

Days of thunder

Warning: The following lines contain politically incorrect comparisons and glorify addictive behaviour. The listening volumes indicated, to which both of the GamuT speakers were subjected, advance global

warming and seduce you into damaging your own hearing. Imitators be warned: If you plan to release this kind of elemental force at home, you will require an outlay of at least 100,000 Euros.



by Stefan Schickedanz

There are certain toys for boys which are very eagerly awaited. They include the most diverse of things, depending on the atmosphere and occasion. And then there are those unexpected problems which can trigger a real downer. Who would have thought that a bloke would end up making just as big a fool of himself when starting up a high-end system, with its extremely promising ample speaker cones and amplifier cooling fins, as he does when attempting to open certain items of women's clothing with one hand? In what is effectively a gentleman's magazine without age restriction I prefer to leave it to your imagination to fill in the details of this well-known parable which has no doubt afflicted each and every one of us, apart from maybe Giacomo Casanova or James Bond. The power switches on the four-part GamuT-Elektronik may not stick but they are simply impossible to find. Experienced ladykillers will know that, if there is no clasp at the back, then you should try looking at the front. But who on earth is expected to look for a power switch at the front, underneath the front panel without the aid of the operating instructions? This game of hide and seek will probably have one or two users actually reaching for the operating manual. And when you do, there's a pleasant surprise. Whereas this obligatory handbook is regarded by most manufacturers



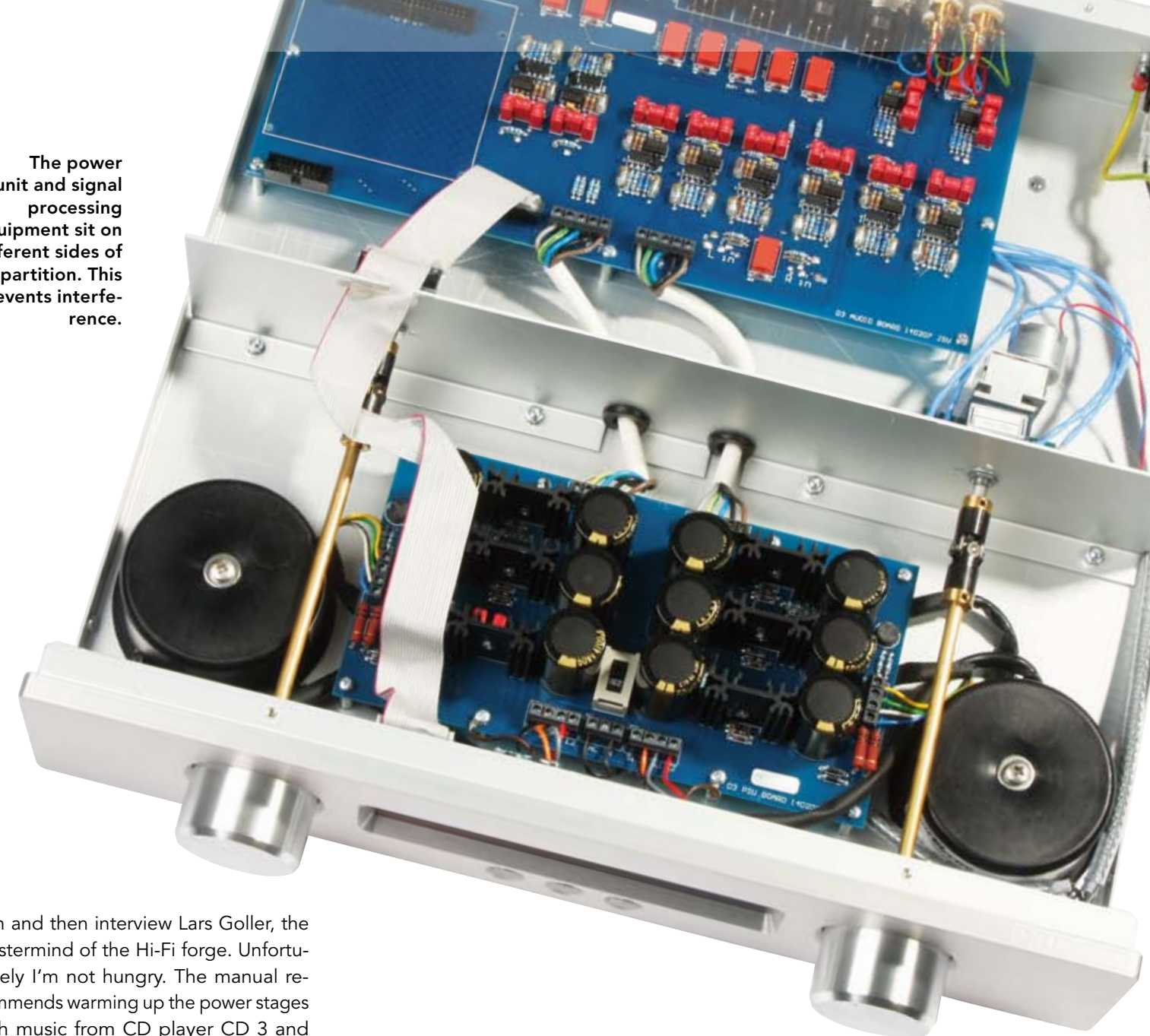
The drawer on the Philips drive is adorned by a solid aluminium cover.

The design of the CD 3 is characterised by purism and symmetry. Unusually ... the axis of symmetry continues within.



- regardless of the price - as nothing more than a compulsory exercise, in this case it is a real literary gem, in genuine free-style. You need a few examples? Following the explanation that the MOSFETs in the output stage of the M 250i mono-amp can handle impressive peak currents of 400 amperes and 100 amperes in continuous operation, the author philosophises: „Somewhere, we have to draw a line between what is a loudspeaker load, and what is a short circuit. We have set this line at 1.5 Ohm, which will draw about 47 Ampere peak.“ The GamuT owner then discovers that the safety circuit may well briefly tolerate impedances below this limit: „However, it works well with Quad ELS- 63 and most Martin Logan electrostatic loudspeakers.“. The section on the effect of the safety circuit is entitled ‚a second of silence‘. The passion of the proud builders is evident on each and every line. This is a case of fanatics writing for fanatics - and that really puts you in the mood. In the mood to get to grips with the Danish delega-

The power unit and signal processing equipment sit on different sides of a partition. This prevents interference.

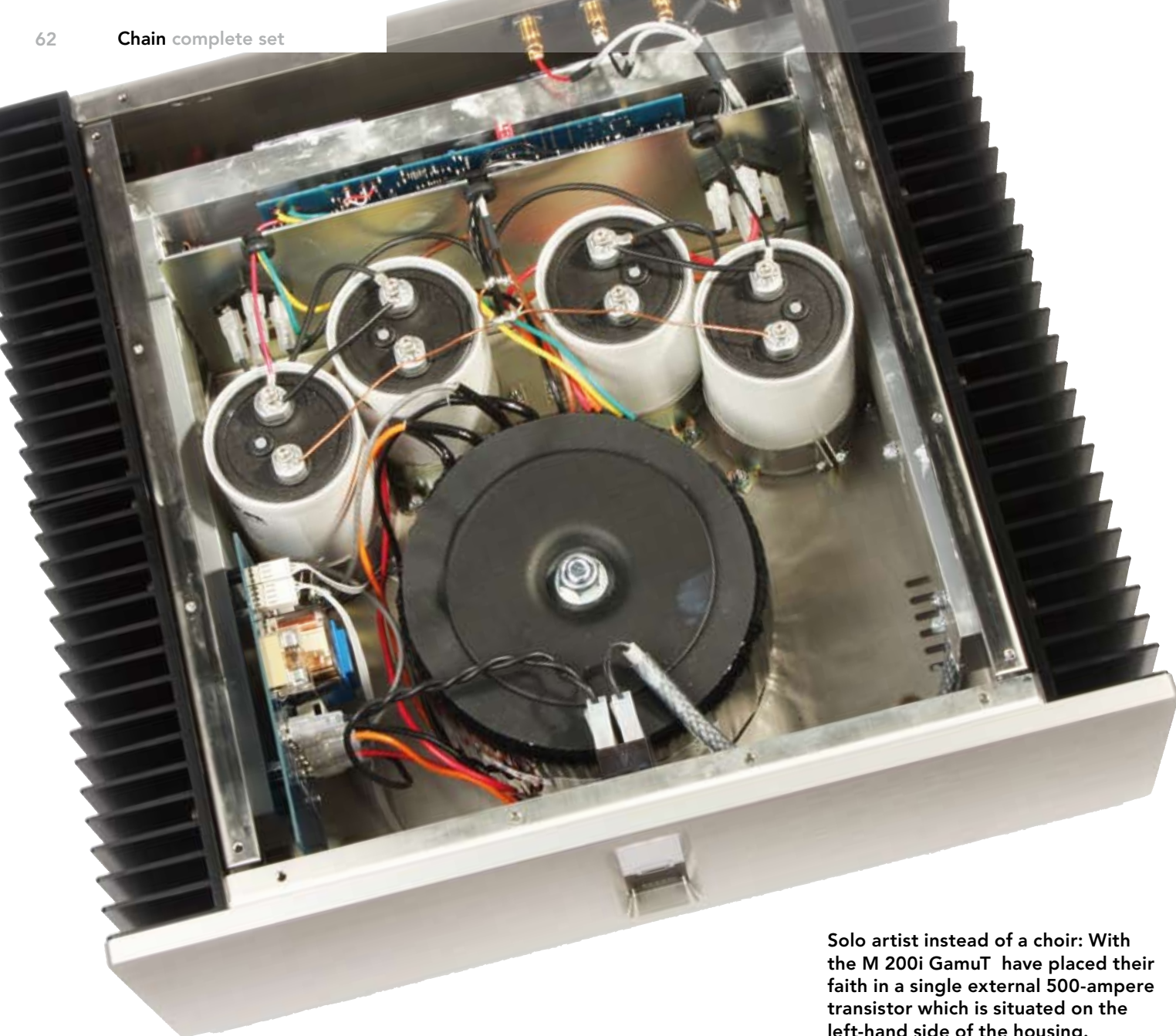


tion and then interview Lars Goller, the mastermind of the Hi-Fi forge. Unfortunately I'm not hungry. The manual recommends warming up the power stages with music from CD player CD 3 and having a meal first before taking on the real feast for the ears. In my case, I use the warm-up stage to get to grips with this Scandinavian technology.

Let's have a look at the system then, starting at the source: What I like about the CD 3 CD player is the simple layout which is symmetrical on both the inside and outside. The six identical solid milled operating buttons are split into two rows of three on both sides of the drive which is positioned in the centre, with a drawer adorned with an elegant aluminium cover which ejects from the glass of the blue illuminated display. The axis of symmetry continues on the inside: The drive and digital processing section which is enclosed in a full-length U-shaped shielding plate separates the sensitive output stage from the power unit with its separate toroidal core transformers for digital >

The three push-buttons conceal a bypass switch for looping through the processor or CD input directly to the power stage.





Solo artist instead of a choir: With the M 200i GamuT have placed their faith in a single external 500-ampere transistor which is situated on the left-hand side of the housing.

and analogue areas in order to limit the reciprocal influence of the modules to a minimum.

Underneath the stainless steel panel there is a high-grade Philips drive. The external beauty of a Hi-Fi design continued in such a resolute manner on the inside is a sight seldom seen. Whilst typical designer audio equipment is often a higgledy-piggledy mess behind the façade and you have to ask yourself why you had to spend so much money, in this case everything still looks just as tasty on the inside - just like a freshly cut pie. I'm reminded of the words of my favourite Honda motorcycle tuner from my youth: „Something which is technically perfect always looks good“.

Thus, you ought to think that a device



The solid, gold-plated terminals take into account that if you are using cable lengths of three to four metres, the contact resistances have more influence on the sound than the cables.

which looks so good right down to the last detail must also be technically perfect. The CD 3 however does not provide that much ammunition for the Hi-Fi discussion group: up-sampling to 24 bit/192 kHz, the artificially refined digital data of which is passed on to a good but altogether conservative Burr Brown 1792 D/A converter chip which in turn, freshly converted, serves the RCA and XLR outputs. The Burr Brown does however provide better data than the Crystal Chips which GamuT used to use. Perfectionists will be happy to take note that the coaxial digital output can be taken out of action with a small rocker switch on the rear in order to rule out interference. The next part of the chain is the D 3i preamp. It too, with its two solid twist knobs and push-buttons, is simple and elegant with a mirrored symmetrical arrangement. The material thicknesses of the front panel and the cover break the usual mould and the supporting chassis is made of anti-magnetic steel. The radical minimalist design resumes on the inside. Both toroidal core transformers and the ample capacitor reservoir of the dual mono construction are situated behind the front panel. A solid partition plate separates the sensitive signal areas from the power unit and also carries the enclosed Alps volume potentiometer, together with motor and gear unit and the switch-over unit for source selection, at the rear. Both modules are connected to the solid knobs on the front panel by thick metal rods.

The slight play that this produces is not an indication of the quality or strength of the potentiometers but merely a minor blemish which is down to the length of the direct connection. Both printed circuit boards are positioned directly in front of the inputs and outputs and are equipped with just a few, selected components of

the highest quality. GamuT place their faith in MOSFET hybrid input and output buffers for low impedances. The left-hand printed circuit board is dominated by particular purism. It is the hidden reserve in the true sense of the word: A plug-in base and two DIP switches await optional phono circuit boards.

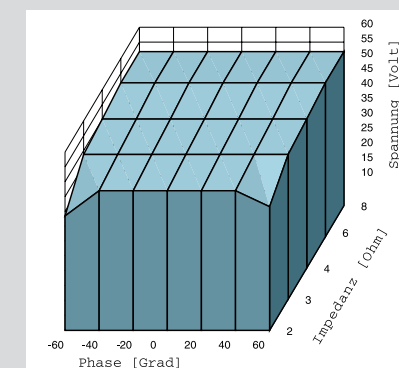
Although the D3i is very understated, as well as its high-grade connection - the solid RCA sockets are gold-plated, GamuT's XLR ports as usual are supplied by studio equipment specialist Neutrik

– it also offers a few very cleverly devised detailed solutions. The preamp does not have just one processor input with which the integrated volume control can be bypassed. This is as far as some competitors can keep up.

The CD input, with its small rocker switch at the rear, also enables the looping through of the signal. So far so good. What I find particularly smart is the additional electronic bypass button on the front panel. It has to be used to enable the bypass. Otherwise some of

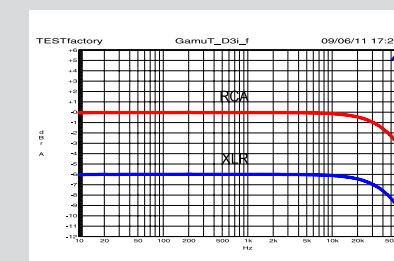
>

Poweramp Stability diagram



The stability cube of the M 250i is almost perfect. It is almost impossible to bring the mono blocks to their knees with low impedances. They only react faintly to phase shifts at 2 ohms. This allows you to control almost any speaker perfectly.

Preamplifier Frequency response



The preamp stage has a very gentle roll-off. It engages as low as under 10 kilohertz and shows no signs of level attenuation on the broadband preamp stage at 20 kilohertz with less than 0.5 decibels.



GamuT reinforces the 10" subwoofers with wooden inserts which are precisely balanced. To integrate the El Superiores better into the room with regard to floor and ceiling reflection, one of the drivers is positioned in the top of the cab.

our contemporaries might blow their speakers if they accidentally switch the full level to the power stage when switching over. From the outside the M 250i mono power amplifiers look the least impressive; it is on the inside however where they are characterised by uncompromising radicalism. GamuT may swear by transistors because they represent a good choice as far as performance yields, budget and energy efficiency is concerned. However, when it comes to sound quality, the Danes liken the multitudes of these semi-conductor components which are used in common transistor power amplifiers with the voices in a scattered choir. To further expand on the metaphor, tiny production tolerances also prevent several dozen of them from singing with a clear solo voice. I.e. instead of several smaller transistors, GamuT use one really big one. And voilà: the puristic single-break amplifier for adults. What also really sticks out is the four point-to-point wired storage capacitors on the power unit which is supplied via a toroidal core transformer.

We have seldom seen a power stage

so clearly laid out. The signal flow can be largely plotted with the naked eye. A partition shields the entire connection area from interference fields from the power amplifier and the power unit. The military appearance of the open monoblocks is further evidence of skilled handiwork. These are the kind of obscure objects which, when they appear on the screen of the X-ray scanner at USA airports, they have security staff instinctively placing their hands on their holster and blurting out „freeze!“ If we take a closer look at the measurements of the last link in the chain, the M 250i power amplifier must really be a bomb in order to keep the promise of a thrilling live experience: Regardless of their stately size and large team of XL drivers, the core sound pressure of the El Superiores S9 monster speakers is a modest 78.9 decibels. I cannot remember when I last saw a speaker with this specification. It must have been back when I was reading magazines like AUDIO and stereoplay, not as a producer but as a consumer. In other words, over 20 years ago. Yet what we know about the speaker on paper tells us everything and nothing. At the end of the day the final judgement is made in the brain's auditory cortex and so far nobody has been able to determine just exactly how many dB are required to provoke the surge of an extra portion of adrenaline. It is nevertheless a good thing that this time I choose to stick to my tradition of not looking at the measured values until after a first listen. I may otherwise have been left without any appetite before I'd even started. However, the sound distribution performance of the Superiores is very good. The same goes for the care taken with the workmanship. In a game of cards the top cabinet would be the top trump within this Danish-made system. 185 kilos per cabinet. Trumps! Trapezoidal housing made of genuine laminated, compression moulded wood over multi-layered beechwood. Trumps!

Solid substructure with cleverly devised spike system made of stainless steel and brass for perfect isolation from the floor. Trumps! Three 10.5" subwoofers with membranes reinforced with solid

”

Lars Goller, Head Developer at GamuT

„With cable lengths of less than three to four metres, the contact resistances have more influence on sound than the speaker cable“.

wood in the voice coil area. Trumps! Ring radiator. Trumps! At least for me, as I am a big fan of this tweeter principle for its resolution and precision. And that's the most important thing when it comes to a dream team of this calibre. However, shall I tell you the truth? After all, just like a crime writer, I'm always one step ahead of my readers. I know how the story ends. And in order to do the whole thing justice and describe just what the listening experience with this system does to me, with its Worm Hole signature cables, also produced by GamuT, I would prefer to restrict this audio test report to one single sentence. A single sentence with drastic words so that the core statement and the core competence of these Danish manufacturers doesn't disappear amongst the general ambient noise. What are you supposed to say when you're dealing with a genuinely exceptional experience? What I experienced with GamuT's mammoths in the heavily dampened and thus muted AUDIO listening room was, to coin a phrase, the ultimate sensation. The top cabinets amongst top cabinets with electronics to give it wings. „Listening pleasure at its best“ and whatever else we have tried to call it. But that doesn't quite express it.

The system was my own personal eureka moment because, if in doubt, I set the dynamics, kick and pulse precision using the frequency response. Someone

who attaches great importance to neutrality would be just as dissatisfied as a bank manager if his dating service matched him with a punk chick. After all, when weighing up the pros and cons, there is seldom so much emotion and ideology involved as with the reproduction of music. And if you really want to let yourself go as if you were at a live concert when listening to recorded music from CDs, this system is the absolute business. No, even this expression seems to banal. How about if we try comparisons from other fields? Because in all departments the bass in particular is what Saddam Hussein would have referred to as the mother of all basses. Breath-taking. Profound. Crisp. Contoured. Nuanced. Rich. Commanding. Final. Or simply unfathomable. If sense of timing and rhythm are your religion, then what we have here on the ground floor of Motorpresse Stuttgart is your church (Faithless „God is a DJ“). And just as I'm about to get addicted, like Michael Stipe in „Losing my Religion“, I put on the appropriate CD for the performance with „Massive Attack“. Just so that we don't get out wires

Both of the rear-side bass reflex ports on the S9 are made of solid brass, the extremely solid terminals are gold-plated to make for the perfect contacts. The elaborate substructure provides stability and effective isolation from the floor.



crossed.

The system has a damn good resolution across the whole range. And the other drivers don't just keep up with the tempo of the bass, they contribute greatly to making sure that people like me come along and finally have just one thing to say: „Cool bass“. At the end of the day the GamuT system shares the same fate as a gorgeous blonde with a D-cup bra size. The lady may have passed all her A-levels with A+ and might have a PhD in Philosophy, but most of us gentlemen still have our mind on just one thing. And thus we're back at the start of our story, reminding us somewhat of the squaring of the circle. Going by live criteria, when it comes to the bass - which is usually the one thing which falls most short of the concert experience when reproducing recordings - I know of nothing else more impressive and I urge you to experience it yourself. From a tonal point of view the dark side of the force exacts its own toll.

As far as I'm concerned, the meeting with the action heroes also took its toll. On a Thursday in the audio room, quite by surprise, I experienced my skeleton moment. You lie down head first on an ultra-flat, 40 kilo sledge and race down the Olympic sled run in Innsbruck at more than 50 miles an hour. You take a few hefty knocks, smash open your chin at three times the force of gravity in the steep turn and run the risk of drowning in your own adrenaline. The whole thing lasts just over a minute but it's enough to turn the whole scale of values on its head. Permanently. After that, a sports car - even a 1001 HP Bugatti Veyron - leaves you cold by comparison. This is pretty much what happened to me with the GamuT system when I was exposed to its brutal dynamics for not just a few seconds but several days. From now on, after these days of thunder, for me there's a new Hi-Fi calendar. It's very thoughtful of the Danes to attempt to inhibit the uncontrolled spread of these legal drugs with their own kind of prohibitive tax, i.e. the six-figure sales price. But what the heck! In the final stage of this addiction the only thing that helps is regular attendance of live concerts. <

A dream of a driver: The bass speakers on the S9 have aerodynamically optimised frames and a huger drive magnet. The specially moulded rubber surround makes for large strokes.

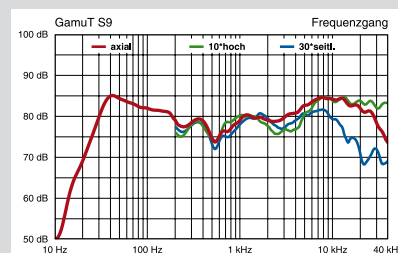
Instead of protective dust covers, GamuT use precisely milled and balanced wooden caps to reinforce and add weight to the low notes.



The drive magnet has a drilled core hole for optimum voice coil ventilation.

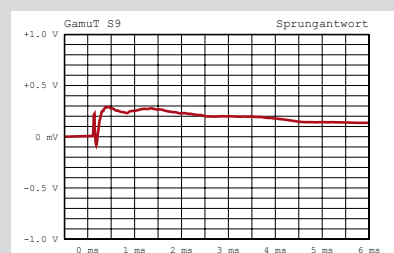


Frequency response



The frequency response of the EI Superiores is wavy and reveals a damping of the mid-range which is reminiscent of a loudness curve. The fluctuations are within a range of 10 decibels within the hearing range. The sound distribution performance on the other hand is excellent.

Step response



The step response provides an indication of the dynamic sound impression and reveals a very quick response to pulses. Even the decay spectrum (not shown) shows that the strengths of the S9 lie in the time domain.

Gamut

CD player GamuT CD 3

List price: €6,000
Warranty period: 2 years
Dimensions WxHxD (cm): 43 x 11 x 42
Weight: 15 kg
Housing options: Silver or black
Connection facilities: Line RCA / XLR, digital coaxial

Pre-amp GamuT D 3i

List price: €7,000
Warranty period: 2 years
Dimensions WxHxD (cm): 43 x 11 x 42
Weight: 12 kg
Housing options: Silver or black
Connection facilities: 4 x high-level inputs (3 x RCA, 1 x XLR, two as processor input with loop-through), 1 x phono, 2 x pre-amp outputs 2 x XLR. 2 x tape out (RCA)

Power amplifier GamuT M 250i

List price: €18,600 (pair)
Warranty period: 2 years
Dimensions WxHxD (cm): 43 x 16.5 x 47
Weight: 35 kg
Housing options: Silver or black
Connection facilities: Cinch / XLR

Speakers GamuT EI Superiores S9

List price: €73,000 (pair)
Warranty period: 5 years
Housing options: White ash, mahogany, wenge'e black
Dimensions WxHxD (cm): 32 x 167 x 80
Weight: 185 kg

Sales and distribution:

Adagio Music
Tanusstraße 32
D-65183 Wiesbaden
Telephone: +49 (0)611 5900728
Internet: www.adagio-music.de



Test-CD

Thomas Dolby
The Sole
Inhabitant

Pronounced bass strings, like on the track „Budapest by Blimp“, are a real sensation with the GamuT system. The live feel of the skilfully recorded concert with all the best tracks of the synth magician demands resolution and an enthusiasm for performance.



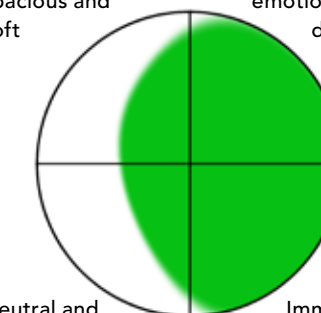
The author

Stefan
Schickedanz

Pays homage to the live feel with electronics from Phonosophie and controls its cabinets in bi-amping mode. However, for more direct control between the amp and speakers, a fully active solution is preferable.

AUDIophile Character

Effortlessly spacious and soft



AUDIophile Potential^{tion}



Recommendation

Above all it is the combination of power stage and speaker which is in perfect harmony. The most room for variation is with the player or the pre-amp stage. Ideal for fans of live sound, not a great solution for lovers of soft tone colours.

Lars Action Hero

Lars Goller, sound guru at GamuT, loves live music and, live only a select few, he knows how to make this demand reality with his products. He inherited his talent from his parents, he gained his comprehensive knowledge of acoustics in part whilst working as a developer at Scan Speak.

Nowadays, when you say the name GamuT, you mostly mean Lars Goller. That said, the mastermind at the Danish Hi-Fi forge is neither founder nor owner of the company in Holbaek. The story is similar to that of a streamlined longship, anchoring in a secure harbour after a long journey through many a dangerous gale. The harbour is called Kvist Industries: a financially powerful company which produces designer furniture and speaker housings, for example, the B&W 800 series. It supplies the half a dozen enthusiasts on the GamuT team with the necessary resources, including its premises, in order to be able to operate successfully. However, with the exception of the speaker housings - which are produced by the parent company - GamuT is a think tank and does not have its own production facilities. The company works with a series of hand-picked special firms who take care of production and servicing

of the premium Hi-Fi components. When Lars Goller, who incidentally speaks perfect German, speaks of the company's beginnings and when he later joined, he is not quite able to suppress a little grin. The founder, Ole Lund, started at the beginning of the 80s with a power amplifier which he developed himself to sell mostly to recording studios. Pre-amps and CD players were added later. The major commercial success arguably came when at the end of the 90s the actual company name „Sirius“ was sold to an American satellite radio provider. Finally, in 2002, Lund had to sell the entire company which has since been renamed GamuT. Business with electronics susceptible to repairs was no longer profitable. New owner Poul Rossing was not happy with the sound of the products. The former development head for speaker giant Scan Speak consulted his friend Lars Goller, who he knew from the develop-

ment department of the well-known Danish speaker manufacturer.

In 2005 Goller joined GamuT and took on half of the shares. Back then, because he was having to spend two days a week in Copenhagen away from the family, in 2006 Goller purchased 100% of the company and relocated it to Jutland. However, Goller was not completely happy until he was out again. In 2009 he sold up to an investor group whose member Kvist Industries took on all the shares in 2010 and contracted him as a freelance consultant. Thus Goller not only has time for his family and sport (he is a youth handball coach) but he can also develop for other companies: „I have numerous customers in the car industry for speaker development and production optimisation“.

But Goller emphasises: „The only company where I make sound is at GamuT“. In principle he can even imagine working



GamuT now belongs to furniture manufacturer Kvist Industries in Arre, Denmark. It is there where the housings for El Superiores are made.

The complete GamuT approach includes the company's own Worm Hole series cables and speaker connectors.

exclusively for GamuT again: „I hope that the company grows enough so that I can dedicate my full talent to it“. And Lars Goller has talent in abundance: His mother was an amateur actress; the sound guru came into contact with jazz musicians via the theatre and was constantly listening to live music. A formative experience, as he found the difference to common Hi-Fi huge - the decisive motive behind his sound philosophy at GamuT. The ability to achieve his goals on the other hand is something which Goller learned from his father, who ran a large car repair shop and encouraged his son to initially gain a qualification as a car mechanic. He later studied engineering. It is perhaps this mixed inheritance of art and manual craft which is the key to understanding what makes Lars Goller tick.



Torben Søndergaard, the man responsible for sales and marketing at GamuT, was Managing Director of Scan Speak from 1991 to 2002. It was together with Lars Goller that he made the company great.



Lars but not least:
Interview with a sound guru

AUDIOphile: After experiencing the GamuT system I would say: It seems you are a big fan of really good bass.

Lars Goller: For me the bass is the foundation for the whole performance. In 1988 I went to Viva as a developer, in 1990 to Dali and in 1992 to Scan Speak. We had the time and money to be able to research and contact with academics like Frank Leonhard who was looking into the processing of sound in the brain. He found out that you make a lot of changes to the frequency response without compromising speech intelligibility. But when an aspect of the energy pattern changes, even small changes are enough and you no longer understand what you are hearing. Bass is the most essential part of music reproduction: It carries everything, all the other information. If it rings, it influences the zero crossing of all the other signals. If the ringing persists for a long time, it destroys the entire energy pattern. Also, live music is not just for hearing; you can feel it through your whole body.

AUDIOphile: I was actually only ever really convinced by really big 36" or 38" subwoofers and fully closed housings. Until the El Superiores arrived.

Lars Goller: At home I also have a speaker I developed myself with a subwoofer of this calibre as a personal reference. But it's not so easy to inte-

grate this type of speaker into the room acoustically as with the S9. With a single driver you get blanking from the first two reflections from the floor and ceiling. We get around this with our two drivers; one at the top and one at the bottom. And as far as bass reflex is concerned, you can even make it react more quickly to pulses than with closed cabinets as long as you balance it properly. It's like the suspension on cars, the function is the same.

AUDIOphile: OK, it's now dawning on me why I instantly liked the El Superiores; it's no coincidence that I have rock-hard sport suspension ... What exactly are the wooden centre pieces in the subwoofers for?

Lars Goller: In simulation we saw that the preferred 10" versions from Scan Speak were not always heavy enough to achieve the required parameters. The wood also makes for rigidity. We didn't want any hard aluminium membranes because it has always been our experience that they add colouration. Wood fibre on the other hand was too soft. So we have the caps milled from the same wood as we use for our housings. However, in order to be exact down to 0.5 to 1 gram me, we weigh every single part and balance out the tolerances with the rubber damping installed behind.