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**AUDIO**  
Issue 11/13  
**Gauder Arcona 100**  
Special Print

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# RENNINGER TOWER

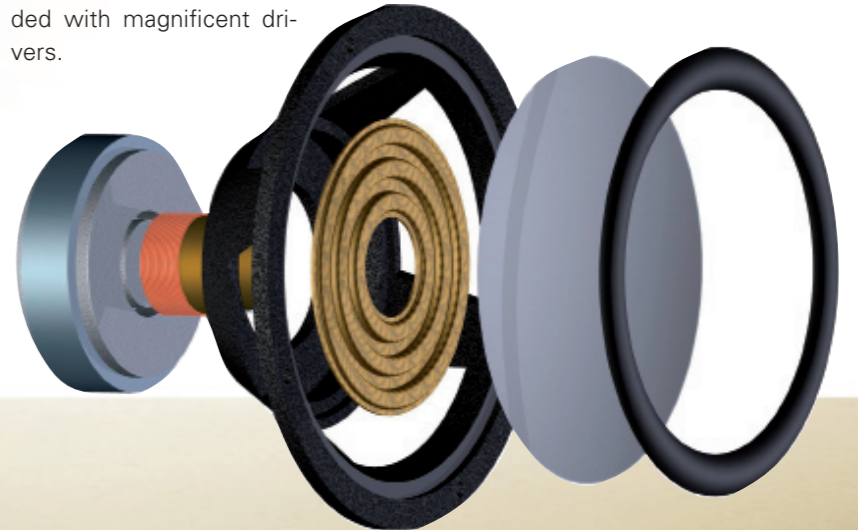
It comes from Renningen. With its elegance, this slender column from the Swabian region of Germany will also fit perfectly well in any big city setting. A question comes to mind. Is there really any reason for further discussion about preferentially buying loudspeakers from a local manufacturer?

■ Reviewer: Stefan Schickedanz

While the Isophon brand is history, the spirit lives on. And how! Designed and now marketed under his own name, Dr. Roland Gauder's loudspeakers bear testimony to two things that distinguished the work of this Swabian physicist even under the old name: expertise and attention to detail. Because this combination resulted not only in a lot to celebrate, but also in high prices, the Arcona Series was introduced somewhat less than a year ago to address the lower tier entry level market. This should of course all be seen as somewhat relative--the Gauder Akustik brand traditionally being associated with higher four figure prices. While Dr. Gauder is no doubt mindful that his terrain usually begins where others give up and leave off, the Arcona 60 and 80 have already proven in tests that they are extremely valid products in terms of intra-brand positioning. Acknowledging that, we received the top model in the series for review, the Arcona 100--but not totally as a blank sheet of paper. For the first time in his designs, Dr. Gauder selected an Air Mo-

tion Transformer as his high frequency driver. In the Arcona Series it is used in conjunction with up to three XPulse diaphragms (LF and/or mid/bass drivers) of identical diameter. The enclosures are tapered toward the rear, and have uniformly curved side walls. This construction offers both an acoustic and a visual benefit. They are clad in perfectly finished white lacquer, and are eye-catchers from every angle. And as all technically astute readers know, the use of non-parallel walls leads to a greater immunity from standing waves inside the cabinet. Elaborate bracing within the enclosures makes the 22 mm thick MDF panels even more rigid. The teardrop shape, curved to the rear, and the rounded corners reduce unwanted reflections and diffraction effects. And a downward firing bass reflex duct was designed to avoid port noise and the muddying effects that it could generate. And the magnificent housing is itself loaded with magnificent drivers.

**ROLAND RESEARCH:** Dr. Gauder's personally 'christened' XPulse cone drivers rely on a composite diaphragm consisting of aluminum with a rear polymer layer for fast impulse response. Extremely steep 50 dB per octave slopes prevent out of band resonances from affecting the music in critical frequency ranges.



**EVALUATION**  
A HIGH-END LOUDSPEAKER FROM GERMANY  
GAUDER ARCONA 100 5800 €/PAIR

**ROOM AND PLACEMENT**

Do not place too close to a wall, and angle-in slightly to give the listener the best listening perspective.



Made in  
Germany



ARCONA-SERIE

GAUDER AKUSTIK gehört im Lautsprecherbereich weltweit zu den Premium-Herstellern. Alle Lautsprecher werden im Werk in Renningen gefertigt – von Hand! Jede Lautsprecherbox wird nicht nur vermessen, sondern auch einem Hörtest unterzogen. Ein hangeschriebenes Zertifikat verdeutlicht dieses Bekenntnis zur Fertigungsqualität „Made in Germany“. Klanglich setzen die Lautsprecher von GAUDER AKUSTIK dank ihren überlegenen Technologien die Trends von morgen: „so viel Klang gab es noch nie fürs Geld“ (Audio 1/2013). Übertreffende Testberichte sowie nationale und internationale Auszeichnungen bescheinigen die Spitzenposition des schwäbischen Unternehmens – und das im Preisbereich von 2.000,- Euro bis hin zum Spitzenmodell, der BERLINA RC 11, um 150.000,- Euro. **Mehr Infos unter [www.gauderakustik.com](http://www.gauderakustik.com)**

The Air Motion Transformer, based on and developed in accordance with the principles set forth by Dr. Oskar Heil, utilizes a wafer-thin foil membrane in which there is practically an inertia-less distribution of energy over the entire surface. As such, the AMT responds so quickly to impulses that it is no longer audible as a working transducer. With this, however, other problems automatically arise. Ultimately there is the challenge of a seamless integration with midrange and bass drivers—drivers whose substantial moving mass and heavier surface areas are acoustically more difficult to hide. High-end ceramic drivers blend nicely—but at a very high price. In the Arcona, Gauder employs one 17 cm (XPulse) driver for the midrange, and two additional 17 cm drivers for bass. There is substantial mechanical driving force for each driver.

Under these circumstances, and in this instance, they succeeded. A unique aluminum-plastic composite structure (maximum stiffness combined with high internal damping) proves to be quite unobtrusive. In contrast to the smaller floor standing Arcona speakers described as 2.5 way systems, the Arcona 100 is a true three-way design, in which the bottom two drivers share the bass workload. In either case or in both, Dr. Gauder worked in a collaborative effort with his Arcona colleagues using ‘all the rules of the art’ to finalize his designs.

And when he had to, Roland Gauder has also been known to resort to drastic measures. The keyword in this case is ‘slope.’ Through brilliant crossover calculations and mechanical measurements of both driver and cabinet parameters, Dr. Gauder—as a physicist—decided on slopes of about 50 dB per octave. In a world where fourth order filtering and 24 dB slopes are accepted as valid, and okay with the audio establishment, Dr. Gauder—the ‘Rebel from Renningen’—has staked his claim to a radical position. He is also one of the few designers in the world who understands phase shift and how to compensate for it in advance with proven corrective measures.

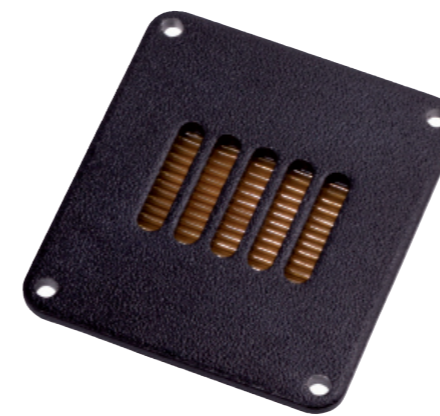
With conical spikes as feet (used with

GAUDER ARCONA 100 5800 EURO/PAIR



protective plates to prevent scratches) Gauder leaves the fine adjustments to its customers (there is even a deluxe metal spike available at an extra charge). But there are far more compelling reasons to want the Arcona 100. When our colleagues at the F.A.Z. (the Frankfurter Allgemeine Zeitung) praised it as a ‘live experience’, these loudspeakers from Renningen took off like a fire brigade. The Air Motion Transformer itself behaves truly like air and love—the opposite of outdated HF drivers, which because of intrinsic shrillness encourage you as a listener to turn the music off. The combination of spontaneous pulse response and the complete fusion of the tonal range—from the delicate and sparkling to the deepest cellar dwelling bass—bass that is palpable but not over-

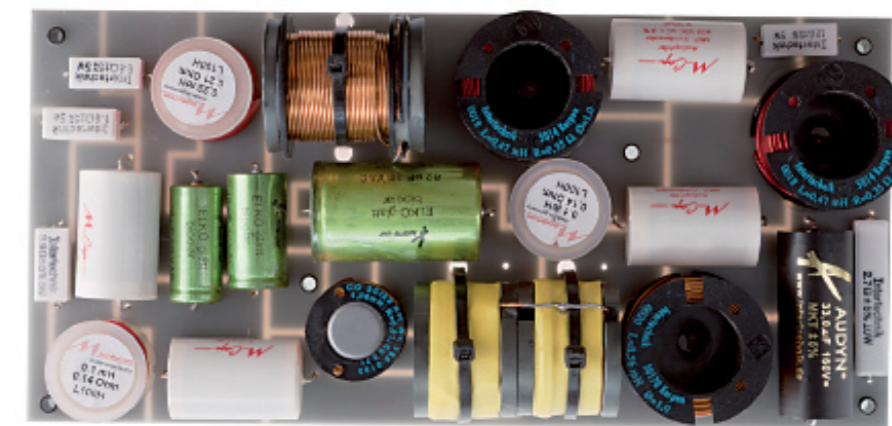
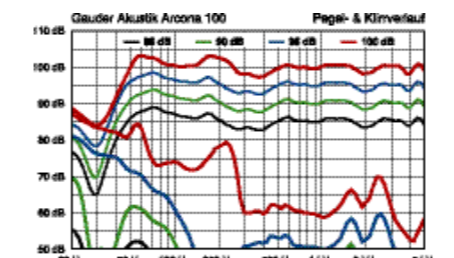
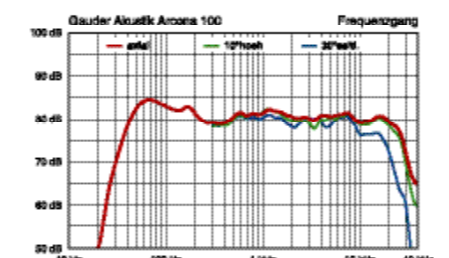
**THE HEIL PROCESS:** To ensure that Oskar Heil’s concepts were realized, a Gauder optimized AMT tweeter is used with specially designed XPulse bass and mid/bass drivers. These drivers are rigid low mass aluminum/polymer composites—to blend and work safely with Heil’s HF driver technology. The result, among other things, is superb musical pacing.



LAB MEASUREMENTS

The combination of a high AK level of 77 and the low efficiency of 80.2 dB speak unequivocally to the need for a powerful and stable amplifier. There is a slight emphasis in the entire bass region, but the low cut-off frequency of 39 Hz (-3 dB) is impressive,

and revealed in the overall frequency response. The decay spectrum shows a rapid fall-off of resonances, particularly in the mid to high frequencies. Here the Arcona exhibits impressively low distortion as it reaches its limit of 98 dB.



emphasized—is a rare treat. Fragile amplifiers, however, should not be used with the Arcona. While the superb T-A PA 3000 HV—as a German companion—with its homogeneity and impulse response, and the powerful vacuum tube Westend Monaco, played music beautifully with the Arcona 100, the otherwise excellent € 550 Marantz PMA-6005 shut down prematurely due to early activation of its protection circuitry. There is a bare honesty, a naked openness, that we can ascribe to the Arcona 100. While a challenge to any amplifier, there is a seductive delicacy to the reproduction of instruments and voices. There is a high degree of transparency, attack, a harmonic resolution of overtones, and all without the least bit of hardness. To round out the wonderful listening ex-

perience, the Arcona also displayed, and staged, an elusive but absolutely alluring presentation of depth and three dimensionality.

CONCLUSION



Stefan Schickedanz  
contributor

**I’ve always found the AMT driver to be good. My issue up to now has been the integration of this leading edge driver with conventional drivers in conventional cabinets. Not so with Arcona. Not only a perfect design, but its finish contributes to its allure.**

**GAUDER THAN ANYTHING:** Gauder Akustik’s approach is totally in contrast with what is currently in vogue in audio—gentle and seemingly innocuous 6 dB slopes. Instead they rely on clear separation and 50 dB slopes, mostly achieved by brilliant and precise calculations.



PROFILE

<b>GAUDER AKUSTIK</b>	
ARCONA 100	
Manufacturer	Gauder Akustik
	0 71 59 / 92 01 61
www.	gauderakustik.com
Suggested list price	5800 Euro / pair
Warranty	10 years
Dimensions	21cm W x 114 cm H x 39 cm D
Weight	29 kg
Real wood / lacquer	• / - / •
Colors and finishes	Piano finish white or black lacquer. Cherry.
Acoustic design	3-way bass reflex
Room adjustment	-
Special Features	WBT NexGen terminals

LISTENING IMPRESSIONS

	Very homogeneous, plays over the entire musical spectrum, temporally perfect and well integrated, very large stage. Highly detailed.
Neutrality (2x)	100
Resolution of Detail (2x)	105
Imaging	95
Three dimensionality	95
Micro dynamics	100
Maximum level	95
Bass quality	90
Bass tightness	95
Workmanship	Outstanding

**VALUE FOR MONEY** 98 PUNKTE  
**EXCELLENT**