MSP43_IO

File: MSP54_IO.kicad_sch

Clock_Drivers

File: Clock_Drivers.kicad_sch

Surrond_Channel

File: Surrond_Channel.kicad_sch

Up_Channel

File: Up_Channel.kicad_sch

Front_Right_Channel

File: Front_Right_Channel.kicad_sch

Front_Left_Channel

File: Front_Left_Channel.kicad_sch

Center_Channel

File: Center_Channel.kicad_sch

Subwoofer_Channel

File: Subwoofer_Channel.kicad_sch

Power_Supplies

File: Power_Supplies.kicad_sch

Analog_Io_Board

File: Analog_Io_Board.kicad_sch

NDG

Sheet: /

File: Amplificateur_Audio.kicad_sch

Title: Amplificateur Audio (Base Saine)

Size: A3	Date: 2025-05-19	**Rev: 1.0**
KiCad E.D.A. 9.0.0		Id: 1/11

MSP43 IO

U201 MSP430F5234IRGZ

- TA0CLK/ACLK/P1.0 (13)
- TA0.0/P1.1 (14)
- TA0.1/P1.2 (15)
- TA0.2/P1.3 (16)
- TA0.3/P1.4 (17)
- TA0.4/P1.5 (18)
- CBOUT/TA1CLK/P1.6 (19)
- TA1.0/P1.7 (20)
- UCB0STE/UCA0CLK/P2.7 (21)
- UCB0SIMO/UCB0SDA/P3.0 (22) — SDA
- UCB0SOMI/UCB0SCL/P3.1 (23) — SCL
- UCB0CLK/UCA0STE/P3.2 (24)
- UCA0TXD/UCA0SIMO/P3.3 (25)
- UCA0RXD/UCA0SOMI/P3.4 (26)
- PM_UCB1STE/PM_UCA1CLK/P4.0 (29)
- PM_UCB1SIMO/PM_UCB1SDA/P4.1 (30)
- PM_UCB1SOMI/PM_UCB1SCL/P4.2 (31)
- PM_UCB1CLK/PM_UCA1STE/P4.3 (32)
- PM_UCA1TXD/PM_UCA1SIMO/P4.4 (33)
- PM_UCA1RXD/PM_UCA1SOMI/P4.5 (34)
- P4.6 (35)
- P5.0 (4)
- P5.1 (5)
- P5.2/XT2IN (38)
- P5.3/XT2OUT (39)
- P5.4/XIN (7) — P5.4
- P5.5/XOUT (8) — P5.5
- P6.0/CB0 (46) — P6.0
- P6.1/CB1 (47) — P6.1
- P6.2/CB2 (48) — P6.2
- P6.3/CB3 (1) — P6.3
- P6.4/CB4 (2) — P6.4
- P6.5/CB5 (3) — P6.5
- PJ.0/TDO (41)
- PJ.1/TDI/TCLK (42)
- PJ.2/TMS (43)
- PJ.3/TCK (44)
- AVCC (6) — 3V3
- DVCC (10) — 3V3
- DVCC (28) — 3V3
- VCORE (12)
- RSTDVCC/SBWTDIO (45) — SBWTDIO
- SBWTCK/TEST (40) — SBWTCK
- RST/NMI (37) — /RESET
- NC (36)
- AVSS (9) — GND
- DVSS (11) — GND
- DVSS (27) — GND
- PAD (49) — GND

SPI_BI_WIRE_JTAG

- 3V3 — R229 47.5k — SBWTDIO
- C218 2200pF — GND
- R228 332 — TCK
- J202 Conn_01x02 — 3V3
- J201 JTAG — VCC TOOL, TCK, TDIO, GND
- GND

RESET

- 3V3 — R227 47.5k — /RESET
- C217 2200pF — GND
- SW209 RESET

SW201–SW208

SW201	MUTE	C201 470pF	R201 33.2k
SW202	VOL+	C202 470pF	R202 33.2k
SW203	VOL−	C203 470pF	R203 33.2k
SW204	MODE1	C204 470pF	R204 33.2k
SW205	MODE2	C205 470pF	R205 33.2k
SW206	MODE3	C206 470pF	R206 33.2k
SW207	MODE4	C207 470pF	R207 33.2k
SW208	LOAD	C208 470pF	R208 33.2k

All: GND, 3V3

Y201

- Y201 32.768kHz — P5.4, P5.5
- C219 12pF — GND
- C220 12pF — GND

U203 24LC512

- R230 0 — A0 (1)
- R231 0 — GND
- A1 (2), A2 (3)
- VSS (4) — GND
- VDD (8) — 3V3
- WP (7) — R232 0 — Bizarre — GND
- R233 100k — 3V3
- SCL (6) — SDA
- SDA (5) — SDA

J203 Conn_02x08_Odd_Even

- SDA
- SCL
- GND

USB-I2X Controller

IHM_UX

P6.0	R225 2.15k	R220 100	D206 MUTE
P6.1	R224 2.15k	R216 100	D202 ACTIVITY
P6.2	R226 2.15k	R219 100	D205 MODE4
P6.3	R223 2.15k	R218 100	D204 MODE3
P6.4	R222 2.15k	R217 100	D203 MODE2
P6.5	R221 2.15k	R215 100	D201 MODE1

All: B — Q206/Q202/Q205/Q204/Q203/Q201 NPN — E — GND; 3V3

U202 TCA6408ARSVR

- 3.3V-3
- VCCP (14), VCCI (15)
- SCL (12) — SCL
- SDA (13) — SDA
- R209 10k
- INT (11)
- RESET (1)
- ADDR (16) — GND
- P0 (2) … P7 (10)
- GND (6) — GND

GPIO EXPANDER

- P0 — R210 10k — /AMP-RESET1
- P1 — R211 10k — /AMP-RESET2
- P2 — R212 10k — /AMP-RESET3
- P3 — R213 10k — /AMP-RESET4
- P4 — R214 10k — /AMP-RESET5

TO_AMPS

I2C EXPANDER U204 TCA9548ARGER

- 3.3V-3 — VCC (21)
- SDA (20) — SDA
- SCL (19) — SCL
- 3.3V-3 — R236 10k — RESET (24)
- A2 (18), A1 (23), A0 (22) — GND
- GND (9), PAD (25) — GND
- SD0/SC0 (1/2) … SD7/SC7 (16/17)

TO DACS

- 3.3V-3
- 2k R237 … 2k R248
- SDA1/SCL1 — Surround
- SDA2/SCL2 — UpMix
- SDA3/SCL3 — Front Right
- SDA4/SCL4 — Front Left
- SDA5/SCL5 — Center
- SDA6/SCL6 — SubWoofer

DECOUPLING

3.3V-3	3.3V-3	3.3V-3	3.3V-3	3V3	3V3	3V3	3V3
1uF C209	0.1uF C210	0.1uF C211	0.1uF C212	0.1uF C213	0.1uF C214	0.1uF C215	0.1uF C216
GND	GND	GND	GND	GND	GND	GND	GND

NDG	
Sheet: /MSP43_IO/	
File: MSP54_IO.kicad_sch	
Title: Amplificateur Audio (Base Saine)	
Size: A3	Date: 2025-05-19
KiCad E.D.A. 9.0.0	Rev: 1.0
	Id: 2/11

Clock Drivers

DIGITAL INPUT CONNECTOR

J301
Conn_02x10_Odd_Even

1	2	DSP-LRCLK	
3	4	DSP-BCLK	
5	6	DSP-MCLK	
7	8	DSP-DATA0	FRONT (Tweeter/Woofer)
9	10	DSP-DATA1	SURROUND (L/R)
11	12	DSP-DATA2	CENTER (Tweeter/Woofer)/SUB
13	14	DSP-DATA3	UP FIRING (L/R)
15	16		
17	18		
19	20		

GND

FROM ALL AMPS

/CLIP_OTW1 — R322 0 — /CLIP_OTW
/CLIP_OTW2 — R323 0 — /CLIP_OTW
/CLIP_OTW3 — R324 0 — /CLIP_OTW
/CLIP_OTW4 — R325 0 — /CLIP_OTW
/CLIP_OTW5 — R326 0 — /CLIP_OTW

/CLIP_OTW — TP302 CLIP

MONITORS

3.3V-3 — R321 47k — R320 100 — G — Q301 NMOS — GND
12V — R319 1k — Q301 NMOS
Q301 NMOS — D301 OTW (Orange) — GND

/Fault1 — R327 0 — /FAULT1
/Fault2 — R328 0 — /FAULT2
/Fault3 — R329 0 — /FAULT3
/Fault4 — R330 0 — /FAULT4
/Fault5 — R331 0 — /FAULT5

/FAULT — TP301 FAULT

3.3V-3 — R332 47k — R333 100 — G — Q302 NMOS — GND
12V — R334 1k — Q302 NMOS
Q302 NMOS — D302 FAULT (Rouge) — GND

U307 74LVC1G125
DSP-DATA0 — GND, VCC — DIN0 — FRONT L/R (Tweeter/Woofer)

U308 74LVC1G125
DSP-DATA1 — GND, VCC — DIN1 — SURROUND L/R

U309 74LVC1G125
DSP-DATA2 — GND, VCC — DIN2 — CENTER (Tweeter/Woofer)/SUB

U310 74LVC1G125
DSP-DATA3 — GND, VCC — DIN3 — UP FIRING L/R

TO ALL PCM5252s

DECOUPLING

1uF C301	0.1uF C302	0.1uF C303	0.1uF C304	0.1uF C305	0.1uF C306	0.1uF C307	0.1uF C308

All: 3.3V-3 — GND

U301 74LVC1G125
DSP-LRCLK — GND, VCC — R301 49.9 LRCK1; R302 49.9 LRCK2; R303 49.9 LRCK3

U302 74LVC1G125
DSP-LRCLK — GND, VCC — R304 49.9 LRCK4; R305 49.9 LRCK5; R306 49.9 LRCK6

U303 74LVC1G125
DSP-BCLK — GND, VCC — R307 49.9 BCK1; R308 49.9 BCK2; R309 49.9 BCK3

U304 74LVC1G125
DSP-BCLK — GND, VCC — R310 49.9 BCK4; R311 49.9 BCK5; R312 49.9 BCK6

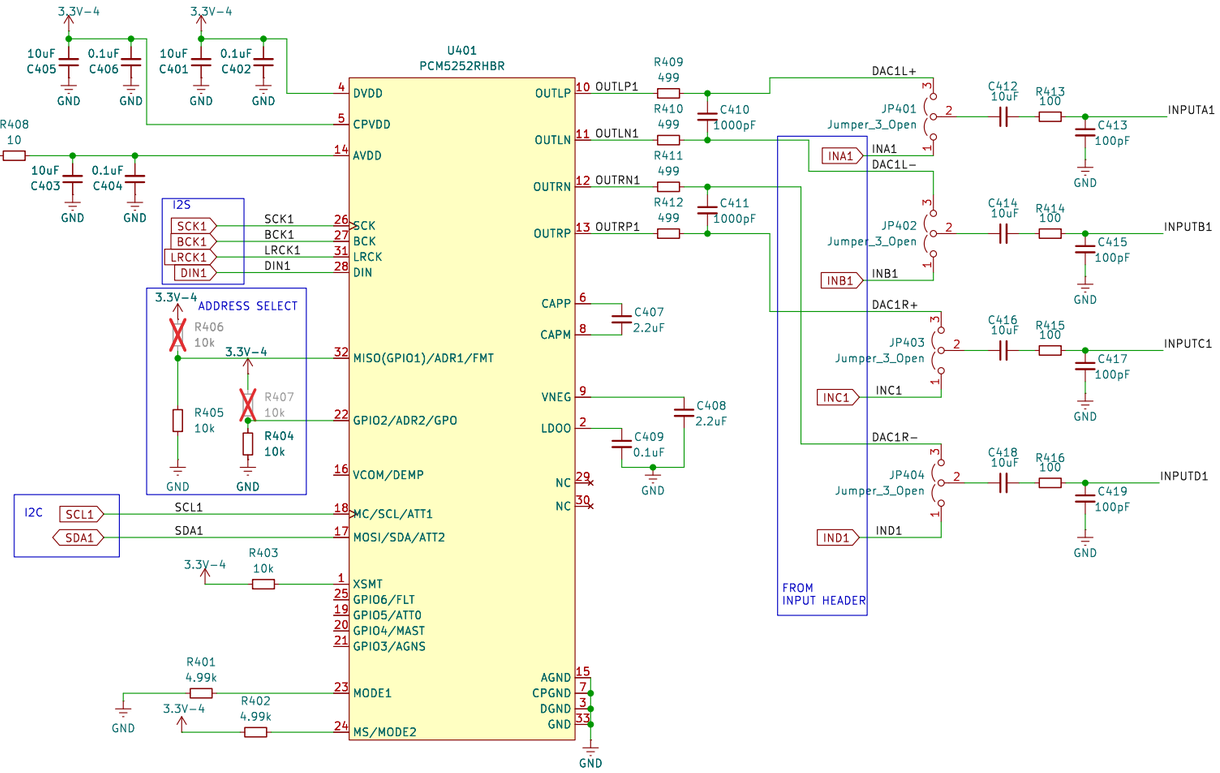
U305 74LVC1G125
DSP-MCLK — GND, VCC — R313 49.9 SCK1; R314 49.9 SCK2; R315 49.9 SCK3

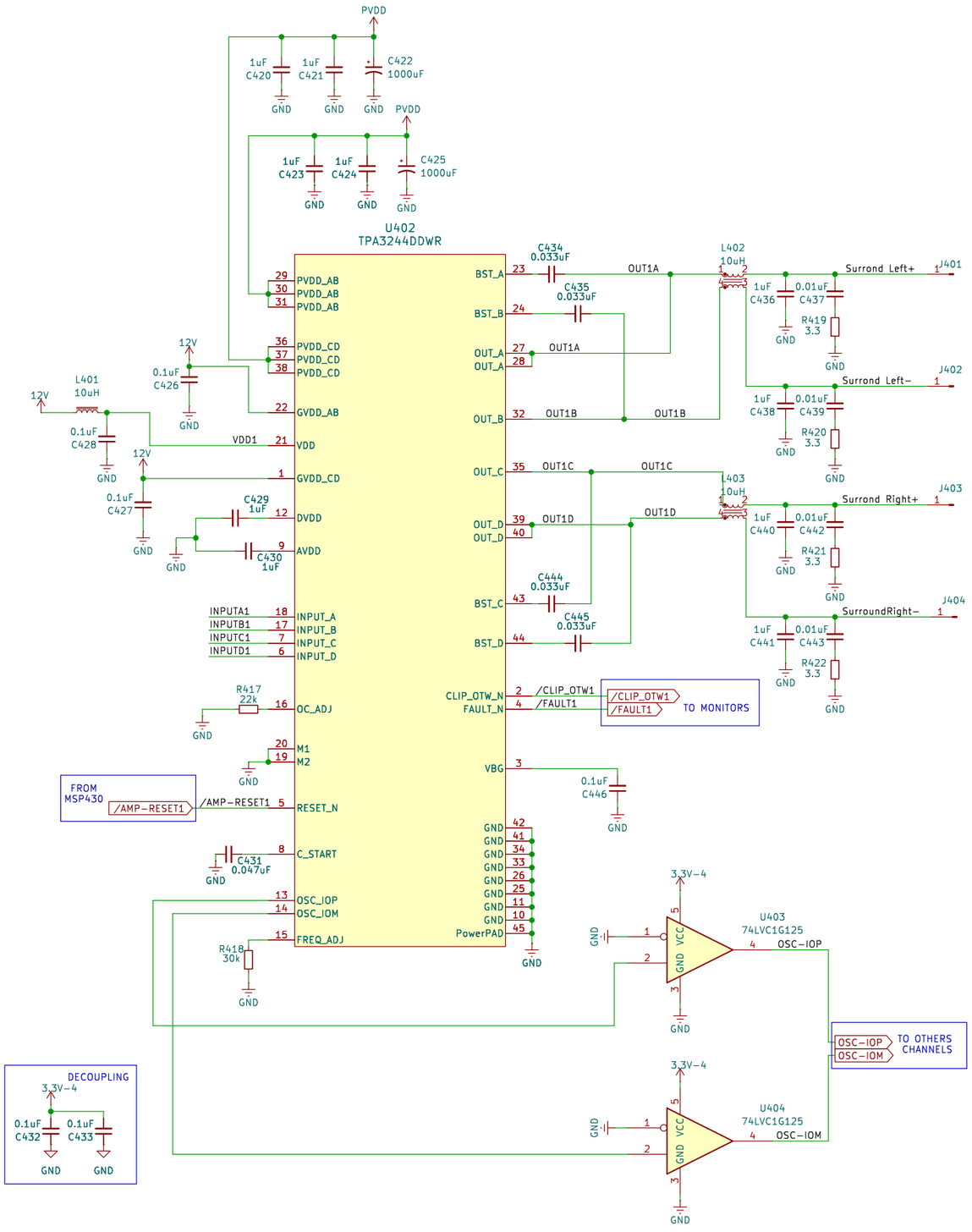
U306 74LVC1G125
DSP-MCLK — GND, VCC — R316 49.9 SCK4; R317 49.9 SCK5; R318 49.9 SCK6

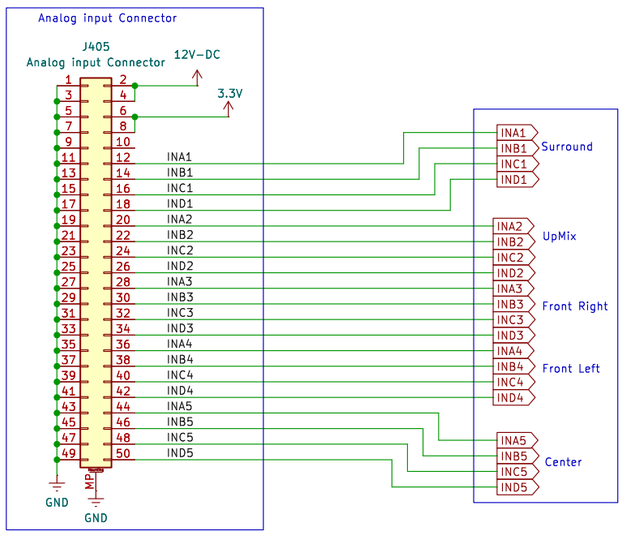
TO ALL PCM5252s

NDG		
Sheet: /Clock_Drivers/		
File: Clock_Drivers.kicad_sch		
Title: Amplificateur Audio (Base Saine)		
Size: A3	Date: 2025-05-19	**Rev: 1.0**
KiCad E.D.A. 9.0.0		Id: 3/11

SURROUND CHANNEL

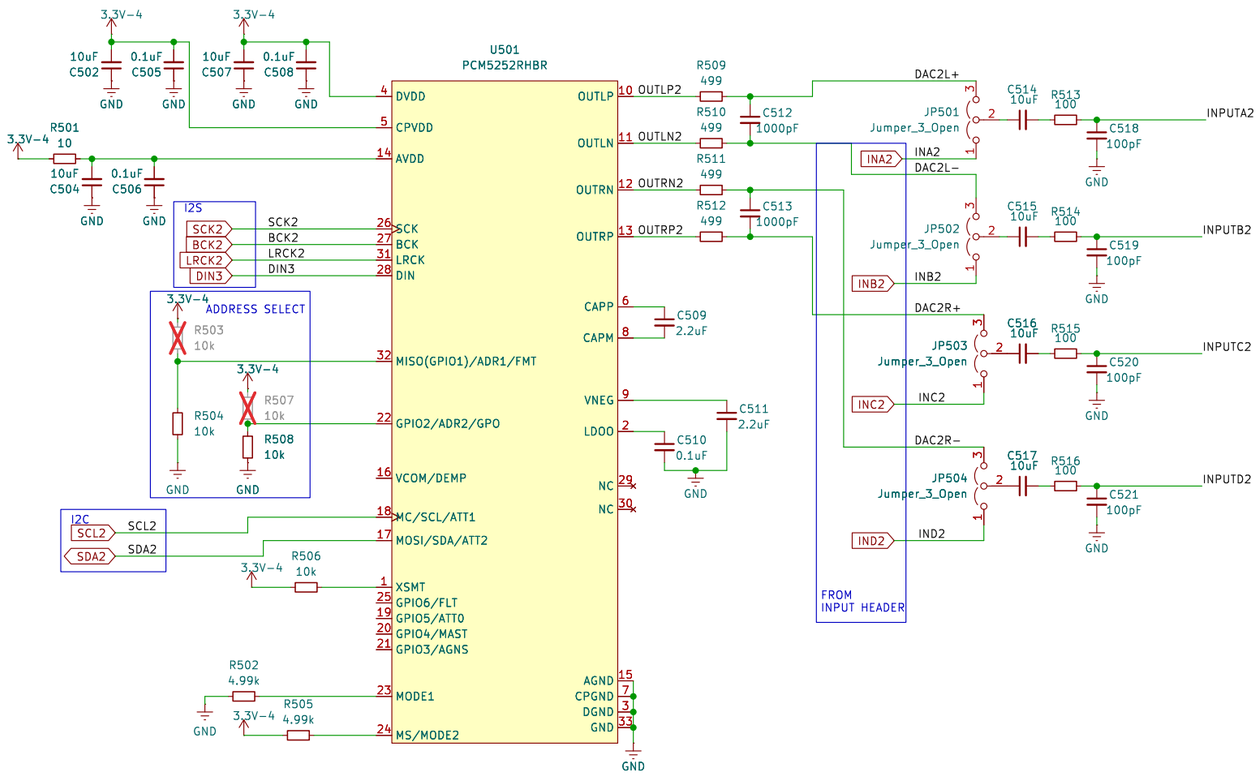


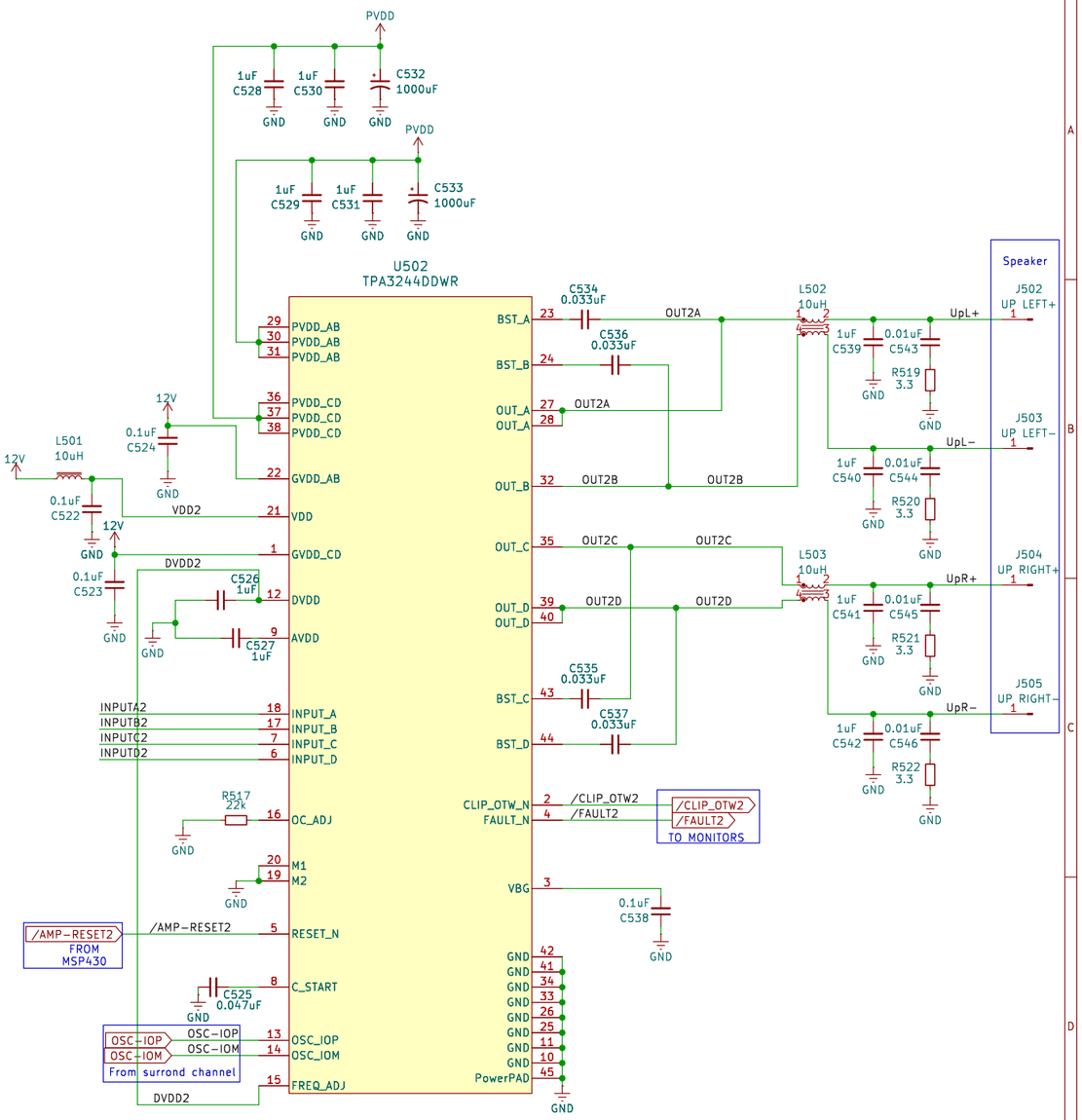




NDG		
Sheet: /Surrond_Channel/		
File: Surrond_Channel.kicad_sch		
Title: Amplificateur Audio (Base Saine)		
Size: A3	Date: 2025−05−19	**Rev: 1.0**
KiCad E.D.A. 9.0.0		Id: 4/11

UP CHANNEL





NDG		
Sheet: /Up_Channel/		
File: Up_Channel.kicad_sch		
Title: Amplificateur Audio (Base Saine)		
Size: A3	Date: 2025-05-19	**Rev: 1.0**
KiCad E.D.A. 9.0.0		Id: 5/11

FRONT RIGHT CHANNEL

U601
PCM5252RHBR

U602
TPA3244DDWR

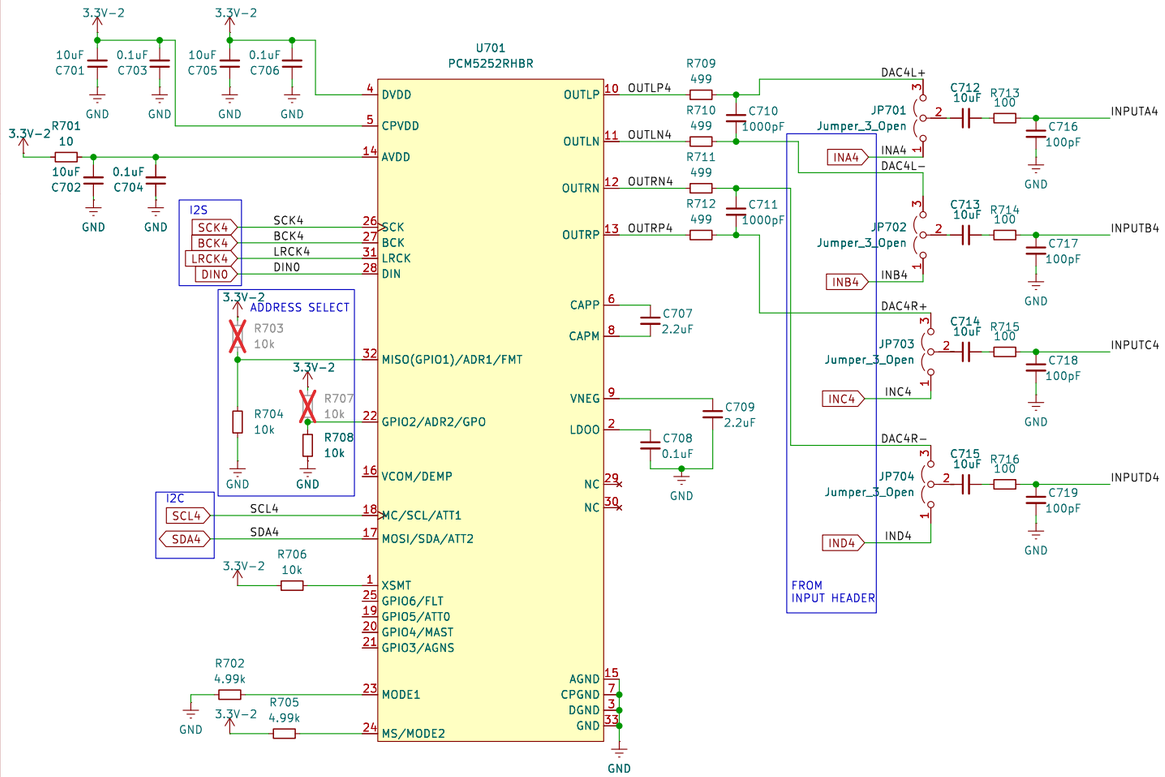
FROM
INPUT HEADER

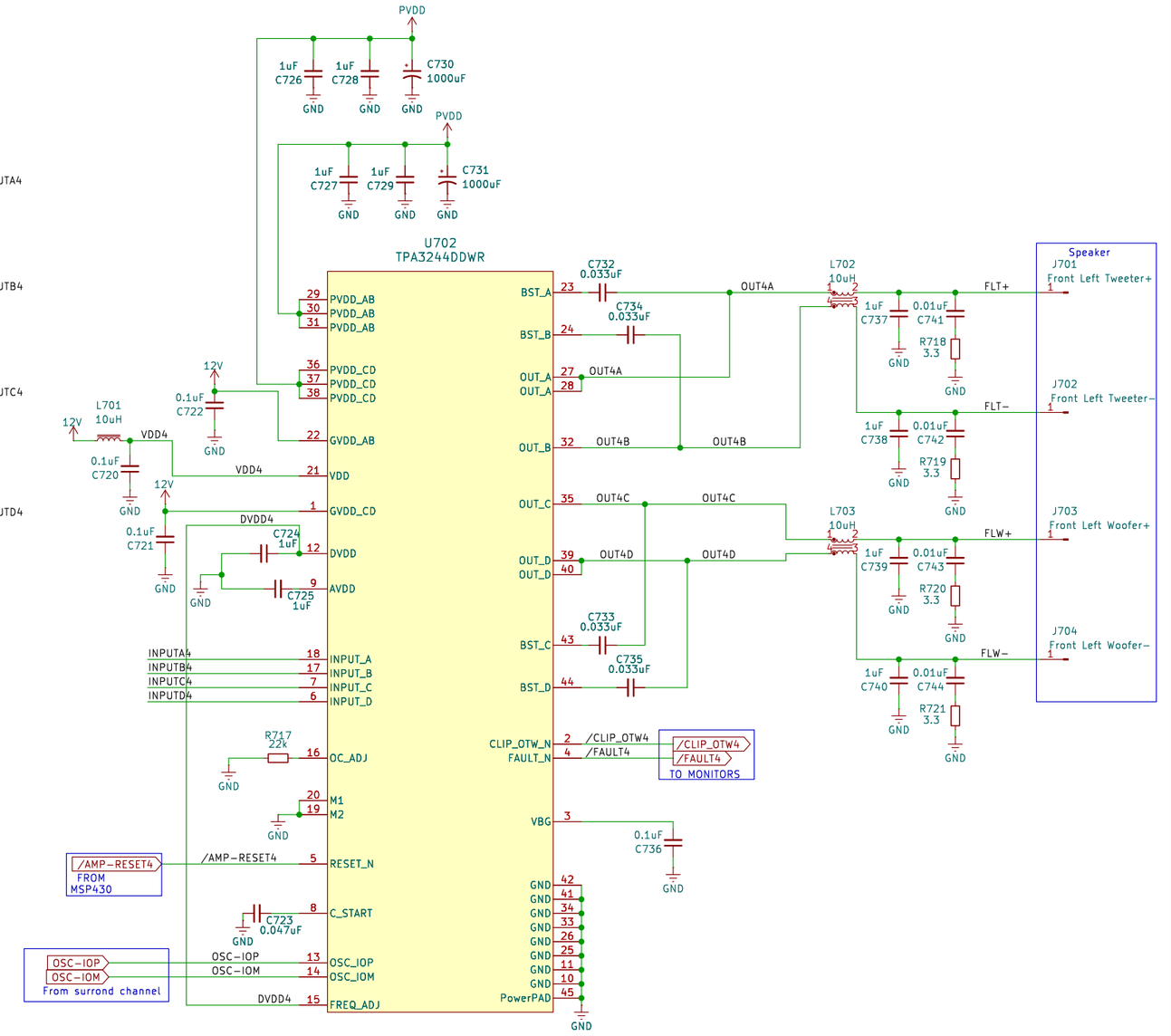
TO MONITORS

Speaker

NDG	
Sheet: /Front_Right_Channel/	
File: Front_Right_Channel.kicad_sch	
Title: Amplificateur Audio (Base Saine)	
Size: A3	Date: 2025-05-19
KiCad E.D.A. 9.0.0	Id: 6/11
	Rev: 1.0

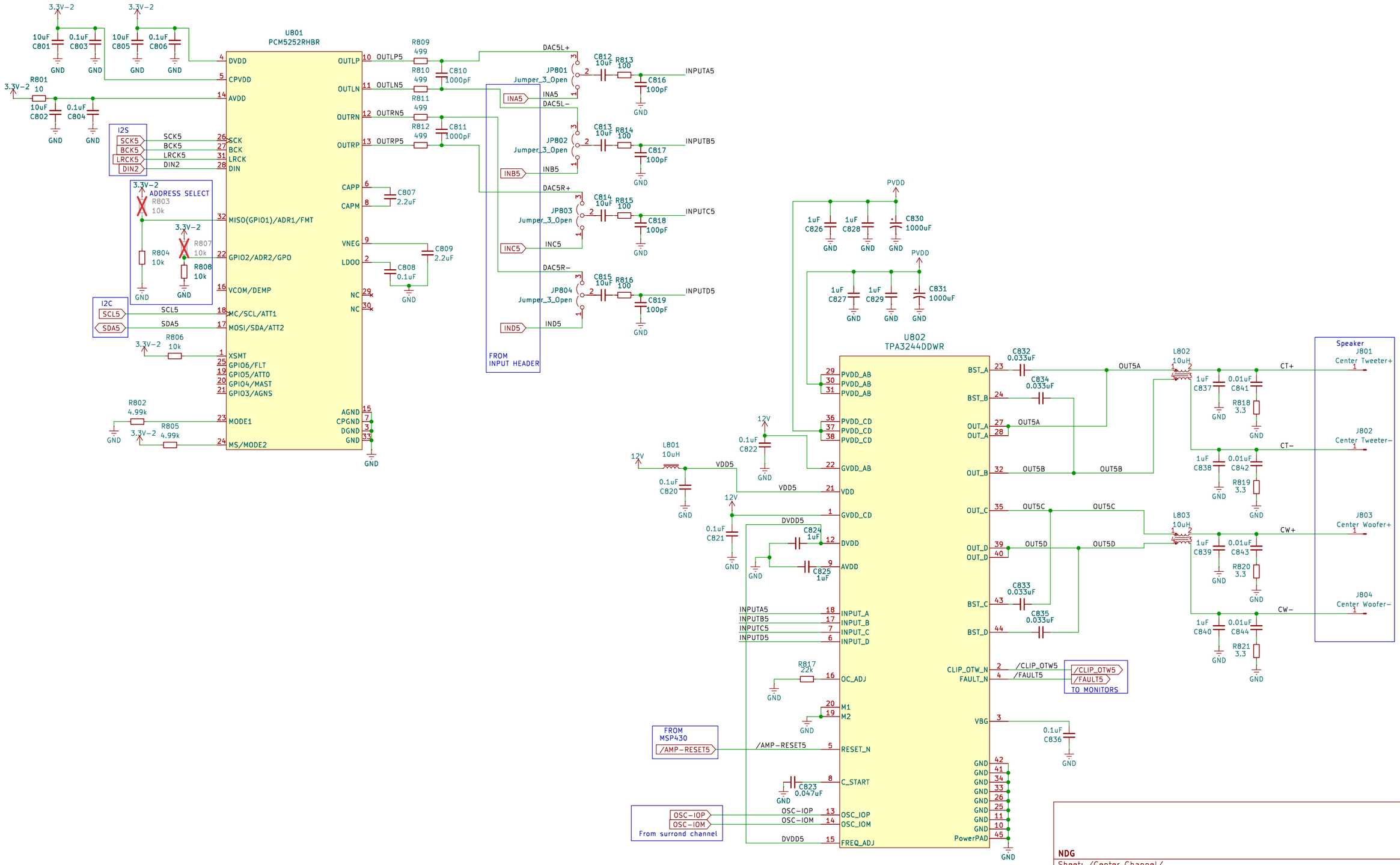
FRONT LEFT CHANNEL





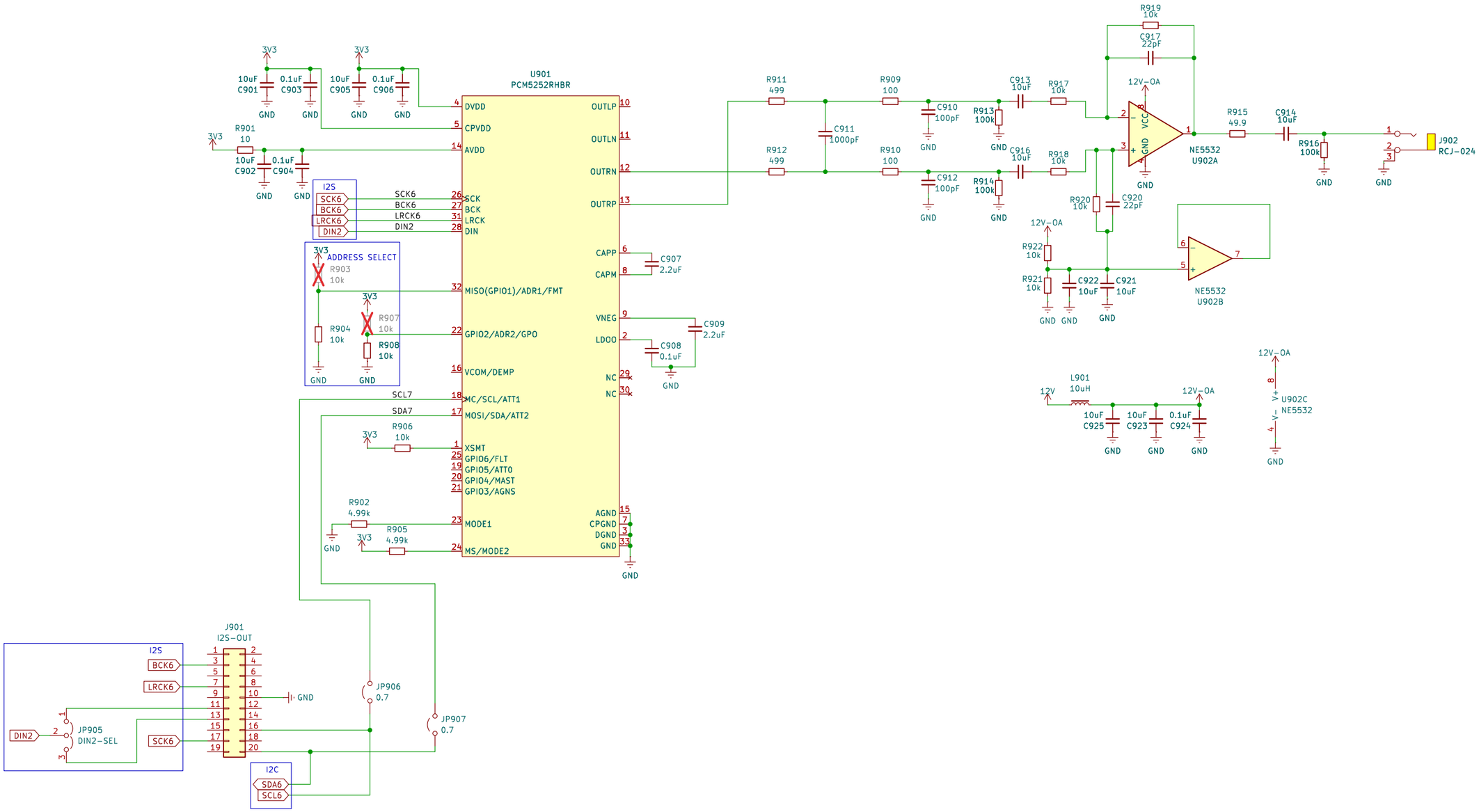
NDG		
Sheet: /Front_Left_Channel/		
File: Front_Left_Channel.kicad_sch		
Title: Amplificateur Audio (Base Saine)		
Size: A3	Date: 2025-05-19	**Rev: 1.0**
KiCad E.D.A. 9.0.0		Id: 7/11

CENTER CHANNEL

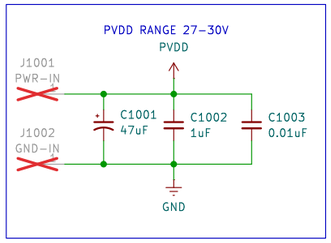


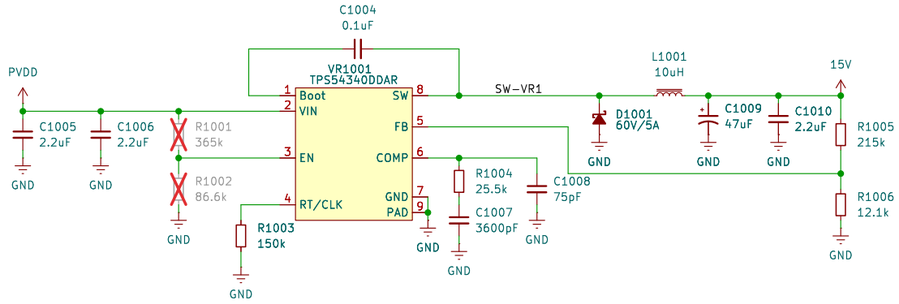
NDG	
Sheet: /Center_Channel/	
File: Center_Channel.kicad_sch	
Title: Amplificateur Audio (Base Saine)	
Size: A3	Date: 2025-05-19
KiCad E.D.A. 9.0.0	Id: 8/11
	Rev: 1.0

SUBWOOFER CHANNEL

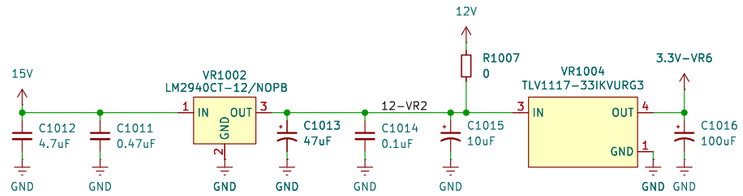


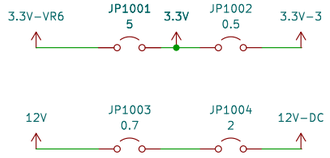
NDG	
Sheet: /Subwoofer_Channel/	
File: Subwoofer_Channel.kicad_sch	
Title: Amplificateur Audio (Base Saine)	
Size: A3	Date: 2025-05-19
KiCad E.D.A. 9.0.0	Id: 9/11
	Rev: 1.0

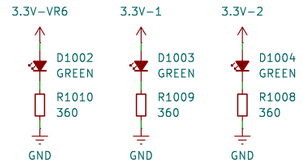


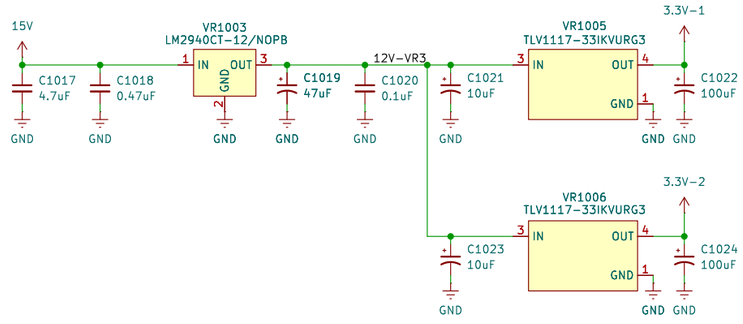


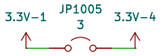
POWER SUPPLIES







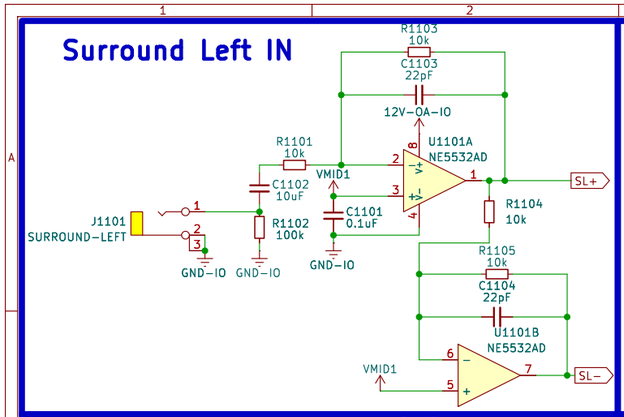




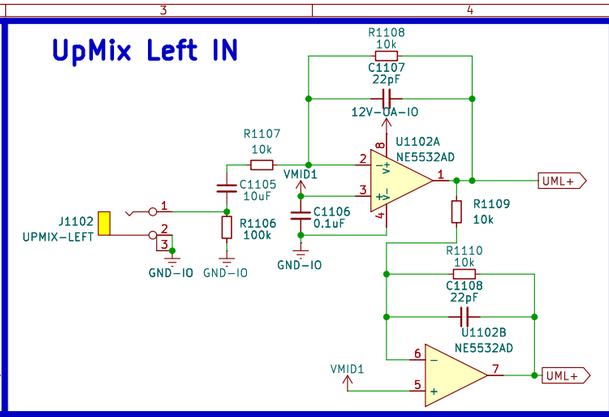
NDG		
Sheet: /Power_Supplies/ File: Power_Supplies.kicad_sch		
Title: Amplificateur Audio (Base Saine)		
Size: A3	Date: 2025-05-19	**Rev: 1.0**
KiCad E.D.A. 9.0.0		Id: 10/11

ANALOG IO BOARD

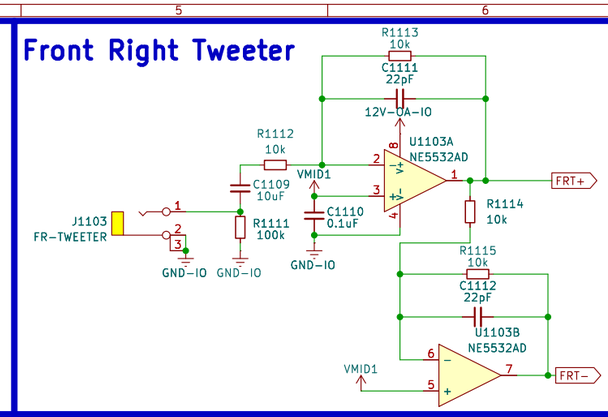
Surround Left IN



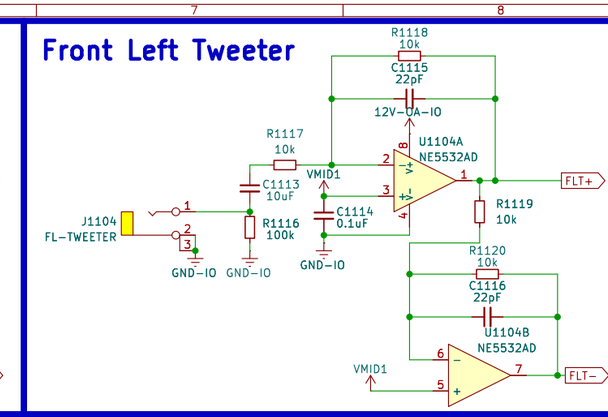
UpMix Left IN



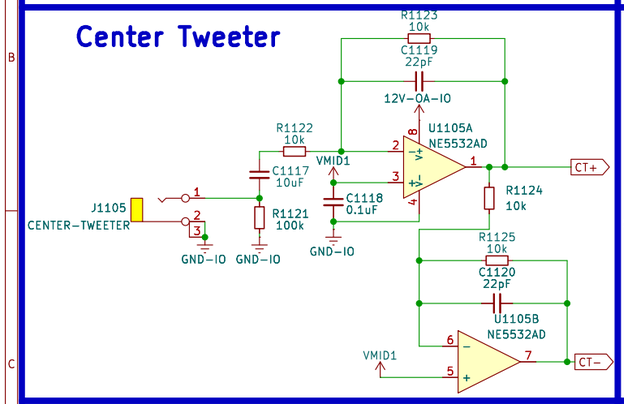
Front Right Tweeter



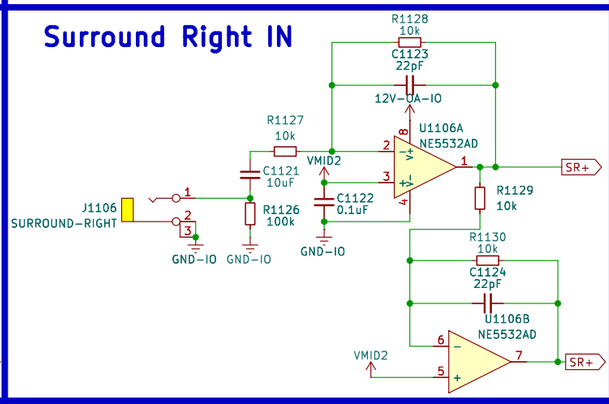
Front Left Tweeter



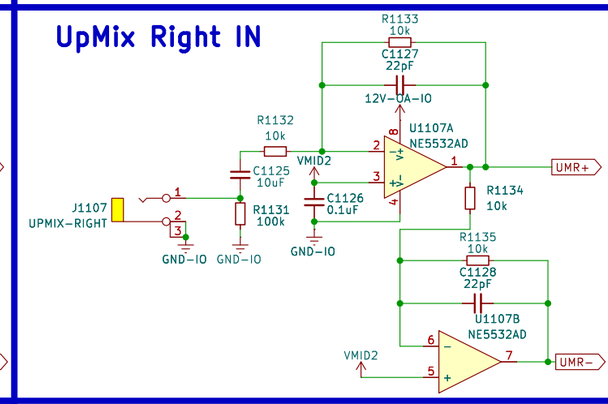
Center Tweeter



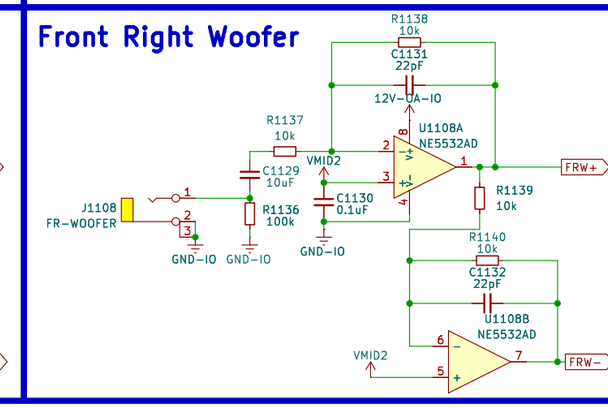
Surround Right IN



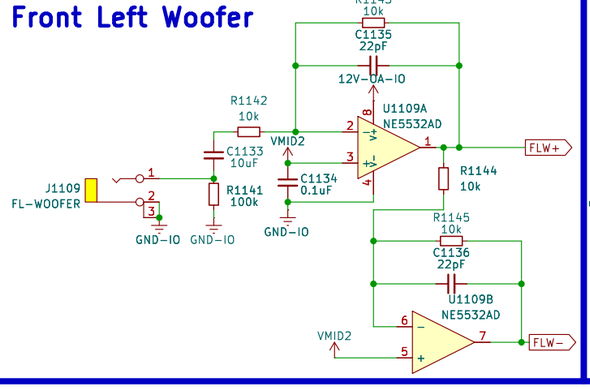
UpMix Right IN



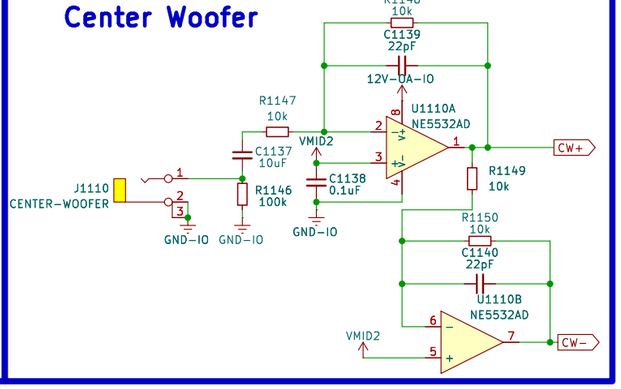
Front Right Woofer

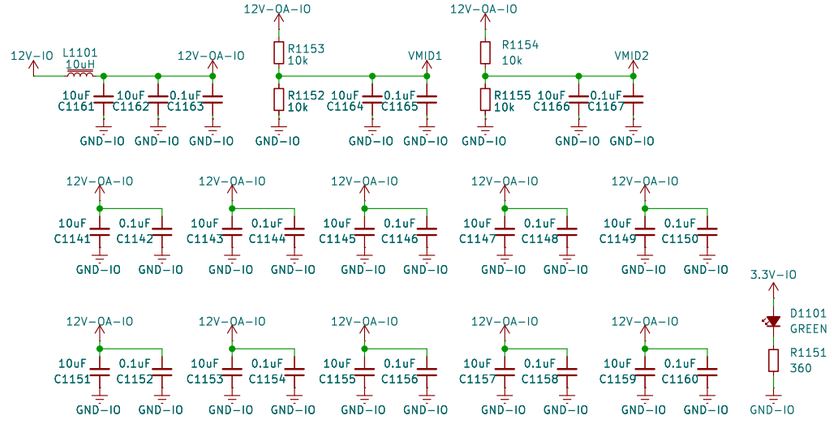


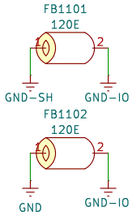
Front Left Woofer



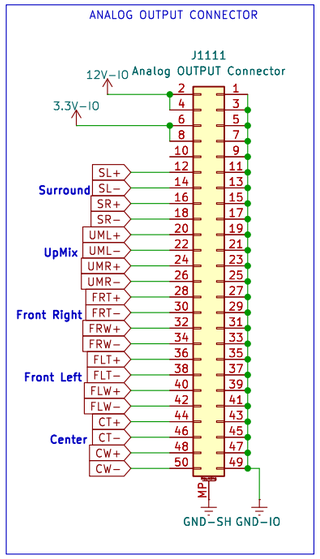
Center Woofer







ANALOG OUTPUT CONNECTOR



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KiCad E.D.A. 9.0.0		Id: 11/11