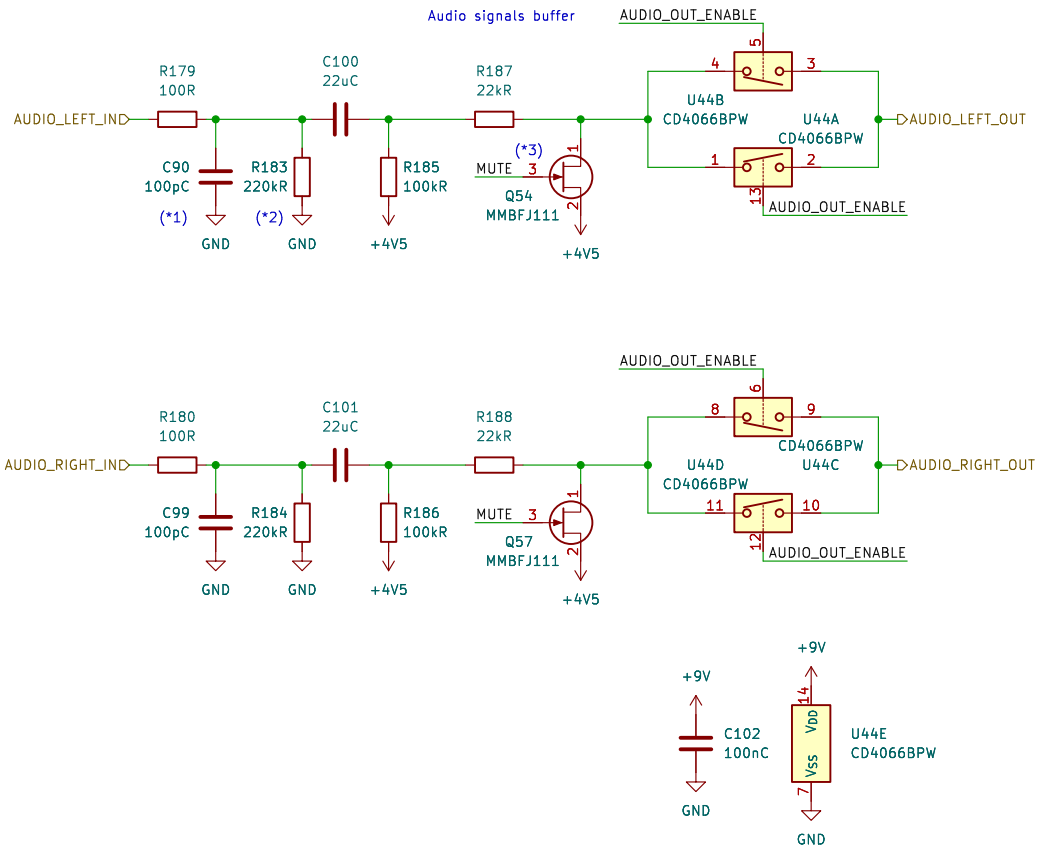




Sheet: /SCART input 7/Video input stage/
File: video_in.kicad_sch

Title:

Size: A4 | Date: | **Rev:**
KiCad E.D.A. kicad 7.0.8 | Id: 39/46



(*1) RF input RC filter. Should be placed near the input connector as possible.

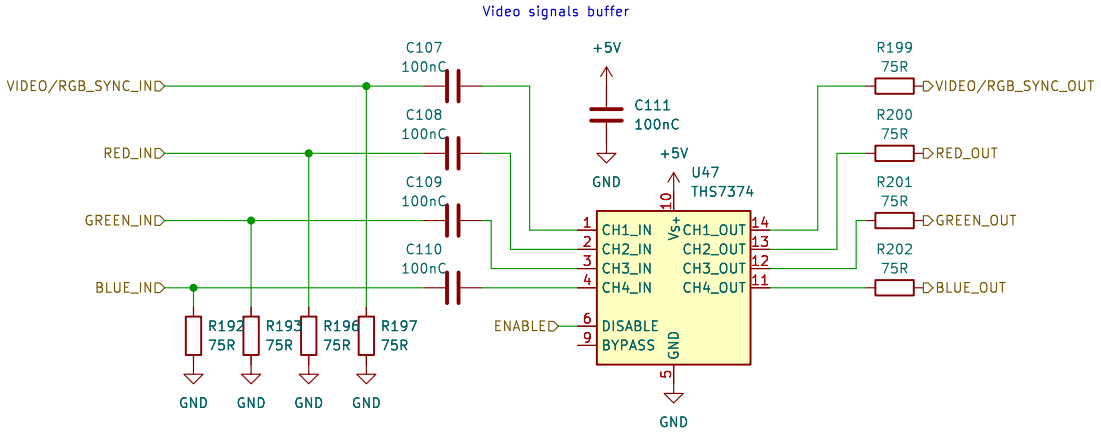
(*2) Drain resistor to discharge the DC blocking capacitor.

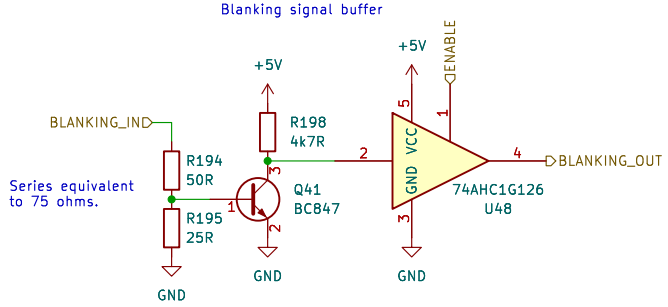
(*3) This JFET is added to improve channel isolation when this channel is off.

Sheet: /SCART input 7/Audio input stage/
File: audio_in.kicad_sch

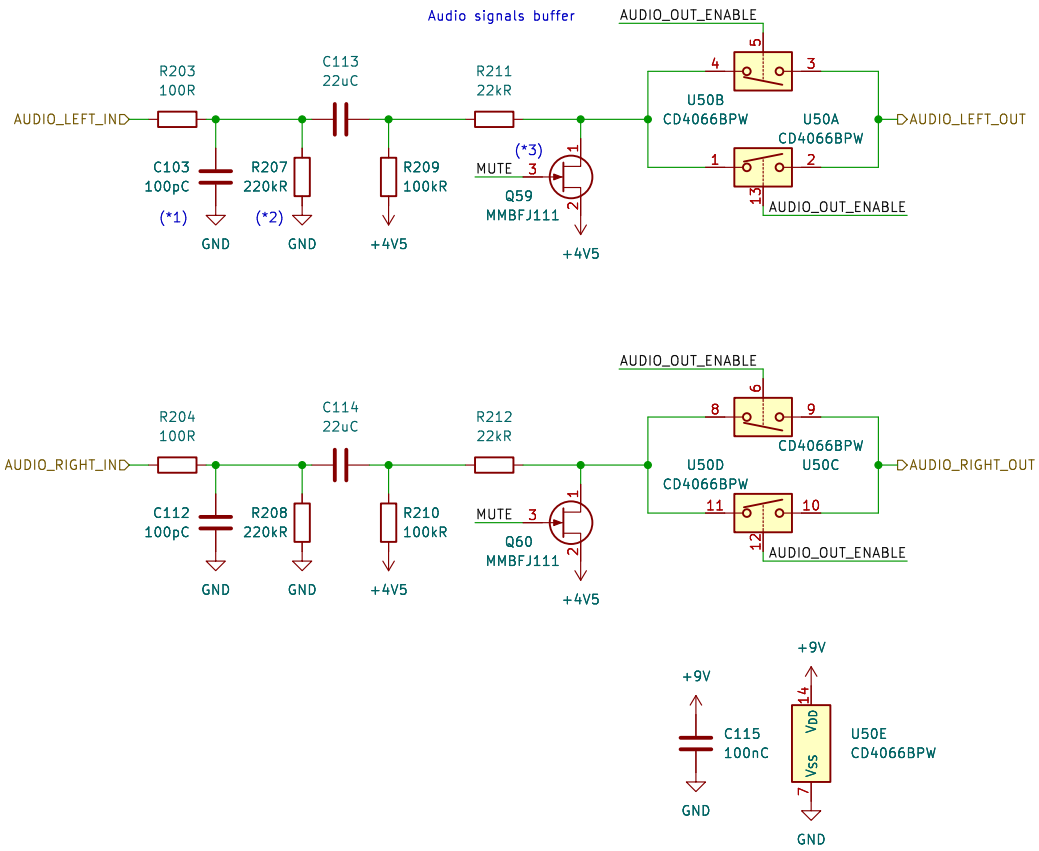
Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 40/46





Sheet: /SCART input 8/Video input stage/		
File: video_in.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 41/46



(*1) RF input RC filter. Should be placed near the input connector as possible.

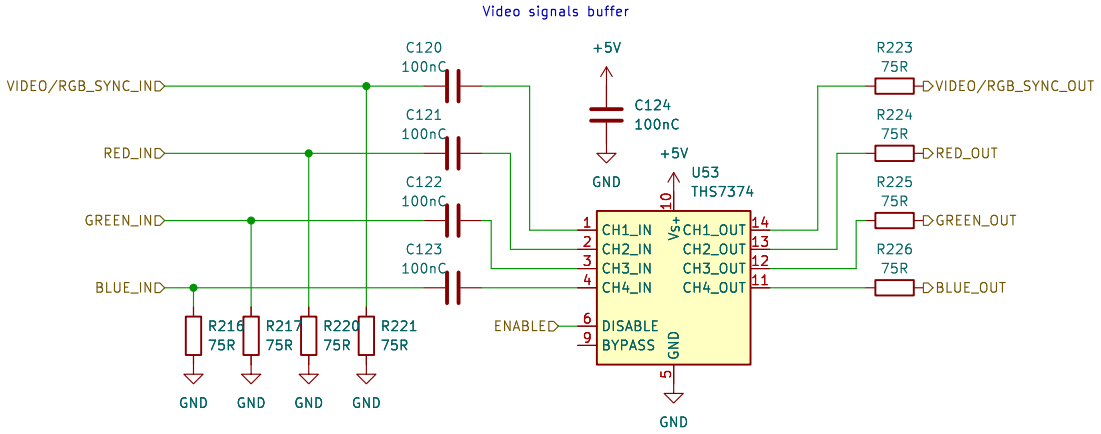
(*2) Drain resistor to discharge the DC blocking capacitor.

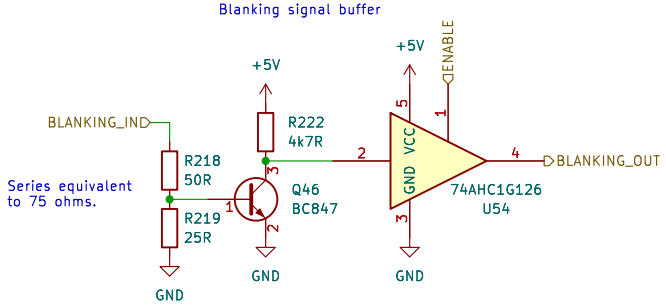
(*3) This JFET is added to improve channel isolation when this channel is off.

Sheet: /SCART input 8/Audio input stage/
File: audio_in.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 42/46



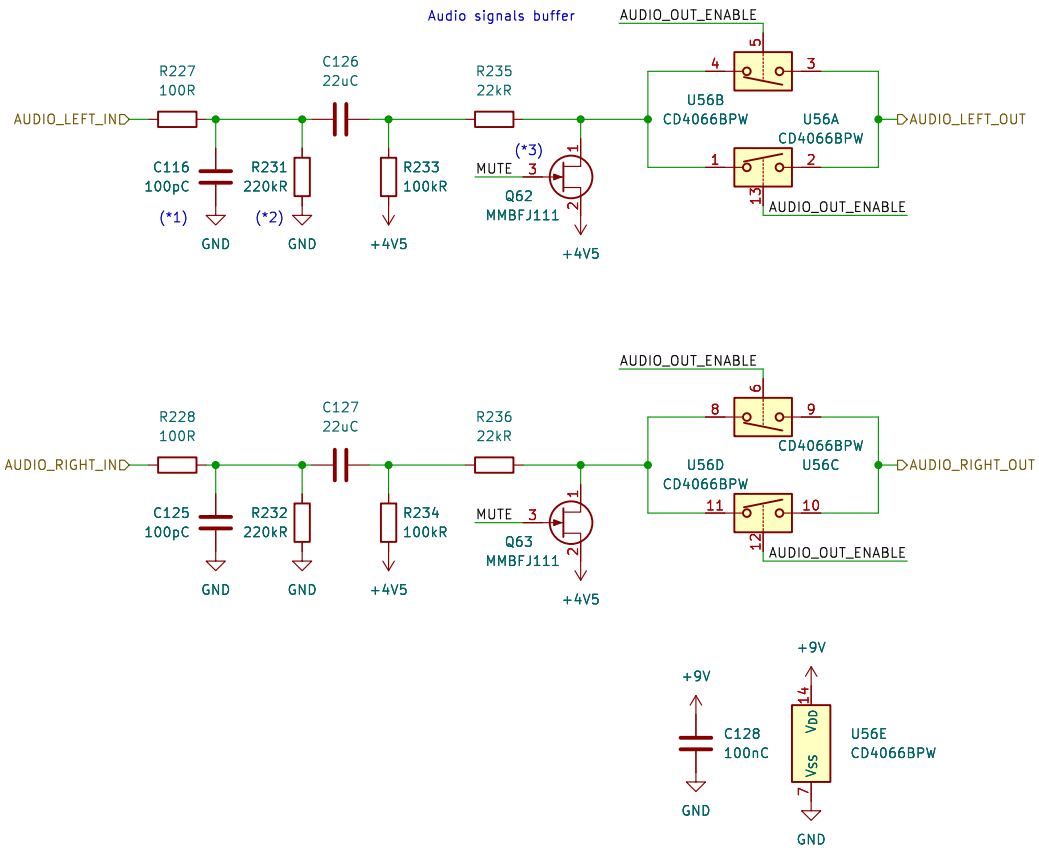


Sheet: /SCART input 9/Video input stage/
File: video_in.kicad_sch

Title:

Size: A4 | Date: | **Rev:**

KiCad E.D.A. kicad 7.0.8 | Id: 43/46



(*1) RF input RC filter. Should be placed near the input connector as possible.

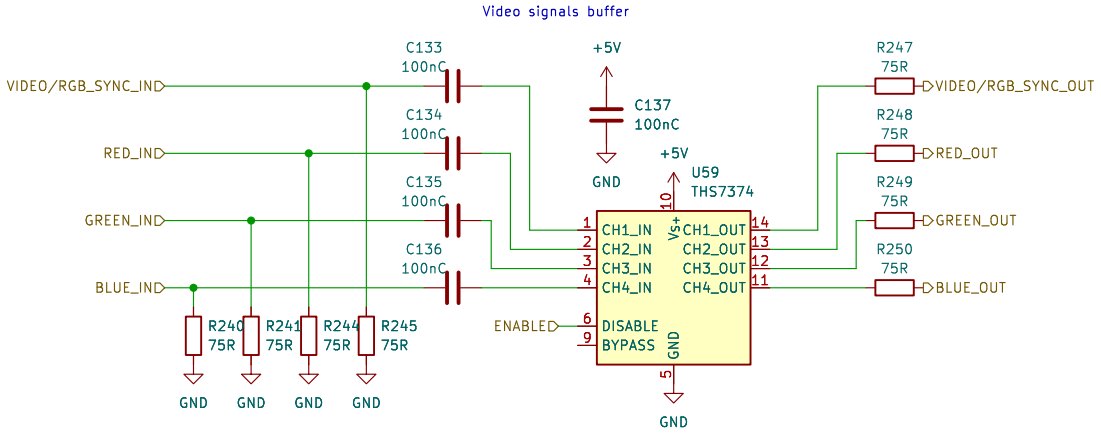
(*2) Drain resistor to discharge the DC blocking capacitor.

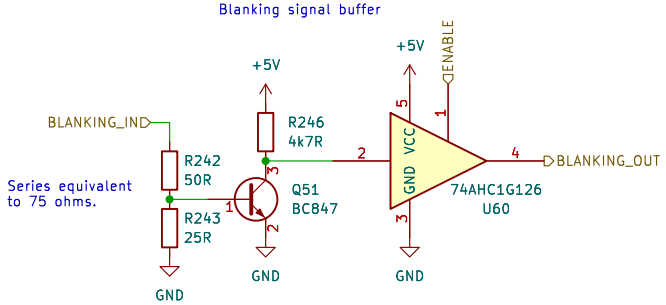
(*3) This JFET is added to improve channel isolation when this channel is off.

Sheet: /SCART input 9/Audio input stage/
File: audio_in.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.8		Id: 44/46





Sheet: /SCART input 10/Video input stage/		
File: video_in.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
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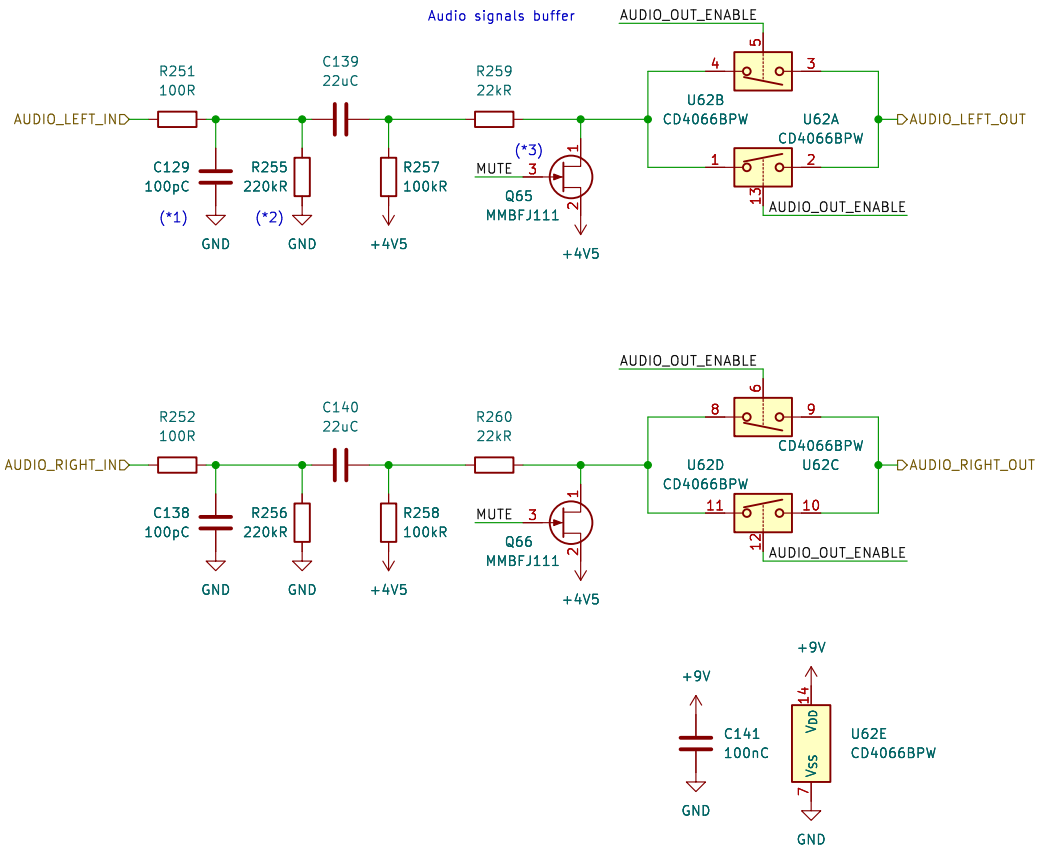

(*1) RF input RC filter. Should be placed near the input connector as possible.

(*2) Drain resistor to discharge the DC blocking capacitor.

(*3) This JFET is added to improve channel isolation when this channel is off.

Sheet: /SCART input 10/Audio input stage/
File: audio_in.kicad_sch

Title:

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