



My audio system was reborn!

Introducing Stirling Trayle, the audio systems optimization expert

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Unless you are new to Hi-Fi, you would know what makes up a good audio system is more than just equipment or cables. Setup and optimization are equally important. Many audiophiles understand the importance of optimization, but how many would put it on very high priority, even higher than equipment, in their checklist? Moreover, even if one knows that optimization is important, the know-how is often a big question mark.

What if audio system optimization is a paid service? Are you willing to spend money on service as much as you would spend on a piece of audio accessories or cables?

In the last Munich High End show in May 2019, I bumped into Roy Gregory, Editor of Audio Beat, Europe. He mentioned that he has a friend who is an expert in optimizing audio systems for his clients. His name is Stirling Trayle. What he does is optimizing system by means of servicing, calibration and positioning of audio components so that it performs as best as it could. In the process, Trayle will disassemble every single component from the system. He

will clean each of them in and out. Unless the chassis is too complicated to open, he will open it and remove dust inside too. He will deoxidize all the contact points carefully. Every Hi Fi rack will also be recalibrated and balanced. At the end, he will make sure all the components are placed on the rack absolutely levelled. After all, the distribution of components on the rack and the positions of loudspeakers are the key focuses.

Roy Gregory told me that Trayle has earned very good reputation in many countries. His clients include clients of Wilson Audio, Rockport, VTL, Sonus Faber etc. Wilson Audio is a special case here. They never let outsiders set up or calibrate their speakers for their clients because they don't want any unqualified personnel representing the company to ruin their reputation by providing setup/calibration service that does not meet the company's stringent standard. Trayle is the only exception. He is not an employee of Wilson Audio but he is recognized by Wilson Audio as an authorized professional to place speakers for Wilson Audio's clients.

Gregory asked me if I'm interested in trying out Stirling's service, free of charge. He has got sponsorship from Chris Leung of Audio Exotics to come to HK to provide a demonstration. The only "condition" for this service is to write a report describing my experience, whether good or bad, about the process. To be honest, I was very doubtful at first. I didn't know Trayle in person and how good he was. What if he spent two days at my home and ended with no positive result at all? This was certainly some risk I had to take. However, my second thought was that there have been a number of performance issues pending resolution in my system for a while. Before I come up with a solution, isn't it a good idea to have an expert to take a look for me and make some recommendations? Hence, I agreed to have Trayle to give me a demonstration.

It took various parties to spend quite an effort to arrange but eventually Trayle and I had the first phone conversation. Since he was in the United States, we discussed about my expectation of this "exercise" over a couple of long-distance calls. My position was very clear. I want to listen to music as if I were sitting at a concert hall. My sitting position should be about 6 rows from the stage.

"So, what you are telling me is that you want to have a relatively intimate distance from the orchestra. At the 6th row, you should have a strong sense of surrounding sound and the depth of the sound stage will not be as obvious as a seat far back in the concert hall." Trayle asked.

"Yes, that's correct. I hope to hear clearly how each of the instrument groups are distributed on the stage", I replied.

"No problem. Let's take this as our target then!" Trayle responded very confidently.

I was surprised by his response. How could one be so confident given that he did not know what my listening environment looks like or sounds like? As a matter of fact, my listening environment is very unconventional. It is a triangular sitting room. On the left-hand side of the listening

position, there is a big glass door to the balcony. The sitting room and dining room are connected through the right-hand side and there is no wall in between. In other words, the listening environment is asymmetric, which makes it challenging to place speakers.

Prelude

One month before the exercise, Trayle told me that he always asked his clients to fill in a questionnaire so that he can gain a comprehensive understanding on every detail of the system. He asked me for the same. When I looked at the questionnaire, I almost fainted because I literally had to fill in everything about my system. This includes the brand and model of the equipment, cables, racks, platforms, and how the components are connected together. Even though I'm very familiar with my own system, I spent almost an hour to complete the questionnaire!

On 27 July 2019, Trayle brought several bags of tools with total weight of 65 lbs. to my apartment at 8:00am. That was the start time we agreed, and he arrived punctually. The first thing he did after coming in was to sit down and listen to my system. He tried to remember how it sounded because it would be the state of the system before optimization.

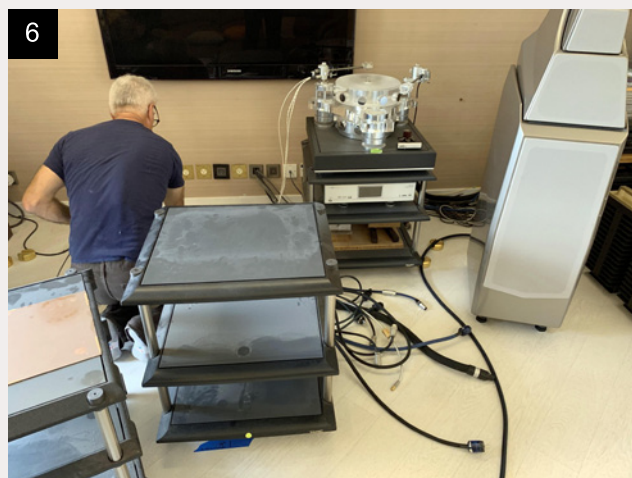
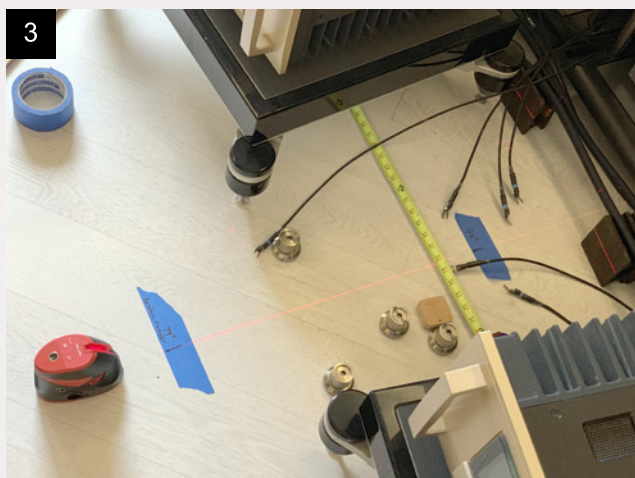
He picked some reference tracks from the CDs he brought with him. I also picked a few myself too. Here are my selected tracks: Carol Kidd's "All My Tomorrow"(AKCD005), Schubert Piano Trios played by Beaux Arts Trio (Philips 475-7571), "Gateways" conducted by Yu Long (DG483-6606) and an infamous percussion album from Hok-man Yim (Master of Chinese Percussion II).

We spent almost two hours listening to music together. We also changed the phase setting in each track and identified the differences. At last, we discovered that two pieces of ASI resonators actually fell off without being noticed. We fixed them immediately, of course. (Pic.1)



Comprehensive Clean Up

After established the reference, Trayle kicked off the optimization process. First, he used a laser line level to locate the center line of the system(Pic.2). He used plastic tape to record its location(Pic.3). He also recorded the precise location and the toe in angles of the speakers. After then, Trayle started unplugging all the cables and removing all the components from the racks one by one(Pic.4). Those racks are no exception. Some of them got dissembled completely and some were partially dissembled(Pic.5,6). Immediately after that, Trayle straightened every power cable and interconnect very carefully(Pic.7). He also spent considerable efforts in removing dust and spaying anti-static cleansing fluid (Nordost ECO 3X) onto the chassis of each component. In fact, he did not only clean components and cables but also racks and even the floor(Pic.8). He emphasized that, dust attracts static electricity. Static





electricity has a lot of interference to the system. Therefore, he recommends audiophiles perform cleaning from time to time and keep dust away from the system.

The wall outlets

As soon as the cleaning exercise was finished, Trayle proceeded to overhauling the power supply. For each of the power outlet for the Hi Fi system, he measured voltage and checked if the AC from all the outlets are in phase. One interesting thing Trayle did was that he measured the stray voltage of the ground. He got a reading of 0.3V. Ideally, the voltage should be less than 0.1V. "So there is stray voltage higher than your recommended threshold in the ground apparently. What can I do about it?" I asked. "Although ground potential below 0.1V would be ideal, 0.3V is not too bad. Unfortunately, there is no way you could reduce it as ground potential is not something you can control." Trayle replied.(Pic.9)

Before noon on the first day, Trayle managed to tighten every screw in all the Hi Fi racks and make sure every shelf be completely levelled.(Pic.10) Each contact point of the audio cables has been cleaned using special cleansing fluid.(Pic.11,12)



In the next 4 hours, Trayle focused on deep cleaning every component. He started with the turntable and the MC transformer. (Pic.13) He opened the chassis of the MC transformer and performed deep cleaning. (Pic.14) Then he used a torque driver to tighten the screws to make sure the

tightness of all the screws is equal. When he was about to put the MC transformer back to the rack, he raised a question that worth a thought: "Should we re-think about the distribution of the components in the rack?"

We did spend some time discussing about this topic. The final agreement is that the power distributor (Shunyata Hydra Vray II) will be put back to the rack. Previously, it was placed behind the left speaker and the supporting platform was not very solid and certainly not vibration-damping. Another change is that the clock will be placed on the shelf underneath the CD player. This position will be more convenient for periodic dust removing exercise, which is essential for the clock as it is more vulnerable to static electricity attracted by dust than most of the other components.

After decided how the components are distributed in the Hi Fi racks, Trayle continued with his clean up exercise. He cleaned the phono stage, the preamp, the power supply and the clock inside out one by one. Every time he closed the chassis after cleaning, he tapped the chassis and sensed the vibration. When he found there is a gap between the chassis and the body, he used a small plastic tape to fill it up to eliminate any unnecessary vibration. (Pic.15) Every component was treated likewise before being placed back on the shelf. (Pic.16) When Trayle finished with all the components, it was 6pm already.

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I treated Trayle a dinner at a nice Chinese restaurant near my place, but it seemed that Trayle wanted to resume his work as soon as possible. After the brief dinner, he connected all the components and paid a lot of attention to how the cables ran on the floor.(Pic.17) He made every attempt to keep the cables straight, nice and tidy. At the end, comparing with “spaghetti” before the exercise, the scene behind the racks was so much more organized and looked spectacular on a clean floor!

One of the last tasks of Day 1 was to tighten the screws in the chassis and clean up the contact points for the pair of power amplifiers. Their platforms (Critical Mass Systems Maxxum) also got levelled. The ground box (Tripoint Troy) was also settled before the audition started. (Pic.18,19)



By the audition session on Day 1, Trayle also examined the torque of the screws that fix each driver in my loudspeakers. Since he is extremely experienced with Wilson Audio loudspeakers, he can tell whether the screws are too tight or too light simply by hands. He discovered that the screws of the mid drivers and the bass drivers in both channels were much tighter than the factory default settings, which is abnormal. Upon my agreement, he adjusted the torque of the screws. (Pic.20)



The outcome on Day 1

After the hard work on the first day, all the Hi Fi racks have been fully adjusted. Each of the components have been cleaned. The connectors looked shiny. The cables ran between components easily and smoothly. Each component has been placed on the spot that has been thought through. Each screw on the drivers has been carefully tightened. The only things that have not been covered is the position of the loudspeakers and the vertical angle of each loudspeaker modules, which is critical for the time alignment. These will be covered on Day 2 but at this point, Trayle would like me to listen to the system to see how what was improved and how much.

I played back each of the reference tracks. What a surprise! The improvement was very significant. Clarity, density, frequency extension on both treble and bass ends and transparency have also been improved. The system was like having underwent a major upgrade. However, if you ask me if I'm fully satisfied with the result at that moment, I would not hesitate to say "no". It's because I have been very upfront with Trayle about my expectation. I expect that my sitting position works like the middle seat in the 6th row at a concert hall. I expect to be able to hear the orchestra layout very clearly and "feel" the ambience of the hall. I expect to hear the boundary of the hall. I don't want to listen to music at open space.

The crux

On Day 2, Trayle arrived at my home at 9:30am. This time he brought his notebook computer with him. There were a large number of music files for testing. (Pic.21) He connected his computer to my Esoteric K1 with an Oyaide Continental 5 USB cable. In just a few minutes, he was able to play his music files in my system.

He used his smart phone as a control to play the files in his computer. I asked what he is going to do and which part of the system he is trying to calibrate...



“What I’m going to do next is to play a number of music files to find out the frequency response of the room and the system. I will play the music very loud and I hope you wouldn’t mind. I have to play it loud because I want to stress your room and from there I will be able to find out the best spot for your loudspeakers. My focus will be on the low frequency response. By means of playing these files over and over, I hope to be able to fix the location of your left loudspeaker first.” Trayle said.

“So once you have fixed the spot of left loudspeaker, are you going to place the right loudspeaker using the same distance from the back wall and with the same toe-in angle?” I asked curiously.

“No! My approach is based on building relationship between the left loudspeaker and the right loudspeaker instead of relating both speakers to the room. This will make sure both loudspeakers are coherent. The room factor will therefore be taken into consideration implicitly.” Trayle explained.

“Of course, both loudspeakers have to maintain the same distance from the floor. And this is the only common room factor I would consider for both loudspeakers.” he added.

“So do you mean, even if I have an irregular and asymmetric listening room, your loudspeakers placement method will still work very well, correct?” I asked.

“Yes, that’s correct!” Trayle confidently replied, “Also, I think Wilson Audio Alexia is a pair of great loudspeakers. I have quite many clients owning them too. By adjusting tweeter angle and the mid angle, you will be surprised how capable they are!”

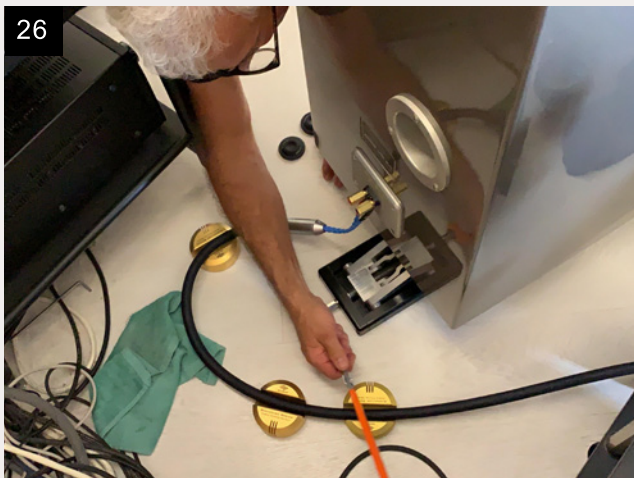
Finally, I understood why Stirling Trayle has been so generously answering my questions without fearing that other people can copy what he does. His secret sauce is loudspeakers placement. Even if he tells you how it works, you probably won’t be able to do it as this requires experience, good hearing and cognition to real sound!”

Real optimization

It’s evident that Trayle is extremely familiar with Wilson Audio loudspeakers. He skillfully removed the upper modules of the left loudspeaker and performed a round of deep cleaning. (Pic.22) Then he removed the screws on top of the lower module carefully (Pic.23) and realigned the metallic block that supports the upper modules.(Pic.24) He also cleaned the area around the metallic block using a piece of soft cloth.(Pic.25) After cleaning, he re-installed the loudspeaker. Following that, Trayle used a Wilson Audio jack to adjust the position of the left loudspeaker.



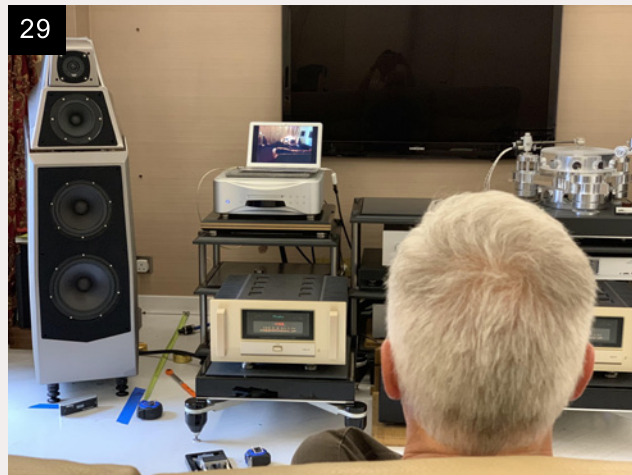
The toe-in angle was initially zero. (Pic.26) Meanwhile, he toed-out the right loudspeaker by 45 degrees. It was a technique I have never seen before. (Pic.27)



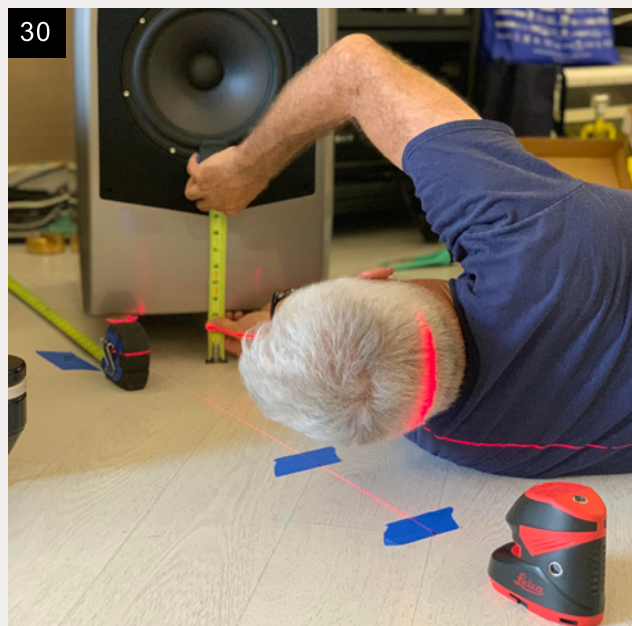
When both loudspeakers were well placed, it was already afternoon. Just like the previous day, Trayle did not stop for lunch. He continued indulging in work. He first selected 16 tracks and played them back. He also recorded the reference volume for each of them. (Pic.28) In the following hour, he repeated these 16 tracks over and over. He finally arrived at the



first sweet spot. (Pic.29) However, he was not satisfied yet. He spent another two hours to find a better one for the left loudspeakers. He eventually found it and the time was already 4:30pm. Frankly speaking, I was deeply impressed by his perseverance and patience.



After the position and the toe-in angle for the left loudspeakers has been set, he performed similar cleaning and adjusted the vertical angles of the tweeter and the mid for the right loudspeakers. Initially, he started with the same back wall distance and toe-in angle used by the left loudspeakers. The distance from the ground was the same, of course. (Pic. 30)



In order to ensure the middle of the two loudspeakers is on the same axis of the best sitting position and both loudspeakers have the same distance from the floor, he used a laser line level to display an illuminated cross onto the whole system from the seat. (Pic.31) He slowly adjusted the position and the toe-in angle of the right loudspeakers. Meanwhile, he replayed several music files repeatedly and used his ears to perform further fine adjustment. It was almost 7:30pm when he was done with the right loudspeaker.

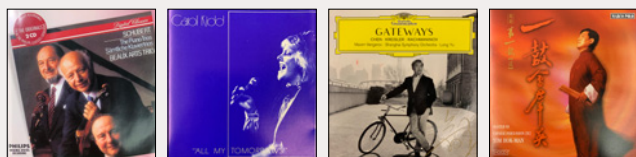
Reborn

In these two days, my system was like "Phoenix reborn through the fire". It took almost two weeks to settle down,



just like a brand-new system that requires some time to break in. When the system was broken in, I listened to the reference tracks again.

When playing "When I Dream" by Carol Kidd, the mouth shape has never been so pinpointed and solid. The outline of the acoustical image was finer and more natural than before. The overtone of the guitar sound was very comfortable to my ears. It has never been such a good support for Carol Kidd's voice.



Then I played Schubert's Piano Trio in E major, D929, both the vertical and horizontal positions of the three instruments were so much clearer than before. What's most important is that I had never enjoyed as much the cooperative interpretation made by these three musicians. Every essence embedded in the music was unveiled and touched my heart. My feeling was indescribable. I just feel so delighted that my system was reborn. I had an impulse to play every single album on my CD rack over again immediately and see if there is any musical element I have missed before. I want to emphasize that what truly excited me was not the acoustical performance or the music details. It was the emotion embedded in the music.

After Trayle's optimization, I found the bass performance of my system underwent a quantum leap in terms of the frequency extension, the speed and the texture. When I played Rachmaninoff's Symphonic Dance, the bass performance unveiled the Russian flavor of the music. Meanwhile, the music became more intense. When I played the drums ensemble track of the percussion album, the drum array created momentum as magnificent as the march of a brigade. The rapid drum sound was lightning fast.

I couldn't help admiring Trayle's skills in placing loudspeakers. Before optimization, when playing live concert recordings, the soundstage was so big that the ceiling and the surrounding walls of my room appeared to have been removed. But that was not good enough. Although I could hear the echos from the concert hall, I couldn't tell the dimension. In theory, human brain should be able to tell the dimension of the hall by means of timing of the echoes. After optimization, the hall effect was more realistic. The echo was very rich. I got a stronger sense of the hall dimension. I'm not too sure if this is the outcome of the hard work on Day 1 or Day 2, or maybe both. But one thing I can tell for sure is that Trayle has overcome the asymmetry of my listening environment. Now the soundstage was natural and well-shaped. There was no balance issue between the left and the right channels.

Conclusion

Many audiophiles, especially those who are very experienced, would believe they can optimize their systems themselves. They tend not to trust other people, not to mention to pay for that. If you are one of them, I fully understand because when Roy Gregory asked me if I would let Stirling Trayle come by my apartment to perform system optimization, I had the same thought at the beginning. I'm glad that I made a wise decision eventually. Why would I reject the idea given that I'm not the best in Hi Fi tuning, nor do I have golden ears? I'm just a normal person who loves music and my hearing is nothing more than healthy (yes, "healthy" as indicated in the annual health check report last year!). As there were indeed room for improvement in my system and that there is an expert who could help you improve it, is there any reason to reject?

For those who are very cost conscious, this is a service that costs a few thousand dollars (USD), the target client would be those who own a system that already worth tens or even hundred thousand dollars. If you are open minded enough, system optimization would most probably be more cost effective than replacing components or cables. At the end of the day, every cent that audiophile spends on components and cables is to get better acoustic performance and get closer to the music. Although this service is neither visible nor touchable, the performance gain is definitely tangible, and the outcome could well be more apparent than component or cable upgrade!

Audio Exotics is the agent of Stirling Trayle for Hong Kong, Singapore and China. If you are interested in understanding the details of the service and the pricing, you may contact them directly. Chris Leung from Audio Exotics once told me that, he has a few clients who thought they could do the Day 1's clean-up themselves. They chose to skip the first day and let Trayle do only Day 2's work in order to save some money. But these clients regretted soon after that because in reality, there are many things that are easier to think than do. ☺