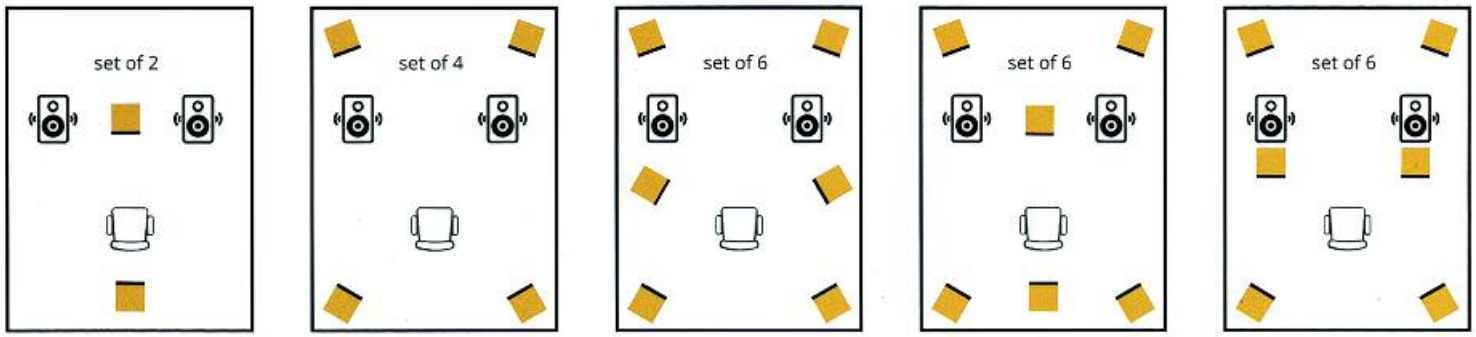
set of 2
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SCHNERZ

Author: Amré Ibrahim Photography: Rolf Winter

The following lines, written with great enthusiasm, cannot adequately convey the astonishing effects that Schnerzinger's new 'Reflector' system can have on the sound in a listening room …

The much-cited 'grey veil'

… just as nutritional information, descriptions and photos are of little use to you if you want to discover the taste of fruit and experience its effect on the body. The only thing that helps here is hearing, mm.., consuming and digesting!

My journey with Schnerzinger began about eleven years ago. At that time, I could not foresee how far my interest in the topic of 'interference fields' would take me. But the steadily improving sound in my listening room forced me to take a closer look at the effects that interference fields have on components and rooms. Two points in particular gave me pause for thought: Firstly, apart from the addition of a few products from Schnerzinger's interference suppression technology range and power and signal cables from the Dortmund-based manufacturer, nothing had changed in the last four years in terms of my digital and analogue source devices, my loudspeakers, my amplifier setup or my listening room and furniture. Secondly, I noticed that I could no longer hear any difference in sound quality when I turned on my system during the day or late in the evening – a contrast that had always been present in all my hi-fi chains and in my former recording studio: it always sounded better at night than during the day, and the more urban and/or close to industrial complexes and busy roads I lived, the 'worse' the sound became. I attributed all this to the considerable fluctuations in power quality in cities and the rapidly increasing electromagnetic pollution from all kinds of devices in the immediate vicinity, as well as from mobile phones, Bluetooth, LAN fields, etc.

The secure transport box for Schnerzinger's 'Reflectoren' is one of the most elegant pieces of packaging I have ever seen. When opened, it exudes the flair of Swiss luxury watches – made in Dortmund. The 'Master' unit (RFMA) and 'Satellite' units (RFSA) included in the set of six are equally well made. The 'boxes' are set up opposite each other in the corners of the room, at a height of approximately 1 to 1.4 metres, because, according to Dirk Klocke, this is where most of the RF interference 'happens'. The setup recommendations are clearly illustrated in the operating instructions


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The Schnerzinger products have changed the game: my hi-fi system now sounds consistently good, no matter when I switch it on. The ongoing exchange of experiences with Dirk Klocke, whom I have come to appreciate as an absolutely reputable developer, not only confirmed my observations, but also made it clear to me that my views were actually quite outdated: for example, whereas ordinary cable shielding used to be sufficient to block high frequencies, today it tends to be more of a target. Some cable designs even act as antennas, scattering high and low frequencies into the signal path of downstream devices. Well, a hundred years ago, there were no power grids as we know them today – not to mention mobile networks, LAN, Bluetooth, etc. – new challenges for humans and the environment.

Above: Each box is equipped with a 'high-gain' antenna specially manufactured for Schnerzinger. This is screwed onto the top of the housing and, due to its directional characteristics, should be aligned with the open joint facing forwards. The Schnerzinger logo on the front should face the listening position. Slight angling can influence the results

Centre: The intensity of the 'cleaning cycles' is set using the two toggle switches on the rear panel and should be determined by listening and comparing – this takes a little time. The circuit board inside the housing is filled with a radiolucent (MRI, X-ray) casting compound that cannot be liquefied again without burning and thus destroying the circuit and components

Bottom: The antenna does not 'transmit' but is part of the receiver unit of the reflector circuit. According to the manufacturer, it picks up electromagnetic interference frequencies up to the three-digit (!) gigahertz range. The 12-volt switching power supply included in the delivery is intended for the RFMA and only needs to be connected to the mains once a year – when a so-called 'reset' is required in connection with the RFSA. The LED on the top of the housing only lights up during this process

You really don't need a university degree in science to understand this. Nevertheless, I must say with great regret that this insight has not yet reached everyone. In this country the prejudgement of products and hostility towards people who communicate publicly about hi-fi topics such as interference suppression, signal and current flow have increased to a more than alarming extent. Yet an honest answer to a very simple question would be enough to instantly demonstrate the absurdity of this behaviour: what is wrong with the human ear as an evaluating authority? Let's be honest: you cannot constantly accuse an entire industry of wanting to cheat consumers in a criminal manner – with 'fake' products and 'alternative science'! Of course, there have always been and still are some rather 'suspicious' products. However, these are neither the norm, nor have they ever been able to achieve widespread acceptance, because there have always been and still are enough rational people who attach less importance to the written or spoken word than to the sound they hear with their own ears.

Companies like Schnerzinger, which enter the market with innovative concepts and products, have a particularly difficult time in Germany, where they are often accused of 'lack of transparency'. Unless they reveal and explain their working methods in detail and document and substantiate them with measurements, they are immediately dismissed as 'voodoo'. Yet it is common practice in every industry, and usually understandable, that trade secrets and the unique selling points of developments are protected from imitators and therefore remain undisclosed. When it comes to technical innovations in particular, all manufacturers are extremely secretive. I daresay that a potential car buyer does not necessarily want to know and understand every design detail before making a

purchase decision. At the end of the day it's the impression gained from the test drive, each individual 's purpose, personal taste and, last but not least, the size of their wallet that tip the scales in favour of a purchase, right?

As far as money is concerned, let's not kid ourselves: an audiophile with an 'average income' will be able to afford a Reflector system from Schnerzinger, at least the set of six that I have here, which consists of one "master" unit and five 'satellites'. It's certainly not a budget proposition, yet that doesn't seem to be a deterrent for a lot of people, because even though the Reflector system hasn't been on the market for too long, it's be coming the best-selling product in Schnerzinger's history. Leaving private individuals aside, I now know of four professional listening rooms belonging to highly reputable, non-'esoteric' high-end companies that use Schnerzinger's high-frequency absorbers – and this is what the Dortmund-based company's latest development is all about – to listen to music.

The reflectors are based on a technology that Schnerzinger calls 'Giga Cancelling Plus'. Behind this marketing-friendly label lies an active noise-cancelling system that is designed to pick up electromagnetic interference and eliminate it using the principle of anti-phase cancellation. Dirk Klocke is keen to emphasise that none of his developments are based on quantum physics or 'energetically informed' concepts, as is often mistakenly attributed to him, but rather on measurable laws of electrical engineering – from signal processing and phase inversion to energy conversion.

A reflector set consists of a 'master' and at least one 'satellite', whereby the master is always also a satellite. It only functions as a master when it is connected to the mains for the purpose of resetting the system and connected to a satellite via a DC extension cable. According to the manufacturer, such a reset is necessary once a year in order to completely reset temporary energy storage that occurs during the conversion of electromagnetic waves. The potential interference 'captured' by the

directional antennas manufactured specifically for Schnerzinger includes not only the 'polluters' listed above, but also the RF generated by autonomous vehicle assistance, radar and satellite systems.

The circuitry of a reflector – with the exception of the 'master' unit, which also houses the aforementioned reset function – consists of a low-latency control unit in addition to the receiver unit, which processes the received interference signal by generating a phase-inverted compensation signal and thereby erasing the electromagnetic waves through destructive interference. The energy generated during this process is converted into electricity and used for the 'drive'. The active, platinum-based circuit therefore does not require a battery and – as is typical of Dirk Klocke's philosophy – does not interfere with the utility signal or use bandwidth-limiting filter technologies and components like capacitors and diodes. This also preserves the temporal integrity of the audio signal, which particularly benefits the low-frequency range that generates the most sound energy. Dirk Klocke therefore recommended that, in addition to placing the reflectors in the corners of the room, I should place a satellite on the floor directly in front of each loudspeaker. In his experience, minimising or eliminating high frequencies in the immediate vicinity of the speakers means that the voice coils built into the loudspeakers operate much more cleanly in the magnetic field.

At the beginning of my positioning experiments, I started with two reflector units, which I positioned at opposite corners of the room from my listening position. In order to achieve the recommended placement height of between 1 and 1.4 metres – according to Dirk Klocke, this is where most of the potential interference occurs – and since I don't have any suitable wall shelves, Schnerzinger provi-

ded me with temporary, height-adjustable microphone stands. After listening for a while, it seemed to me that 1.15 metres, a placement height just above the coaxial chassis of my active loudspeakers, was the sweet spot. However, the results were significantly better when one reflector was positioned centrally between the speakers and one behind the listening position – both at the aforementioned height. Of course, you will now ask me what I mean by 'better'! So I should correct myself, because "liberated" is definitely the more appropriate term: I know of no other product to which descriptions such as 'a curtain that has been lifted' or 'the grey veil that has been removed' are more applicable.

Partnering Equipment

Turntable: Pear Audio Blue Odar, Genuin Audio Drive MK2 **Tonearms:** VIV Laboratory Rigid Float MK2 7', Pear Audio Blue Cornet 3 12', Genuin Audio Point MK2 **Cartridges:** Genuin Audio Sting, Skyanalog G-1 **Headshells:** Acoustical Systems Arché 5D, SteinMusic Ametrin 1, Oyaide HS-TF Carbon **Phono stages:** Rike Audio Natalija Pre 2, Genuin Audio Pearl **MC step-up:** Phasemation T-300 **Preamplifier/DAC:** Canever ZeroUno SE DAP: FiiO M11 Plus Ltd. **Music server:** Genuin Audio Tars **Headphones:** Hifiman Audivina, Hifiman Svanar Wireless **Speakers:** Genuin Audio Ava **Cables:** Schnerzinger Resolution Line AC, XLR, Schnerzinger Essential Line Phono, RCA & SPDIF, Kondo Vc-II RCA & ACc Persimmon, Cardas Audio Parsec Headphone **Accessories:** Turntable mat Black Forest Audio DÄD!MÄT, SteinMusic Pi Perfect Interface, Schnerzinger Operator power strip, Schnerzinger Grid Protector, Schnerzinger Multi Guard, Schnerzinger Cable, Signal & LAN Protectors, Schnerzinger micro fuses, CAD Ground Control, Black Forest Audio SoundPucks & SoundSheets, TAOC racks, Iso-Acoustics Zen bases, SteinMusic harmonisers and Blue Suns, Acoustic Revive RL-30 vinyl record demagnetiser, Audiodesksysteme Gläss vinyl cleaner PRO X, Audio Exklusiv from d.C.d. bases and silent plugs, fastaudio absorbers, Acoustical Systems SMARTractor and HELOX record clamps, Levin Design record brushes and needle brushes, MFE phase testers, UberLight Frame turntable lighting, complete tube equipment from BTB Elektronik

The Reflector system, which took over six years to develop, not only takes individual or specific audiophile parameters to a new level, but all of them! It's like putting a colourful item of clothing in the washing machine and then wondering afterwards why the colours aren't so bright as when you bought it and why you can't see the finest details of the fabric so clearly! Strangely enough, you never noticed any lack of colour or detail before washing it. Similarly, the newly gained quality of signal purity makes it clear, on the one hand, how much 'high-frequency noise' obscures the sonic possibilities of an audio system and, on the other hand, that we never actually hear our signal chain, but only the result of the interaction between our loudspeaker and the room – along with everything in it – including electromagnetism.

In my articles, I usually describe the sound phenomena that occur using specific musical examples. As far as Schnerzinger's reflectors are concerned, I will deliberately refrain from doing so, because a) it is also new to me that the 'liberation' of the sound image has an unrestricted effect on the entire frequency range, and b) you will only believe me if you have the reflectors demonstrated to you or are allowed to try them out for yourself. Instead, I would rather give you a hint: the really 'mean' thing about the Reflector system is that with each addition of another pair of satellites, you can hear how micro-details become even clearer, the localisation sharpness increases, the stage gains depth and the sounds unfold even more naturally in the room. I 'haunted' two friends with the Reflector system, and in both rooms, the set of six ultimately won out. Then there is another aspect that could become a problem for overly impatient personalities: placement and height are not the only criteria that influence the performance of the reflectors. The angle of the directional antennas and, above all, the two two-stage toggle switches on the back of the reflectors, which can be used to adjust the intensity of the cleaning circuits, also have a significant impact on the sound result. To put it bluntly,

you will need to invest time if you want to get the most out of the reflectors.

Before I conclude, let me address the human disruptive forces that roam the relevant internet forums and social media, seemingly with nothing better to do than to rant and rave with their unteachable know-it-all attitudes: No way can you spoil my favourite hobby! Every morning I will get up, look in the mirror with a clear conscience and say: 'Those who can hear have a clear advantage!' Believe it or not, Schnerzinger's Reflector system has what it takes to turn a propeller plane into a jet – in terms of sound, of course. That's why I would like to give this new 'high-frequency absorption concept' the same rating that renowned loudspeaker developer Joachim Gerhard gave Sven Boenicke's 'Swing Base' loudspeaker suspension many, many years ago: For me, it's the 'tuning accessory of the decade'! ▢

Acoustic absorber Schnerzinger Reflector

Principle: High-frequency absorption system with one 'Reflector Master' (RFMA) and at least one 'Reflector Satellite' (RFSA) **Connections:** 1 x DC socket (12 V AC/DC adapter mains connection), 1 x 2.5 mm jack socket, 1 x SMA 50 Ohm antenna socket **Special features:** Reduction of electromagnetic interference frequencies down to the three-digit gigahertz range – based on Schnerzinger's 'Giga-Cancelling-Plus' technology; Circuit with receiver and control unit without the use of filter technologies and energy-storing components like capacitors, resistors or batteries; Solid milled, anodised and lacquer-coated aluminium housing with circuit boards encapsulated in a special, radiation-proof compound; Directional antennas manufactured to Schnerzinger specifications with defined reception characteristics; LED for system alignment display between RFMA and RFSA **Scope of delivery:** 12-volt power supply (exclusively for system reset), high-gain antenna, 3 m DC extension cable (exclusively for system reset) **Dimensions (W/H/D):** 9/9/26.5 cm each (including antenna) RFMA and RFSA **Warranty:** 2 years **Prices:** Upon request

Contact: Schnerzinger GmbH & Co. KG, Heinrich-Sträter-Str. 15, 44229 Dortmund. Telefon 0231/13385015, www.schnerzinger.com