

# MAGNEPLANAR<sup>®</sup>

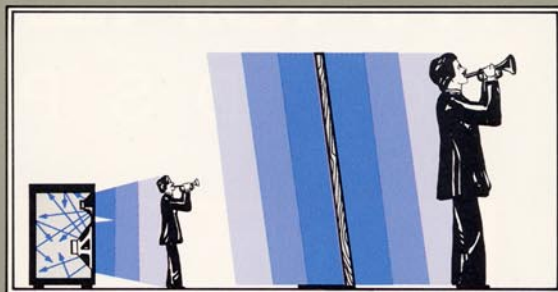
## LOUDSPEAKERS



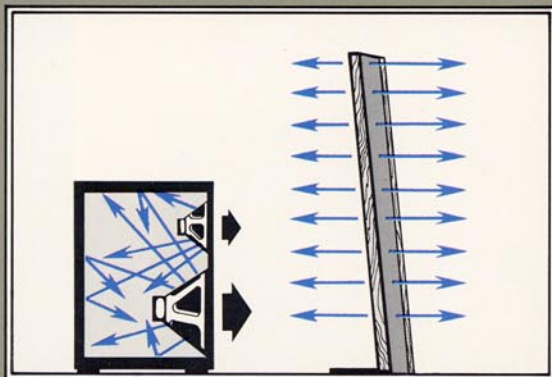
Technology  
Serving Music

# Magneplanar

**IMAGE SIZE**—Instruments projected from small boxes sitting on the floor *sound like* they are coming out of boxes on the floor. This problem can be partially corrected by placing the box speakers on tall speaker stands. However, the sound still seems to be coming out of a box, because that's precisely what it is doing. The patented Magneplanar principle eliminates these problems by a fundamentally different approach to sound propagation. The Magneplanar projects sound from top to bottom, giving the sound height as well as stereo width and depth. In the concert hall, instruments project in all directions. Instead of projecting sound out of a box, Magneplanars project in all directions, which closely duplicates the original performance. With your eyes closed the

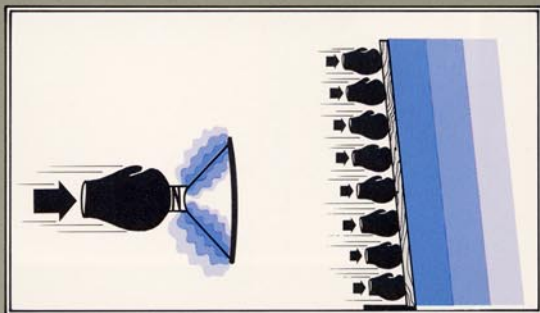


Magneplanar will allow you to "see" the original performance suspended in space. The full height, width and depth of the concert hall can be heard.

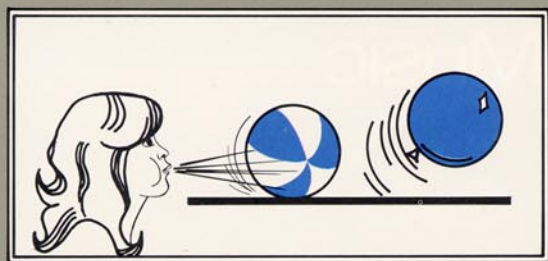


**LOADING**—Theoretically, loudspeakers should use massless drivers suspended in space with no box, magnet structure, or framework around the drivers. Most conventional box speakers are far from this ideal. The mass of the driver is high and the rear wave is contained within the box or magnet structure. While the frequency response can be smoothed out in a box speaker, the character of the sound is inevitably affected. The music sounds like it is coming out of a box—constricted and unnatural. The Magneplanar diaphragm comes closer to the ideal driver. The mass is low and the diaphragm is not contained. The sound is permitted to radiate freely into space. With the box removed, Magneplanars sound more like you are there.

**UNIFORM DRIVE**—The power from the amplifier causes the conventional cone speaker to react as if it had received a sharp blow at the voice coil. Since the outer portions of the cone cannot respond instantly, the cone will flex. The resulting cone breakup gives music a "fuzzy," "blurred" quality. The Magneplanar eliminates cone breakup by driving the Magneplanar diaphragm over its entire area. The force from the amplifier is distributed over the entire diaphragm so that it all moves at the same time. Cone or diaphragm breakup is dramatically reduced and the integrity of the music signal is preserved.



**MASS**—The effect of mass on a loudspeaker can be illustrated by the comparison of a balloon and a beach ball. In the case of the balloon a nominal force such as a puff of air will cause the balloon to



accelerate quickly. When the force ceases, the balloon decelerates quickly. The same force will move the beach ball, but the ball is slower to start and slower to stop. High mass is one of the main causes of sonic degradation in a conventional box speaker. Expecting a heavy cone woofer to move 1000 cycles per second in perfect synchronization with the electrical signal is expecting the impossible. The music is "blurred." The details and texture of the music is lost—the bass is "boomy" or "muddy"; mids and highs sound "nasal" or "raspy." The Magneplanar has less mass than the conventional box speaker; consequently the Magneplanar diaphragm is more in step with the electrical signal. The detail and texture of the music is maintained.



# Loudspeakers



## MAGNEPAN



Magnepan's corporate and manufacturing facilities are located in White Bear Lake, Minnesota, a small community north of the twin cities of St. Paul and Minneapolis. Having rapidly outgrown the original facilities, Magnepan's current plant is over 50,000 square feet, in addition to the corporate and engineering offices.

When production was first started in 1971 the entire speaker was virtually handmade. Today, after more than 130,000 sold, the speakers are made with the same care and attention; but the devices used in the fabrication are much more modern and efficient, affording greater consistency and cost effectiveness. For example, a computerized frame router allowed the older composite wood and metal frames, which incorporated 25 pieces, to be replaced by more rigid, one-piece, high density fiberboard frames.

Magnepan will continue to explore and add any new manufacturing techniques which will improve the construction quality and consistency of their products, which have always enjoyed an excellent reputation for the care with which they were made.



# A Tradition of Innovation and

## Complement Your Decor

Magneplanars provide unique styling not available in box speakers. With optional trim and fabrics, Magneplanar screens can blend or contrast with the surrounding decor, thus forming a backdrop in the same manner as curtains or drapes. With

Magneplanars you have the ability to add a pair of speakers to your living area without adding the visual "weight" of box speakers. Magneplanars are easily moved for vacuuming or repositioning to other listening areas.



## Magneplanar Models

**SMGa**—Incorporates most of the unique qualities of the large expensive models, at an affordable price. This smallest and most popular model is for the serious music lover on a budget and works best in smaller listening rooms. The SMGa can be placed against the wall when you are listening to background music or pulled out 2 or 3 feet to appreciate their full potential. The SMGa is our most efficient model and can be driven with smaller receivers and amplifiers or can be part of a serious audiophile system, utilizing the best of equipment.

The music lover on a budget can now own a music system that will bring him or her much closer to the excitement of a live performance. Available in three trims (oak, brass, or chrome), and three fabric colors (off-white, black, or brown).

**MG-Ic and MG-IIc**—These models are of similar design, both representing excellent value. The MG-IIc is one foot taller than the MG-Ic, providing better vertical dispersion and extension of the frequency extremes. Both models appeal to a wide range of listening tastes. For the classical music enthusiast, the critical midrange of the MG-IIc is often the speaker of choice. Having been introduced in their original versions many years ago, these speakers have benefited from years of gradual refinements.

They highlight Magneplanar's belief that there should be no change for the sake of change. Improvements over earlier versions include a reduction in diaphragm mass, refinements in magnetic structure, improved crossover design, more rigid panel construction, inclusion of bi-amplification option, and improved diaphragm mass distribution.

Both models are worthy of the finest ancillary equipment and source material, and are remarkable in their respective price ranges.



# and Advanced Technology

**MG-IIIa**—Critically acclaimed,\* the MG-IIIa utilizes Magnepan's patented line-source ribbon tweeter in conjunction with the latest generation planar-magnetic midrange and bass.

The 60 inch long, transformerless design eliminates dynamic compression and distortion associated with 2-3 inch long ribbons. The Magneplanar ribbon is bipolar, with near-perfect polar response of 180 degrees off the front and rear at 20,000 Hz. This results in superb image stability, regardless of the listener's position. At 2.5 microns, the Magne-

planar ribbon is the lowest mass ribbon on the market and provides high frequency extension to approximately 50,000 Hz. Full, deep bass into the 30 Hz range is insured by the largest planar drivers Magnepan has produced.

To approach musical perfection in a loudspeaker, all drivers must be of similar overall characteristics—the MG-IIIa achieves this by employing: line-source, bipolar, transformerless, and low-mass driver technologies in both the new ribbon tweeter and the time-tested, planar-magnetic midrange and bass.

\*Ask for a packet of speaker reviews.



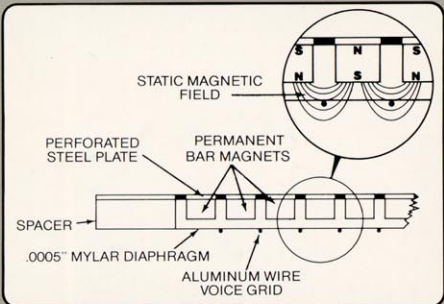
## Magnepan's Design Policy

- ☐ To seek the most elegant, cost-effective solutions to design problems.
- ☐ To design speakers that we at Magnepan, as serious audiophiles, would want to use in our personal music systems.
- ☐ To maintain aesthetically pleasing designs which blend well into the home.
- ☐ To make model changes based on major performance improvements rather than "making changes for the sake of change."
- ☐ To design products that will perform reliably for many years.

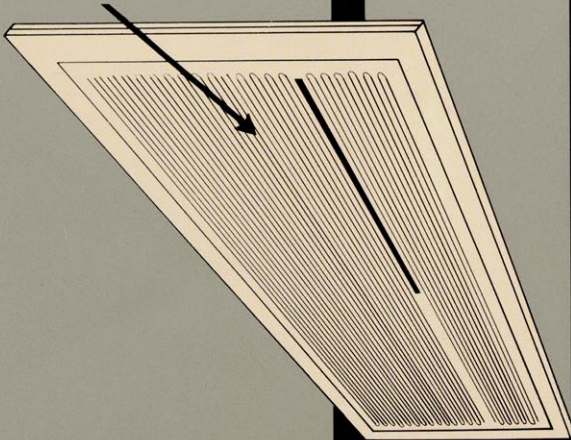


Planar-Magnetic Driver

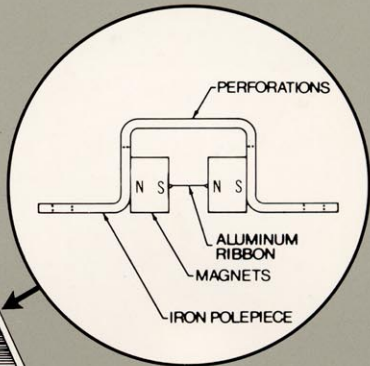
- Low Mass .0005 inch diaphragm
- Bi-Polar Design—No cabinet to color sound
- Direct Coupled—No transformer is necessary. Subtle detailing is maintained with no dynamic compression
- Mirror-Imaged for stable stereo image
- Linear Power Response—No compression of dynamic range
- Superb Power Response
- High Power handling
- Flat Impedance for ideal amplifier loading
- Accurate Phase response



CROSS SECTION MIDRANGE-BASS



Two Unique Technologies



CROSS-SECTION RIBBON TWEETER

Line-Source Ribbon Driver

- Lowest Mass ribbon tweeter on the market
- Direct Coupled—No transformer is necessary. Subtle detailing is maintained with no dynamic compression
- Bi-Polar Design does not close off the ribbon, which allows the rear wave to radiate freely
- Nearly Perfect 360° horizontal dispersion at 20 kHz
- Superb Power Response
- Line Radiator Design allows excellent phasing with Magneplanar's line-source midrange
- Flat Impedance due to "straight wire" design
- Wideband Operation (2-40 kHz)

U.S. PAT. NOS. 4,319,096 & 3,674,946

SPECIFICATIONS

	SMGa	MG-Ic	MG-IIc	MG-IIIa
Description:	2-Way, Full-Range, Planar/Magnetic Speaker System	2-Way, Full-Range, Planar/Magnetic Speaker System	2-Way, Full-Range, Planar/Magnetic Speaker System	3-Way, Combination Planar/Magnetic and True Ribbon Tweeter
Frequency Response:	50 Hz to 18 kHz ± 3dB	45 Hz to 18 kHz ± 3dB	40 Hz to 18 kHz ± 3dB	32 Hz to 40 kHz ± 3dB
Recommended Power:	40 to 150 Watts RMS, 8 Ohms	50 to 200 Watts RMS, 8 Ohms	50 to 200 Watts RMS, 8 Ohms	75 to 200 Watts RMS, 8 Ohms
Sensitivity, 1 Watt/1 Meter:	90dB	85dB	84dB	85dB
Impedance:	4 Ohms, Resistive	5 Ohms, Resistive	5 Ohms, Resistive	4 Ohms, Resistive
Suggested Retail, Including Freight:	\$495/pair	\$880/pair	\$1245/pair	\$1995/pair



1645 Ninth Street, White Bear Lake, MN 55110