

NOVEMBER 2011



ASI

LIVELINE PREAMP
GRAND STEREO AMP

COUNTRY OF ORIGIN



SERBIA

Reviewer: Marja & Henk

Sources: PS Audio PWT; PS Audio PWD; Dr. Feickert Blackbird/Zu DL-103

Streaming sources: Foobar2000; XXHighEnd

Preamp/integrated/power: Tri TRV EQ3SE phonostage; Audio Note Meishu with WE 300B (or AVVT, JJ, KR Audio 300B output tubes); Yarland FV 34 CIIISA; Qables iQube V1; Devialet D-Premier; Acoustic System International LiveLine Preamplifier; Acoustic System International Grand Stereo power amplifier [in for review]

Speakers: Avantgarde Acoustic Duo Omega; Arcadian Audio Pnoe; Vaessen Aquarius;

Cables: complete loom of ASI LiveLine cables; full loom of Crystal Cable cables; Nanotec Golden Strada #79 nano 3; Nanotec Golden Strada #79; Nanotec Golden Strada #201

Power line conditioning: Omtec Power Controllers; PS Audio Powerplant Premier; PS Audio Humbuster III;

Equipment racks: ASI amplifier and TT shelf

Sundry accessories: Furutech DeMag; Nanotec Nespa #1; Exact Audio Copy software; iPod; wood, brass, ceramic and aluminum cones and pyramids; Shakti Stones; Manley Skipjack

Room treatment: Acoustic System International resonators, sugar cubes, diffusers

Room size: ca 5 x 7m with a ceiling height of 3.50m, brick walls and concrete floor downstairs, ca. 14.50 x 7.50m with a ceiling height of 3.50m, brick walls, wooden flooring upstairs.

Price of review item: €24.000 for the preamp, €30.000 for the Grand Stereo

Pick up an electric guitar. Plug it into a modest combo. Set the volume at any position. Strike a chord. What do you get? Plenty of dynamics. Yes! There's acoustic impact, speed and above all, tone. Now move over to your stereo system. Select an electric guitar album. Play it at about the same volume. Now what's missing? No doubt a whole lot. Isn't the sound miniaturized? Isn't the sound stripped of its dynamic impact, smoothed over into something 'nice'?



If you don't have access to an electric guitar, pay a visit to your local music shop. No, not the one you visit regularly to pick up new CDs or old vinyl. No, the one with the guitars, the Marshalls, Mesa Boogies, other axe amps and keyboards and drums. They surely will have a coffee corner or bar to hang out. Have a coffee and chat with the visitors or owner. Explain what you want to hear. There is always someone willing to give a demo and show off his or her skills on the 6-string. And if you walk around the musicians' candy store already, why not pick up a drumstick and whack a cymbal while you're at it? It's not hard to remember the result for a long time. Wasn't that loud and instantaneous? Back

home try to get the same result from any of your recordings over your hifi. Fat chance you'll come close. This is the dilemma of many music lovers and audiophiles alike. Somewhere in the chain of recording, mastering and replay things get lost that are so readily available live, prior to all the hifi efforts.

An avid guitarist himself and gifted with an incredible musical ear, Franck Tchang too encountered these limitations of reproducing music at home. First he tried to make the physical space which the reproduction takes place in more cooperative to the music being played. Though by now less and less controversial as many 'inspired by' copies of his small acoustic resonator cups made of precious metals have hit the scene, they are still a mystery in how exactly they work though they very clearly do. Work. Mounting the resonators in the designated spots improves the collaboration between room and musical signal such that the responsiveness and thus in-room

dynamics come very much closer to the 'real thing'. A next step were the much discussed (and doubted) Sugar Cubes which can alter and tune a room's acoustic balance - or what Franck calls tonality - to a much more realistic level.



To assess the workings of these acoustic tuning products and improve them further, Franck needed a good reference system for his Parisian studio. His search steered him in two directions. One led towards Novi Sad in the northern Serbian province of Vojvodina, the home town of Milan Karan, an engineer who started out as manufacturer of fine electronics for the medical sector.

Milan loves music so much that he switched from the high-tech medical world to the quirky world of audio to start Karan Acoustics. Though his Karan amplifiers are not a household name, Milan has a steady group of dedicated followers, more so now that his friendship with Franck bore the fruits of enhancements of original Karan products. Franck Tchang's keen ears are very sensitive to two factors - compression and tonality.

In every audio related conversation with Franck, these qualities return. Over the years Karan products improved as stimulated by Franck's push to rid them of remaining compression whilst enhancing the tonality of the resultant sound. The Paris studio of ASI saw many variations of Karan amplifiers come and be replaced by subsequent iterations.

With the amplification part of the audio system pushed to its limits, Franck then took the second path culminating in the design of his ASI Tango speaker. He already had some experience with designing loudspeakers for other companies but with the Tango could go all out unlimited by commercial restrictions.

Franck Tchang at Munich High End 2011

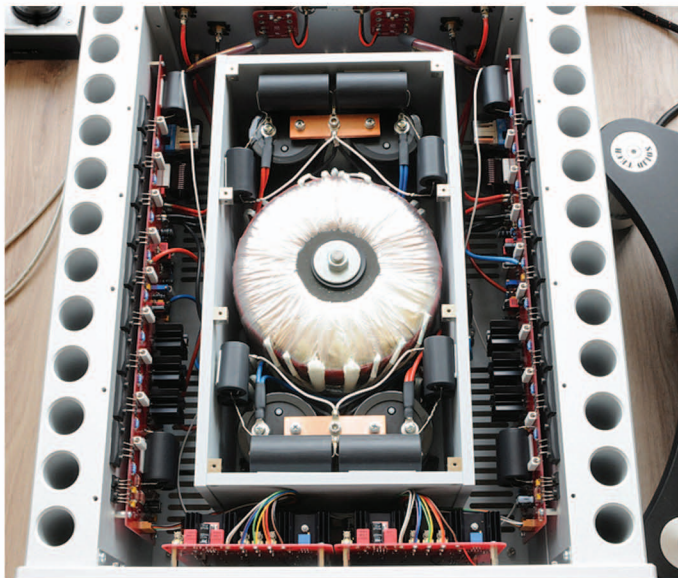
He built and builds the speakers basically for himself and a select group of friends only. The Tango is another controversial design - what else did you expect from Franck Tchang? - that sports a classic boat hull cross section but otherwise breaks almost all loudspeaker 'rules' of the audio status quo. There is no damping and there are tiny breathing bores connecting the internal compartments with each other and the room. In the three mid / low frequency drivers are a myriad of even tinier holes. Next there are three resonators lined up behind the oval breathing gap of the thrice - paralleled woofers whilst behind the actual drivers sit checker - sized wooden tuning blocks which alter the sound by simply rotating them. This is Franck's reference speaker which fights compression and has all the tonality he requires.

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Milan Karan & Darren Censullo

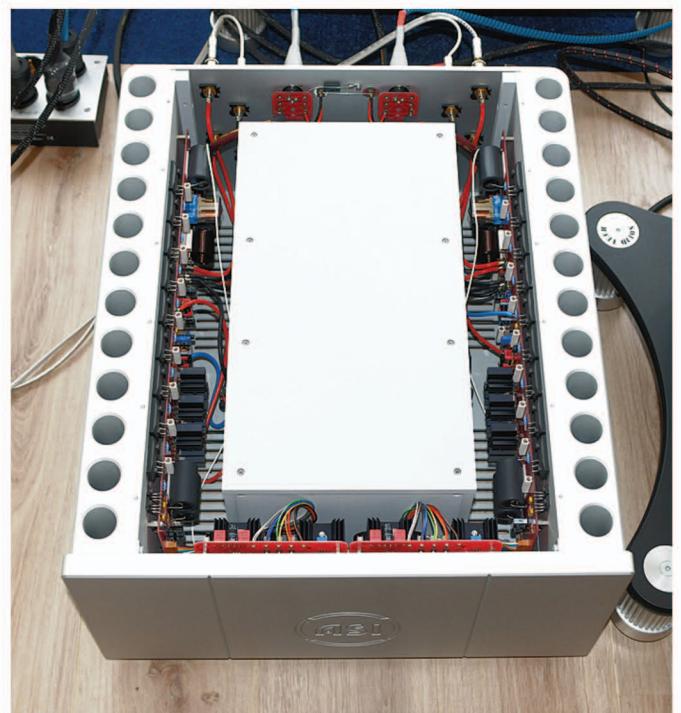
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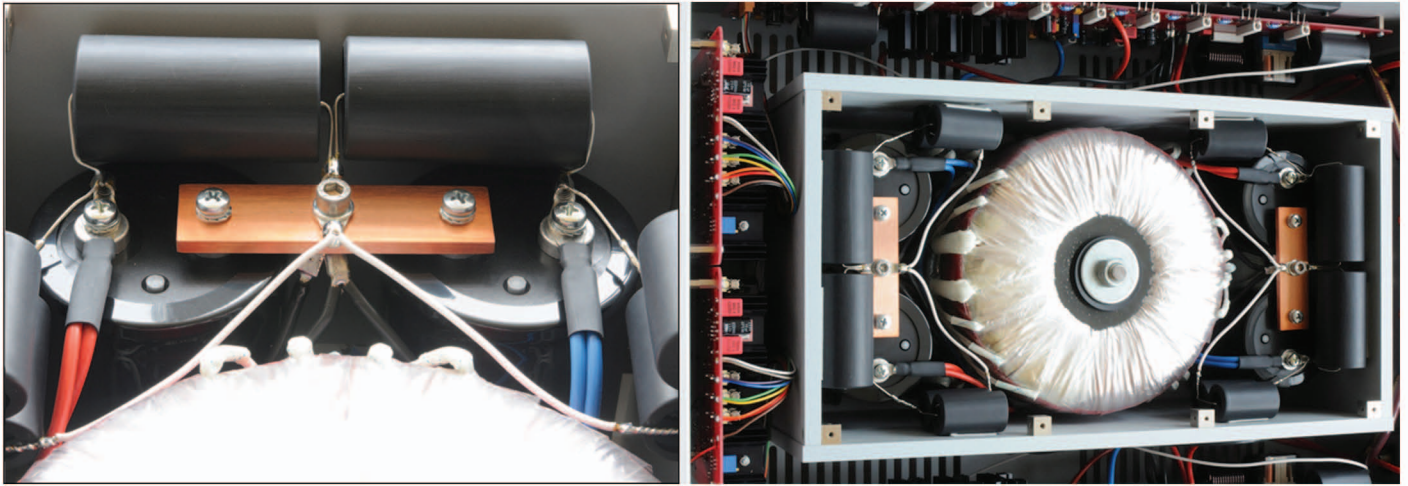
all the tonality he requires.

In the studio of Paris' 10th arrondissement Franck's system was getting closer and closer to the desired capabilities. Still, picking up one of his guitars and playing along with his favorite axe slingers like Larry Carlton and Robben Ford had him feel that the replay fell short compared to what he got out of his guitar. Sure the Karan KA M 2000 amplifiers had plenty of reserve - 2000wpc into 8 ohms are no cacahuètes - but Franck felt that whenever the volume was turned up, compression kicked in. This was detrimental to how he had tuned his room. Alas when he adapted the tuning to complement these max volumes, then at lower volumes things went wrong again. How to end this dilemma became the next challenge.

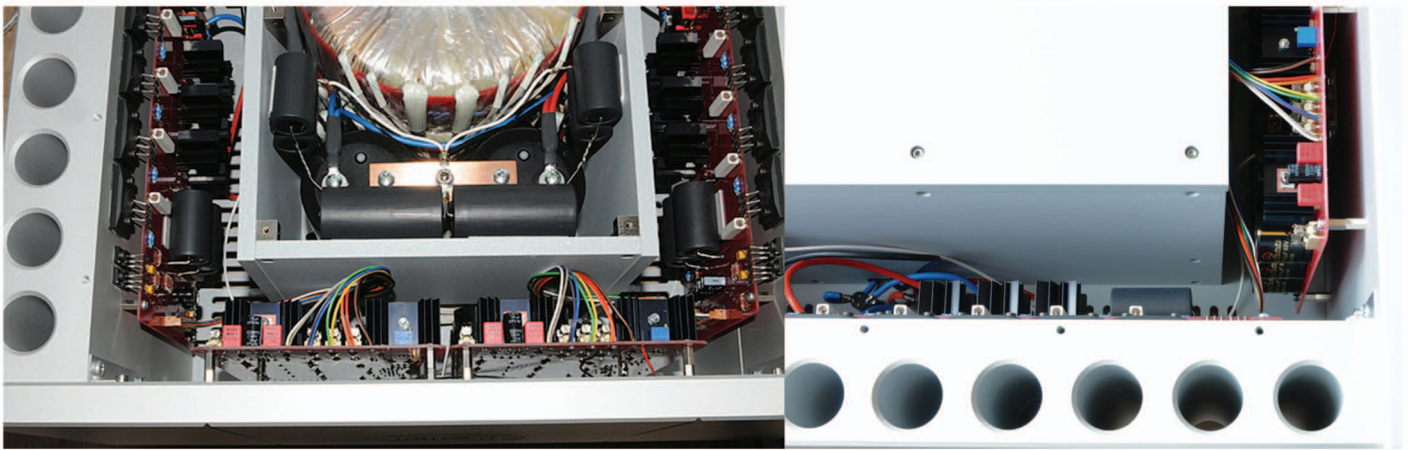
Thus Franck took on a joint project with Milan to develop his own line of amplifiers suited to fit the special requirements he had in mind. The project



would have Milan completely rethink and redesign the circuit boards of the upcoming preamplifier and power amplifier. But not only the circuit boards. The chassis, transformers and everything else were revisited as well. Everything had to begin from scratch again so the latest-technology parts could be used. It took a year and a half to



arrive at the first component when Milan could finally invite Franck to Novi Sad for an audition. Franck was very pleased with the results of Milan's hard work and his own role as inspiration and guide.



From this collaboration we today have the two-piece LiveLine preamplifier, the Grand Stereo and a Grand Mono power amplifier under the Acoustic System International or ASI banner. The LiveLine preamp's spec read as having "three RCA/XLR inputs each and two XLR outputs. Maximum swing voltage is 18Vrms. Input and output impedance are 30K and 30 ohms respectively. Frequency response is a very wide DC to 600kHz $\pm 0/3$ dB. Channel separation is <120 dB and the A-weighted noise floor is <130 dB. Maximum power consumption is 60 watts and the unit operates [in rooms] at up to 40°C (internal temperatures may approach 60°C)."

Then there are the monoblocks as "our reference statement amplifiers. They deliver a crushing 2.400 watts into 8 ohms (3.600 into 4 ohms, 4.500 into 2 ohms) and peak current and voltage swing figures of 240A and 140V. Even so their reflexes are blindingly fast and frequency response is a very broad DC to 500kHz $\pm 0/3$ dB. Damping factor for uncompromised speaker control is 10.000 from 20Hz to 20.000Hz and the signal-to-noise ratio is better than 120dB to keep up with today's high-resolution music material. Each monaural amplifier weighs 90 kg (198lbs) and measures 505 x 630 x 270mm WxDxH (19.9 x 24.8 x 10.6"). Rear panel provisions are two IEC power inlets, biwire terminals and XLR or RCA inputs."



Finally "the matching Grand Stereo utilizes the same chassis but scales back power to 650 watts into 8 ohms, 1.000 watts into 4 ohms and 1.800 watts into 2 ohms. Its instantaneous peak current delivery is 120A and maximum swing voltage is 75V. Weight and dimensions are identical to one mono amp." This is the amplifier for today's review combined with the matching LiveLine preamplifier. With 90 whopping kilos this is one serious amp. Our main listening room is on the first floor accessed via 16 steps with a 90° bend at the top. This presents a formidable challenge to aging backs to heave up and down brutally heavy gear. We therefore decided to leave the amplifiers on the ground floor's second listening room.



Upon arrival the two wooden boxes of the preamplifier chassis were easy to handle. On the other hand the Grand Stereo in its bigger wooden crate required four arms to move from the pallet truck into the house. Then came the challenge of manhandling the amp out of its crate which opens at the top. We can appreciate that over in Novi Sad crating and uncrating is no problem. Milan is a 2 meter 130kg gentle giant of a man who can probably carry two Grand Mono amps around on his own. We however had to ask a neighbor to uncrate the Grand Stereo for us.



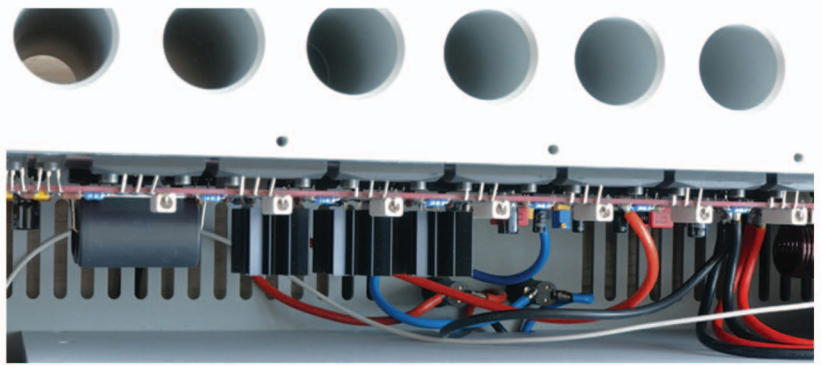
With the power amp sitting in place we put the two preamplifier chassis behind it and as a source reached for the PS Audio PWT / PWD combination. In this downstairs listening room our speakers of choice are the Vaessen drop / egg-shaped Aquarius loudspeakers. Interconnects were to be Franck's

ASI LiveLine balanced cables. For loudspeaker cables we used the Japanese Nanotec Golden Strada #79 nano 3. Power was handled by ASI power cables and a Furutech power distributor. Room tuning of course was by ASI resonators and sugar cubes. For the power cable between external power supply and preamplifier, ASI dispatched a custom Cardas cable.

In the middle of the i / o ports of the preamp sits the 7-pin Cardas power inlet. The separate power supply simply has



an IEC inlet, power switch and the matching Cardas 7-pin connector. Over at the Grand Stereo the back shows two balanced inputs flanked by two RCA inputs, two IEC power inlets, two power switches and two pairs of (bi-wired) loudspeaker terminals. Yes, the Grand Stereo is a fully dual mono affair just like the LiveLine preamplifier and its power supply.



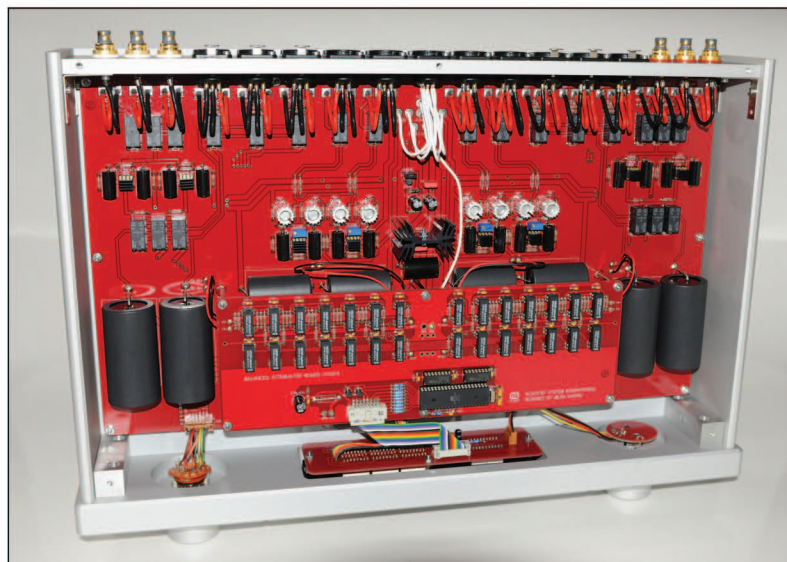
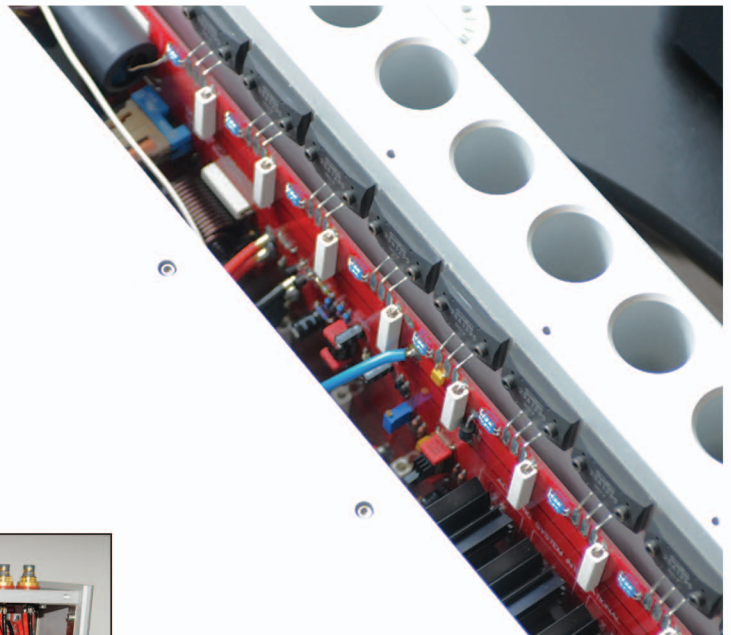
In an e-mail exchange with Milan he explained how the weight of the amplifier is caused by its two 1600VA toroidal transformers. These are custom made



for the ASI Grand series of amplifiers and their main characteristic is very small inductance to be extremely fast and provide a lot of instantaneous current. But there's more. Each trafo winding has three wires twisted together. This supports speed and current delivery. Separate windings are available for the input section, driver stage, output stage and control electronics. All this rests within a central enclosure of 1 cm thick walls shielding the surrounding electronics electrically

and acoustically. Speaking of shielding, the specially designed heat sinks are the way they are because this geometry and mass provide the best resonance control in conjunction with the rest of the massive chassis. There's your backbreaking weight.

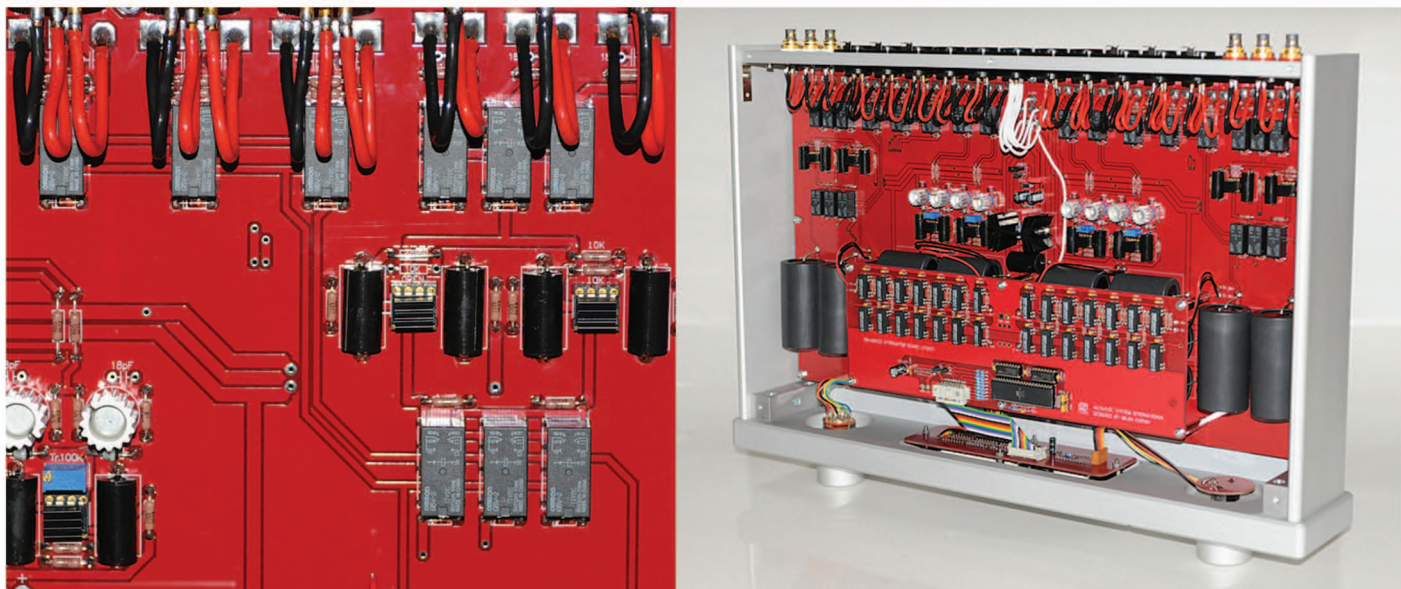
All Karan power amplifiers are characterized by a continuous sliding bias control. This is unlike the sliding bias used by Krell. Krell raised and lowered bias in predetermined steps like Mayan pyramids. In Karan designs an electronic circuit measures the incoming signal's amplitude. If there's need for additional output power, the current on the power rails which supply the class A output transistors is raised instantaneously. When the input amplitude goes down again, the bias follows suit. This way the output transistors always obtain the right amount of current and the operational temperature of this hugely powerful class A



amplifier remains luke warm even when driven very hard. At 2500V/microsecond this circuit is very fast. Speed is the leading reason why Milan chose Sanken Ring Emitter Transistors. These RETs have far lower rise times than any other type of transistor.

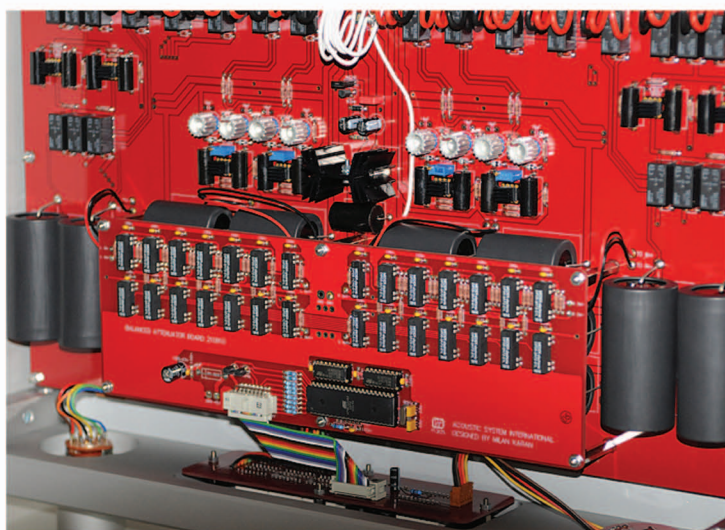
Working with parts which can handle such speeds without introducing any phase shift between DC and 500kHz means walking a razor's edge. At these very high speeds - the components are capable of handling signal up to 60MHz - there's always danger of instability

and oscillation. To counter these threats Milan commissioned a lot of custom-made bits like capacitors, resistors and of course wires.



We have singled out Milan as the team leader but Karan is actually composed of a team of five. These members are all driven by music and life around music which makes it all worthwhile even though Milan admits that today there's only music left. They all are getting older and their wild days are over. But the team is still a group of friends. One of them runs a transformer company where he literally ran off hundreds of prototypes until the final quality and performance for this project were reached. Talk about dedication and patience! In-house Karan operates a CNC machine, finishing tools and anodizing equipment. The results of these can be admired in the ASI products.

When asked about future plans, Franck and Milan want to build a dedicated phono preamp, a CD transport and DAC. Even a super no-compromise speaker system with external crossover is on the wish list. For now we had the Grand Stereo and LiveLine preamp in da crib. Time for the first CD.



To stay with Franck's tastes, the Larry Carlton/Robben Ford live recording from a 2006 Tokyo concert went in the tray. With 650wpc on hand we set the volume to a low display figure, then slowly upped it to a nice level. We must salute how this preamp handled that with an electronic control over usefully small steps of attenuation and a fantastic remote control. Now we gave the Aquarius speakers a nice workout and the system showed amazing dynamic linearity, i.e. continuity with increasing levels. There was no difference in sound when playing at decent neighbor-conscious volumes or blast-out madness. Second was speed. We like fast systems. With two hornspeaker pairs in permanent residence (Avantgarde Acoustic Duo Omega, Arcadian Audio Pnoe), there is plenty of opportunity for direct in-your-face music. Even with inherently 'slower' dynamic speakers like the Aquarius, the speed of attacks of



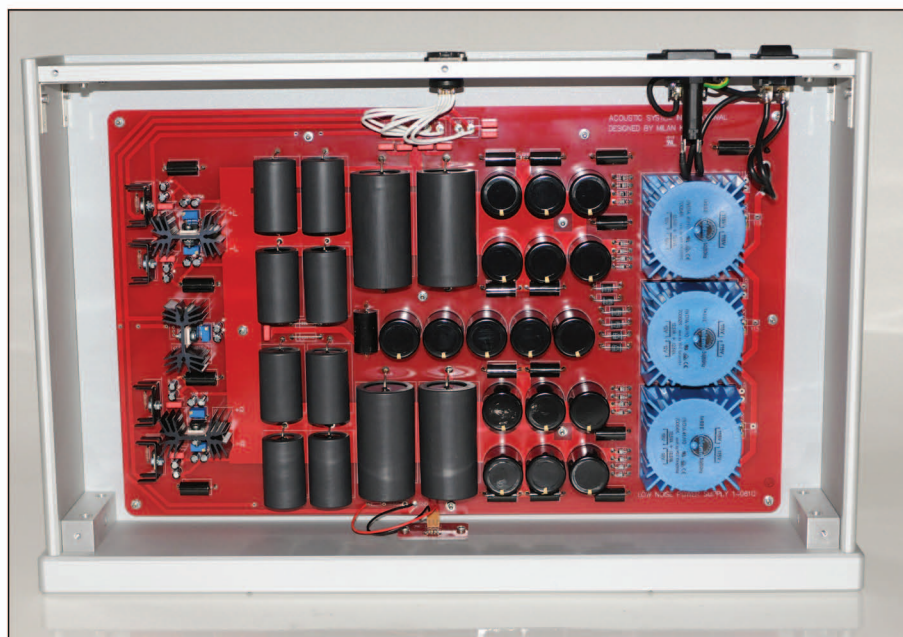
Franck's electronics was phenomenal and the live impression very high.



To assess the capabilities of the ASI gear further, we wanted to connect them to the more sensitive Pnoe horns. Franck's Tango is around 89dB in sensitivity, the Pnoe 100dB. But how to connect the horns and amplifiers? Hey, the shortest connection between two points is a straight line. So up we went through the floor. Not ideal perhaps but practical and we don't rent but own. We only needed some long-enough loudspeaker cables and drill a hole in the floor.

A few days later we had long speaker cable thanks to our friends at X-Fi poke through a hole in the upstairs floor. Connecting the speakers was easy. Now we had to run downstairs, cue up a CD and manipulate the volume until sounds of approval came down from the upstairs listener.

Of course this setup sounded different. A single-driver horn has a different flavor from a vented 3-way direct radiator. An 8-inch driver even when horn loaded does not have the same impact as a 12-inch woofer with port. Into this 16-ohm load the Grand Stereo had less power than 8 ohms but in



practice there remained plenty. Plenty refers to stand-by reserves. Here we must admit to Franck that one really can never have enough power. The adage of a high-sensitivity loudspeaker being perfectly married to a flea-power amplifier only is a myth and poppycock. A well-designed muscle amp can be as delicate and revealing as a small SET. That's one point checked off. Secondly - and this is a true forté of the ASI amp - the speed of a superior transistor amp does not stop at the speed of a fine SET with the best possible output transformers. We think this amp is faster than most. We have not had many other muscle transistor amps through our current system so we cannot compare speed first hand. But recalling previous listening sessions at Franck's for instance, this Grand Stereo is faster.

The ultimate test for any power amp is to eliminate the preamp of course. Some in fact think that the best preamp is no preamp. So we hooked the balanced outputs of the PS Audio PWD DAC directly to the Grand Stereo and started another round of auditions between the Aquarius and Pnoe speakers. We had been impressed by the speed of the pre/power amp combination but without the preamp something very special occurred. Of course there are situations when you need a preamplifier as when you play vinyl but with a volume-controlled DAC it's not mandatory.

We segued into this article with the comparison of a live guitar and one reproduced from a recording. Now we had live guitars, cymbals, drums, violins and what not in the house. Leaving out the extra link or detour through the



preamp made a day'n'night difference. With all the mastery, skills and efforts put into the LiveLine preamp, skipping it benefited our musical pleasure in this context.



One reminder is vital though. The source material of course should contain the essential dynamic range. We all know about the loudness wars and what harm that has caused to recorded dynamics. Fortunately there still are recordings that use a fair portion of the 96dB of dynamic range available in the 16-bit CD format. King of these and no doubt the benchmark is Touch by Maarten van der Veen as recorded by Eelco Grimm. Eelco used no limiters, compressors or whatever, just a little dithering when converting his 24-bit recording to 16-bit CD.



Played at our normal listening volume there was hardly any sound pressure - until Maarten hit one of his percussion instruments hard. Now that's what dynamics are all on about. Other examples of wide dynamic range are German blues man Todo 'Toscho' Todorovic's Oh Lord and Dutch saxophonist Yuri Honing's Walking on the Moon version. Directly feeding music into the Grand Stereo was so compellingly enveloping and sucked us in so much, it became almost eerie in its realism. Just imagine what the monos will be able to do. Scary thought that



Quality of packing: Outstanding in heavy padded wooden crates closed with plenty of screws.

Condition of component received: Excellent.

Quality of owner's manual: Brief and straight forward

Website comments: Basic and typical Franck.

Pricing: A lot of money for a lot of amplifier. If the electronics follow the other ASI products, your investment is safe as no second-hand products will be available.

Human interactions: Quick, friendly and to the point.

Remark: With the era of streaming and other computer-based sources here which offer their own means of attenuation, the Grand Stereo alone will serve most needs.