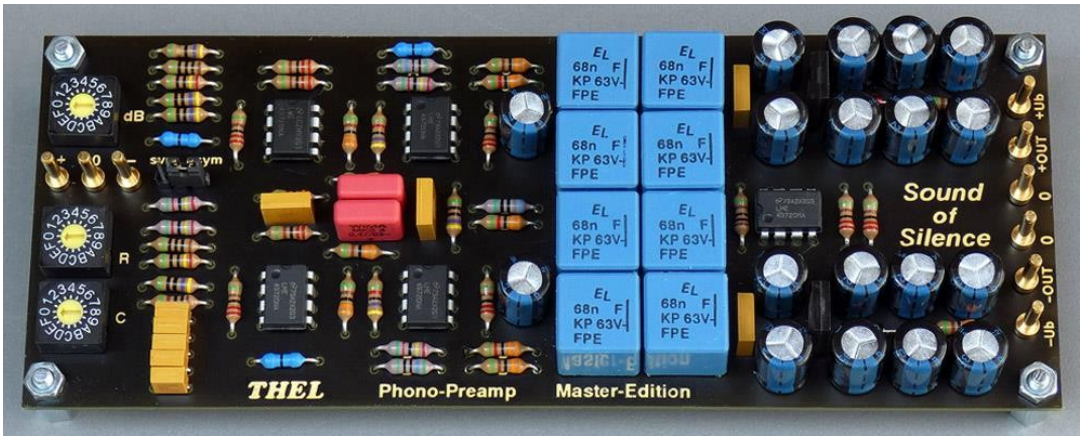

2020/05

EXPERIENCE/ LISTENING EXPERIENCE THEL AUDIO "SOUND OF SILENCE " PHONO PRE (ASYM)

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Introduction

So, why a new preamplifier, to describe it in German.

1. I was up for it
2. I currently have a PhonoPre that is a little too quiet on the TA GraceF9.
3. Long good experience with Thel modules and Mr Hartwig's promise >>

Quote: "Anyone who has heard this circuit design once will think differently about listening to music afterwards".

First of all, if you think you can **change the** built-in **op-amps,** ... hm, not without further ado, they are soldered in. In our "hi-fi pond", the exchange of op-amps is very popular, e.g. with an Australian brand.
Statement by Mr. Hartwig : "Since this OP is in a price range that is not comprehensible, it touches on not our interest."
He has a point, it would add about 375€. Is that what you want, is it worth it? Does everyone have to
A socket for the op-amps would have made the exchange easy.

Test equipment

Record player:

- Lenco L75/ MM - Grace F9, Soundsmith Replica Needle
- Elac 770H/ MM - D344, Jico HE796 needle
- Synq-1/ MM - ADC K8, K8E Needle Tonacord

Existing PhonoPre:

- Digna 1, Telefunken ECC8100
- Power Supply - Paul Hynes Design LTD, SR4S-19

Approx. prices as of 2020:

- Thel Phone Pre in case (complete) - 1000€

- Digna 1/ Telefunken - 650€
- Power supply Paul Hynes - 400€

Order

The cost of a project is always an issue. My motto is, what is important (the statement is probably relative) is bought because it is either not available or not good enough.
Housing- I still had an old sheet metal/aluminium housing (discarded as scrap) from medical production ☺.The quality is excellent and it came with, for example, the cold appliance socket with switch. The lid is made of aluminium, which will certainly be positive because of the heat development.
There are already quite a few vents underneath, so I had good hopes that I would be able to reduce the excessive heat of the
Class-A power supply units.

Cables - I still had cables for the power section. For the phono part I used the Belden 8402, which turned out to be a very good, affordable interconnect. Here I connected the shield to RCA ground.

Screws - always use stainless steel screws, which may be a tick I got from medical technology and always costs a bit more.

Connection to the phono modules Thel- 2mm pins - there I had ordered from the court supplier Ama... 2mm socket/plug combo. I wanted to avoid soldering the cables to the PCBs in order to possibly implement the Sym. version of the Thel-Pre later.
I can say that the quality of the supplier Ama... I can say that the quality of the supplier Ama... leaves a lot to be desired, so I recommend the 2mm bushings from Thel, in the hope that they are of better quality.

Consumables - yes as always, heat shrink tubing in all cable sizes, cable ties, etc.

So what have I ordered from Thel (as of 2020-04):

Type	Single. EUR	Total EUR
2 x Sound of Silence	215,00	430,00
2 x Black-Pulsar 10 power supply unit (set approx. 2x 21V)	118,00	236,00
4x CB-400G high-end cinch socket	4,90	18,60

Structure

It is always a question of which boards to place where in the enclosure, taking into account e.g.

- Heat dissipation
- Transformer to each other/ to the phono module (should have the greatest possible distance)
- Sufficient space for cable routing
- No obstruction with protruding sockets
- Tidy cable routing - short paths, no crossings
- Possibly upgrade with sym. sockets or filter module

I think experience helps, whoever has done something like this before has a better overview. It is important to take your time before drilling the holes for the stud bolts. This is usually difficult because the fingers
"and you are longing for completion. The result is - Figure 1

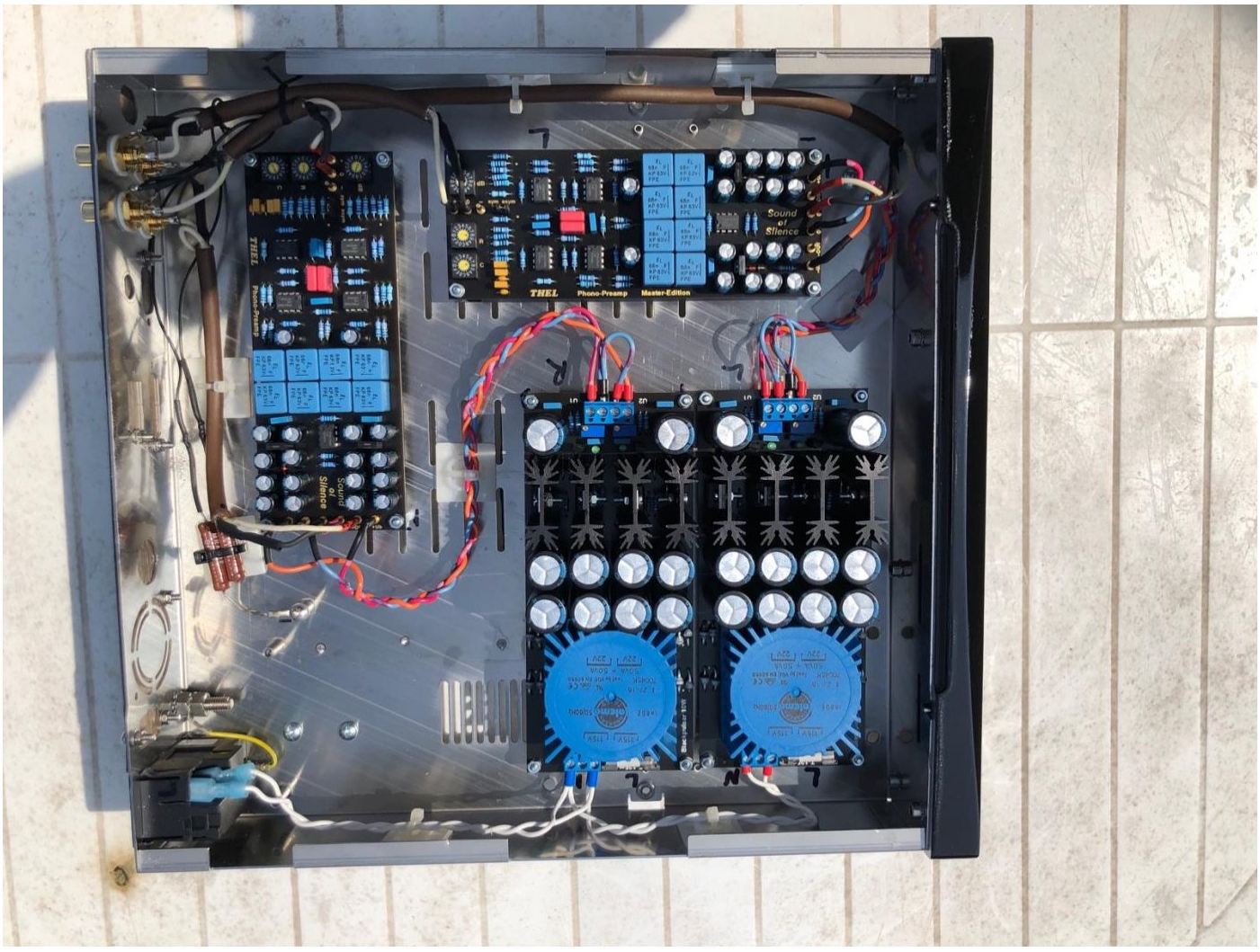

Figure 1

One more thing about the **cable connection to the power modules**. The degree of freedom of the cable thickness is limited due to the terminal size. These are of excellent quality, but at 1 square millimetre it gets tight. Why - sometimes two cables have to go under one clamp. Since I want to work cleanly and safely, I use cable end sleeves. That was a bit of fiddling, but ultimately successful.

The **connection to the 2mm pins of the phono boards** should be easy with my court supplier 2mm socket. But as always there is always something in between. Some sockets are too big (almost no resistance when plugged in) or too small (can only be plugged in a little or not at all).

Calming measures on the enclosure - here I have partially used "Alubutyl" self-adhesive insulation mat. installed below the enclosure without blocking the ventilation slots.

Cinch sockets - good quality and install effortlessly.

Rear wall of the enclosure/connector panel - I was talking about a used enclosure and so there were holes that I could use in part, but not in part. In the end, I left the existing old fan inlet open and sealed the rest with a matching vinyl tile.

Figure 2

First commissioning

At first, everything was done without a cover, as the extent of the heat development was still unclear and improvements might be necessary. Finding out the settings of the DIL switches (capacity, amplification) was also not yet 100% clear.

I was glad that nothing went wrong after the first time I switched it on.
I have checked the connections - so far so good.

I put on a well-known record at 11 p.m. and listened to the first few beats over a beer. Spontaneous thoughts arose such as - more volume, more voices, more space, quieter and one had the urge to control the turntable speed, as the impression arose that it was turning too slowly.

At this point I had not yet realised the recommended ground connection, which works with my turners.

In the next step, I wanted to measure the **temperature** with the enclosure closed. The hottest point on the heat sinks of the power supply units was 62°C. The electrolytic capacitors were extremely close to this temperature. The electrolytic capacitors installed extremely close to this
heat and, from experience, not optimal. After studying the specs, it was clear that Mr.
Hartwig had taken this into account and electrolytic capacitors with a max. temperature of 105°C were used. I quote from his brochure "Information on the electrolytic capacitor temperature: The electrolytic capacitors are selected LOW-ESR 105° types. At a cooler temperature of approx. 85°C, the electrolytic capacitor temperature settles at approx. 50°C."

Figure 3

A measurement between the electrolytic capacitors showed approx. 56 °C. I asked myself what I could possibly do to improve this. I definitely wanted to uncover the fan slots on the rear wall.
After that, the question was whether two measures could possibly improve the temperature conditions.

1. **6cm, 24VDC Install fan**
2. **Increase the distance between the power modules.**

I realised **point 1**, but it became clear that at 24VDC the ventilation performance is good, but I can hear a turbine when listening to a disk. 9VDC fan operating voltage is too weak and 12VDC seemed a good compromise. The temp. adjusted lower, but still too loud over all - so I discarded the idea.

I haven't implemented **point 2** yet and it will certainly help, but it doesn't change the temperature between the electrolytic capacitors. This measure would also reduce the distance to the phono boards, which is not what I had in mind.

Now some people will surely sit up and say that this is all rubbish.
I can say that, in my personal experience, this does have an effect. However, I can report that after 3 nights, fed with a mobile player at the lowest volume level, the sound has become considerably more "adult".

Listening - Sessions

So now comes the hardest part and it's all subjective. Oh, before I forget, listening sessions were only with MM systems. Both phono pre can do MM and MC with great flexible, practical adjustment possibilities.

In my mind, the question is where the Sound of Silence lies compared to the Digna Phono Pre, which is definitely a wonderful pre-amp. By the way, Made in Germany great support from Jürgen Grau.

Listening session 1: This does not mean the first listening session, but the first stage.
I listen to everything first and only use the Thel-Pre and describe my impressions.

Listening session 2: Now I know how the Thel-Pre sounds (has more operating hours on it now) and start to compare A - B.

Listening session 1:
As I said, the Thel-Pre has now had a few hours on it. I have noticed that the otherwise slight phono pre hum (which never bothered me) is not present at all or is reduced. Gain is 44.2dB, C=367µF and 47K for MM systems.
Voices "spit" at me, the stage is bigger. Details are audible throughout, especially the small ones that run in the background at a reduced level in many pieces. And the sound image is calm. Sometimes the question seems to come up, is this less attack, more boring or just more right. My music buddy (a tube fan) said it sounds more technical, less analogue.
Hello.....this is an analogue chain my friend. I know what he meant and in the A-B comparison later on we'll check it again and then the Thel-Pre will have a few more hours on it.

Listening session 2:

So, on to the duel with the Digna. What can I say, the Digna is not bad, but the Thel stands out positively(er). For example, with Georg Michael, album Faith, song "Hand to Mouth", the stage is bigger, the punch and this record has a lot of it, goes even more into the pit of the stomach. Musically there's just more happening, there's more going on on stage. I like the voices more melting, more intense.
Over all, the Digna seems to be the smaller brother in this configuration. The listening session 1 statement, less attack can be safely shelved, a certain break-in time is confirmed again and again, like here.

Summary

We all agree that my comparison is a subjective "recording". I was satisfied with the Digna, but it could be even better. It should be mentioned here that the Digna was driven by a very good DC power supply. The Thel will probably also be at the same sound level as it is because of its good power supply units, because as we know, what is not done right at the front cannot be done better at the back.
It was important to me to create a report that would motivate people to do it themselves and give them a certainty about where they stand with the Thel device. Unfortunately, for the purpose of making a rough purchase decision, do-it-yourself construction has little lobby or guide speakers a la magazines. I hope I could help out here.

Have fun listening to the music.

With best regards
Abi

Tips:

- **Always keep contacts free of grease, isopropyl alcohol should always be at hand with clean cotton cloths. Long live the old pants .**

- **Drill holes for PCBs very precisely, i.e. M3 fastening screws must "align" absolutely exactly, otherwise you risk "distorting" the PCBs. Remember, it is warm in the enclosure and material is always "working".**

- **Always twist the internal power cable/strands. Ensures clean cable routing and electrotechnical safety.**
  Betterment.

- **Do not choose an enclosure that is too small, find a good compromise between heat dissipation, distance and clean cable routing.**

- **Ensure good heat dissipation. The less stress on the materials the better.**

Left:

Thel Homepage: http://www.thel-audioworld.de/
Digna Homepage: http://www.nixiekits.eu/index.php
Paul Hynes Design: https://www.paulhynesdesign.com/