MIRAGE® 550

If you don't spend a lot of time listening to speakers in the showroom, you're likely to walk out the door carrying a pair of brash, boomy speakers. Because brash, boomy speakers can sound very impressive at first.

But once you get them home, you may come to the conclusion that you have made a serious mistake. Because that brash, boomy sound tends to get very annoying.

Which is what inspired us to build the Mirage® 550.

SEE THE MUSIC®

Mirage® Soft-Dome Tweeter.

Our goals were more ambitious than just avoiding sizzle and boom, however. We wanted our speaker to reproduce music with all of its sense of space and position intact.

We knew, from listening at concerts, that our ears formed distinct sonic images of each musician's location in space.

Yet when we listened to a recording of that same concert at home, the image disappeared.

Most of the blame lay within the speaker. (Or to be more precise, with the design of the speaker.)

THE TRICKY PART OF REPRODUCTION.

We've found (don't ask how) that in order for a speaker to be able to recreate an accurate image, it has to be able to produce a full range of frequencies that arrive at your ears all at precisely the same moment in time, all in phase with each other, all at the same amplitude, with a minimum of diffraction.

Which is not an easy thing to do.

A CROSSOVER CAN DOUBLE-CROSS YOU.

The part of a loudspeaker that causes the biggest problem is not even the speaker. It's the crossover network.

So we designed the finest possible crossover for use in our 550: the Mirage Multi Time-Constant™ Crossover.

The design problem is to have a woofer and a tweeter make music together, without asking either to produce notes outside of its range. Engineers of previous speakers had found two ways of doing this, each with its pros and cons.

One way is the first order network, which blends the music gradually. This preserves imaging: the time and phase relationships that tell us the size and position of musical instruments.

Other crossovers sharply limit the amount of bass that a tweeter sees, which protects the speaker and increases power handling.

Unfortunately, this degrades the imaging.

We want our Mirage 550 to be transparent enough to reveal the inner detail of a symphony orchestra, sturdy enough to reproduce a rock concert in your living room, and dynamic enough to meet the challenge of today's digital recordings. So the Multi Time-Constant™ Crossover carefully overlaps two different networks. The highs and lows are delicately blended at the points where the woofer and tweeter meet, and then each is cut off where it would produce distortion or speaker failure.

So, when all is said and done, the entire range of sounds, from the kick of a bass drum to the upper harmonics of a violin, is reproduced with a breathtaking coherence and clarity. Of course, a crossover is only as good as the speaker it's connected to.

THE SPEAKER WON'T SPEAK FOR ITSELF.

The woofer is made of filled polypropylene. Because unlike some less expensive materials we could mention, polypropylene is a dead material. (Meaning it will not break up under duress, add its own interpretation to whatever it's supposed to be reproducing, or store energy and release it at inappropriate moments.)

To continue the sounds of silence, the 550 uses the 1" Mirage Soft-Dome. The dome itself is made from a totally inert material - which is the way we want it. It's stiff enough to hold its shape when it's oscillating 20,000 times a second, yet dead enough to stop when the music does, so that resonances don't make your highs harsh and shrill. We surround this special dome with a foam barrier which stops sounds from travelling along the front of the cabinet before passing through the air to your ears. Because music that diffracts along the baffle doesn't sound much like music anymore. We even fill the gap inside the tweeter with a special magnetic ferro-fluid which conducts away heat that could melt your voice coil. So our tweeter stays cool when the music gets hot.

THE DRIVERS TALK. THE CABINET DOESN'T.

No matter how well you make your drivers, you can't make them work as well as you'd like if you put them in an ordinary box. So we make our cabinets from a special high-density particle-board which is much denser than any common wood. Then we seal the seams with a glue even stronger than the cabinet itself. Finally, to prevent the cabinet from vibrating and making a little music of its own, we do something few others do. We support our cabinets with internal cross-braces. So they sit silently while the drivers are playing.

STAND UP AND BE HEARD.

It's not generally known, but your living room floor is a part of your speaker, acoustically speaking. If the speaker is properly designed, the reinforcement from the floor adds a boost just as the woofer is "rolling off," smoothly extending the bass response. For this reason, some excellent speakers recommend a special speaker stand to raise the woofer the proper distance from the floor. We go one step further, and eliminate the stand by building a taller cabinet which ideally positions the drivers *and* provides more cabinet volume for deeper bass response.

IT PASSES SIXTEEN TESTS. OR WE EAT THE SPEAKER.

After all the time and effort we've put into the 550, we are not about to have one let you down. So each 550 gets run through a computer-driven laboratory that tests the speaker at sixteen separate points. If it doesn't pass all sixteen tests, it doesn't pass through our doors.

Which is why we have the audacity to back the 550 with a 10 year limited warranty.

ONE LAST NOTE.

It has been our experience that a great many of the people who buy Mirage speakers are professional musicians.

And while it could lead us to believe that people who live for music are in the best position to appreciate properly reproduced music, we suspect there is something else at play.

Musicians like to see live concerts, too.

H	(31½ in.)	80.0 cm.
W	(12¼ in.)	31.1 cm.
D	(9¼ in.)	23.5 cm.
Net	(37 lbs.)	16.8 kg.
Gross	(43 lbs.)	19.5 kg.

IMPEDANCE	6 ohms
SENSITIVITY	91 dB
CROSSOVER FREQUENCY	4
RECOMMENDED AMPLIFIER POWER RANGE	15-120 watts

mirage

SEE THE MUSIC.™

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Printed in Canada