

Resonators in Coral Bay - Round I

A word to the wise. This is very powerful stuff. Another word to the weary. Like potent medicine, it can be used for good or bad. Setting up the advanced default matrix of 11 resonators for a standard rectangular space -- three vertically stacked front-wall center line; two vertically stacked in each front corner; one just below the ceiling on each side wall's midpoint; two vertically stacked rear-wall center line -- I noticed the effects right away. No doubt, these things were doing something very potent. Whether I *liked* what they did was in grave doubt. At first.



To wit, the bass disappeared. Recall that I run eight high-efficiency 10" woofers EQ'd below 40Hz to be up about 3dB at 20Hz in the listening seat. You can appreciate that I was feeling rather flummoxed. Next, the free-flowing sonic gestalt felt drastically overdamped. Worse, very weird pressures built up in the room that caused a psychic sense of alarm. Some unfamiliar and invisible process was rearranging things. There was a rise in energy intensity and I clearly sensed the pressure-presence of very strong, very high harmonics inside my head. My audiophile affairs had gone topsy-turvy in one fell swoop. Sonically and at this early stage, things plainly *sucked*. I was stuck on an aural construction site - messy, not even halfway done and realtors expected with eager clients tomorrow. Patience and faith, grasshopper.

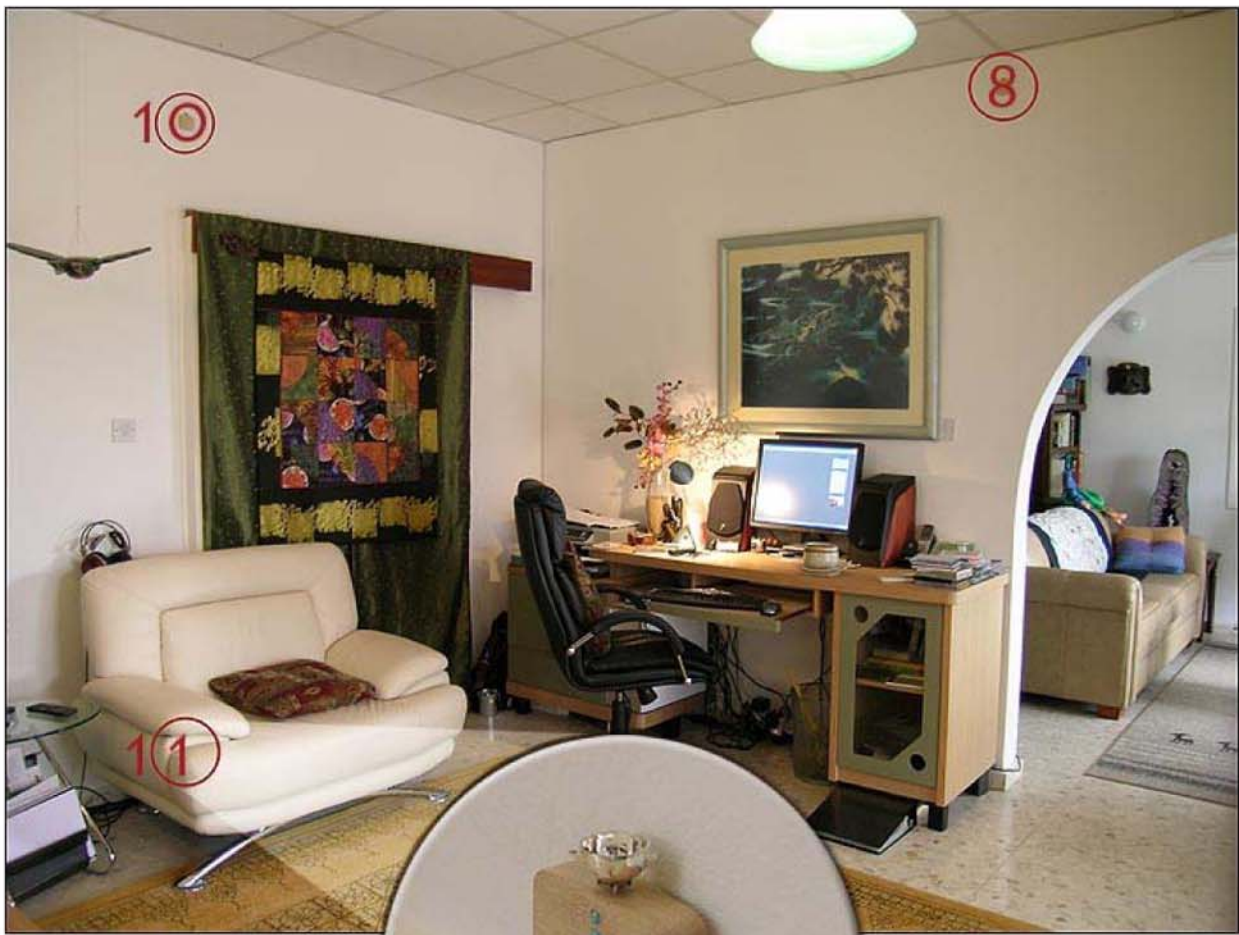
After a few hours, things began to change. By now I was too rattled to come to even preliminary conclusions, much less understand why there should be a settling-in period with such bizarre initial results. Unless more was going on along the lines of the hinted-at antenna effects. In which case I understood nothing. Time to walk away, let my bio computer reset itself and return the next day. Franck in the meantime suggested firing the speakers straight out rather than toed-in as before. So I did. I was deep in unknown waters. Better listen to experience and regain my footing.



Whatever 'pressure potentials' inside my crib had gotten drastically stirred up when I first applied the full-hog treatment all at once -- plus the obligatory resonator in the refrigerator -- settled down and equalized overnight. Left in their wake was a tacit sense of equilibrium and (don't laugh) a difference in air texture, as though someone had sprayed a fine mist of atomized oil in the central aircon unit.

The bass returned as well, clearly stripped of mud and echo. It was leaner, more intelligible and without discontinuity of feel with the remainder of the spectrum. Slam factor or impact was softened, however. This sounded exactly as though the physical sound container (my room) had increased in size. It no longer imposed familiar degrees of relative room lock and loading. It instead supported my somewhat abnormally bass-endowed setup far more evenhandedly all around.

The bass also wasn't as loud at the customary settings. I took this to mean that distortion had reduced rather profoundly. It's a well-known phenomenon that especially in the low frequencies, significant distortion components telegraph as an increase of amplitude. Think boom trucks. I was reminded also of the *leanearization* of bass which I had encountered during my first experiments with decoupling my prior Avantgarde Duos from a concrete floor with Grand Prix Audio Apex footers. This had cleaned up their low registers. Simultaneously, it had attenuated subjective LF output as though a certain amount of vibratory floor reinforcement was canceled. I could easily address this balance with Avantgarde's active bass systems. Someone with conventional passive alignments and used to their tonal in-room balance however would not have been able to. Enter the resonators. Their effects aren't on or off but offer a nearly disturbing range of intermediate values. They really invite experimentation and are very easy to move with the provided yellow tack.



10

8

11



ON WALL

BEHIND CHAIR



I had also relegated a former indoor tree to right in front of the glass doors behind my equipment rack before the resonator shipment even arrived. Franck had suggested audible improvements. Damn if he wasn't right too. Unless it's specifically spec'd for acoustic isolation purposes, glass leaks bass. Having a botanic diffuser in this outside pressure zone made weird sense - once one adopted, however tentatively still, Franck's esoteric view on things. While on that *sensible* subject, consider his two recent speaker prototypes, below in his listening space that's spatially challenged as is typical for Paris.



The red speaker uses prototype diamond tweeters from Denmark, the blond one textile soft domes. The latter, as per Franck, produces natural harmonics, the former impressive HiFi treble. That's nothing Franck couldn't fix by altering driver mounting torque and mechanical tuning tweaks inside the enclosures. Without seemingly acknowledging just how subversive his statement would sound to the peanut gallery already howling, he casually opined that he could make any driver material sound like any other.

Back to my digs. At this juncture, I wasn't paying any attention yet to manipulating the soundstage. My idea of soundstaging is foremost concerned over not hearing the speakers as apparent sound sources. Beyond that, subjective depth, width and other staging aspects aren't something I fret over. I'm triggered by dynamics, timing and tonal balance. Once those are right, any extra spatial tricks are cream and the cherry on top.

Make no mistake, I was hearing the *effects* of suddenly being in a larger room. Loud and clear. But I related to that not in terms of inspecting whether or how the soundstage might have moved or expanded. I related by how the resonator induced acoustic alterations affected the sense of musical energy transmission (sounds reaching across space to pull on my heart strings); how transient attack and tonal balance integration were impacted. With the resonators mounted as sketched out by Franck for a starting point, I'd already made significant progress in bass integration and seamlessness. Where I suspected minor setbacks was in the arena of leading-edge bite and jumpiness. Quite literally, it seemed as though my acoustic was now damped just a bit higher than I fancy. The Q was



too strong. Which parameters of the setup to manipulate to shift these values? There was swapping out specific resonators for others of different metal composition. There was changing locations of specific resonators. Or both. Off



went a request to Paris. Where should I start? Franck suggested to move the four sidewall resonators close to the front wall farther into the corners [4 thru 7 in the above images].

Because they were easier to reach, I did so first with 6 and 7, the two lower silver resonators atop the stone base boards. I moved them 16 inches backwards, smack into the corner as far as they'd go while remaining on the sidewall. *Freaky!* Bass got louder, the midband lit up and transients liberated as though someone had taken them off a leash. This was wicked and utterly unexpected. These changes were profound. I was stunned, not in denial but in disbelief. It was only at this juncture that I appreciated just *how* potent these little suckers were. Once the main setup matrix had leveled the playing field by raising resolution through removing acoustic disturbances and obstacles, little adjustments could now make substantial differences to tweak for optimum effects.

Having to accomplish this level of performance optimization with cables and sundry pucks and cones seems grotesquely *primitive* once you're seated behind the cockpit of far more powerful and comprehensive tuning controls. There's a misguided belief that neutral and right somehow relate to the way things turn out when well-reviewed good components connected with good cables interact in your room (minus the most obvious room node issues). If you saw just how many controls and sliders make up the average mixing board to give the sound engineer the desired results... well, one should feel quite disenfranchised for being expected to obtain ultimate results at home with nothing better than luck and circumstance. That's haphazard component matching. Franck's resonators operate outside the electrical signal path yet in potency, mimic an equalizer's tone and reverb controls though not quite in the same domain. That's not idle talk. I've got a 10-band professional EQ in the system operating below 40Hz. The linear bass response in the seat as accomplished with the EQ had not *touched* the remaining pressure zones and their negative effects which the resonators' arrival so perfunctorily eliminated.

Because I still had a few spares from Franck's bulk shipment at this point, I added one silver resonator in each front wall corner, right across from but slightly higher than the two silvers that were already on the sidewall floor board butting up against the front wall. (The high 4 and 5 had been moved backwards like the low 6 and 7.) Since the front corners created the biggest pressure loading of the room, the more remedials installed, the more potent the effects I reasoned. Indeed. The bass got even more profound and stygian, literally as though I'd turned up a knob. Nearly more remarkable, the soundstage now spilled into the corners, right behind and outside the speakers. If before its lateral demarcations more or less coincided with the inner walls of the speakers, these soundstage markers had now moved deep into the corners. The apparent stage now literally reached from sidewall to sidewall as though the additional resonators had pulled it outwards and then anchored its edges there like you'd unfurl a picnic blanket and weigh down its corners with pebbles to keep it stretched out.



By a very significant margin, I was now enjoying the best bass -- best integrated, best in quantity -- I've ever had in any prior or present residence. Earlier SPL ceilings too had been lifted. Where the room would load up before the resonators were installed, their presence acted like release valves to bleed off pressure build-up so that a constant equilibrium at the listening seat was maintained. Soundstage width and depth too were enlarged as though the double-teaming in the lower corners had pulled things backwards. I could play louder than I'm comfortable with yet the room wouldn't interfere. Best of all, rather than dry and overdamped, the bass rang out properly to sound very natural. There wasn't even a hint of that cutting slamming cyborg brutality that in certain quarters goes for "real" bass.



For an encore, I unpacked the two last bowls and maple bases I had left over, two Basics. I affixed them to the sidewalls at the exact halfway point between speakers and seat, slightly higher than the speaker tops since on one wall, my writing desk computer monitor occupies the area that would coincide with speaker height. I stuck one resonator right on the framed picture that hangs above the monitor. I mirror-imaged that location on the other wall. This was likely gilding the lily twice over but while my tool box allowed for it, why not to see what'd happen? This now made the *connection* of faraway soundstage and listening seat stronger. The performers didn't move closer physically. Their energies did. It was as though (excuse the esoteric imagery) someone had amped up their auras. Their presence extended farther. It was felt more strongly just like a charismatic person entering a hall's far reaches can be felt immediately even at the opposite end. The music was more *in* the room even though it apparently still originated well behind the speakers, i.e. mostly outside the room on the porch. What I call vocal lock -- often presumed the special strength of SETs -- had gotten more uncanny. Call it thereness or suchness when voices exhibit extreme presence.



If you have practical or conceptual issues with active steering -- active crossovers with adjustable gain, knee and slope settings for different bands or TacT-type digital room correction -- or own a purely passive speaker (the vast majority of consumer speakers in the market), you could embrace active steering the Franck Tchang way. It's passive by not inserting into the electronic signal path. It is very much active in how it changes the biggest audiophile variable - your room, the thing that's between your speakers and your ears. Or as Franck would say, the air that conducts the sound waves. The air is definitely *in* the signal path once you think about it.

One Scandinavian reader opined that for the money stuck to my walls, one could easily remodel a room and achieve far superior results. If you're a tenant like me, what an absolutely idiotic thing to say. Though in fairness, this reader didn't itemize costs properly. I was using only two of the most costly Platinum resonators. The majority were the far cheaper Silvers. But back to his argument. The most a renter can do is to order either generic room treatments -- trust me, they won't do what the resonators do -- or enlist the services of a professional consulting firm which will diagnose the space based on its dimensions, shape and layout to then recommend or build specifically *tuned* treatments. Once you move again as most tenants do, your investment won't adapt perfectly (if at all) to your new digs.

I just learned that Harry Pearson accorded the resonators a special mention in his Year End's *Best of 2006* list in *The Absolute Sound*. Surfing the pages on Ayon Audio's website, I also discovered that at least one of their speaker models contains Franck Tchang resonators inside its enclosure (a German review of that model mentions it). Word is spreading...