

Focusrite®

Scarlett 2i2 (3rd Gen) Service Manual



Last Revised 30-May-19

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1. Promo Material

Third-generation Scarlett mic preamp

Get the best out of your microphones with our majorly improved third-generation Scarlett mic preamp – resulting in a better recording. We've upgraded the entire mic preamp design to deliver what you hear, the best sound available.

Scarlett 2i2's Air-enabled mic preamp can reproduce the Air effect of our original ISA mic preamp, so recordings of vocals and acoustic music can now have a brighter and more spacious sound. Gain Halo metering easily shows the signal level.

Plug your guitar straight in

Simply plug in your guitar or bass to the high-headroom instrument input and start recording without any clipping or unwanted distortion. A Gain Halo meter makes it easy for you to set the input level.

High-performance converters

We use the same 24-bit/192kHz AD-DA converters throughout our third-generation Scarlett range, so you're always guaranteed the same pristine sound.

Latency so low you won't notice it

Scarlett Solo enables you to record through plug-ins, or use them for monitoring purposes without incurring latency issues.

Reassuringly easy recording process

You get free production tools right out of the box, or you can start making music in seconds with Scarlett Arcade – a place ready for players at all levels.

Two digital audio workstations included

With selected instruments and effects plus all the essential workflows of Ableton® Live™, Live Lite™ provides a fresh and easy way to write music, record audio and produce your own songs. Pro Tools® | First Focusrite Creative Pack is simple enough for beginners, yet you can quickly go from creation to final mix with intuitive recording and music creation tools, including hundreds of virtual instrument sounds, 500MB of loops, and great-sounding effects.

2. Product Images



Figure 2.1 – Scarlett 2i2 (3rd Gen) Left $\frac{3}{4}$



Figure 2.2 – Scarlett 2i2 (3rd Gen) Right $\frac{3}{4}$



Figure 2.3 – Scarlett 2i2 (3rd Gen) Front



Figure 2.4 – Scarlett 2i2 (3rd Gen) Front Elevated



Figure 2.5 – Scarlett 2i2 (3rd Gen) Rear

3. Box Contents

The following items are included with each new Scarlett 2i2 (3rd Gen):



Figure 3.1 – Scarlett 2i2 (3rd Gen) Box Contents

Item	P/N	Description
1		USB A to C Cable
2		Safety Insert

Note: Refer to the spare parts list for the latest part numbers

4. Scarlett 2i2 (3rd Gen) Disassembly

This disassembly is also available online:

<https://sway.office.com/W2W10ZWFVjTDhLFC?ref=Link>

Password: Focusrite5erviceNetwork

Required tools:

- Phillips 1 Screwdriver
- Phillips 2 Screwdriver
- Set of plastic spudgers
- Long nose pliers
- Heat gun

The Scarlett 2i2 (3rd Gen) comes in a brown outer shipping carton like the previous Scarlett products.



Figure 4.1

As before, there is a glossy giftbox inside.



Figure 4.2

The unit has been completely redesigned with a more modern look, and tighter tolerances all round. The front and rear have now been designed to mimic smartphone displays.



Figure 4.3

On the rear the design is much simpler, and this is carried throughout the range.



Figure 4.4

USB C is the standard connector now.



Figure 4.5

The Scarletts are also on average 15% shallower than the 1st and 2nd Gen equivalents.



Figure 4.6

On the underside, labels have been removed. All notices are now lasered onto the chassis, with the serial number being replaced with a Unique Product Code that houses not only the device serial but the bundle code as well.



Figure 4.7

To start removing the main PCB, there are two screws under the two rear feet. Use a plastic spudger to remove the edge of the foot without damaging the anodised chassis.



Figure 4.8

Undoing these screws allows the main assembly to be removed from the chassis.

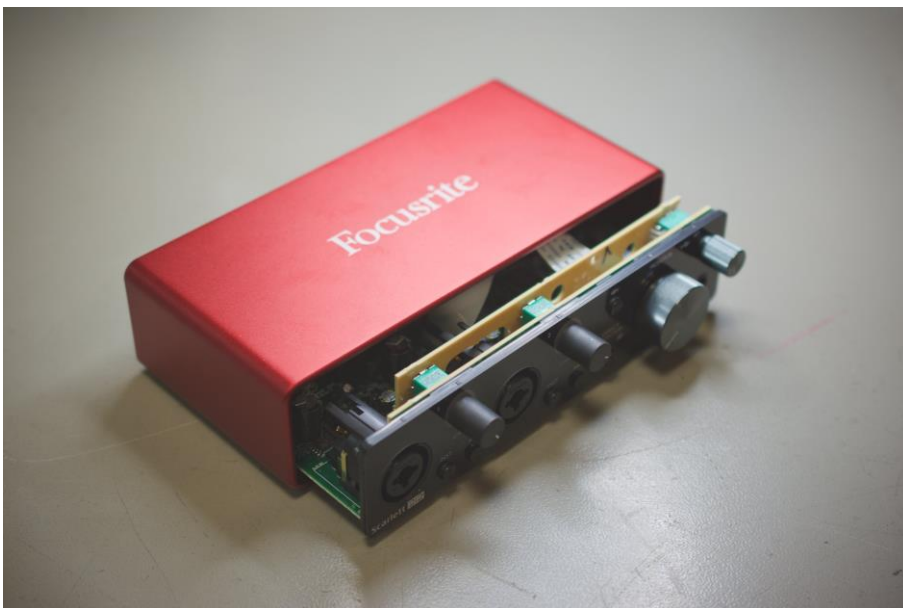


Figure 4.9

There are no clips, and the main PCB is free.



Figure 4.10

The main board has been completely redesigned, and the front is now 2 PCBs with one housing only the pots, and another for the tactile switches and surface mount LEDs.

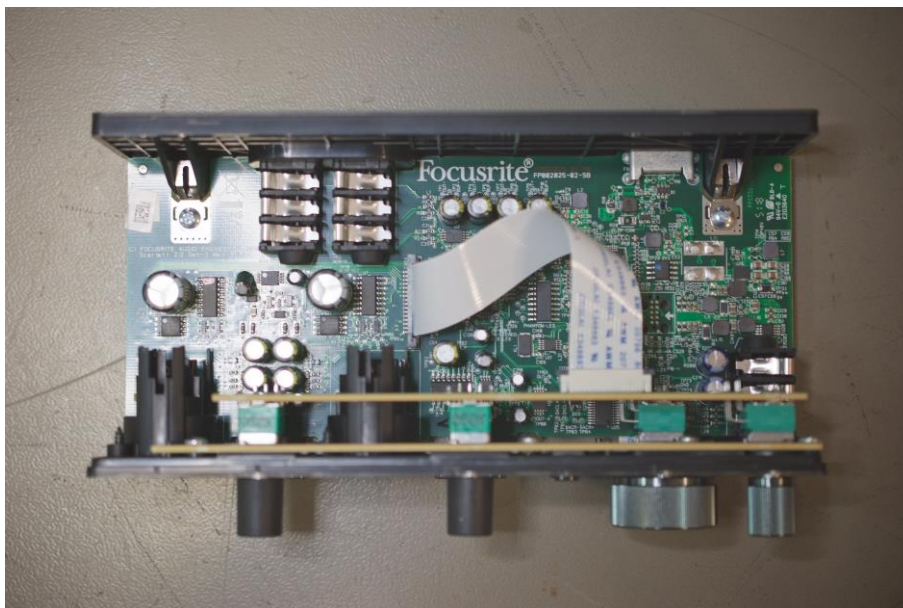


Figure 4.11

Removing the front panel FPC cable allows for access to most of the top of the main PCB.



Figure 4.12

The board is populated on both sides now, a necessary change because of the 15% reduction in depth.

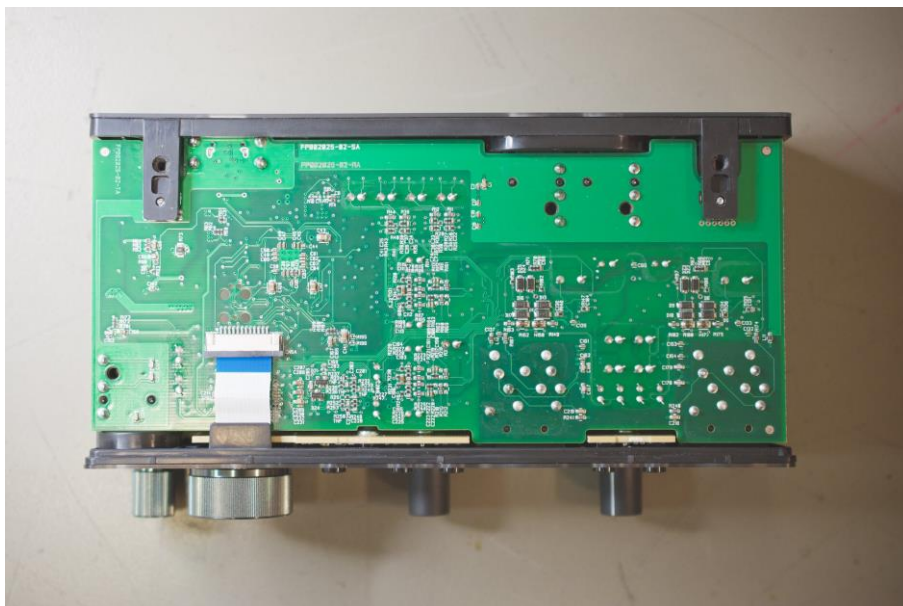


Figure 4.13

The front and rear have adhesive plastic covers that provide the glossy finish.



Figure 4.14

Using a sharp plastic spudger, start in one corner and carefully insert it down the gap. These plastic covers do leave space for this to happen, and the edges are not completely flush as a result.



Figure 4.15

Depending on how easy it is to get started with this, it might help to use a heat gun on a low setting to warm the plastic up, which will soften the adhesive and make this an easier job.

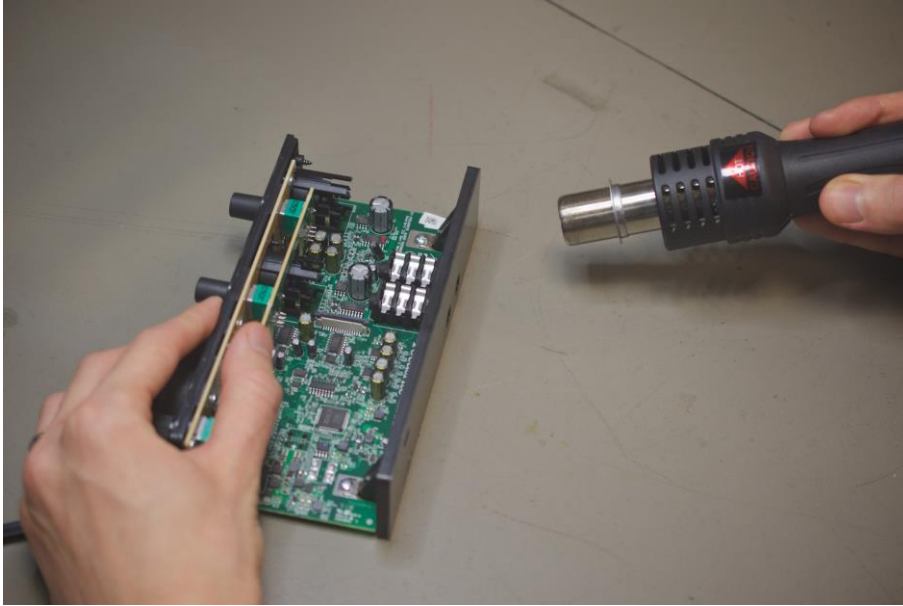


Figure 4.16

Continue progressing carefully across the back, being careful not to put too much stress on the plastic or it could crack.



Figure 4.17

Once the plastic is off, the main rear panel will be visible.



Figure 4.18

Circular slotted nuts are used to hold the jacks in place, these can be removed with a slotted nut spanner, but are just as easily undone with a pair of long nose pliers.



Figure 4.19

There are also two screws on the inside holding the rear panel down. Once these are moved the rear panel can be removed.

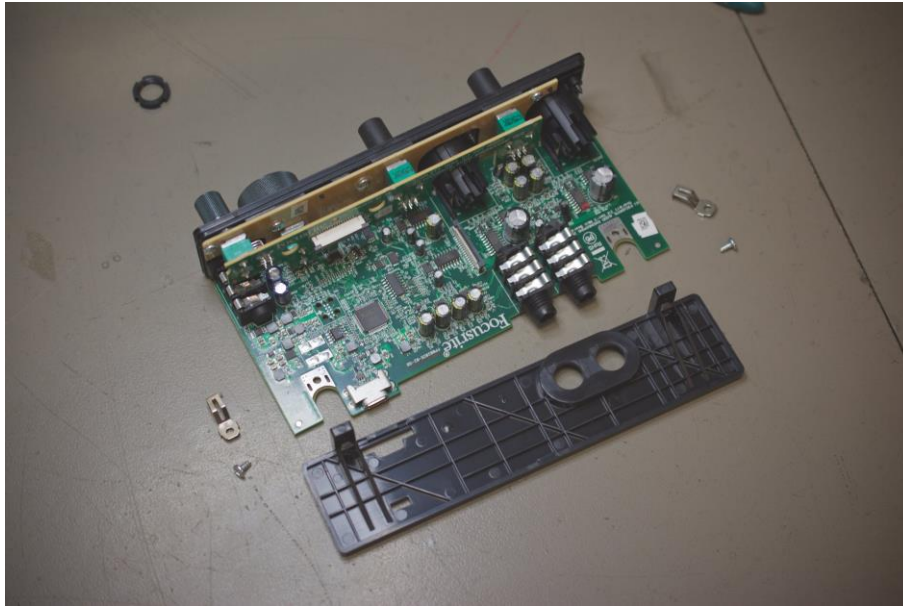


Figure 4.20

A closeup of the USB C connector. There is a strong metal bracket over the connector which will provide strength and prevent the connector from breaking. This approach has been taken with Clarett C and has proved successful there. We expect this design to be much more reliable than USB B Type ports.



Figure 4.21

On the underside, the USB C connector has 4 through hole legs for support, and the bracket has another 4 connection points, for 8 mounting points in total. The 2nd Gen Scarlett USB B type ports only had 2 points that were the same size as this.

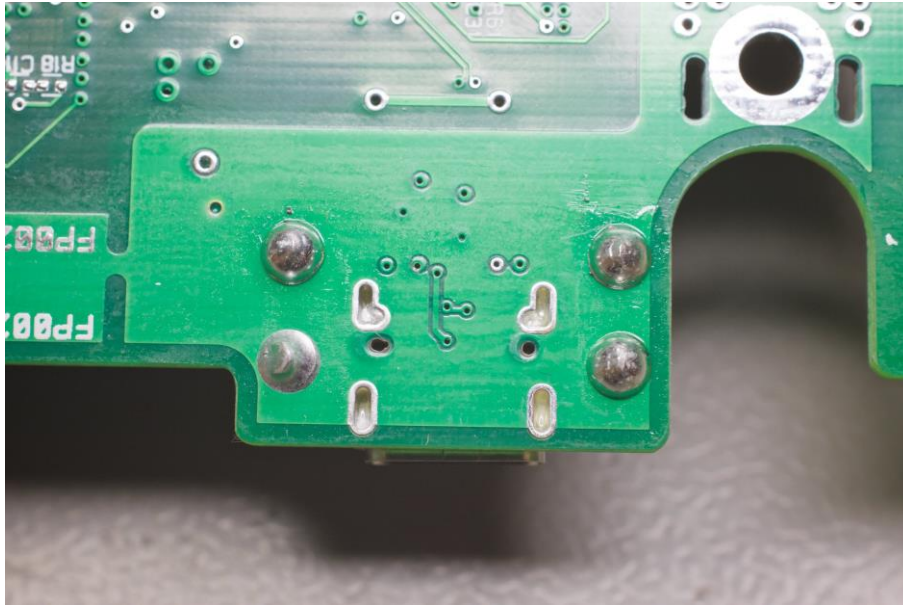


Figure 4.22

To begin removing the front panel, first remove the knob caps which are friction fit and should pull off.



Figure 4.23

Start in a corner again and carefully prise the plastic back.

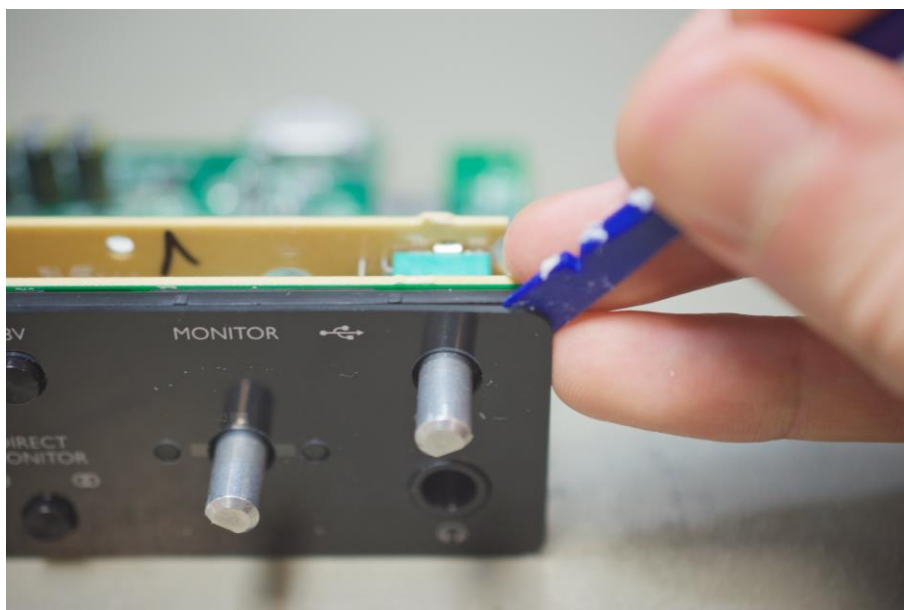


Figure 4.24

Take care around the tactile switch caps as these can bend out of shape if caught during the removal process.

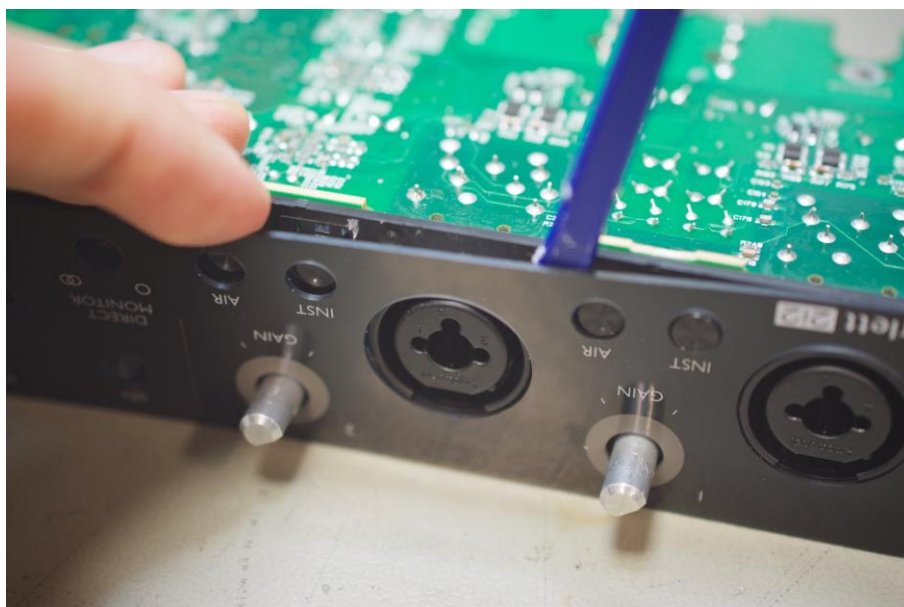


Figure 4.25

The front panel has less adhesive so should be easier to remove than the rear panel.

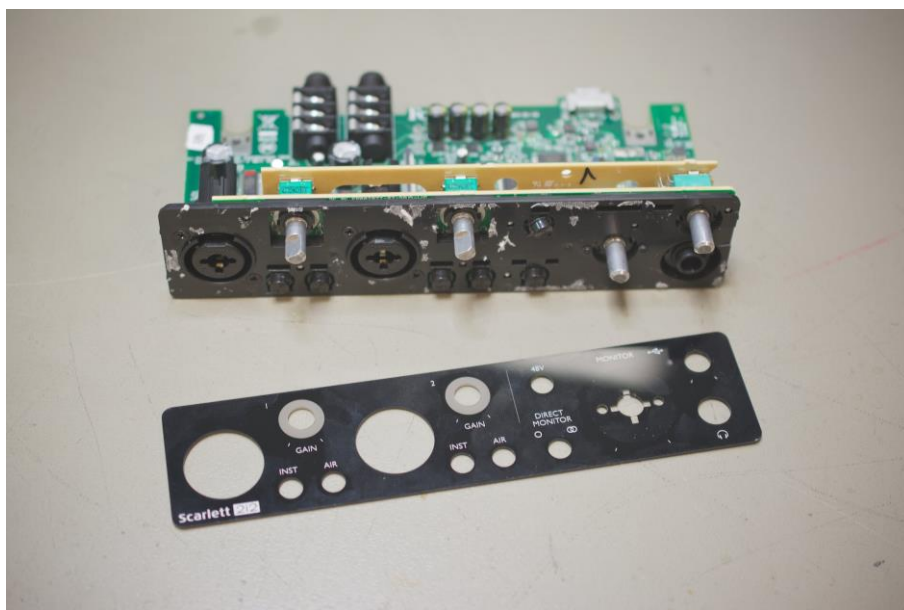


Figure 4.26

There are a series of screws for the XLR Combi jacks and another slotted nut around the headphone jack.



Figure 4.27

Once those are undone, the only thing holding the front panel to the main PCB is the front panel FPC cable on the underside.

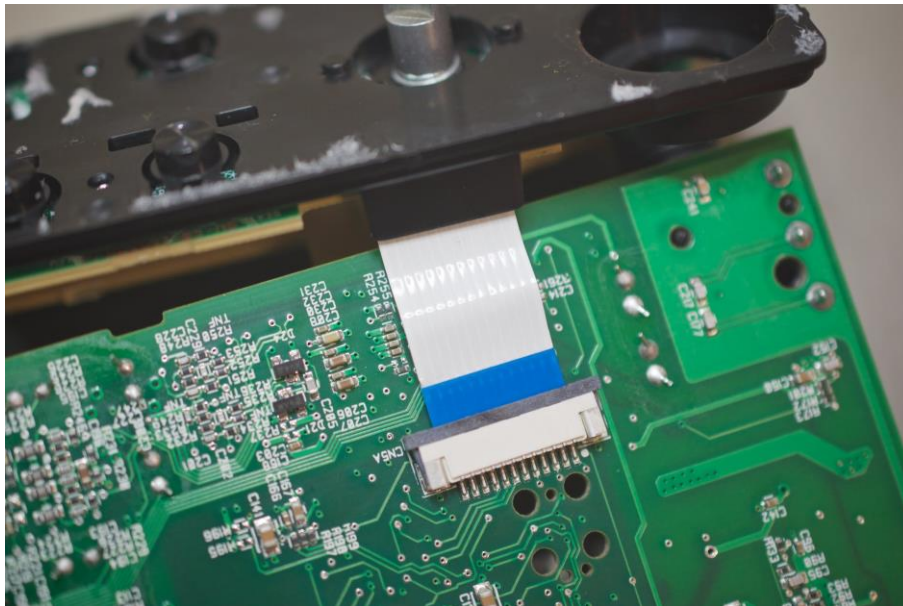


Figure 4.28

Unclipping this will free the front panel, allowing the whole main PCB to be accessed.

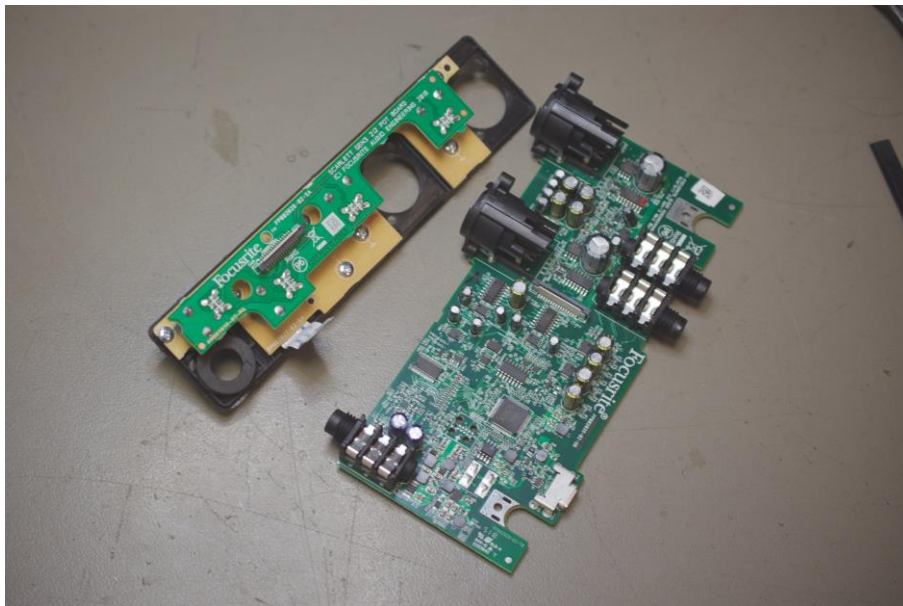


Figure 4.29

On the front panel PCB, undo all the silver screws to remove the front of the sub front panel plastic.

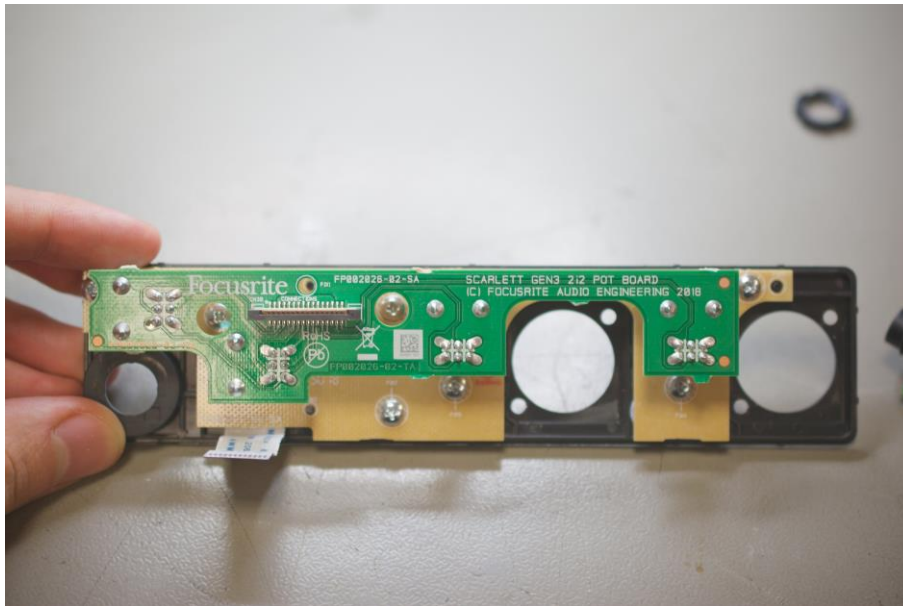


Figure 4.30

The front panel has the tactile switches, an upgrade from the slide switches found on the previous 2 Scarlett generations. The smaller mechanical travel distance should help with reliability long term.

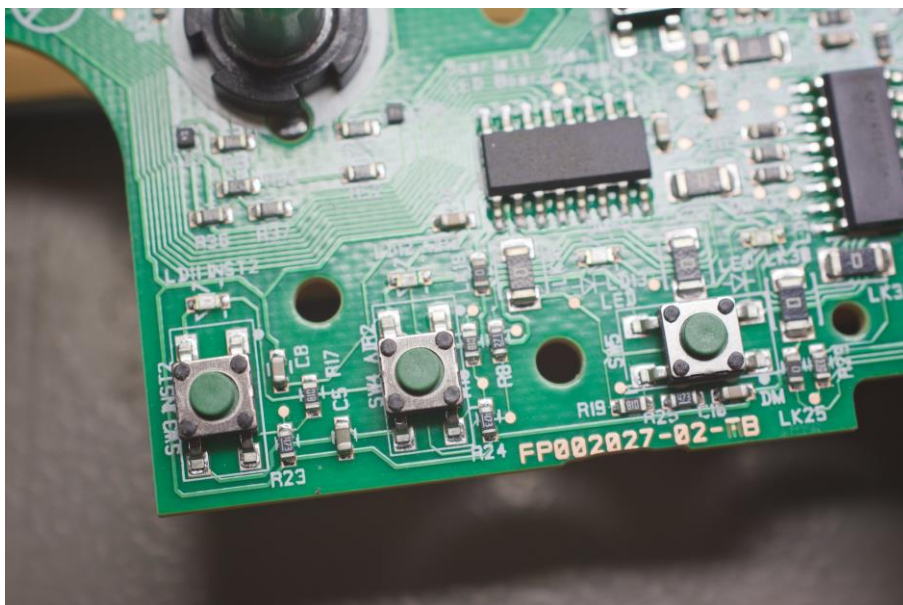


Figure 4.31

There are only 4 more slotted nuts on the pots to undo to remove the pot PCB.

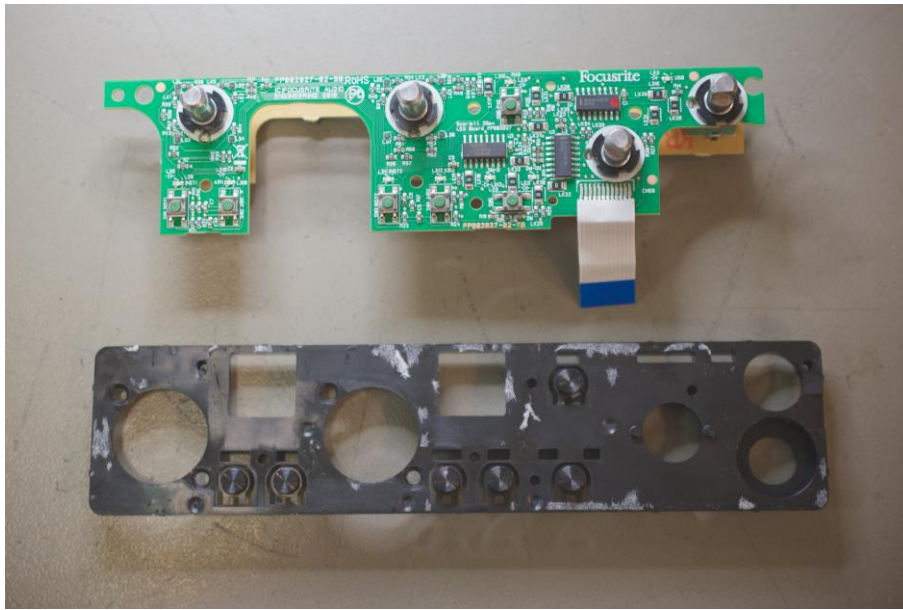


Figure 4.32

The pots are one of the more difficult parts to access on this unit, however unlike previous generations the design of the pots is entirely riveted, no folded metal to hold them together, and each one is nutted to the front panel to improve the resistance to any physical shocks.

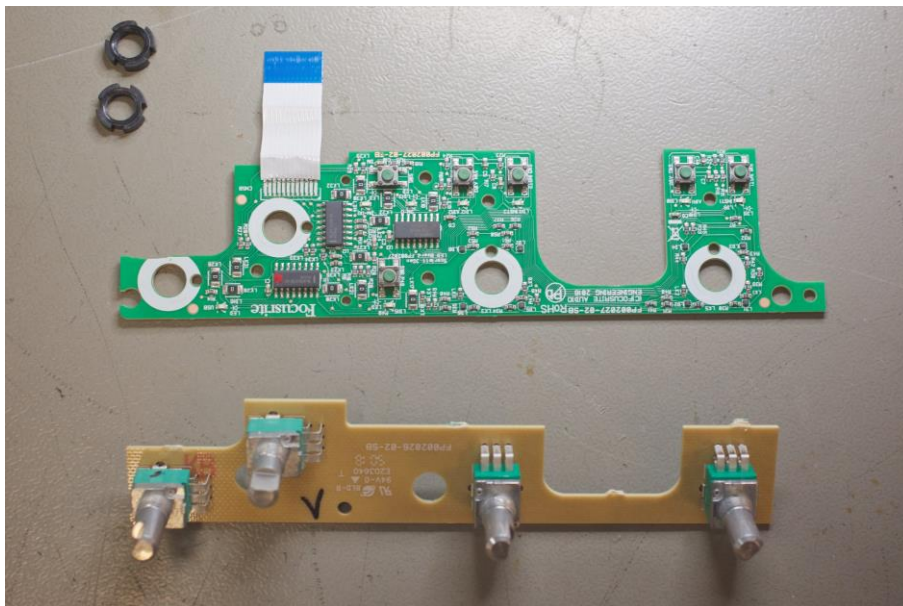


Figure 4.33

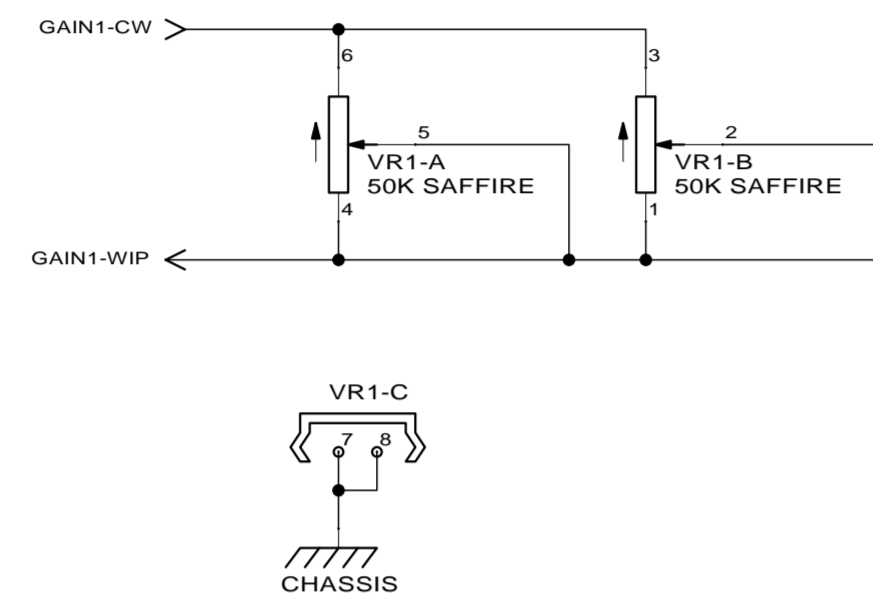
It's worth noting on this product that the XMOS chips used will be a different type, incompatible with previous generations. This is because the firmware on the device is now encrypted to prevent it being drawn off and put on another product. Attempts to access the firmware will result in the unit becoming inoperable.



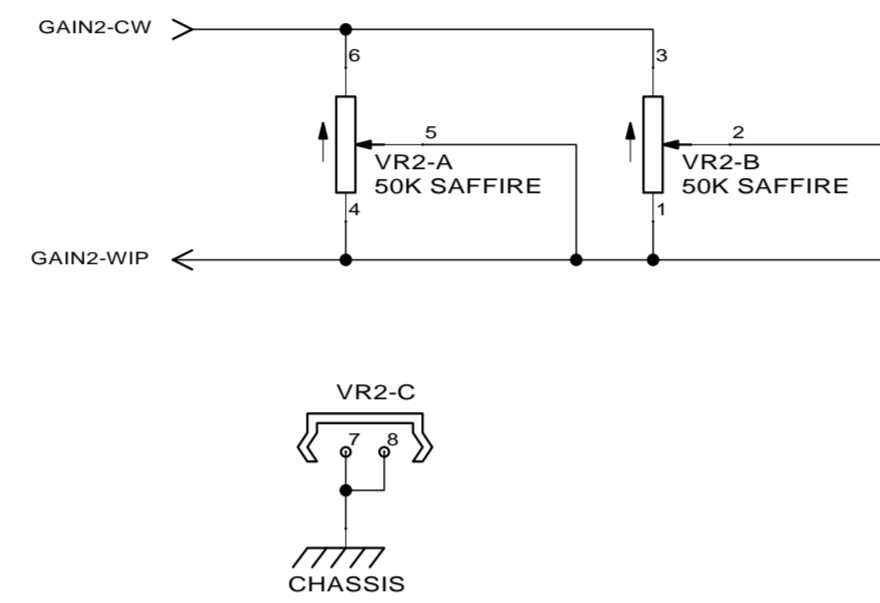
Figure 4.34

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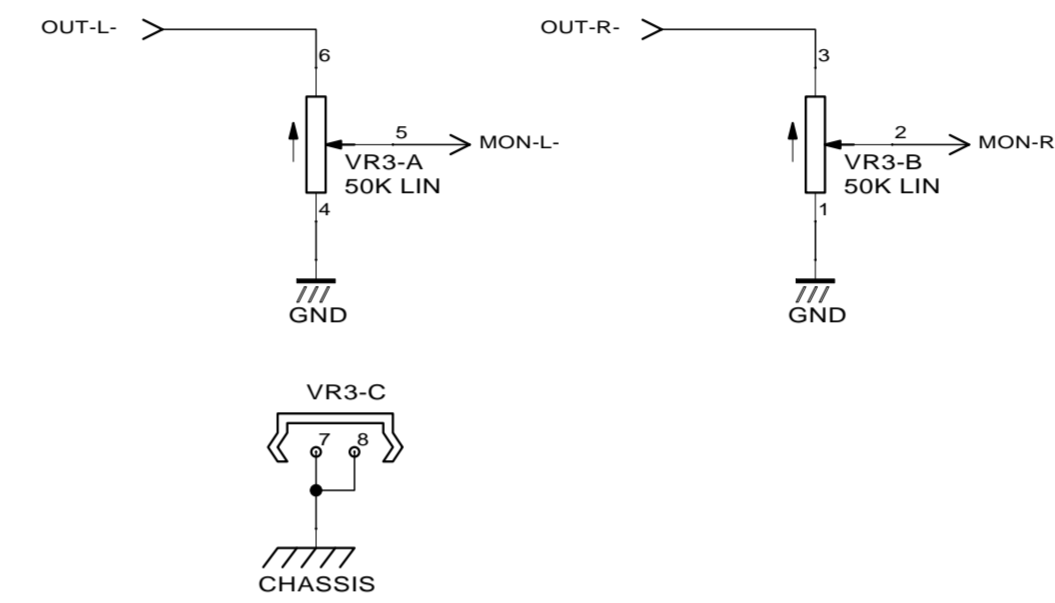
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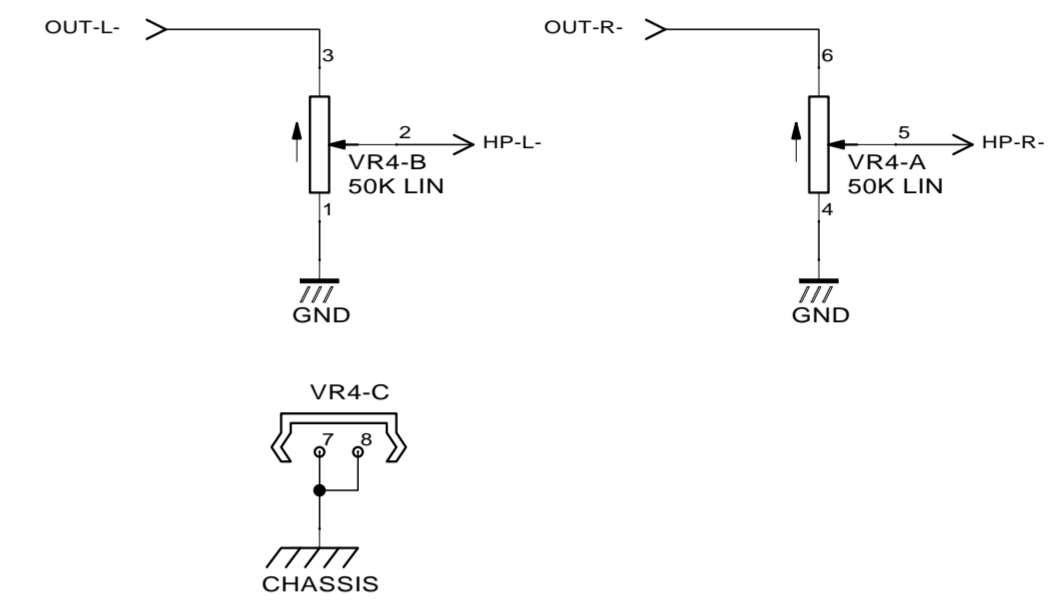
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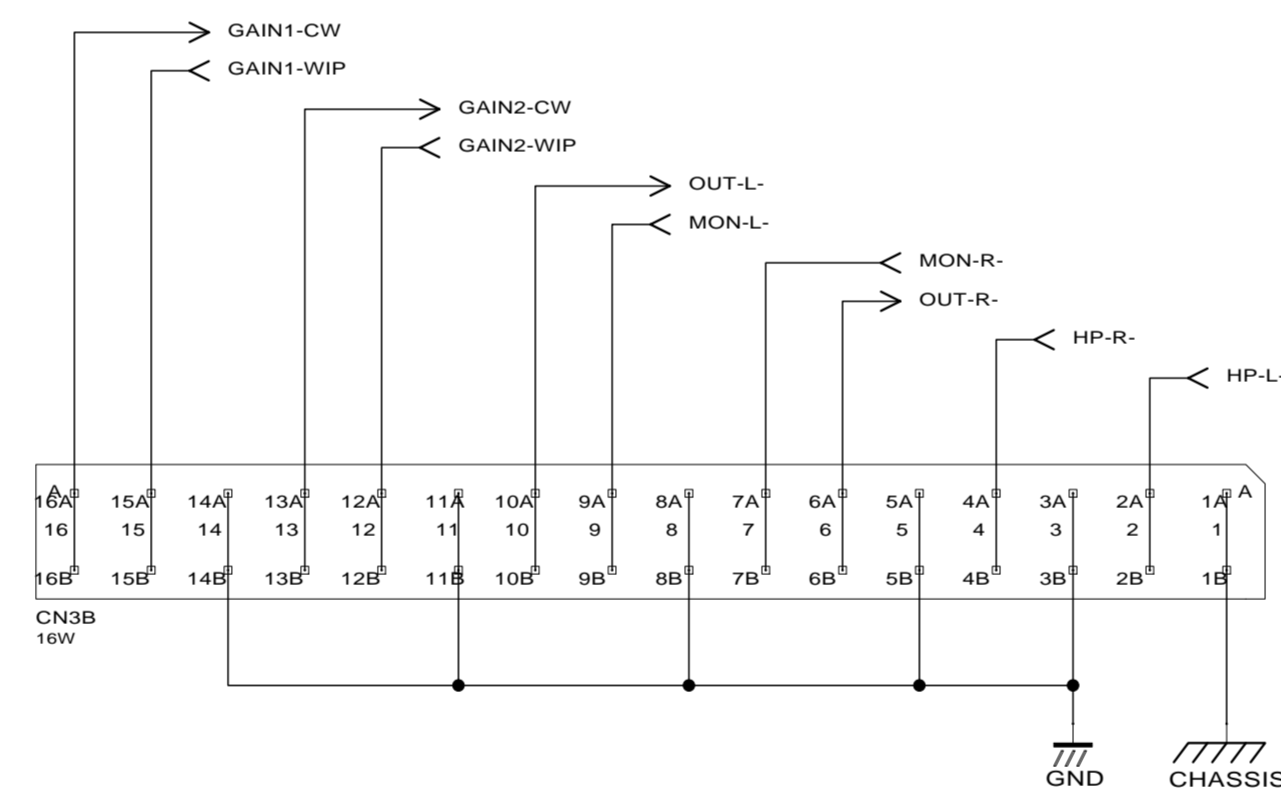
MONITOR



HEADPHONE



- ZF1 FIDUCIAL 2MM
- ZF2 FIDUCIAL 2MM
- ZF3 FIDUCIAL 2MM
- FIX1 3.17mm NF



Crosswired with CN3A on FP002025

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NOTES

NO CHANGE FROM REV-01 TO REV-02. UPDATE FOR PCB ONLY.

DRN. TAH
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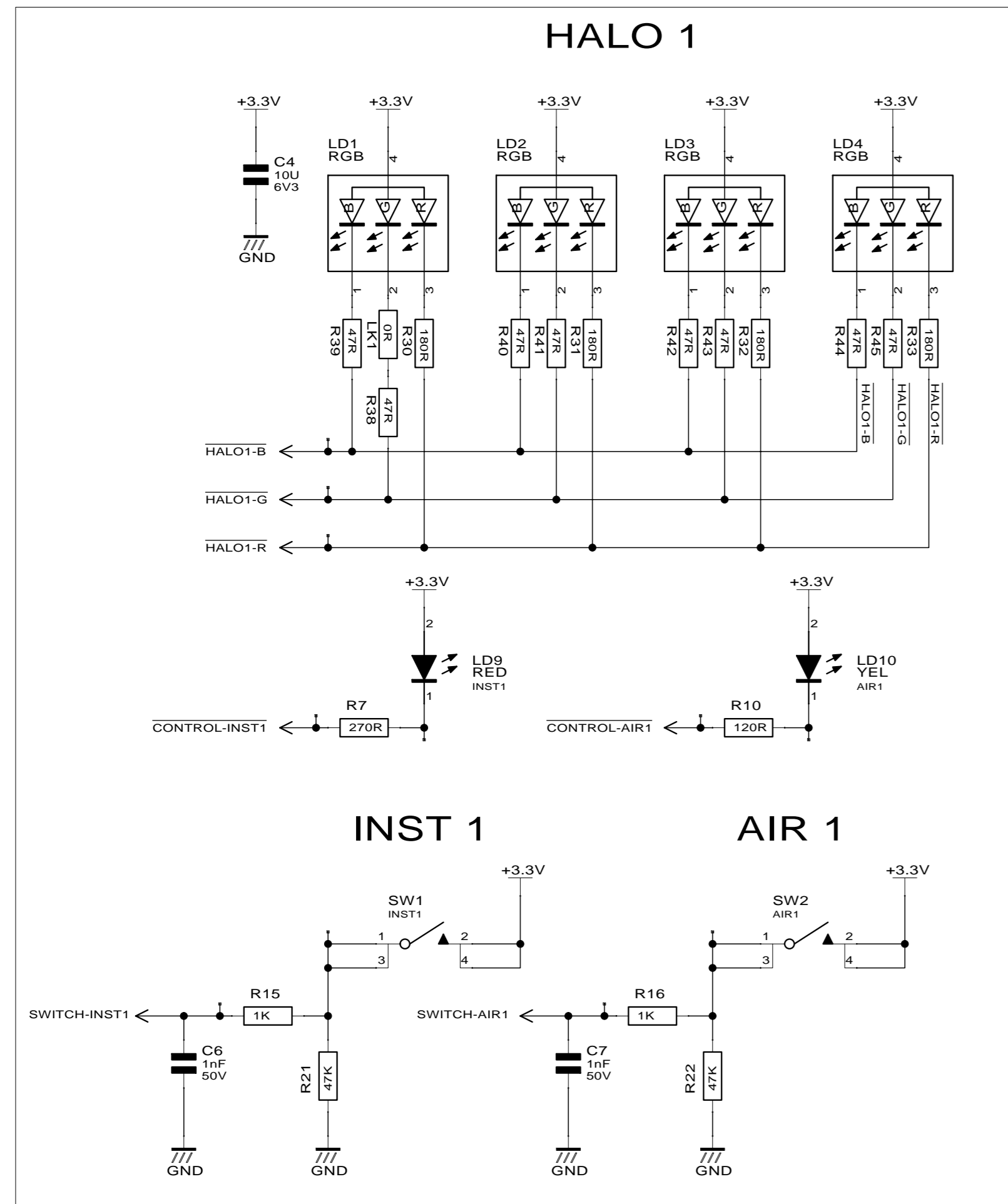
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PROJECT:
FP002026
SG3 2i2 Pot Board

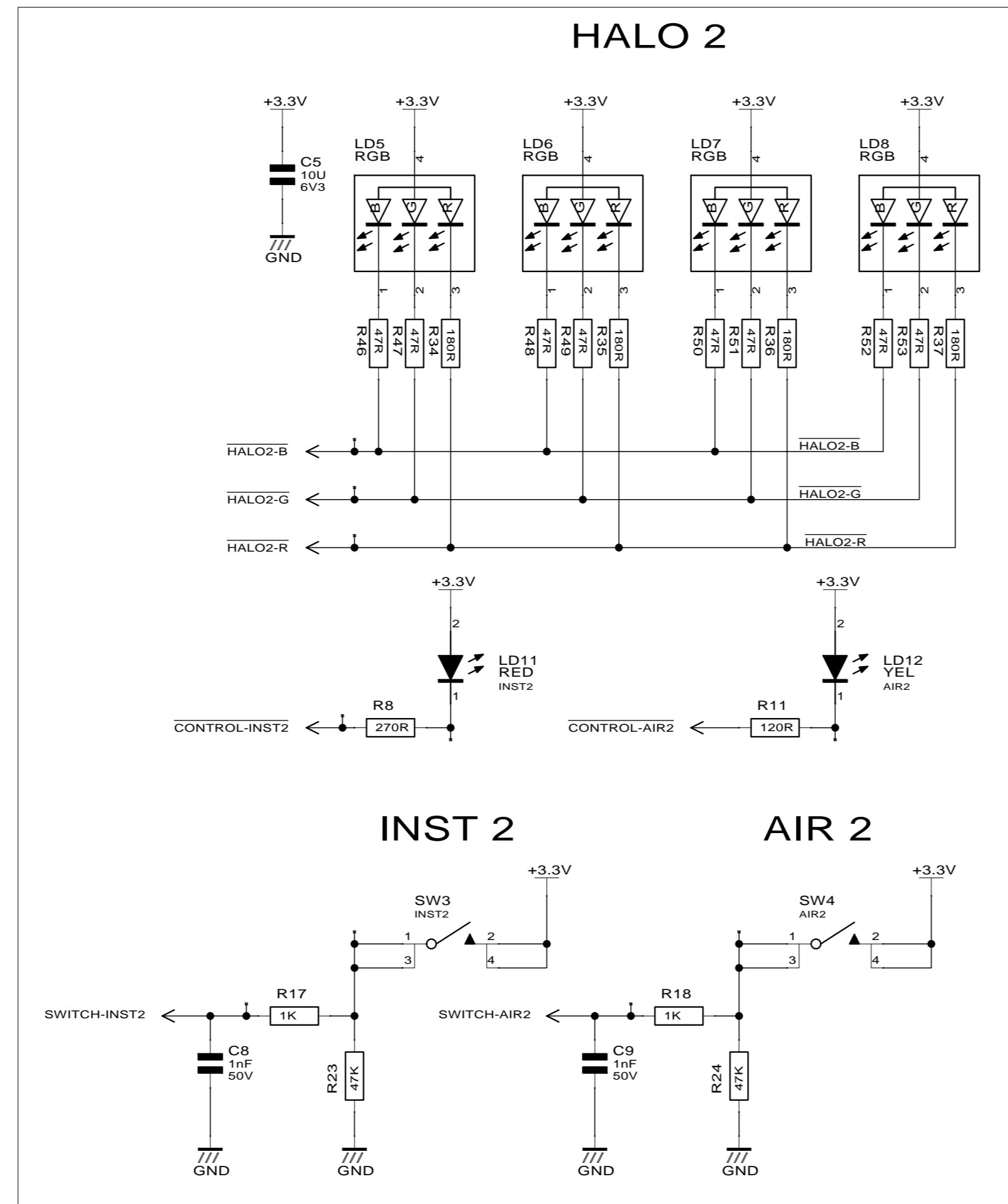
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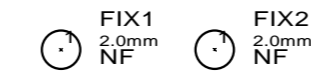
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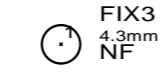
CHANNEL 2



Locating pins



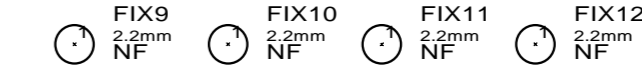
Screw holes with locating pin



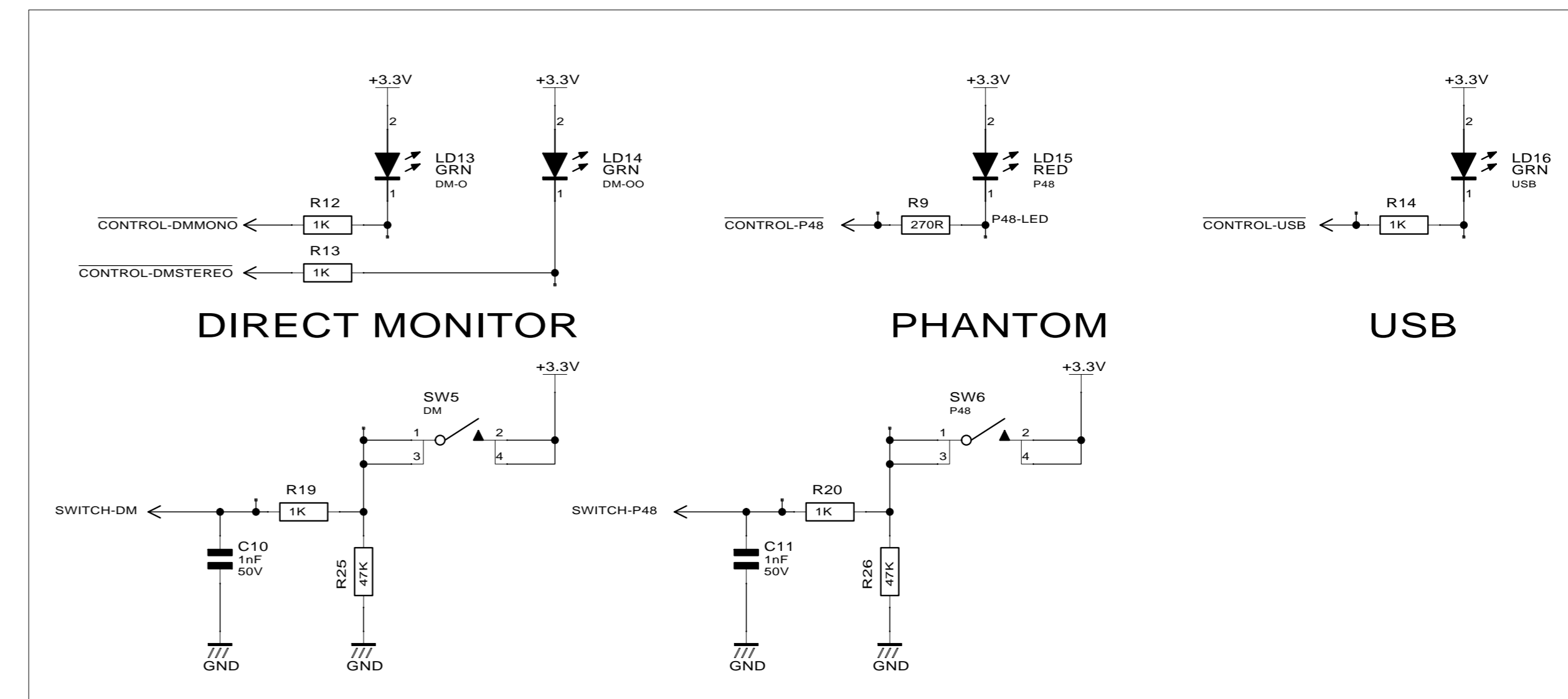
Screw holes



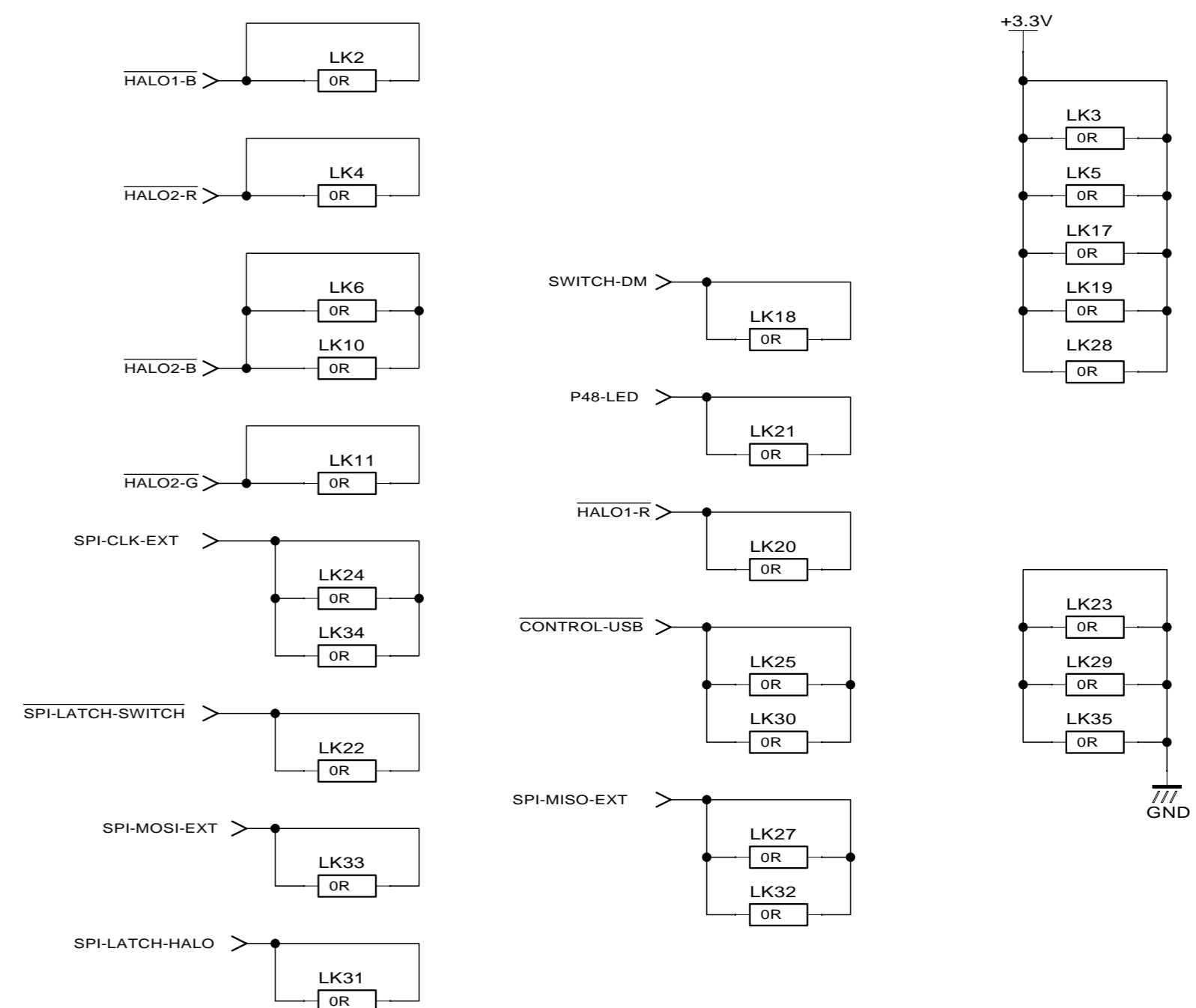
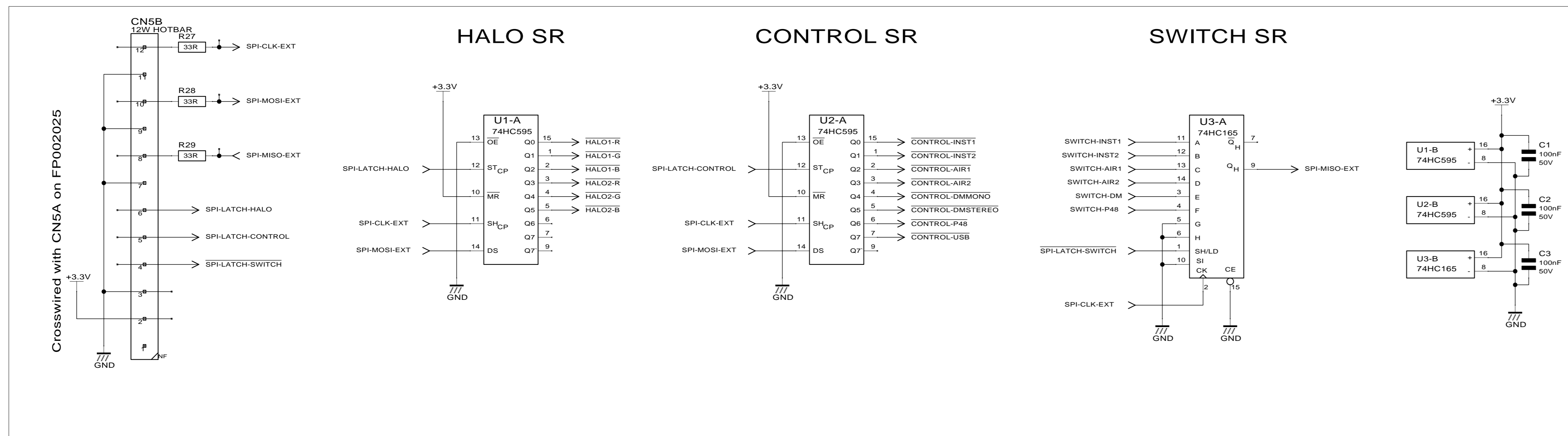
Pot locating tab holes



MONITOR BLOCK



SPI CONTROL



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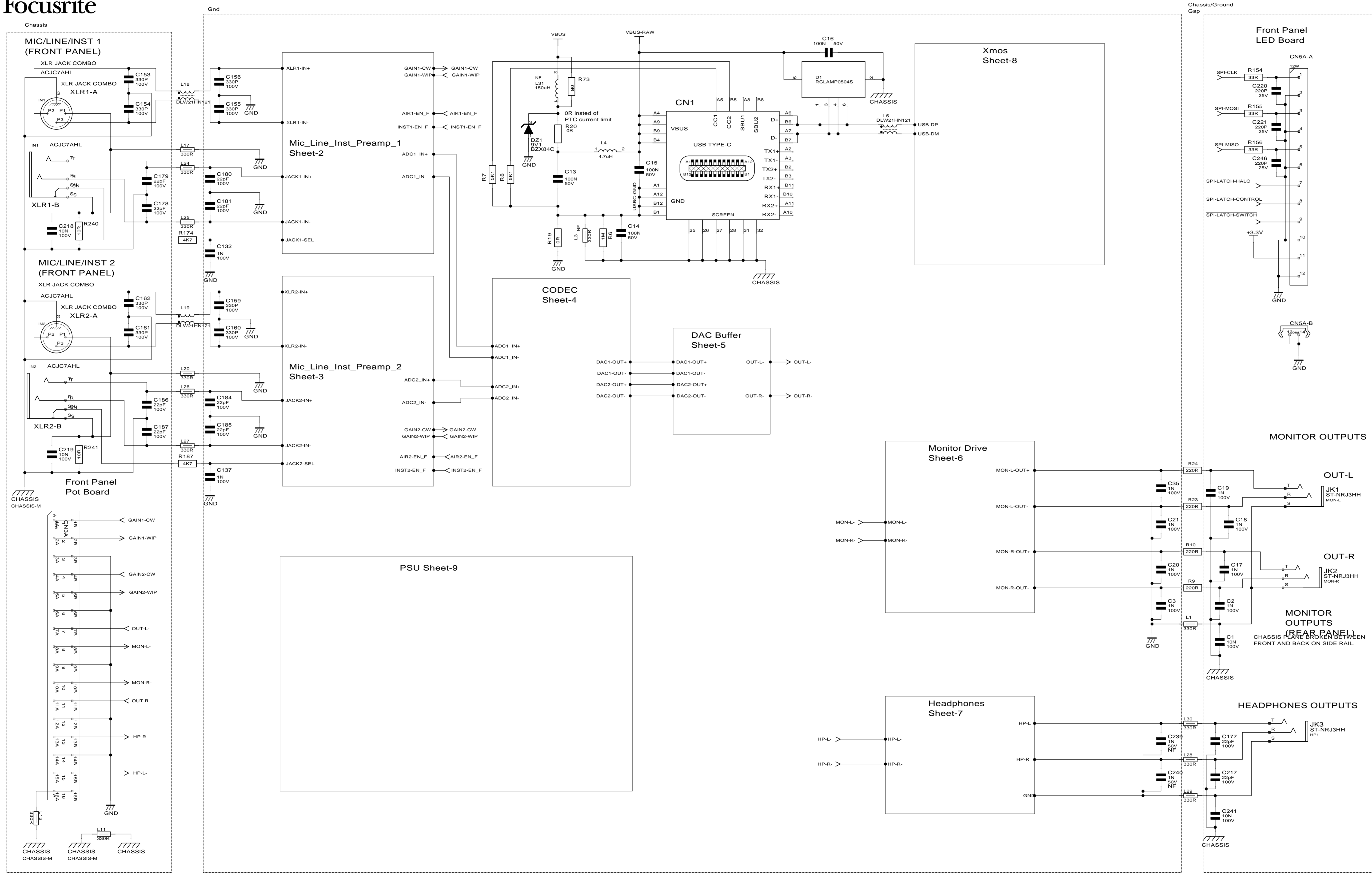
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PROJECT:
 FD002027
 SG3 2i2 LED Board

DRG NO.
 FD002027

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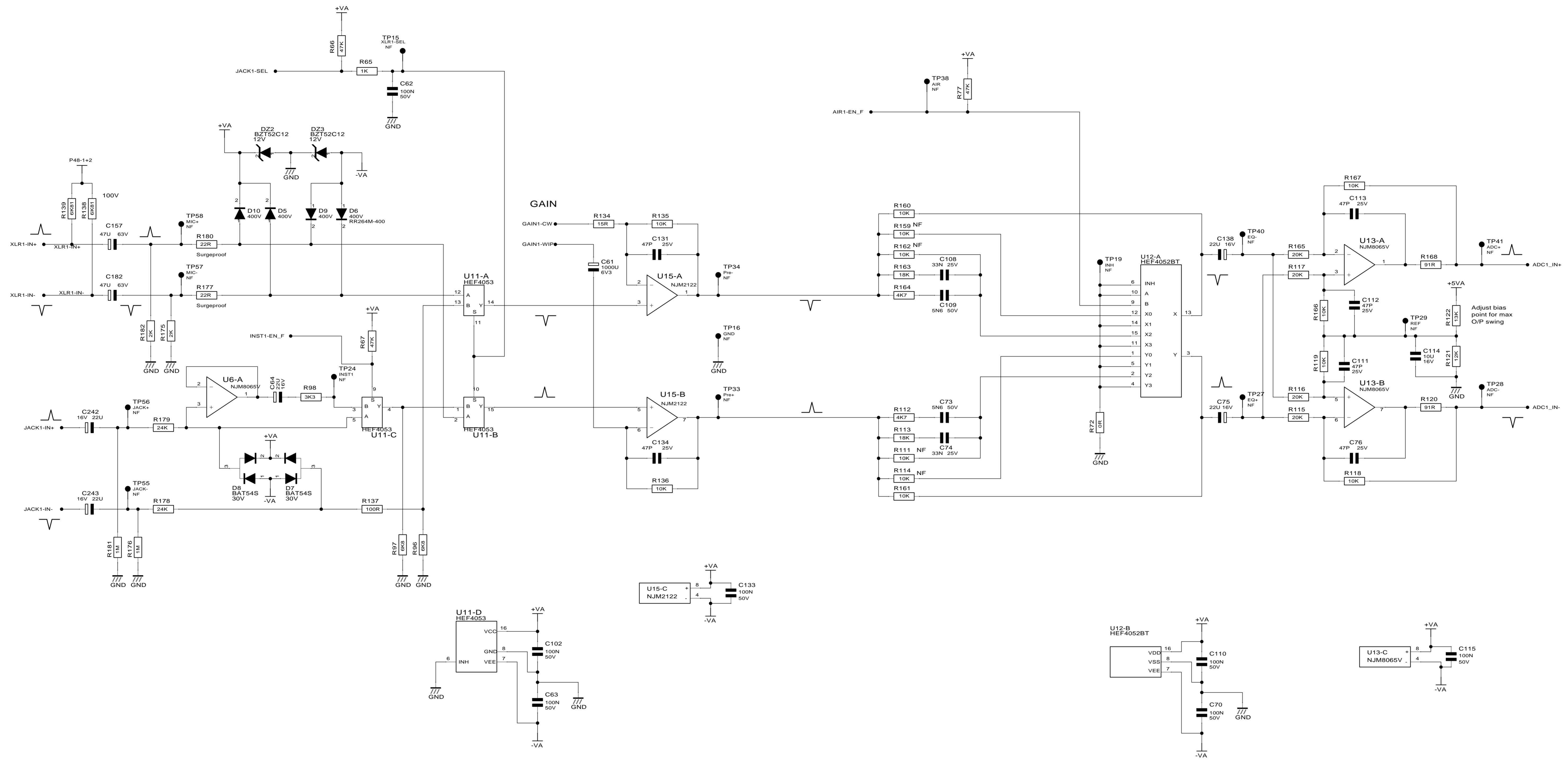
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PROJECT:
 Scarlett 2i2 G3
 Top Level

DRG NO.
 FD002025



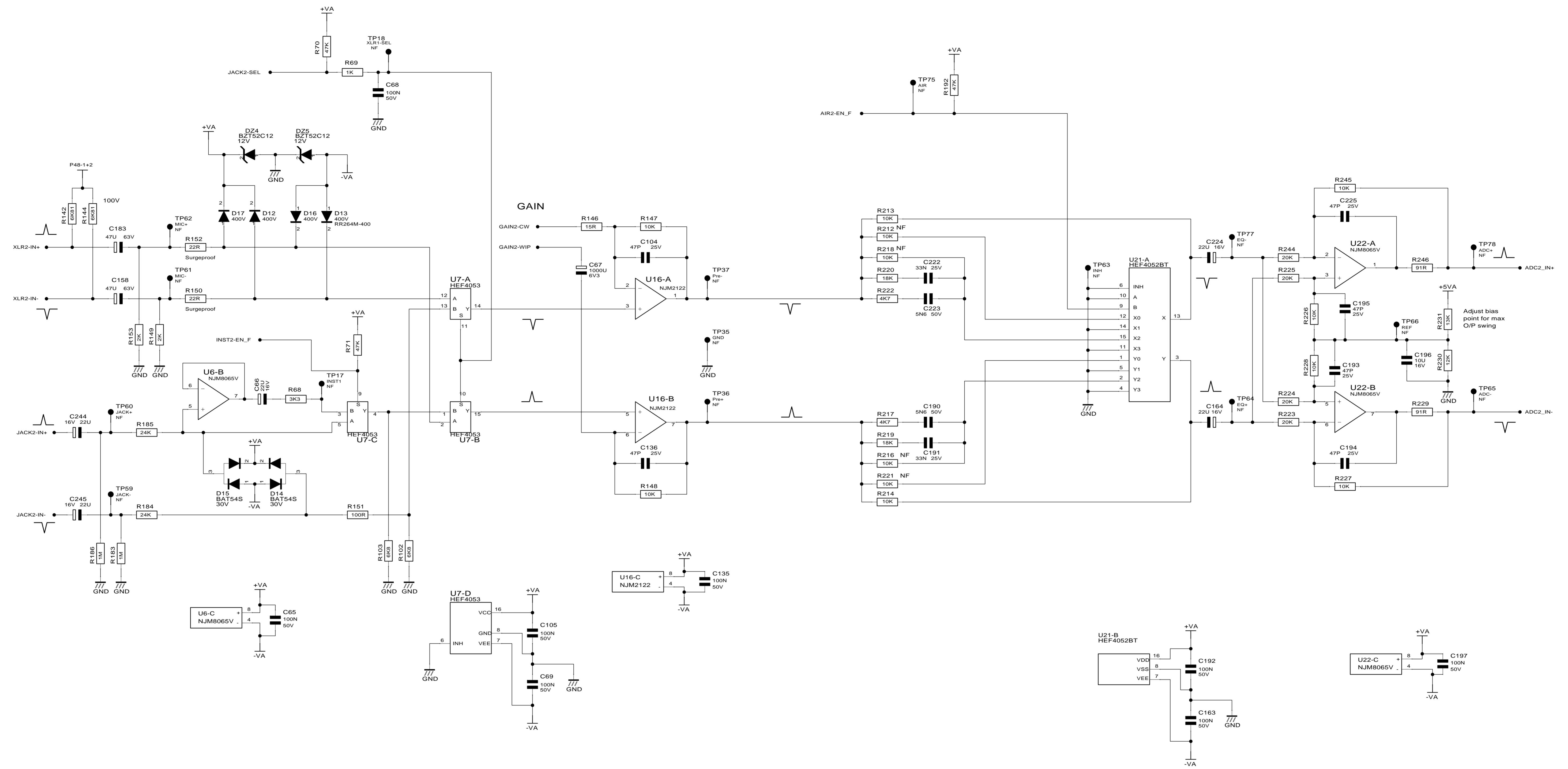
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PROJECT:	Scarlett 2i2 G3 Mic_Line_Inst_Preamplifier_1 Sheet-2
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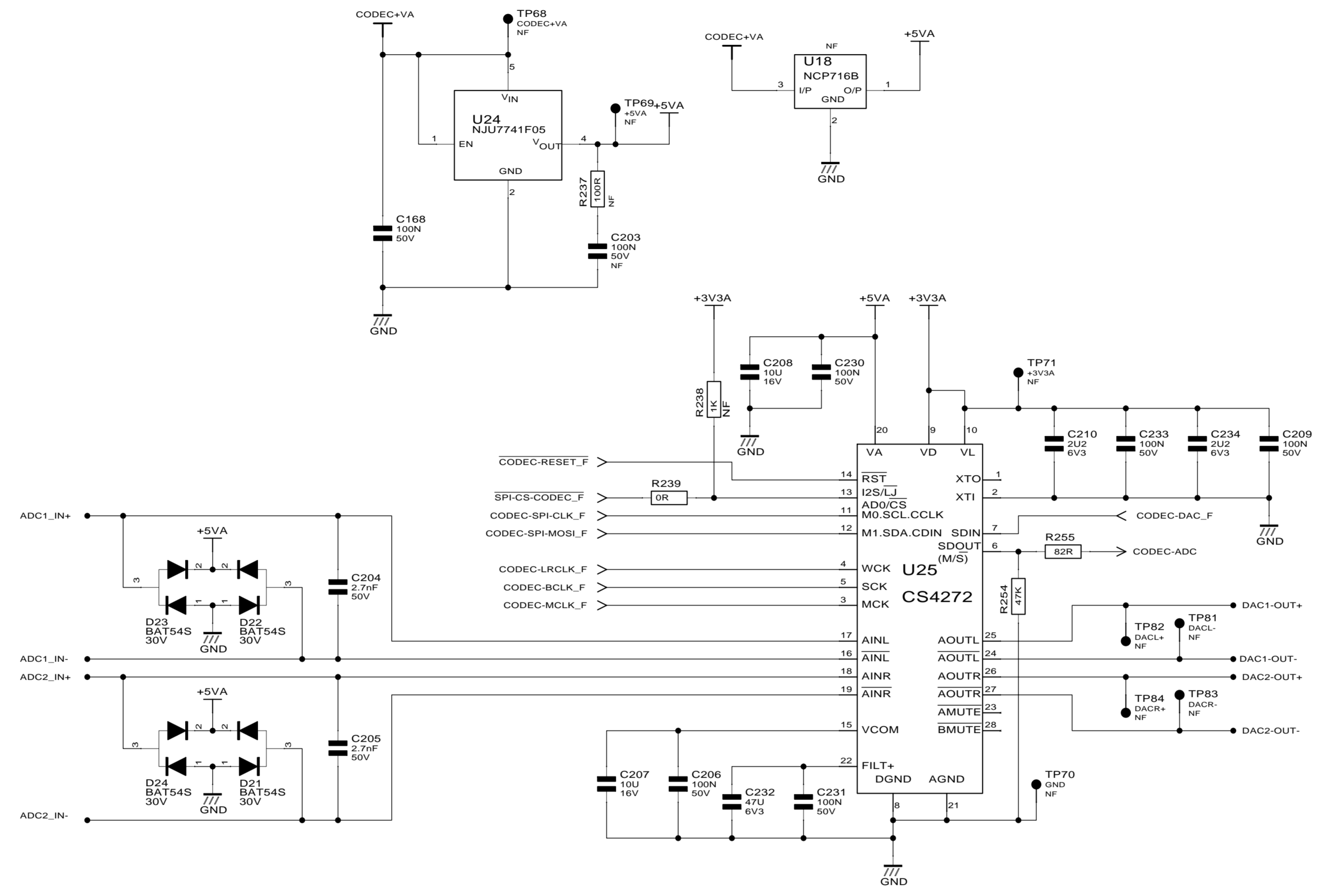
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PROJECT:

Scarlett 2i2 G3
Mic_Line_Inst_Preamp_2 Sheet-3

DRG NO.

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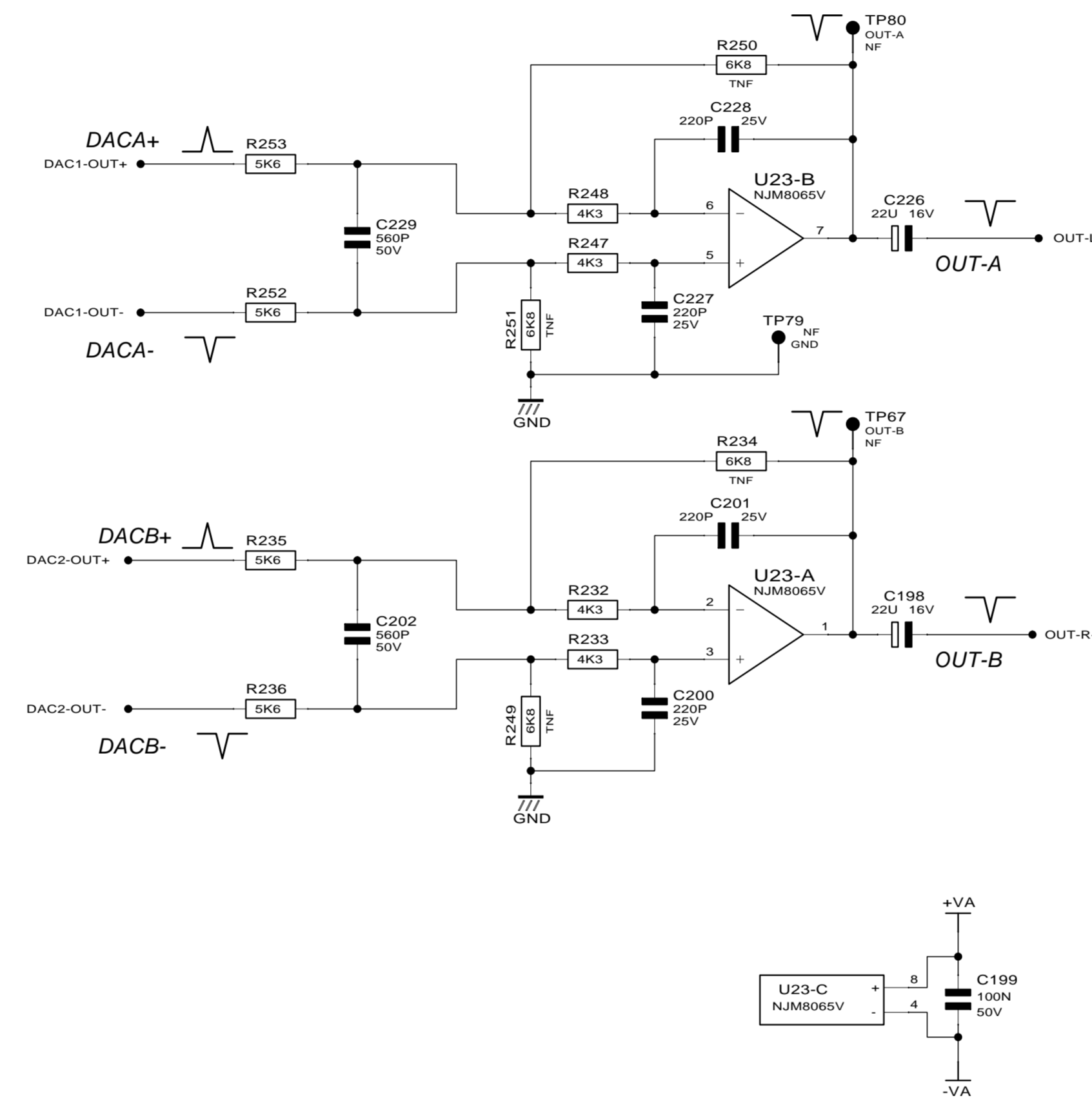
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PROJECT:
Scarlett 2i2 G3
CODEC Sheet-4
DRG NO.
FD002025

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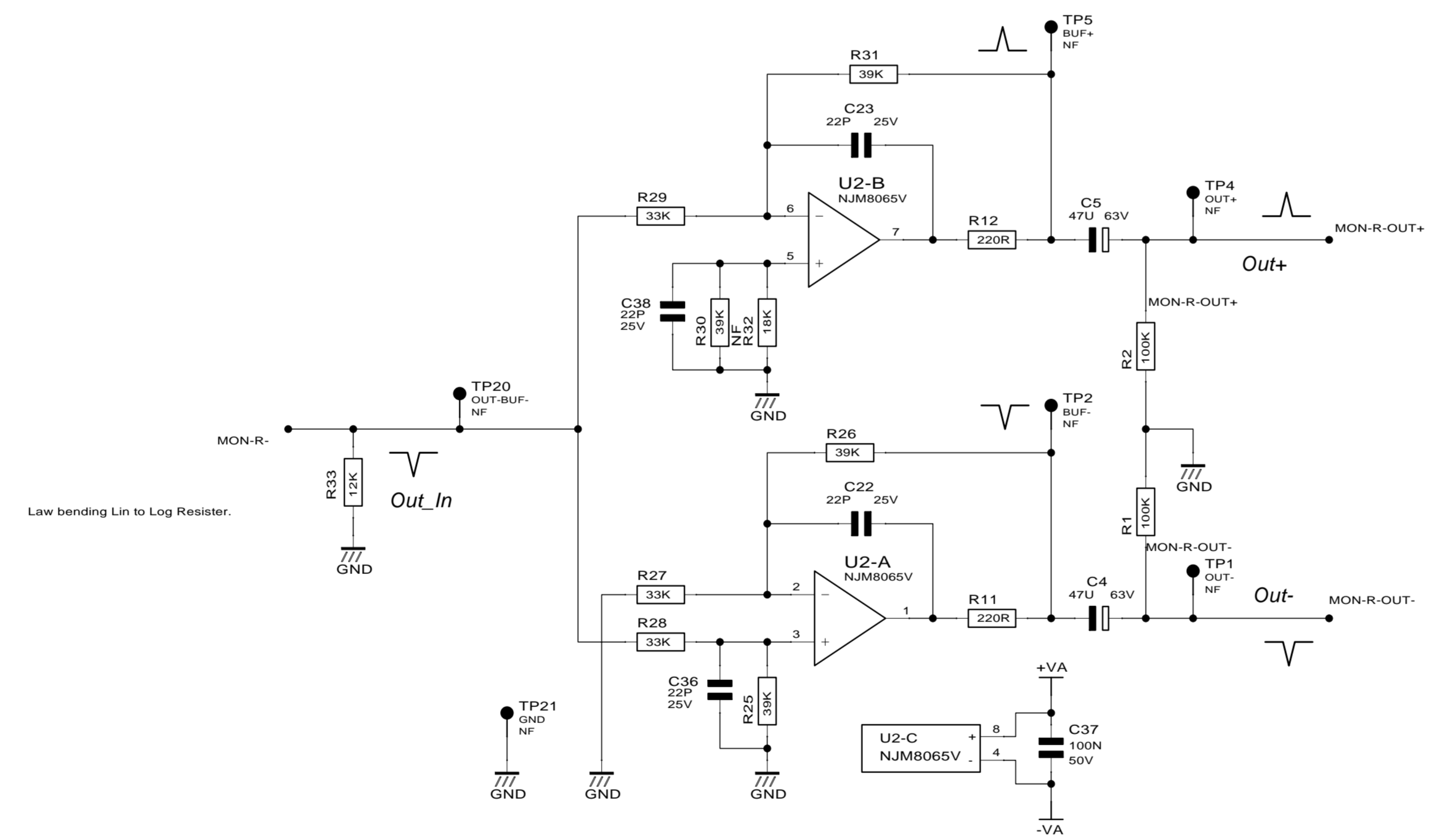
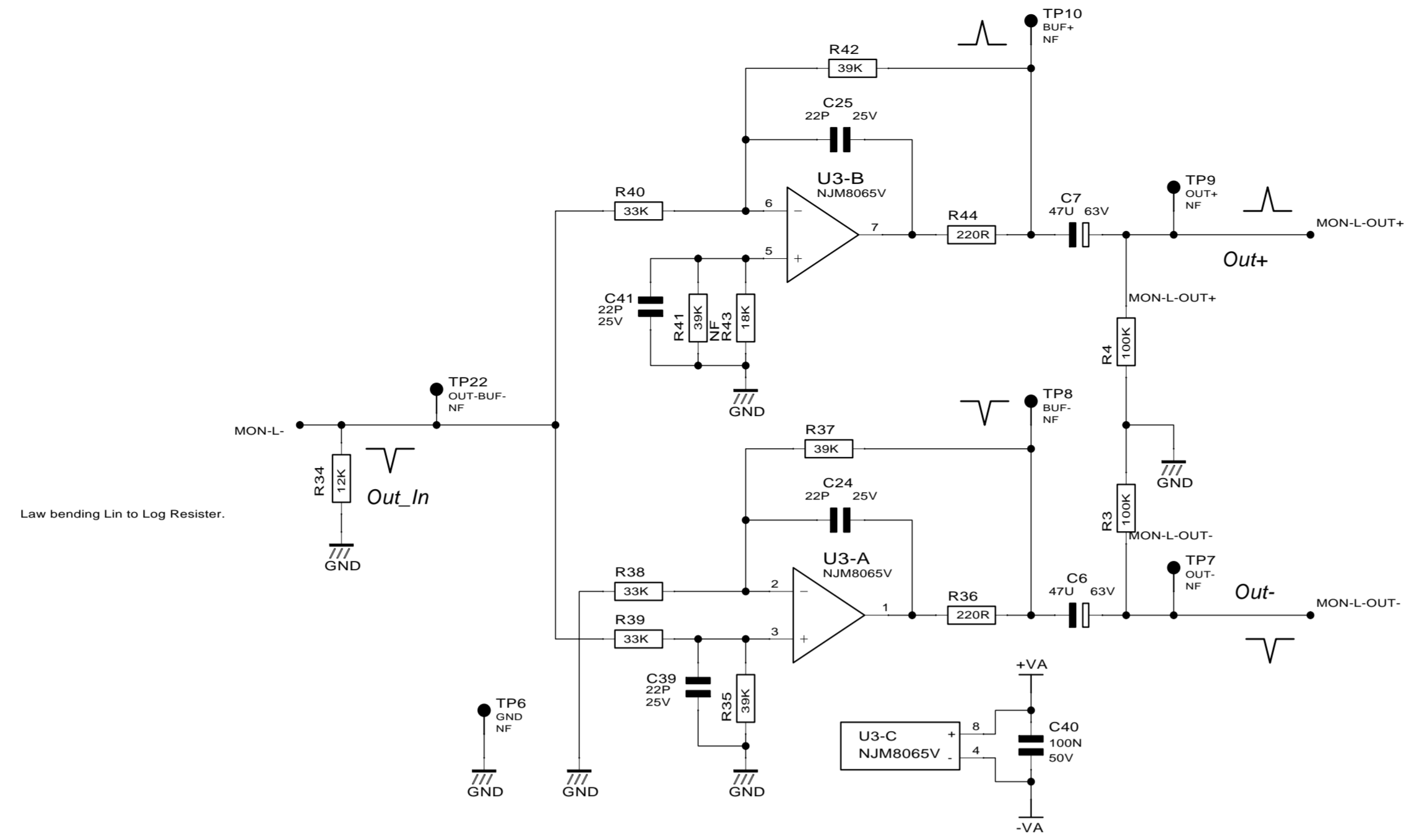
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PROJECT:
Scarlett 2i2 G3 DAC Buffer Sheet-5
DRG NO.
FD002025

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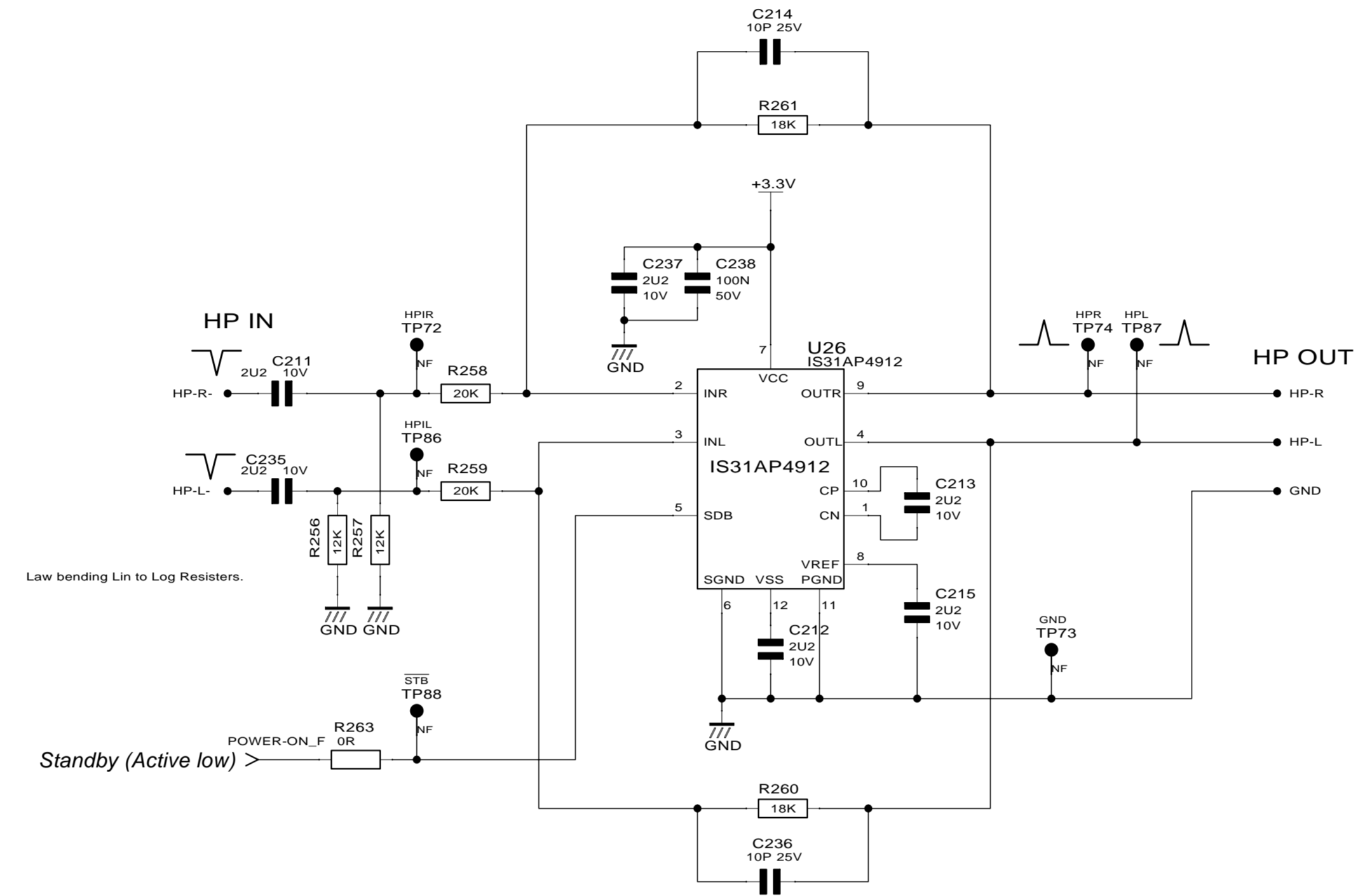
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PROJECT:	Scarlett 2i2 G3 Monitor Drive Sheet-6
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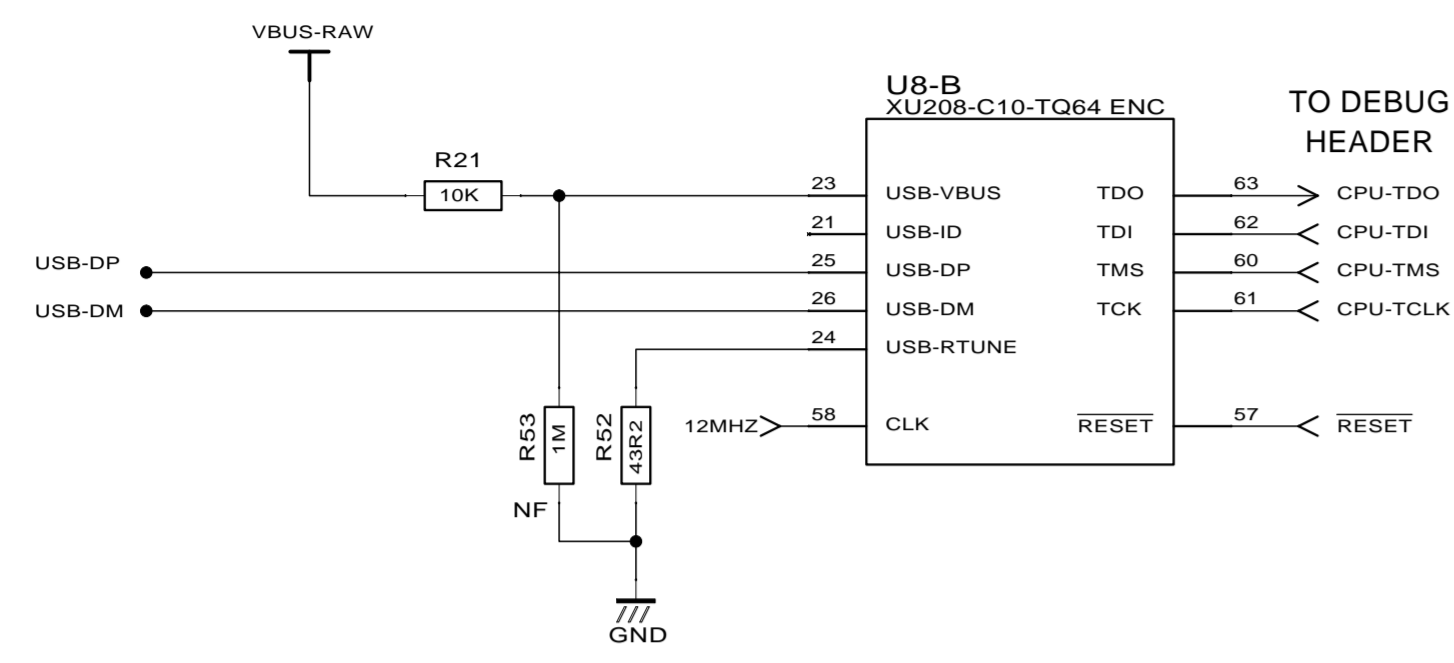
Scarlett 2i2 G3
 Headphones Sheet-7

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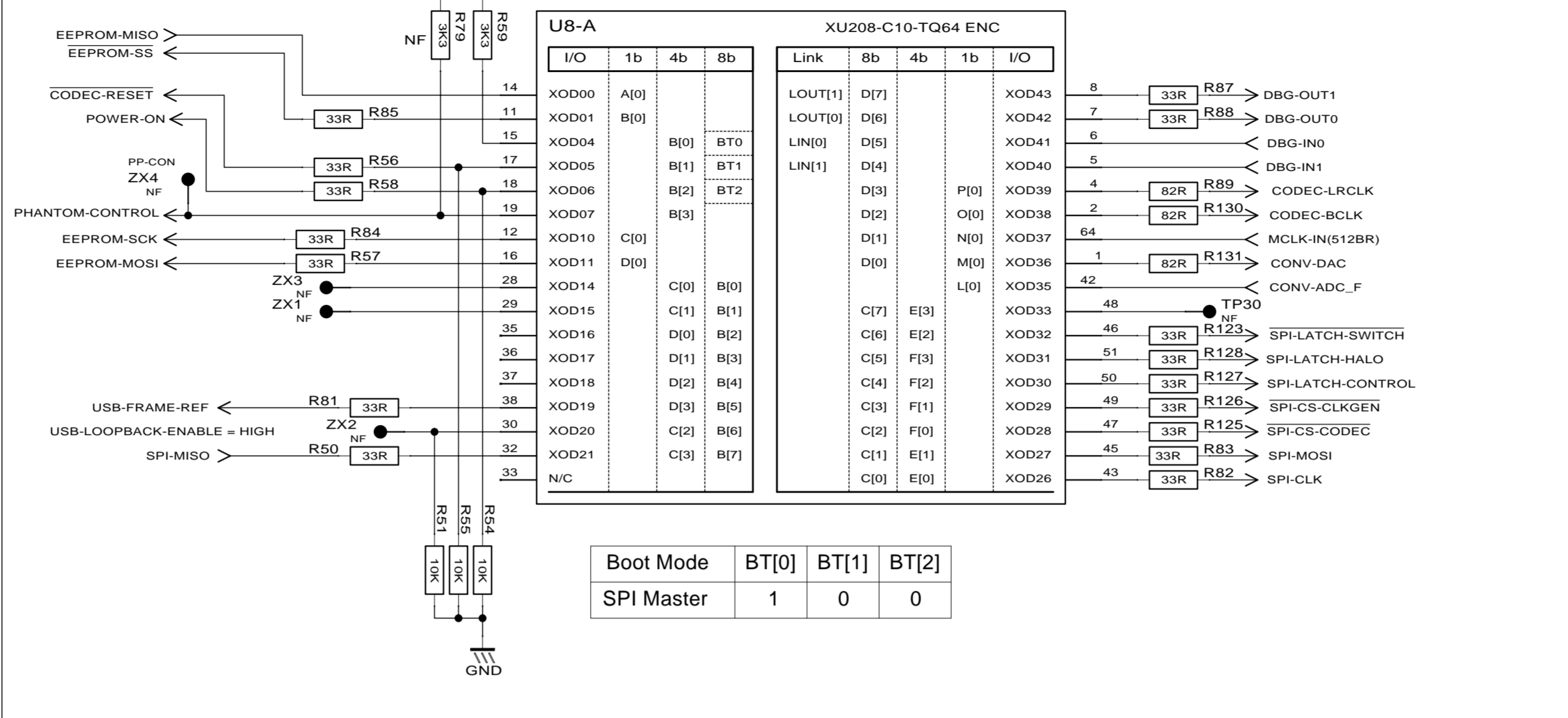
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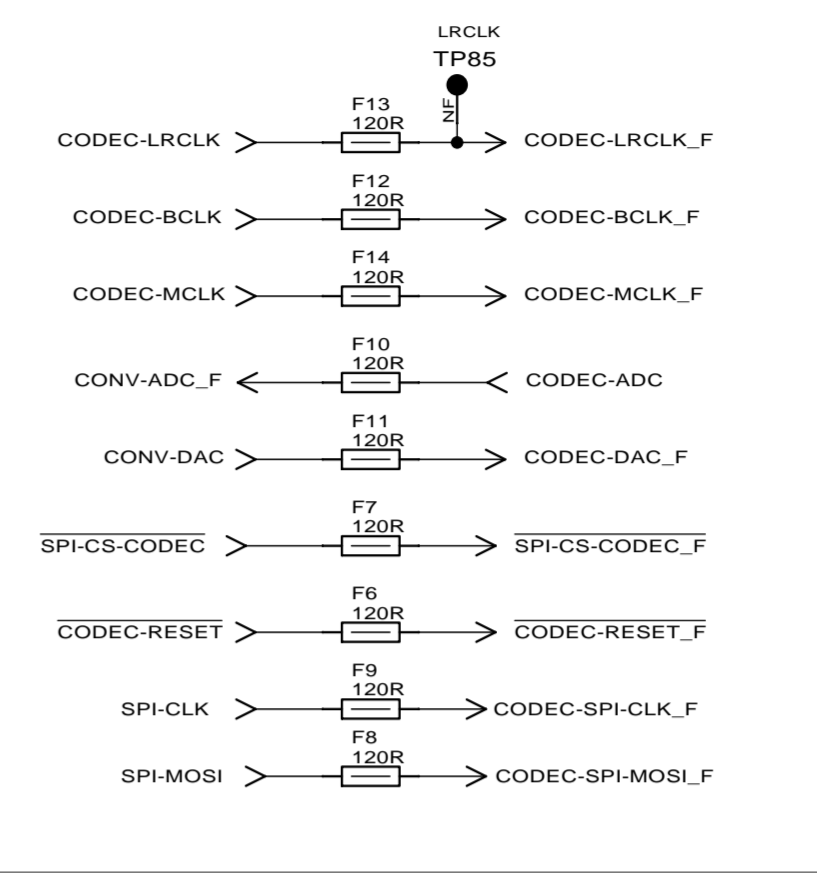
USB interface



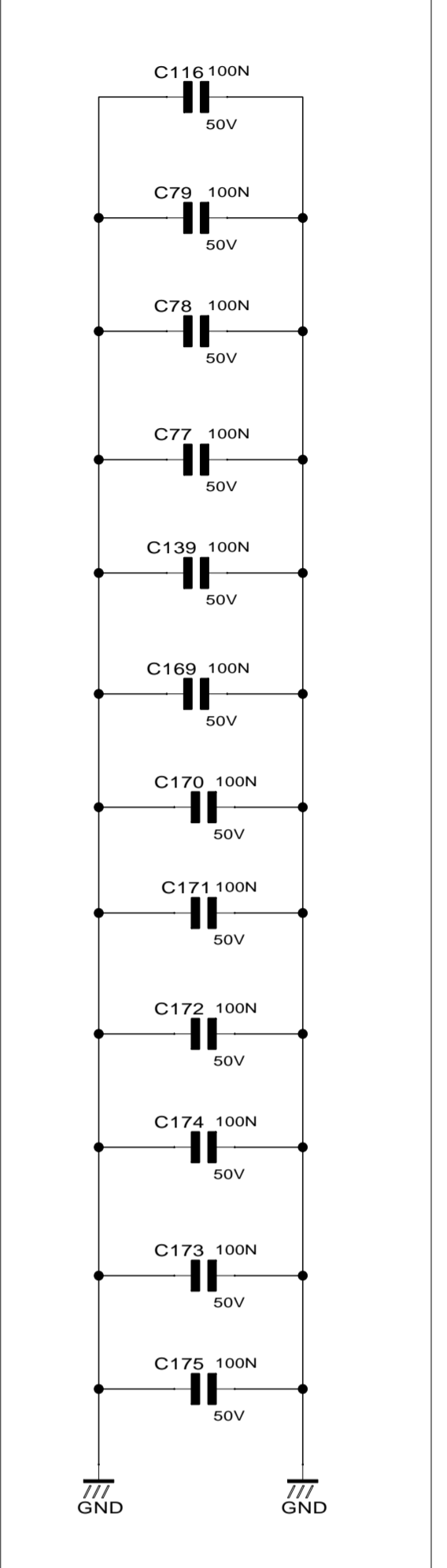
Xmos CPU



Plane split filters

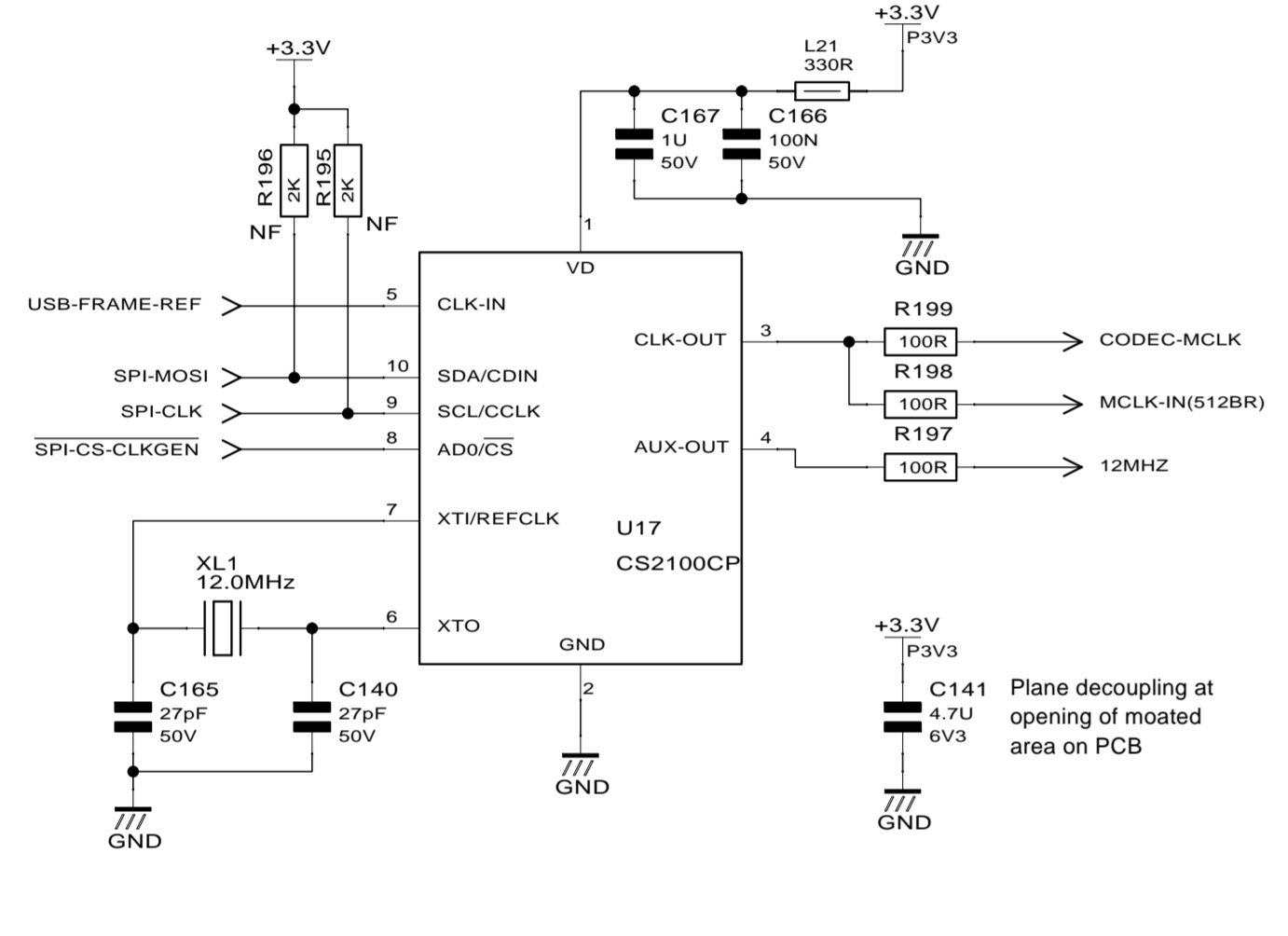


Plane split Caps

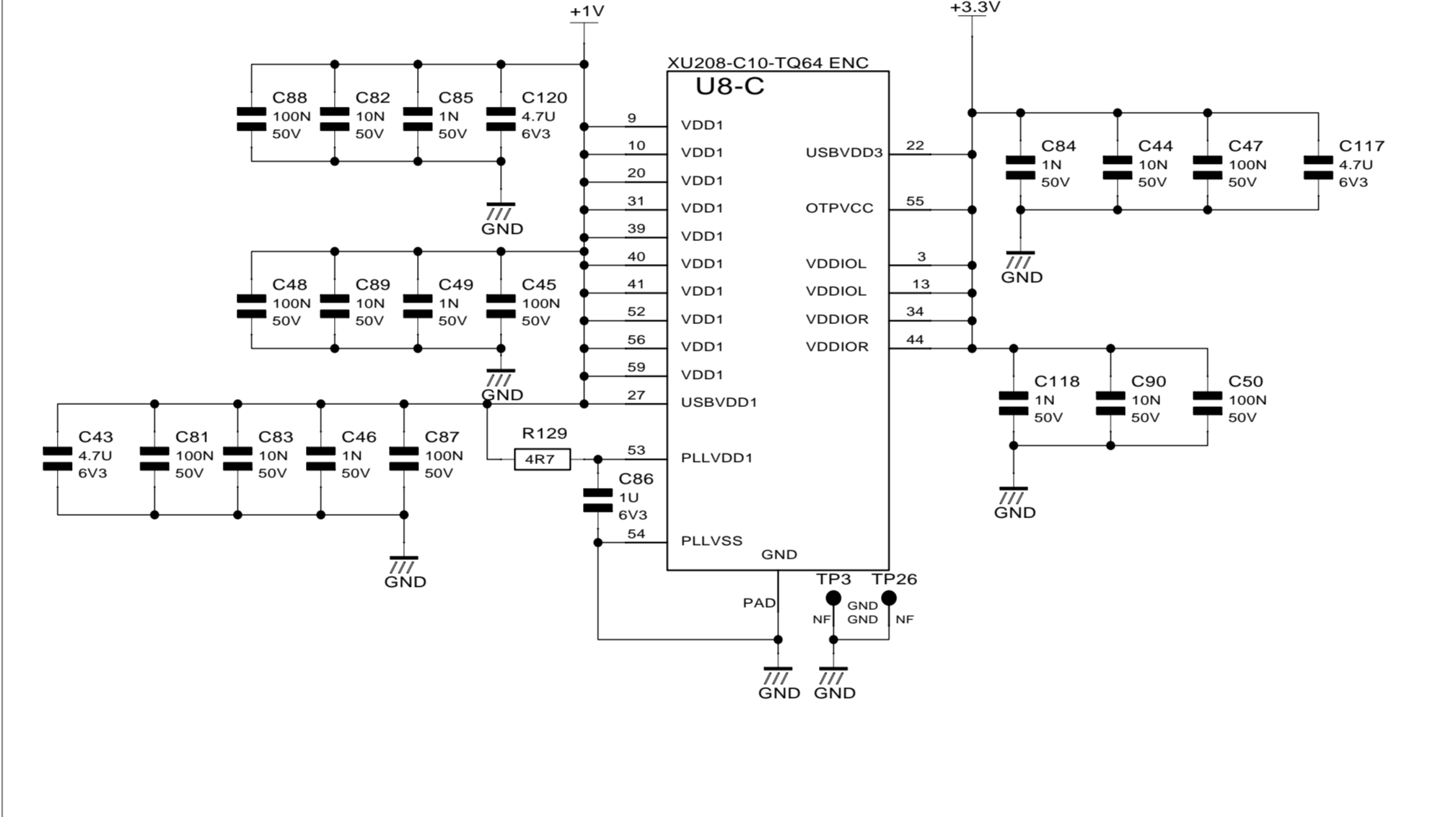


Clock

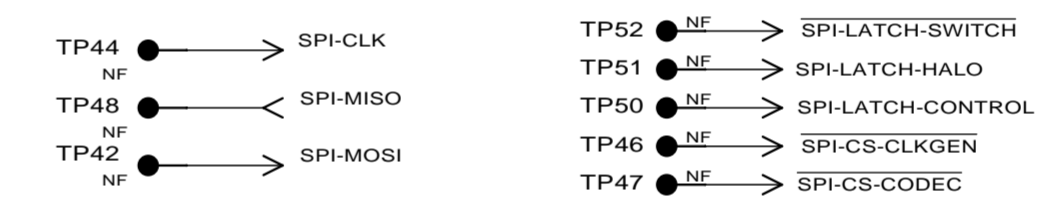
Xmos_Clock



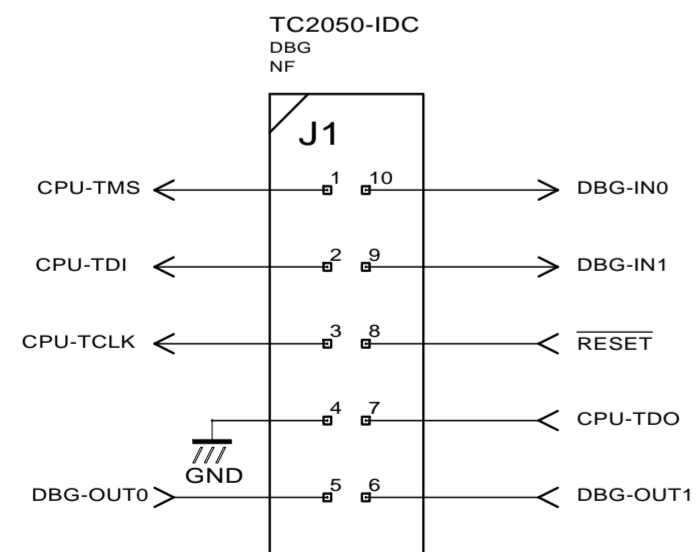
Xmos Power



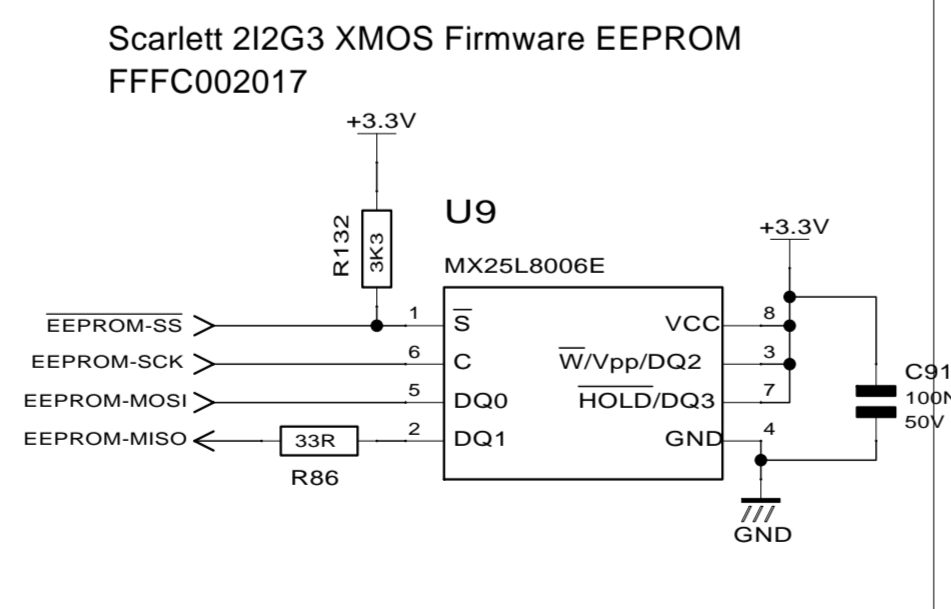
Debug Breakout



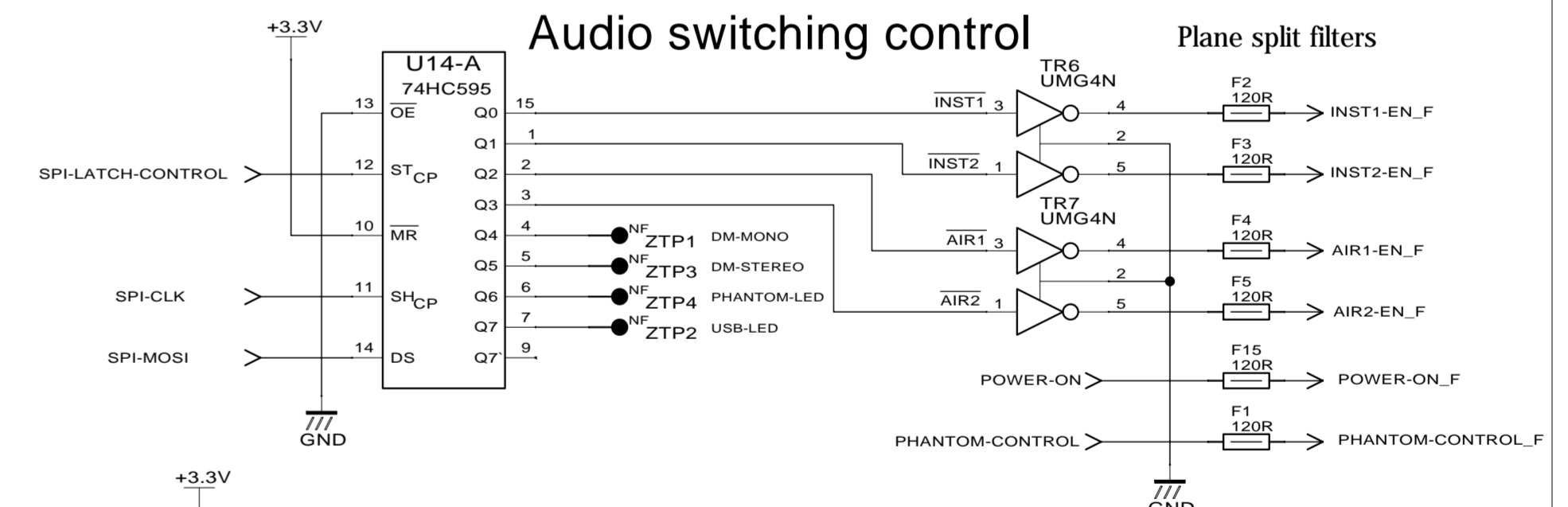
Debug connector



Flash



Audio switching control



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NOTES

DRN.

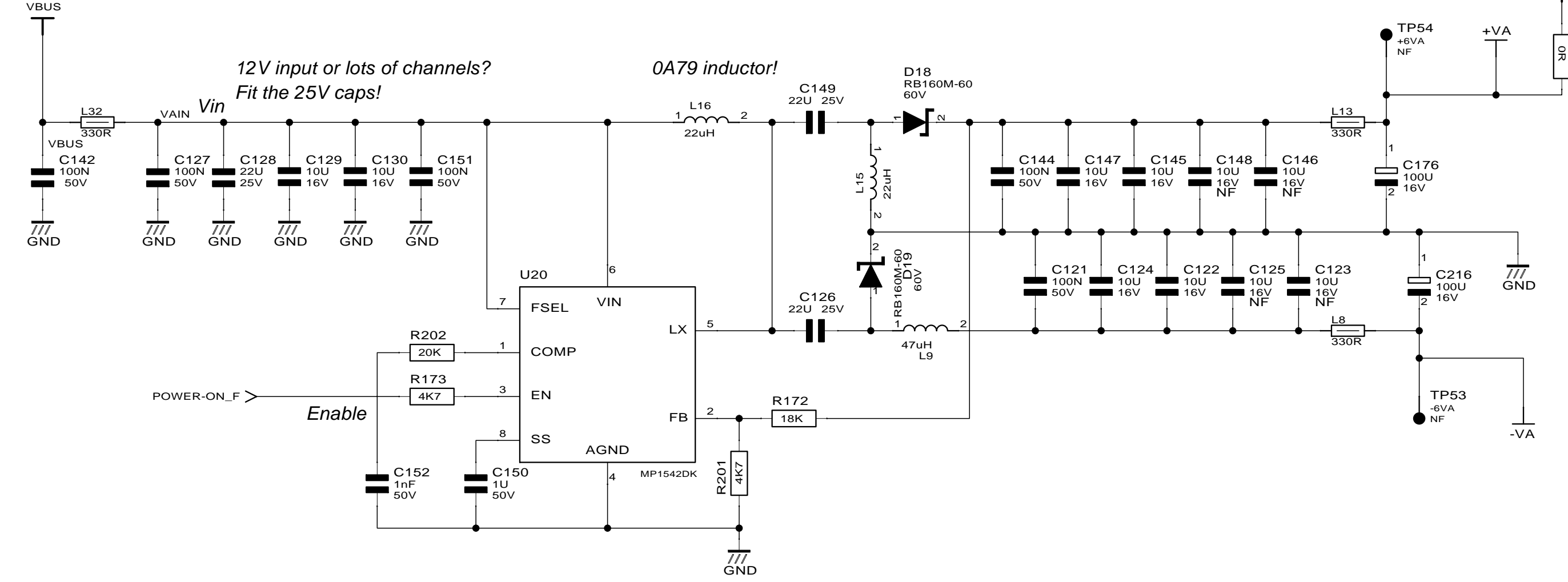
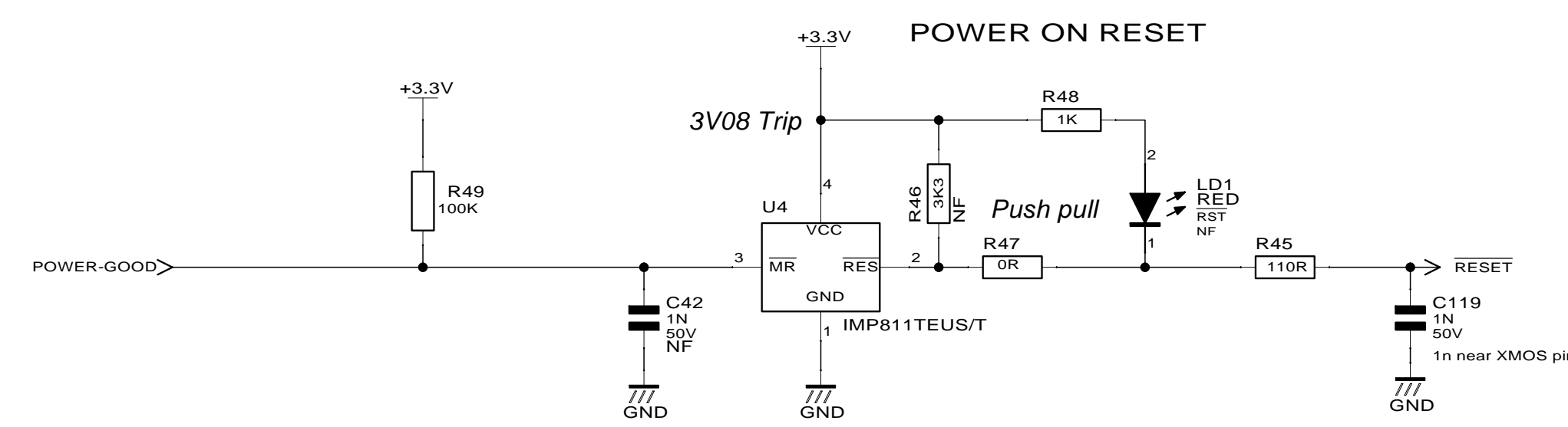
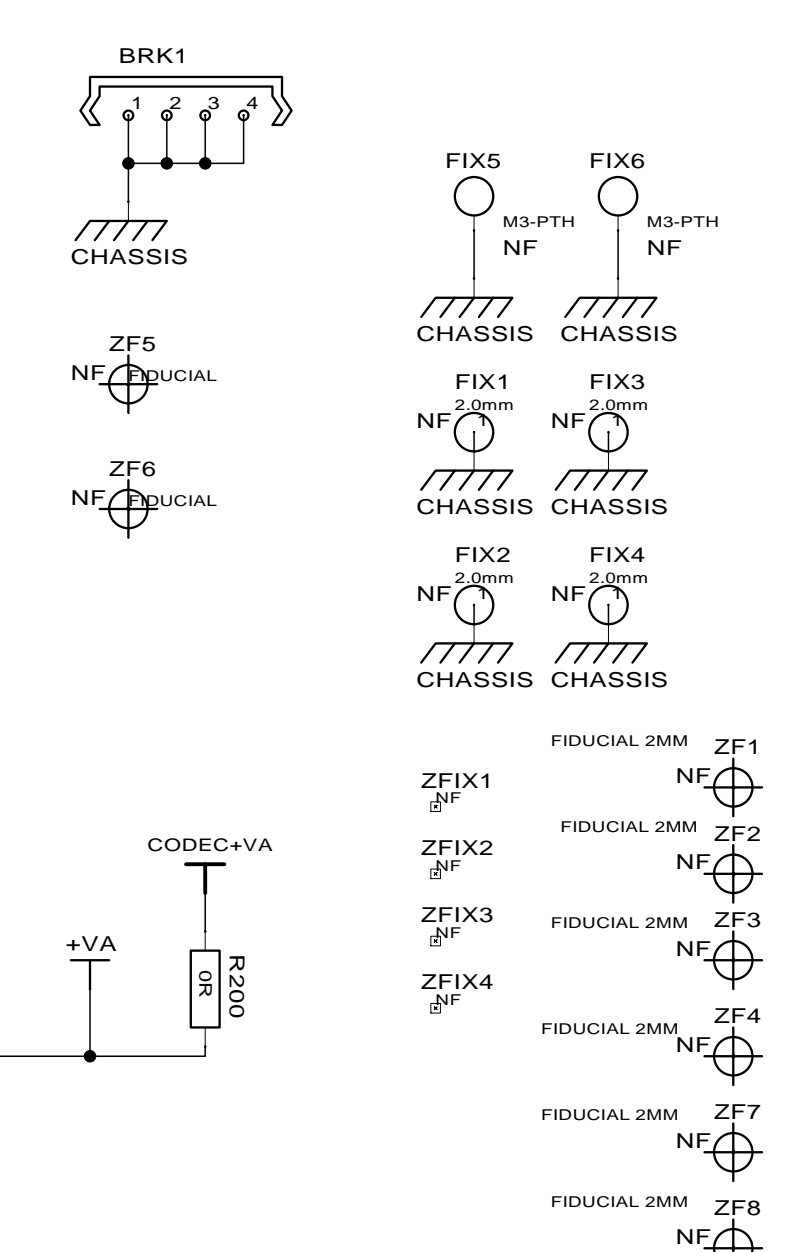
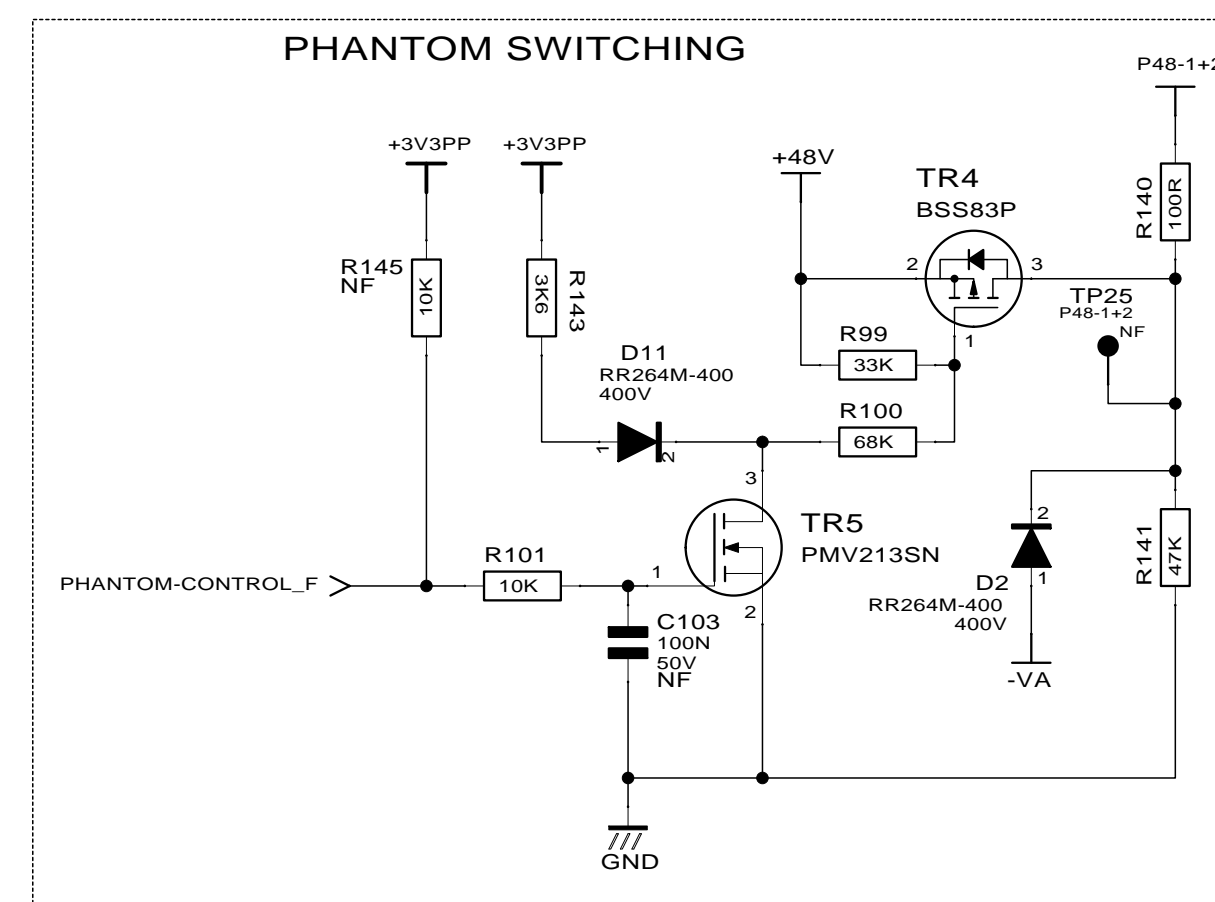
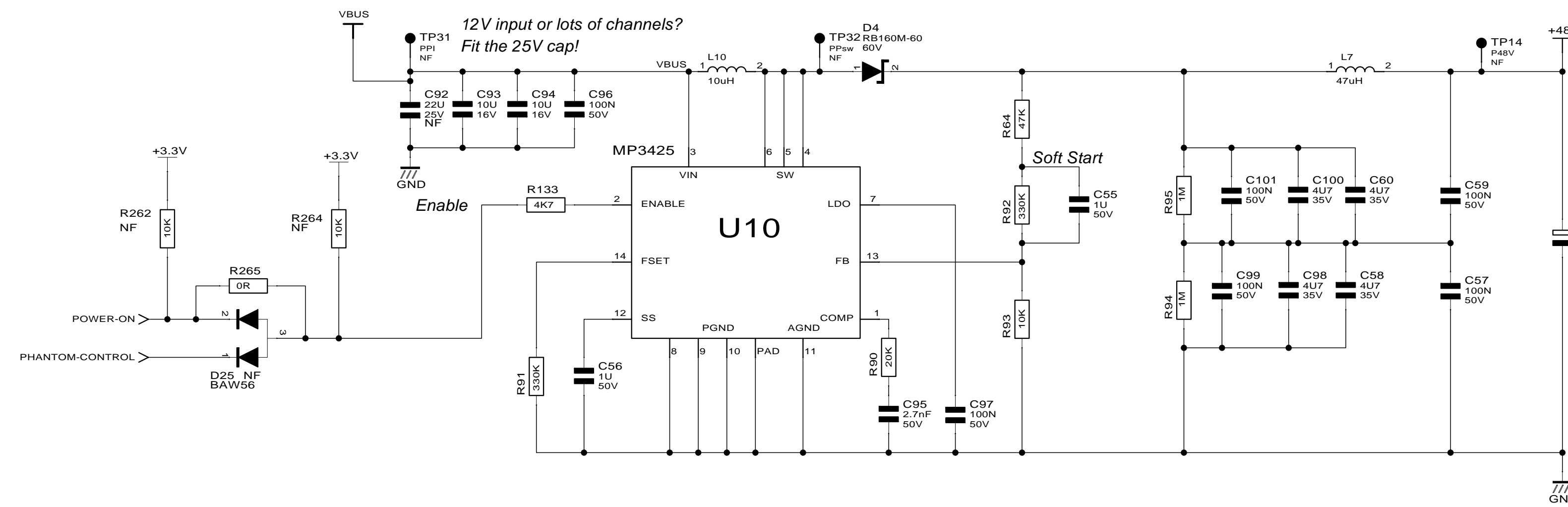
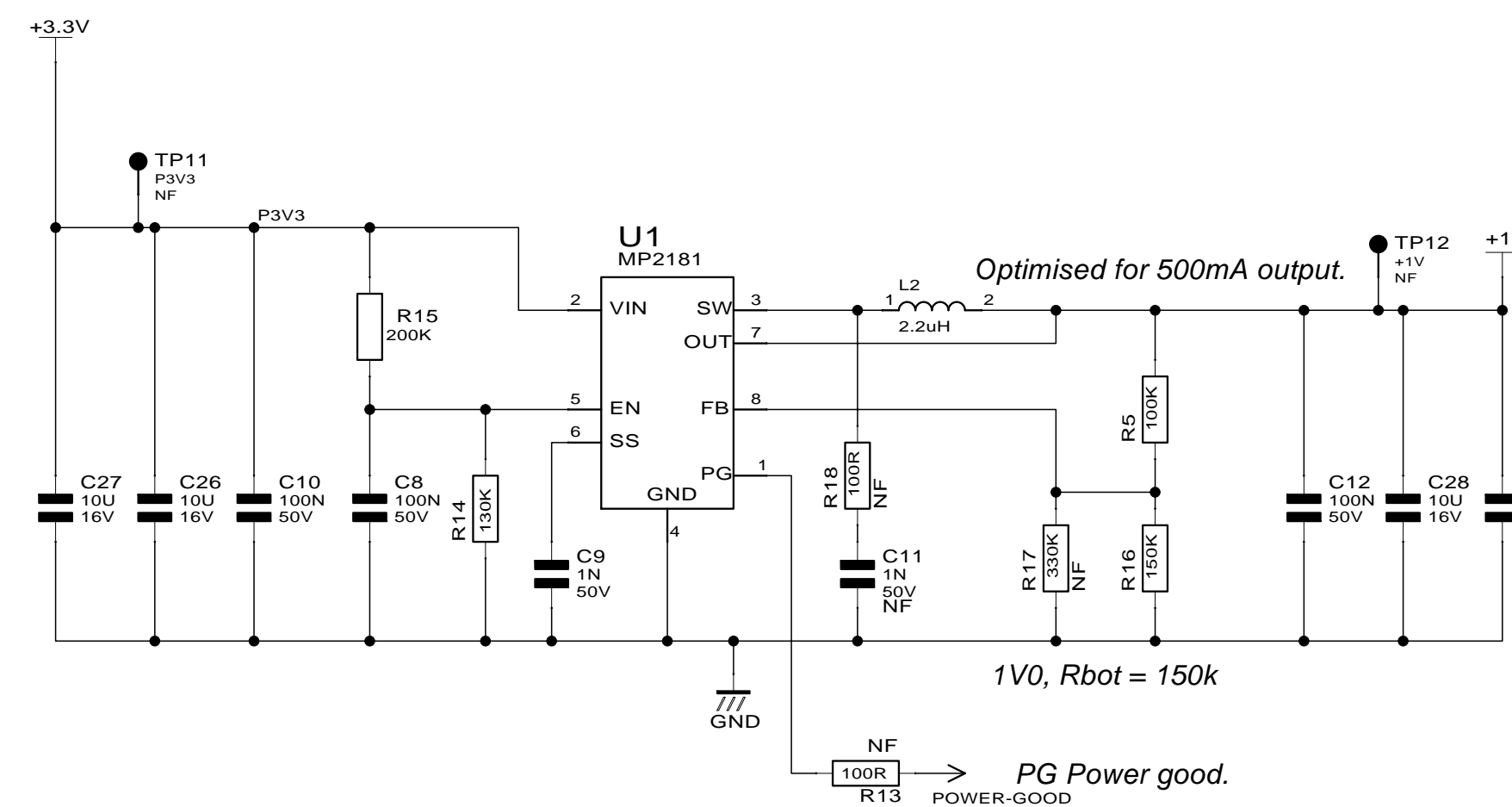
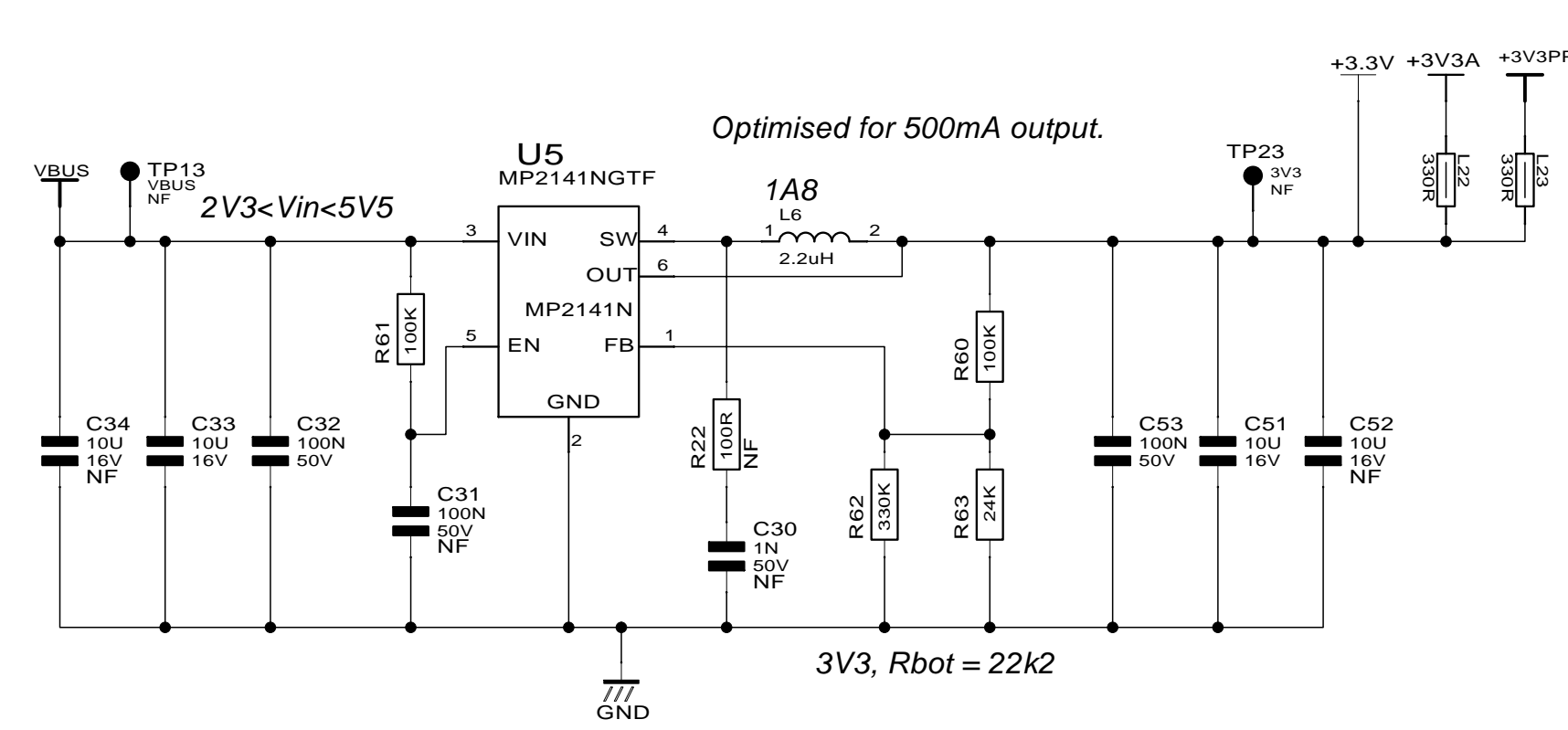
DATE SMB

16-05-18

Focusrite Audio Engineering
Windsor House, Turnpike Road
Cressex Business Park
High Wycombe
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FAX: +44(0)1494 459920

PROJECT:
Scarlett 2i2 G3
Xmos Sheet-8

DRG NO.
FD002025



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NOTES

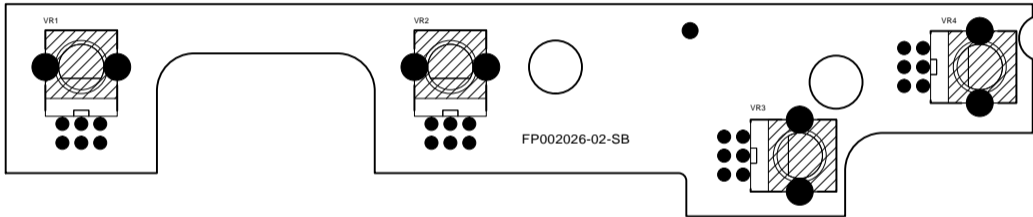
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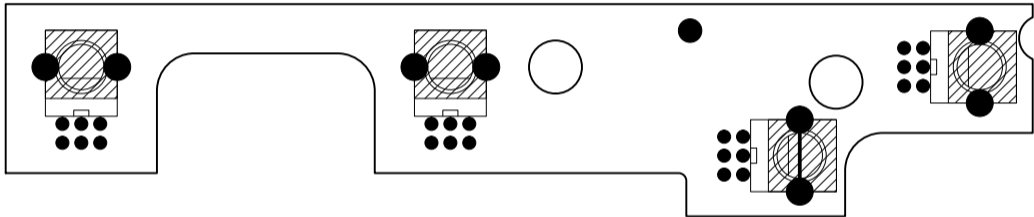
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PROJECT:
Scarlett 2i2 G3
PSU Sheet-9

DRG NO.
FD002025





Focusrite



FIX1

FP002026-02-SA

SCARLETT GEN3 2i2 POT BOARD
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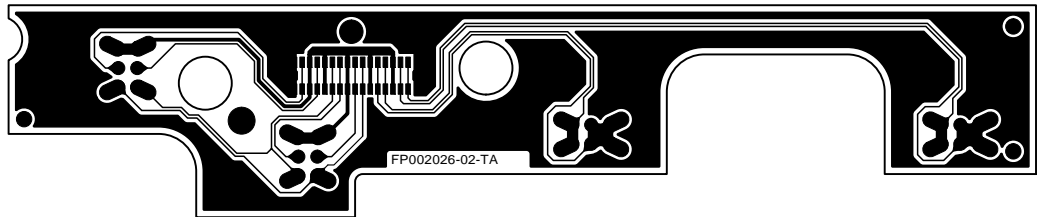


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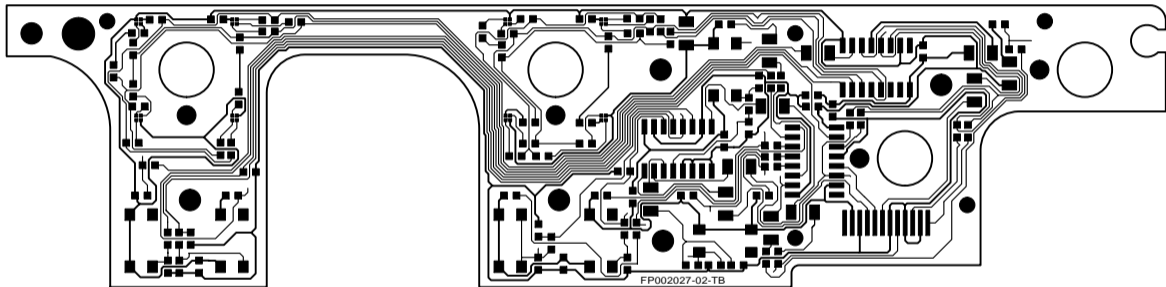


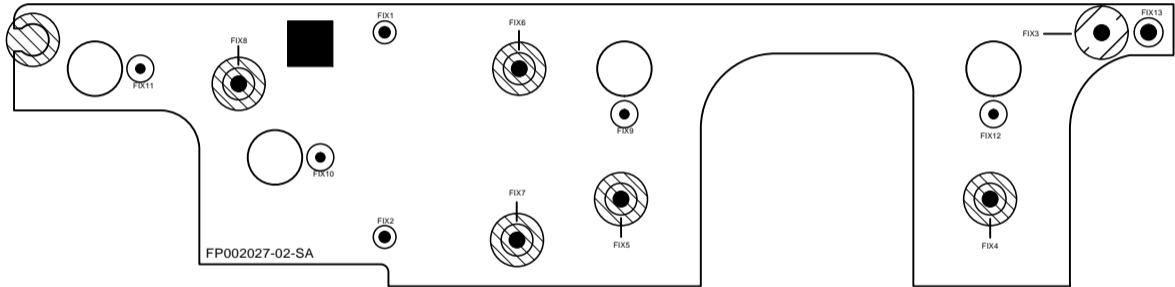
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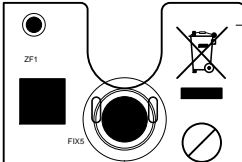




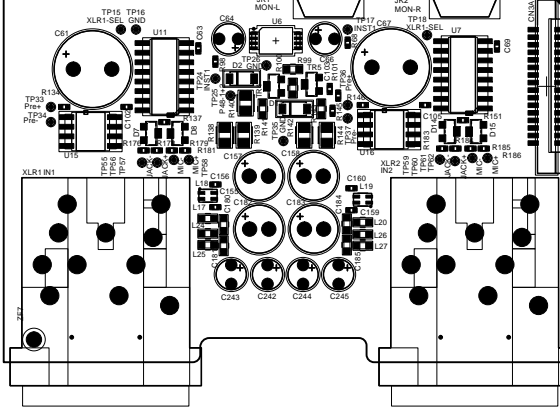
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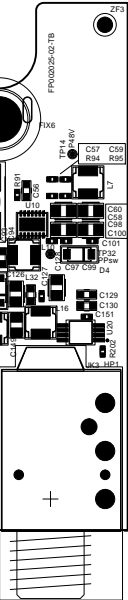
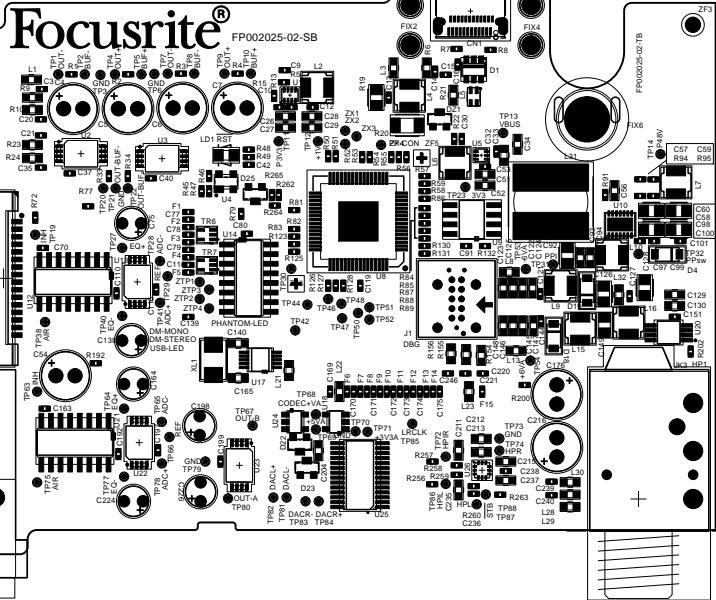


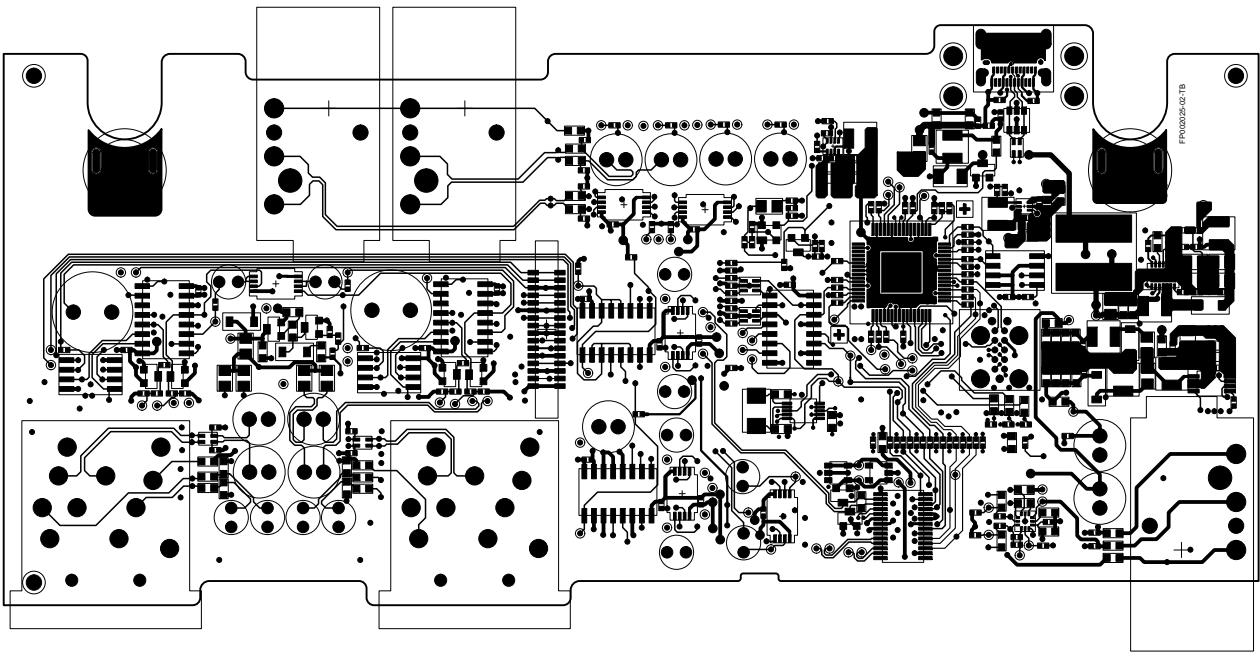
(C) FOCUSRITE AUDIO ENGINEERING 2018
Scarlett 2i2 Gen-3 Main Board



Focusrite®

FP00025-02-SB



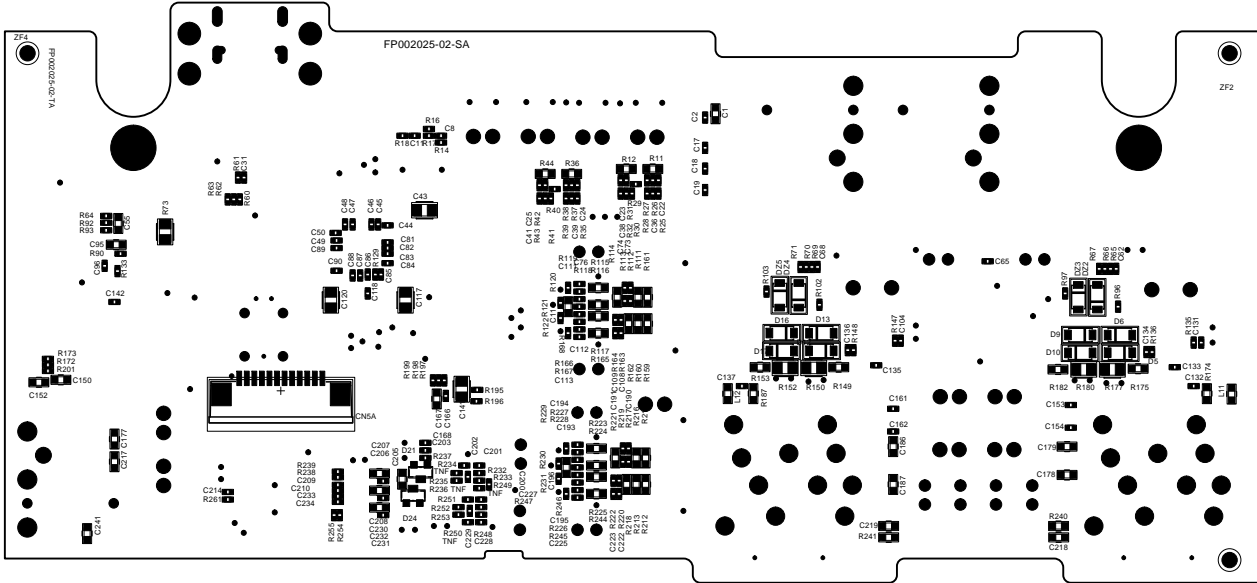


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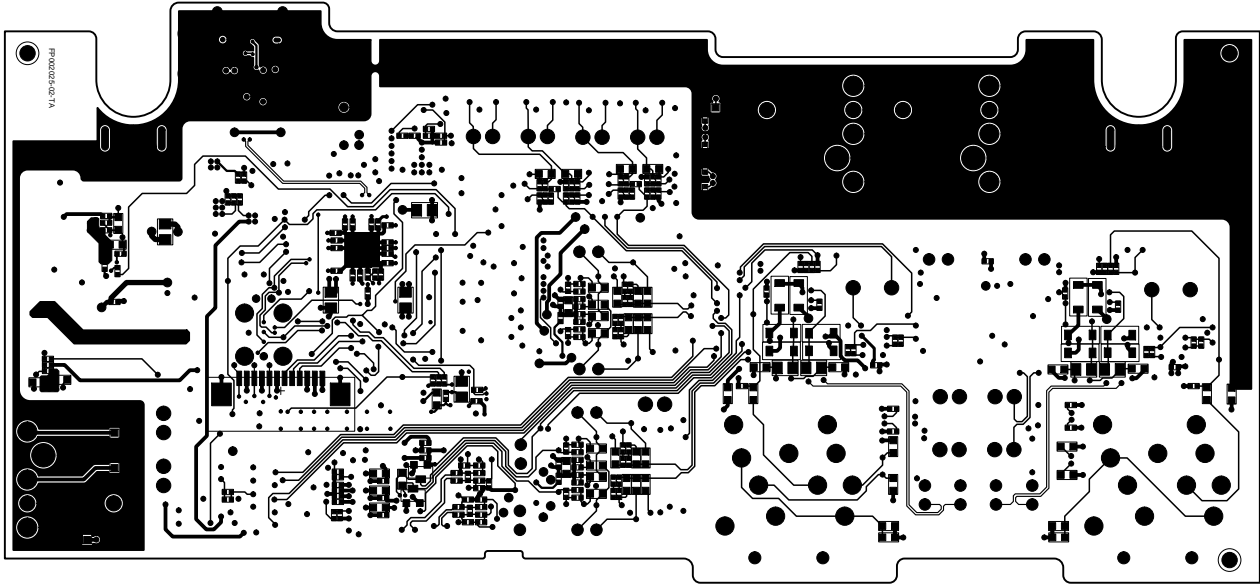
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VL 09-63000-01

FP002025-02-SA

ZF2



ZF8



6. General Test Procedure

As the Scarlett 3rd Gen Range has been unified in terms of audio performance and features, this test procedure has been written for the Scarlett 2i2 (3rd Gen) and should be scaled up or down depending on channel count. Where necessary, extra sections are added for features that are specific to a certain unit.

This test procedure also doesn't test any of the digital I/O as in our experience, getting a failure of this circuitry is rare. If a customer has raised an issue with this, then either devise a test that checks for that fault or contact Focusrite for guidance.

Required Equipment:

- Analogue Audio Test Equipment (We use a Prism DScope III for testing, other equivalent piece of equipment can also be used)
- Multimeter
- XLR male to XLR female x2
- XLR male to TRS x 2
- XLR female to TRS x 2
- Headphones

6.1 Hardware/Software Setup

The first check to do with any Scarlett 3rd Gen Unit is to give the unit a physical inspection. As a rule, if the unit is going to be resold any scratches longer than 1cm on the top or sides should result in the unit having components replaced (chassis, front/rear panels etc.).



Figure 6.1

Start by powering up the unit. This could be either by just connecting a USB cable to a host computer, or by also plugging in the power supply or IEC cable.



Figure 6.2

Not all units have a power light, but all have an illuminated USB logo. Check this turns on and the computer recognises the device.

At this point, setup all pots on the unit so all gains are turned fully counter clockwise (CCW), monitor pot is full clockwise (CW) and the headphone outputs are fully CCW. We also always test with direct monitoring off.



Figure 6.3

With software, the device needs to be setup to route all stereo pairs of analogue inputs to all stereo pairs of analogue outputs. With a 2i2 this is straight forward as inputs 1+2 are routed to output 1+2. Using a DAW like Logic Pro is an easy way to do this. Select the Scarlett USB as the device in Logic Pro.

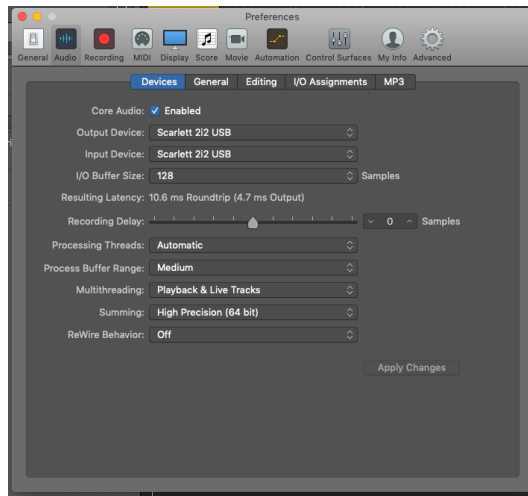


Figure 6.4

Use a single stereo track with the inputs as 1+2 and outputting to the stereo output. Input monitor this track to complete the software setup. Leave the fader at unity and panned centrally.

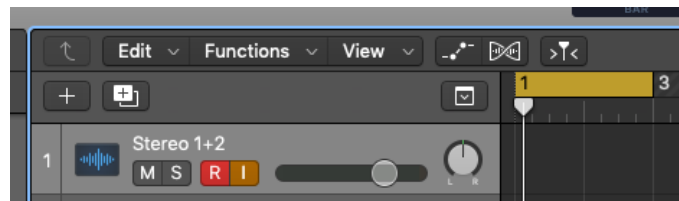


Figure 6.5

For a unit which uses Focusrite Control, a DAW isn't required. For every pair of outputs, select a custom mix and add stereo pairs for all analogue inputs. Leave all faders at unity and panned centrally.

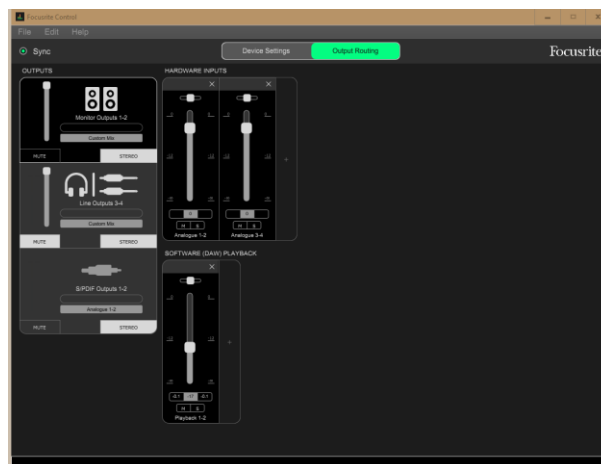


Figure 6.6

6.2 Test Procedure

6.2.1 Microphone Input and Balanced Output Test

Each mic input needs to have the following tests done:

- Low Gain Test
- Low Gain Air Test
- High Gain Test

Connect two XLRs to inputs 1+2 on the front. Connect these XLRs to the outputs from the audio analyser.



Figure 6.7

Connect two ¼ inch TRS cables to outputs 1+2 on the rear of the unit. Connect these cables to the inputs on the audio analyser.

Refer to Section 6.3 for measurements.



Figure 6.8

Press the air buttons, or enable these in Focusrite Control.

Refer to Section 6.3 for measurements.



Figure 6.9

Turn the gain controls full CW, switch Air off.

Refer to Section 6.3 for measurements.



Figure 6.10

Repeat for every pair of mic inputs and balanced outputs.

6.2.2 Line Input Test

Each Line input needs to have the following tests done:

- Low Gain Test
- High Gain Test

Connect two ¼ inch TRS cables to inputs 1+2 on the front. Connect these to the outputs from the audio analyser. As all inputs are routed to every pair of outputs, the TRS cables connected to the outputs from the mic test should be left plugged in.

Refer to Section 6.3 for measurements.



Figure 6.11

Repeat this again with the gain controls fully CW.

Refer to Section 6.3 for measurements.



Figure 6.12

Repeat for every pair of line inputs.

6.2.3 Instrument Input Test

Each Instrument input needs to have the following tests done:

- Low Gain Test
- High Gain Test

As with the Line input test, the Instrument input needs to be checked at Low and High Gain settings. Enable Instrument inputs on the front of the unit.

Refer to Section 6.3 for measurements.



Figure 6.13

6.2.4 Headphone Output Test

With audio going into the unit, plug in a pair of headphones and listen to check there is signal on both sides. Faults with headphones amplifiers are extremely rare so this basic check is adequate unless a customer has mentioned a specific fault with these outputs.



Figure 6.14

Repeat for every headphone output.

6.2.5 Phantom Power Test

The phantom power should be enabled on the front panel of the unit and using a multimeter probe between pins 1 and 2 on the XLR connectors. A figure of $48V \pm 1V$ should be measured.



Figure 6.15

6.3 Measured Test Specifications Reference

The performance of all units in the Scarlett (3rd Gen) range has been unified. These values will vary slightly between units and should be used as guides.

Specification	Mic Low Gain	Mic Low Gain Air	Mic High Gain	Line Low Gain	Line High Gain	Instrument Low Gain	Instrument High Gain
Input Level	+6dBu	+6dBu	-50dBu	+20dBu	-38dBu	+14dBu	-50dBu
Balanced Output Level	+13dBu	+15dBu	+13dB	+14dBu	+12dBu	+14dBu	+6dBu
THD+N %	0.0016%	0.016%	0.015%	0.003%	0.11%	0.014%	0.43%
Residual Noise Level	-85dBu	-83dBu	-63dBu	-84dBu	-47dBu	-76dBu	-40dBu

These were all measured with a Prism DScope III with the following base settings:

Outputs:

- Balanced
- Impedance 50R
- Grounding – Floating

Inputs

- Balanced
- Impedance 100K
- 22-22kHz bandpass filter engaged

6.4 Resetting Mass Storage Device Mode

By default, every Scarlett 3rd Gen unit ships from the factory with MSD mode enabled. This helps customers to setup faster by taking them directly to the website to download Focusrite Control, and types in the device's serial into the registration form.

All units being returned to B-Stock after being serviced should have this re-enabled.

While the unit is in MSD mode, because of limitations on the processor the sample rate is limited to 48kHz.

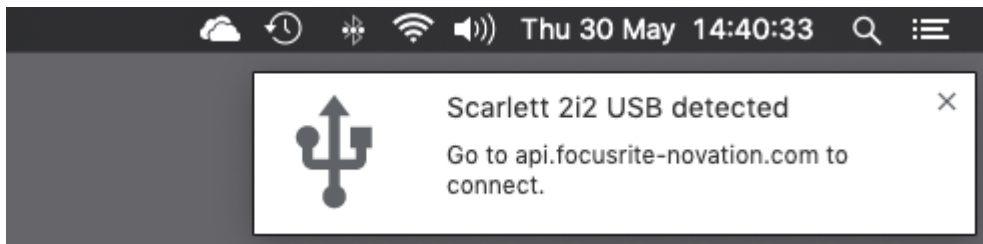


Figure 6.16 – MSD Mode prompting the unit to be registered

6.4.1 Turning Off MSD Mode with 48V Button

Other than registering the product, MSD Mode can be turned off in a few ways.

The quickest way is to just hold the 48V button when turning the unit on. Do this for about 5 seconds, then power cycle the unit. MSD Mode should be disabled.



Figure 6.17

6.4.1 Turning On/Off MSD Mode with Scripts

To save time, two scripted applications have been created for turning MSD Mode On or Off. These currently only work on Macs at the time of writing. Both methods are identical.

Start by downloading the two applications from the FTP Server. With the unit connected, run the application required.

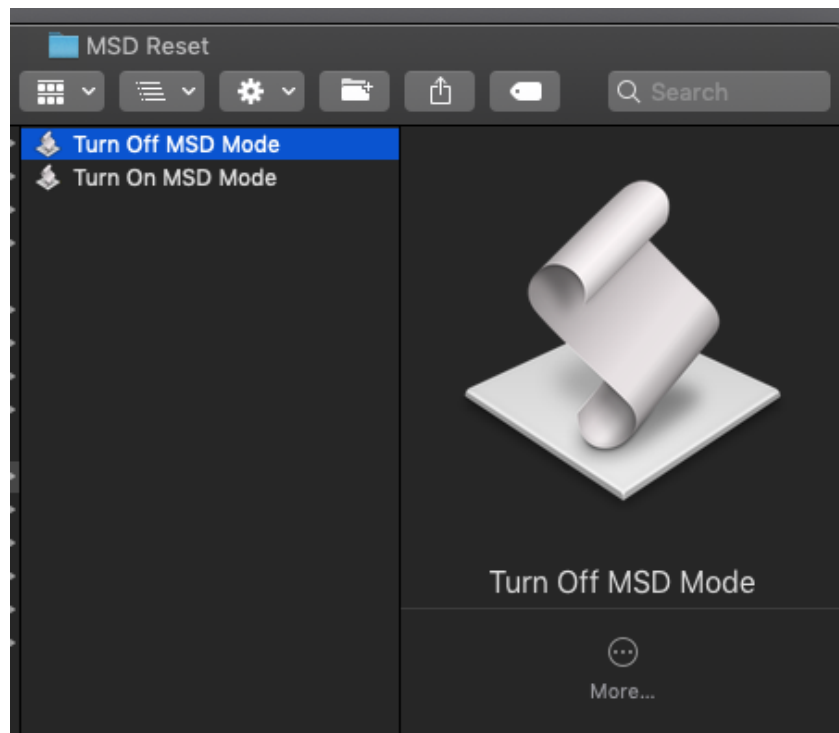


Figure 6.18

You will be prompted for your password.

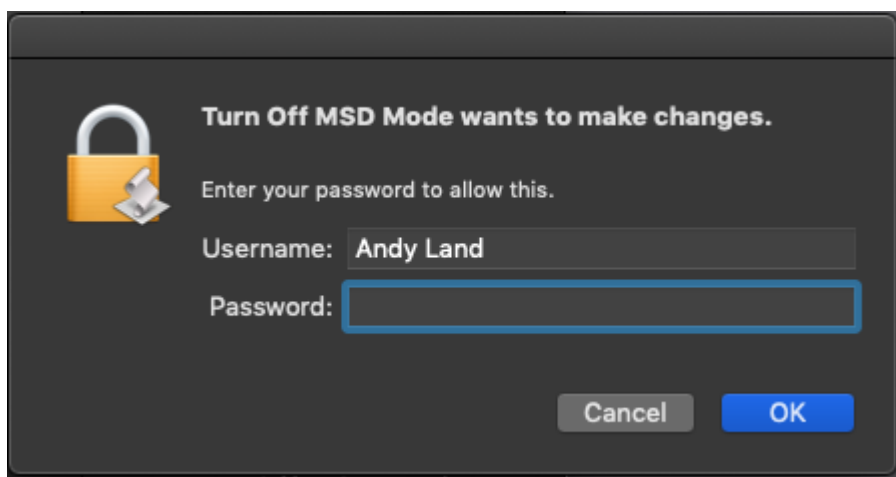


Figure 6.19

Terminal will then open, and you will be prompted to allow Terminal further controls. Press OK.

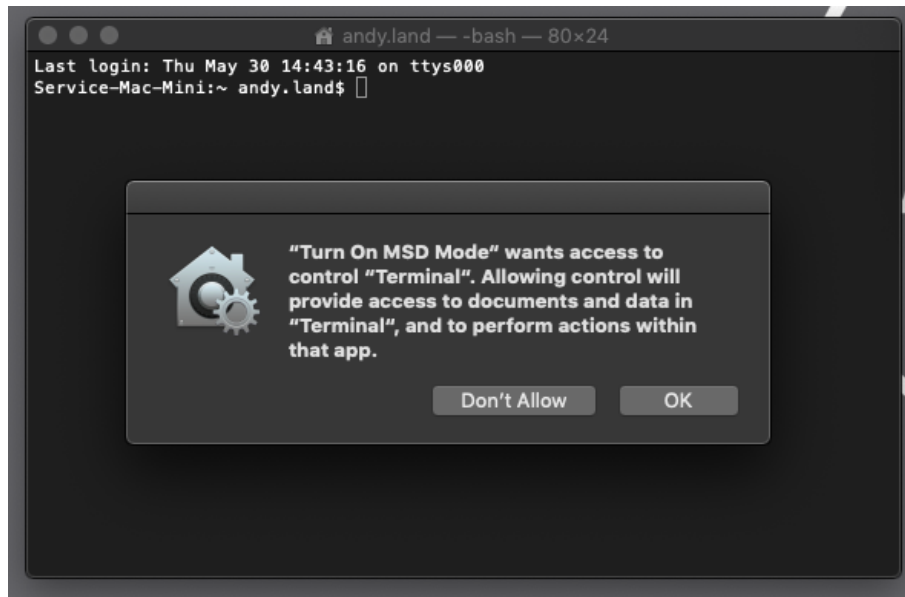


Figure 6.20

The script will then run with a message coming up at the end to confirm the process is complete.

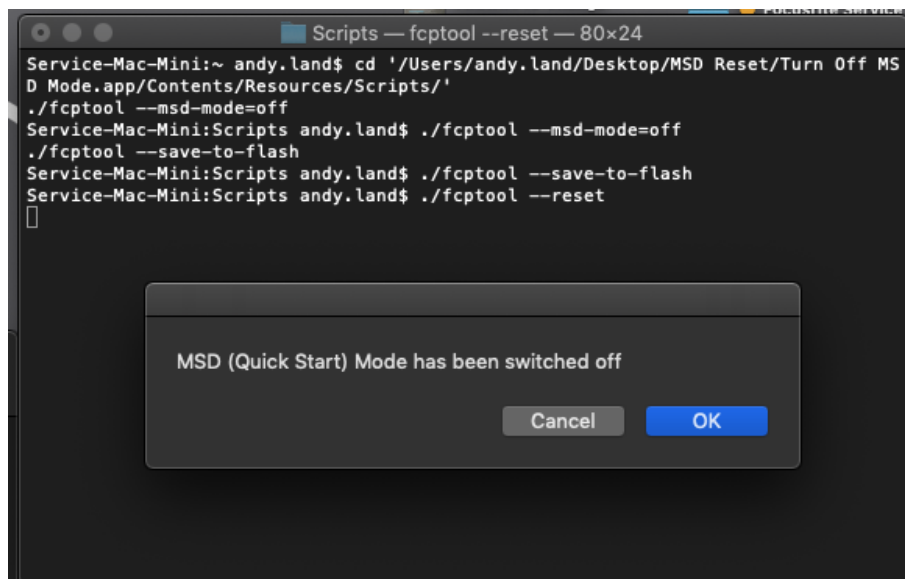


Figure 6.21

Part Number	Description	Category
CBLE001117	XLR LEAD M-F L=3M PT=032C RED FOCUSRITE OFC "DICON" DCD-8004R	Cables
CBLE002051	USB 2.0 Cable Type A to C L=1.0M BLK "World Window"	Cables
CBLE002059	USB 2.0 Cable Type C to C L=1.0M BLK "World Window"	Cables
CONS002037	USB 2.0 TYPE-C SKT R/A W/LUGS 16PIN USB-IF CERTIFIED "PALCONN UTC027"	Connectors
CONT002009	XLR JACK COMBI WITH 1 BREAK S-SN AND NO LATCH "AMPHENOL" ACJC7AHL	Connectors
CONT002010	JACK SOCKET SLIM SINGLE TRS "NEUTRIK" ST-NRJ3HH	Connectors
DDES000013	DIODE DUAL SCHOTTKY BAT54S ANODE-CAT-CAT SOT23	Electrical Components
DDES000040	DIODE SCHOTTKY RB160M-60 1A 60V SOD123 "ROHM" RB160M-60	Electrical Components
DDES001001	DIODE SOT23-6 ESD PROTECTION "SEMTECH" RCLAMP0504S.TCT	Electrical Components
DDES001006	BZT52C12 SOD123 ZENER DIODE 12V 0.4W	Electrical Components
DDES001010	DIODE RECTIFIER 400V 1A SOD123 "ROHM" RR264M-400	Electrical Components
DDES002009	DIODE DUAL ESD TVS 6.8V (5V0) PROTECTION "NXP" PESD5V0S2UAT	Electrical Components
FFFB002032	Scarlett 2i2 (3rd Gen) POT Front PCBA	PCBs
FFFB002033	Scarlett 2i2 (3rd Gen) LED Front PCBA	PCBs
FFFS002054	Large Monitor Knob Cap Assembly Scarlett 3rd Gen	Assembly Parts
FFFS002055	Headphone Knob Cap Assembly Scarlett 3rd Gen	Assembly Parts
FFFS002056	Gain Knob Cap Assembly Scarlett 3rd Gen	Assembly Parts
FFFS002059	Scarlett 2i2 (3rd Gen) - Front Window Assembly	Assembly Parts
FFFS002060	Scarlett 2i2 (3rd Gen) - Rear Window Assembly	Assembly Parts
FFMB002027	Rubber Foot Scarlett Solo 2i2 Scarlett 3rd Gen	Plastics
FFSA002006	Scarlett 2i2 3rd Gen Service Assembly	PCBs
GBOX002004	Gift Box Assembly Scarlett 2i2 Studio 3rd Gen	Packaging
INDS000011	INDUCTOR CHOKE SMD USB 280MA COMMON MODE 0805 ROHS "MURATA" DLW21HN121SQ2	Electrical Components
INDS000028	INDUCTOR 10UH 20% 4X4MM 1.17A "MURATA" LQH44PN100MP0L	Electrical Components
INDS000029	INDUCTOR 22UH 20% 4X4MM 0.79A "MURATA" LQH44PN220MP0L	Electrical Components
INDS000030	INDUCTOR 2.2UH 20% 4X4MM 1.8A "MURATA" LQH44PN2R2MP0L	Electrical Components
INDS000032	INDUCTOR 47UH 20% 4X4MM 0.30A "MURATA" LQH44PN470MJ0L	Electrical Components
INDS000033	INDUCTOR 4.7UH 20% 4X4MM 1.7A "MURATA" LQH44PN4R7MP0L	Electrical Components

INDS001001	FERRITE 0603 1A7 100MHZ 330R "MURATA" BLM18KG331SN1	Electrical Components
INDS001010	FERRITE 0402 1A5 200MHZ-2GHZ 120R "MURATA" BLM15EG121SN1	Electrical Components
LEDS002001	LED SMD RGB "CREE" UHD1110-FKA-V3c3a3pBQb1p3-0FU	Electrical Components
LEDS002002	LED SM 0603 YELLOW CLEAR ~590NM 18-45 MCD @ 5mA 85C	Electrical Components
LEDS002003	LED SM 0603 RED CLEAR ~624NM 11.25-45 MCD @ 5mA 85C	Electrical Components
LEDS002004	LED SM 0603 GREEN CLEAR ~520NM 112.5-180 MCD @ 20mA 85C	Electrical Components
MISC002043	Headphone HP60 MkIII - Scarlett Studio "Dicon" Aluminium Labels, Imitation Leather Pads	Accessories
MISC002044	Microphone CM25 MkIII - Scarlett Studio "Dicon" DCZ-16 Mount	Accessories
MISC002047	Microphone Clip "Dicon" DCZ-16	Accessories
PCKG002090	Paper Pulp Tray Scarlett 2i2 Studio 3rd Gen	Packaging
RESV002004	POT 50K LINEAR 3B DUAL GANG BL SCARLETT G3	Electric Mechanical
RESV002005	POT 50K SAFFIRE LAW DUAL GANG GN SCARLETT G3	Electric Mechanical
SEMS000005	IC 4053 SO16 TRIPLE 2 TO 1 MULTIPLEXER PHILIPS SO16	ICs
SEMS000026	IC CS4272 TSSOP28 STEREO CODEC "CIRRUS" CS4272-CZZ	ICs
SEMS000065	IC NJM2122M DMP8 LOW NOISE OP AMP "JRC" NJM2122M	ICs
SEMS000199	IC SN74HC165D SOIC16 8-BIT P/LD S/REG TAPE&REEL "ROHS" "TI" SN74HC165DR	ICs
SEMS000230	IC 74HC595D SO16 OCTAL SHIFT REG & LATCH "ROHS" "TI" SN74HC595D	ICs
SEMS000230	IC 74HC595D SO16 OCTAL SHIFT REG & LATCH "ROHS" "TI" SN74HC595D	ICs
SEMS000249	IC HEF4052BT SO16 CMOS DUAL 1:4 ANALOGUE MUX "PHILIPS" HEF4052BT	ICs
SEMS000321	IC POWER SUPERVISOR 3V08 THRESHOLD ACTIVE LOW SOT-143	ICs
SEMS001097	MP3425 QFN14 STEP-UP REGULATOR 55V 3.5A 300K-2MHZ "MPS" MP3425DL-LF	ICs
SEMS001113	MX25L8006EM1I-12G SO8 8M BIT SPI EEPROM	ICs
SEMS001117	IC MP1542 MSOP8 STEP UP SW REG 2A 25V "MPS" MP1542DK-LF-Z	ICs
SEMS001158	IC NJU7741F05 SOT-23-5 100MA 5V 0.2V-LDO ON/OFF LIN-REG "NJR"	ICs
SEMS001159	CS2100CP MSOP10 CLOCK PLL GENERATOR "CIRRUS" CS2100CP-CZZ	ICs
SEMS002021	STEREO HEADPHONE DRIVER IS31AP4912 UTQFN-12 2X2MM	ICs
SEMS002022	STEP DOWN CONVERTER SYNCHRONOUS 1A MP2141NGTF ADJUSTABLE "MPS"	ICs
SEMS002023	SYNCHRONOUS STEP DOWN CONVERTER 1A WITH SS & PG MP2181 "MPS"	ICs
SEMS002025	IC DUAL OP AMP NJM8065V SSOP8 "JRC"	ICs

SEMS002050	XU208 QFP64 CPU 256K RAM 1-TILE 8-CORE 500MIPS ENCRYPTED	ICs
SWHS002004	SWITCH TACT GREEN FORCE 160 "FORWARD ELECTRONICS" SFKHRMA2221T	Electric Mechanical
TRAS000010	TRANSISTOR UMG4N NPN 10K R1 SC70 DOUBLE DIGITAL "ROHM" UMG4N	Electrical Components
TRAS000220	PMV213SN TRANSISTOR N-MOSFET VDS=100V ID=1.9A PD=2W SOT23	Electrical Components
TRAS002000	TRANSISTOR SMD P-MOSFET BSS83P VDS=60V ID=0.3A PD=0.4W SOT23	Electrical Components
XTLS001003	Oscillator, Crystal, 12.0MHZ, 18PF,Â CRYSTAL 12.0MHz 18PFÂ F=30PPMÂ T=20PPM 5X3.2SMT	Electrical Components

Board Reference	Notes	GBP Price	USD Price	EURO Price	AUD Price
		£1,31	\$1,70	€1,52	\$3,52
		£1,82	\$2,16	€ 2,16	\$3,14
		£2,26	\$2,76	€ 2,64	\$3,68
CN1		£0,28	\$0,36	€ 0,34	\$0,50
XLR1, XLR2		£1,02	\$1,32	€ 1,18	\$1,86
JK1, JK2, JK3		£0,26	\$0,32	€ 0,32	\$0,46
D14, D15, D21, D22, D23, D24, D7, D8		£0,02	\$0,02	€ 0,02	\$0,03
D18, D19, D4		£0,08	\$0,09	€ 0,09	\$0,14
D1		£0,21	\$0,26	€ 0,25	\$0,37
DZ2, DZ3, DZ4, DZ5		£0,02	\$0,02	€ 0,02	\$0,03
D10, D11, D12, D13, D16, D17, D2, D5, D6, D9		£0,05	\$0,05	€ 0,06	\$0,09
DZ1		£0,06	\$0,09	€ 0,08	\$0,10
		£3,22	\$3,94	€ 3,54	\$5,86
		£2,66	\$3,24	€ 3,18	\$4,64
		£1,10	\$1,48	€ 1,32	\$2,07
		£0,66	\$0,87	€ 0,78	\$1,20
		£0,16	\$0,20	€ 0,20	\$0,28
		£1,17	\$1,56	€ 1,36	\$2,13
		£1,04	\$1,39	€ 1,21	\$1,89
		£0,12	\$0,18	€ 0,16	\$0,18
		£40,88	\$52,94	€ 45,44	\$74,37
		£3,20	\$3,92	€3,56	\$2,41
L18, L19, L5		£0,13	\$0,17	€ 0,15	\$0,15
L10		£0,13	\$0,17	€ 0,15	\$0,23
L15, L16		£0,14	\$0,16	€ 0,12	\$0,22
L2, L6		£0,14	\$0,17	€ 0,17	\$0,26
L7, L9		£0,10	\$0,13	€ 0,12	\$0,20
L4		£0,10	\$0,13	€ 0,12	\$0,17

L1, L11, L12, L13, L17, L20, L21, L22, L23, L24, L25, L26, L27, L28, L29, L30, L32, L8		£0,02	\$0,02	€ 0,02	\$0,03
F1, F10, F11, F12, F13, F14, F15, F2, F3, F4, F5, F6, F7, F8, F9		£0,03	\$0,03	€ 0,04	\$0,06
LD1, LD2, LD3, LD4, LD5, LD6, LD7, LD8 LD10, LD12	Air mode LEDs	£0,06	\$0,08	€ 0,08	\$0,12
LD11, LD15, LD9	48V and INST LEDs	£0,02	\$0,02	€ 0,02	\$0,03
LD13, LD14, LD16	MONITOR LEDS	£0,01	\$0,02	€ 0,01	\$0,02
		£16,14	\$22,40	€ 18,84	\$29,36
		£22,86	\$31,72	€ 26,68	\$41,58
		£1,56	\$2,16	€ 1,82	\$2,83
		£2,26	\$2,78	€ 2,66	\$3,63
VR3, VR4		£0,54	\$0,74	€ 0,66	\$0,98
VR1, VR2		£0,54	\$0,74	€ 0,64	\$0,98
U11, U7		£0,22	\$0,28	€ 0,26	\$0,38
U25		£3,10	\$3,79	€ 3,60	\$5,49
U15, U16		£0,17	\$0,25	€ 0,20	\$0,31
U3		£0,24	\$0,21	€ 0,19	\$0,29
U14		£0,26	\$0,32	€ 0,30	\$0,46
U1, U2		£0,26	\$0,32	€ 0,30	\$0,46
U12, U21		£0,13	\$0,19	€ 0,15	\$0,23
U4		£0,08	\$0,11	€ 0,10	\$0,13
U10		£0,64	\$0,80	€ 0,76	\$1,16
U9		£0,49	\$0,61	€ 0,57	\$0,87
U20		£0,57	\$0,70	€ 0,68	\$0,99
U24		£0,14	\$0,20	€ 0,17	\$0,26
U17		£1,32	\$1,79	€ 1,58	\$2,36
U26		£1,62	\$2,28	€ 1,87	\$2,94
U5		£0,20	\$0,26	€ 0,24	\$0,36
U1		£0,23	\$0,29	€ 0,27	\$0,40
U13, U2, U22, U23, U3, U6		£0,10	\$0,01	€ 0,01	\$0,13

U8	£4,02	\$5,48	€ 4,74	\$7,31
SW1, SW2, SW3, SW4, SW5, SW6	£0,06	\$0,09	€ 0,08	\$0,12
TR6, TR7	£0,04	\$0,02	€ 0,05	\$0,03
TR5	£0,13	\$0,17	€ 0,15	\$0,23
TR4	£0,11	\$0,13	€ 0,13	\$0,20
XL1	£0,54	\$0,66	€ 0,63	\$0,96

8. Previous Range Faults

For up to date information about potential fixes to issues, please use our service help centre:

<https://focusriteservice.zendesk.com/hc>

If you do not have a login, please email us on service@focusrite.com.

With the Scarlett 3rd Gen Range, effort has been made to address any issues that have caused returns in the past. As a result, the following issues have already been addressed:

Fault	Mitigation
Broken USB Ports	We have switched to a USB C type port and have a metal bracket over this to hold it in place. This port is also recessed into the unit so the cable fits flush against the rear chassis. This has proved reliable on the Clarett USB C units.
Broken Headphone Ports	All jacks on the rear and front of every Scarlett 3 rd Gen unit is either nitted or bracketed down to the PCB.
Front Panel Switches Breaking	We have moved from slide switches to momentary tactile switches. As the travel on this type of switch is less there is less risk of them breaking.
Monitor Pots Breaking	All the pots on the 3 rd Gen range are new and are all riveted in their construction which should make their breaking force significantly higher than before.
Unit not powering up	We have redesigned the power supply section to provide a more protection to the regulation ICs. This should improve their long-term reliability.
Tighter Tolerances	The aluminium chassis is already very strong but having tighter tolerances on the mechanical design means less flex of the PCBs internally, so less chance of a unit failing if it's dropped.

Some issues we are unable to fix though, and are due to equipment other than the Focusrite units:

- Broken tips of jacks in Combi XLR TRS jack. We try to provide a high retention force, but if a customer plugs a low-quality jack into the combi jack, the tip can be ripped off, and will be stuck. Replacing the combi jack is the only solution to this.
- USB Fast Chargers. USB C type chargers for phones should only sent high voltage down the cable when requested but should one of these fail there is a chance a Scarlett could be damaged in this way as a result of a faulty charger.

9. Returns/Contact Details

For spares and service enquiries email:

spares@focusrite.com

service@focusrite.com

Phone: +44 1494 462 246

Fax: +44 1494 459 920

Before returning any items, they **must** be booked in. Contact a member of the service team and return numbers will be issued where appropriate.