



∞ Infinity

**The fine art of musical accuracy in
four remarkable speakers from Infinity.**

Infinity technology: Elegance by design.

It is indeed exceptional when a breakthrough in acoustic technology gives a speaker system strikingly good looks along with a major advance in musical accuracy.

Such is the case with the remarkable series of Infinity speakers described here.

Their softly curving cabinets are crafted of golden oak. And their classic contours are, in large measure, the result of precise mathematical calculations that shape the way they sound.

It's all part of an evolutionary process that began with the creation of our monumental Infinity Reference Standard. It was the first speaker system capable of accurately re-creating an actual *sound-field*. The IRS used revolutionary advances—such as diffraction-minimizing curved cabinetry and unique drivers with correct phase characteristics—so that for the first time a listener could hear a completely three-dimensional sound image. Never before had the subtleties contained in today's finest audiophile recordings been re-created so fully. These subtleties allow one to hear the ambience of a true concert hall, with its precisely defined size, back wall, floor and ceiling.

You'll find most of the exclusive innovations that originated with the Infinity Reference Standard in these four Infinity speakers.

Diffraction distortion is phased out.

Diffraction distortion occurs when sound waves emanating from a speaker's drivers reflect off the flat front of the cabinet. These out-of-phase diffracted waves interfere with the principal sound waves, upsetting the formation of the *sound-field*.

To re-create the *sound-field*, one must preserve the original phase relationships of the recording. One way Infinity accomplishes this is by curving the front of the enclosure so the diffracted waves are directed out of the listening area. Diffraction distortion is further minimized by utilizing beveled edges on the inside of the grille frames.

The result is that the principal wave has virtually no phase interference so that detail and harmonic structure are reproduced with a new sense of clarity and definition.

Listeners can "place" individual instruments in the panorama of the orchestra—front to rear and top to bottom, as well as left to right. Everything is heard. And everything is in proper perspective—like the concert environment itself.

For maximum dispersion, start small.

The laws of physics require that for a speaker to disperse sound widely into a room, the diameter of each driver must be smaller than the wavelength of the sound being reproduced. Unfortunately, in order to move enough air for sufficient loudness, the drivers of most speakers must be much larger than this. So instead of dispersing their sound, they tend to beam it narrowly into the room, destroying any notion of reality.

Theoretically, an ideal way to obviate this problem is to create a point-source—an infinitely small, single driver that would radiate sound



Left to right: Infinity Reference Standard IIIb, 4b, 5b, and 6b. They are sup

in all directions and maintain perfect phase relationships.

While a true point-source exists only on paper, Infinity has engineered its new speakers to serve as excellent approximations. The unique Infinity drivers are always smaller in diameter than the wavelength of the sound they reproduce, so they achieve nearly ideal sound dispersion over the full audio spectrum.

PolyDome. The superior midrange driver—improved.

Infinity's updated PolyDome™ polypropylene rapid-acceleration midrange is our latest

development in dome driver technology. It combines wide bandwidth, phenomenal power-handling capability and wide dispersion.

The PolyDome's distortion is inherently lower than that of traditional midrange drivers due to both its design and materials.

Unlike a cone that's driven only from its center by a relatively small voice coil, the PolyDome is driven around its entire periphery by a coil that's much larger in relation to the driver's surface area. This lets the voice coil control the movement of the dome with greater accuracy so that the musical response more closely mirrors the electrical input.



...lied with dark brown grille cloths, which were removed for this photograph.

Virtually all traditional midranges are formed from either paper, damped cloth, heavy plastics, or metals. These materials are either too heavy, too weak, or both, to follow sudden transient signals accurately. Residual vibrations resonate through the driver, coloring the sound and masking overtones.

Polypropylene is stiffer and has less mass per unit area than damped cloth or paper. Its physical properties effectively damp out spurious vibrations, allowing the PolyDome exceptionally low coloration. The music comes out the way it went in—virtually unaltered by the dome material itself.

Today's PolyDome features several significant improvements over earlier versions. A lower-mass voice coil, thinner dome construction, and greater magnetic field give it higher efficiency and even quicker transient response.

EMIT. Still the ultimate tweeter.

The EMIT™ (Electromagnetic Induction Tweeter) continues to astonish knowledgeable critics throughout the world with its superior frequency response and low distortion. New magnets made from a stronger formulation of samarium cobalt are combined with its almost zero-mass etched planar diaphragm for even

greater efficiency and transient response.

The EMIT's extraordinary range extends up into the important ultrasonic overtones (32 kHz) and its minuscule radiating area approximates a point-source so these musical nuances are effectively dispersed throughout your listening area.

Polypropylene woofers can do a lot for you.

Run your finger along a paper cone. Hear that hollow, "papery" sound? That's the inherent sound of paper—the sound that is added to all of the music that is reproduced by that speaker.

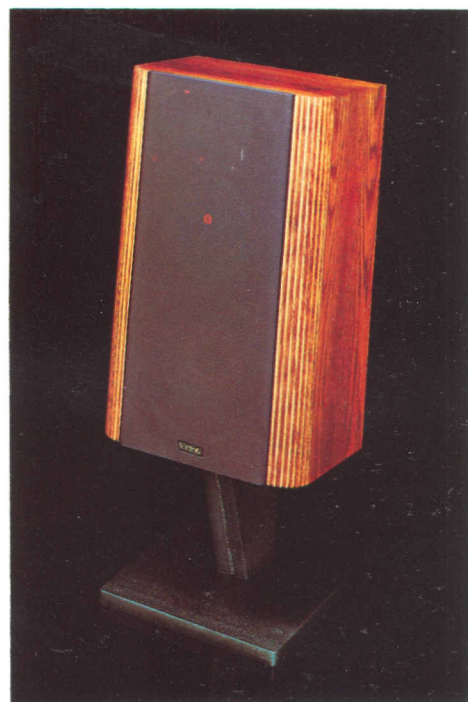
Now rub your finger along an Infinity polypropylene cone. The sound is neutral. Quiet. Nothing has been added. That's why music heard through an Infinity speaker sounds like the original music. With a polypropylene cone, when you put the music in, it comes out music—not music plus paper.

There are other remarkable benefits to polypropylene. Unlike paper cones (which absorb moisture and become sluggish and "dead" in high humidity, dry and brittle in high heat, and are susceptible to damage) polypropylene cones are impervious to heat, moisture, cats, and children.

More improvements for more accurate bass response.

Each of these new Infinity woofers has a new stronger magnet (for improved efficiency) and a longer voice coil (for even lower distortion at low frequencies).

The dual woofer systems in the Reference Standard IIIb and 4b are controlled by a new L-C circuit that minimizes impedance aberrations and extends bass response. Two woofers, rather than a single larger driver, insure optimum dispersion and transient response.



The New Black Pedestal Base places the speaker at the correct height for optimum bass performance and proper imaging. Optional with Reference Standard 5b and 6b.

Our crossovers tie it all together.

Similar to the instruments of an orchestra, Infinity's remarkable driver units are not designed to stand alone. They are carefully crafted to blend harmoniously so that they speak with a single voice. Conducting this ensemble is the job of the crossover network.

Speaker designers generally base their crossover circuitry on idealized calculations and driver locations. But Infinity engineers have gone a step further. Each crossover network is designed and balanced for each individual

driver-enclosure combination. Every system is subjected to extensive listening tests and modification until the frequency and phase characteristics of the entire system are maximized. To ensure the utmost sonic transparency only the highest-quality components (expensive polypropylene capacitors, conservatively rated inductors, and precision resistors) are used.

Listen to a masterpiece.

Audition your favorite composition on any of these Infinity speakers. You'll discover a piece of music you never really knew before—repro-

duced by an elegant expression of the unity of form and function.

That's Infinity. The fine art of accuracy.

Specifications.

These four Infinity speakers share many state-of-the-art technologies. They differ from one another primarily in their power-handling capacity, depth of bass response, and the size of musical image they are capable of re-creating. A listening test will reveal that each of these Infinity speakers can reproduce music with accuracy genuinely comparable to the live musical performance.

	Reference Standard IIIb	Reference Standard 4b	Reference Standard 5b	Reference Standard 6b
Drivers, each channel:	Two 10-inch polypropylene woofers. 1 PolyDome midrange. 1 EMIT tweeter.	Two 8-inch polypropylene woofers. 1 PolyDome midrange. 1 EMIT tweeter.	One 10-inch polypropylene woofer. 1 PolyDome midrange. 1 EMIT tweeter.	One 8-inch polypropylene woofer. 1 PolyDome midrange. 1 EMIT tweeter.
Frequency response:	34Hz-32kHz, ±3dB.	38Hz-32kHz, ±3dB.	42Hz-32kHz, ±3dB.	45Hz-32kHz, ±3dB.
Suggested for use with amplifiers or receivers of:	50 through 200 watts per channel RMS.	40 through 150 watts per channel RMS.	35 through 125 watts per channel RMS.	35 through 100 watts per channel RMS.
Crossover frequencies:	600, 4000Hz.	600, 4000Hz.	600, 4000Hz.	600, 4000Hz.
Nominal impedance:	4 to 8 ohms.	4 to 8 ohms.	4 to 8 ohms.	4 to 8 ohms.
Finish:	Hand rubbed oiled oak veneers and hardwoods.			
Dimensions:	48 inches H x 18 W x 7¾.	42 inches H x 14½ W x 10¾.	24¾ inches H x 15½ W x 10.	22 inches H x 13½ W x 10.

WARRANTY: Five years, transferable (see complete warranty statement).

Pedestals optional for Reference Standard 5b and 6b at additional cost.

Because Infinity strives always to improve existing products, specifications and prices are subject to change.

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We get you back to what it's all about. Music.