

H'st

EXCLUSIVE!

Thiel CS 1.6

TAG 250 MR

Sonus Cremona

Marantz DV-12

audio

m a g a z i n e

Volume 2 No.8

\$\$\$5.00

SPECIAL:

Room Acoustics

REVIEW:

Sony DVP900

Sonic Link Control

Karan KA-i180

FEATURE:

Tag McLaren



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audio research CD 3

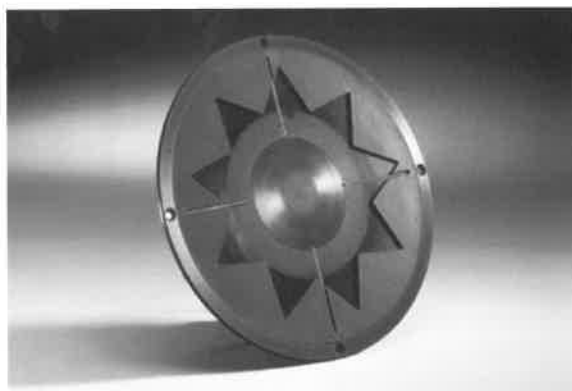
Eichmann eXpress power cords and bullet plug connectors promotion!



Manger Madness

Terence Wong

The principle of the bending waves starts from the center of a plate-like diaphragm and travel to the outside, like the ripples or wave after you throw a stone into the water. The rigidity of the thin flexible panel increases from the center to the outside at an equal ratio. The high frequencies falls off as it approaches the edges of the driver while lower frequency energy emanate around the outer edge. The result is an impressive bandwidth of 80 Hz to 35 kHz. The Manger driver also attains a relatively high sensitivity of more than 90 dB.



A close up of the Manger driver



The result is a unique loudspeaker drive unit that allows the continuity of the frequency response without resorting to multiple drive units, the crossover and the attendant distortion they introduce. The extended bandwidth of up to 35 kHz means it is able to accommodate the bandwidth demands of the new SACD/DVD-A formats. The main drawback of the Manger driver is the cost due to the complexity of manufacture. This would limit its use to more expensive speakers or put it this way, any loudspeaker with Manger drive units are expensive!

The Manger Zero Box 103.3 (\$20,000) featured here is the flagship model with the famed Manger driver. Three Manger drive units are used per loudspeaker in an unusual array of front, inside and outside firing. This is done to ensure that the omnidirectional dispersion pattern is even and 'hot spots' from typical front facing loudspeaker is eliminated. To achieve adequate deep bass extension, two 10-inch front facing woofers per cabinet are used. The crossover point is at 160 Hz and this allows a lighter workload for the Manger drive units. A first order high pass filter for the Manger drivers allows minimal phase shifts while a third order low pass filter is used for the woofers. At four Ohms, the speakers demand an amplifier that is able to handle low impedance even if the sensitivity suggest otherwise.

The 103.3 stands a proud 1.2 metre tall and sports a variety of veneers to match your taste. In this system, the 103.3 is driven by Gryphon's finest, the Antileon pre and power amplifier (*pictured above*). The front end is Marantz's flagship, the SA-1 SACD player (*pictured right*). Supra speaker cables link the system and interconnects are custom made by a friend.

The primary benefit of an omnidirectional loudspeaker is the elimination of the hot spot, the narrow listening position where the frequency response of the speaker exhibits the smoothest and flattest response, for a wider listening area. With an omnidirectional design, you can sit in front of one speaker and you can

still hear the other speaker playing. The imaging may suffer some degree of ambiguity (depending on the nature of the room and its reflections) but the spaciousness is much welcomed. In this system, the listening position (due to the shape of the room) is definitely off axis. Conventional speakers would have been unable to give the same results. Jim, the owner of this system certainly appreciates the 103.3's spatial characteristics over normal loudspeakers.



For those who are keen to know more about Manger, you can check out www.manger-msw.com

