

# The Speaker.

Rather than starting with an existing speaker, Yamaha began with a speaker idea.

A speaker system with the lowest distortion and coloration, and the best possible transient response.

Instead of merely modifying one, Yamaha has re-invented it. And in doing so, has improved every aspect of speaker design.

We call it the NS-1000 M Monitor.

## Transparency and The Dome.

Existing technology has largely solved a major problem of speaker design through the use of the acoustic suspension driver: extended frequency response. Today, what's missing from most sound in most people's living rooms is something a touch more subtle. It's called transparency.

The hemispheric dome tweeter allows a wider dispersion of high frequencies.

But the dome's own material weight causes it to lag behind the input signal. It simply doesn't respond fast enough, creating an opaque, masked sound that lacks fine detail and definition.

The ideal dome material for midrange and high frequency drives would be extremely rigid and, most importantly, virtually weightless.

## Introducing the Beryllium Dome. Why did it take so long?

After all, beryllium is the lightest, and most rigid metal known, and has a sound propagation velocity twice that of commonly used aluminum.

**Beryllium is lighter and stronger and propagates sound better than other metals.**

	ATOMIC WEIGHT	RIGIDITY ELASTIC MODULUS kg/mm <sup>2</sup>	SOUND PROPAGATION velocity m/sec.
BERYLLIUM (Be)	9.013	28000	12600
MAGNESIUM (Mg)	24.32	4500	5770
ALUMINUM (Al)	26.98	7400	6420
TITANIUM (Ti)	47.90	11000	5990
IRON (Fe)	55.85	19700	5950

But because of beryllium's inherent characteristics, it resisted attempts by any manufacturer to form it into a diaphragm, let alone a dome.

Until now.

The New Yamaha Beryllium Dome, formed by Yamaha's unique vacuum deposition process, is lighter than any other speaker diaphragm found today. So it's more responsive

to direction changes in amplitude and frequency of the input signal.

Dome Tweeter Comparison			
	SIZE OF DOME	THICKNESS	WEIGHT
YAMAHA NS-1000 M (BERYLLIUM DOME)	3 cm	0.03 mm	0.03 g
TYPICAL SOFT DOME	3 cm	0.3 mm	0.1 g
CONVENTIONAL DRIVER	2.5 cm	0.45 mm	1.03 g

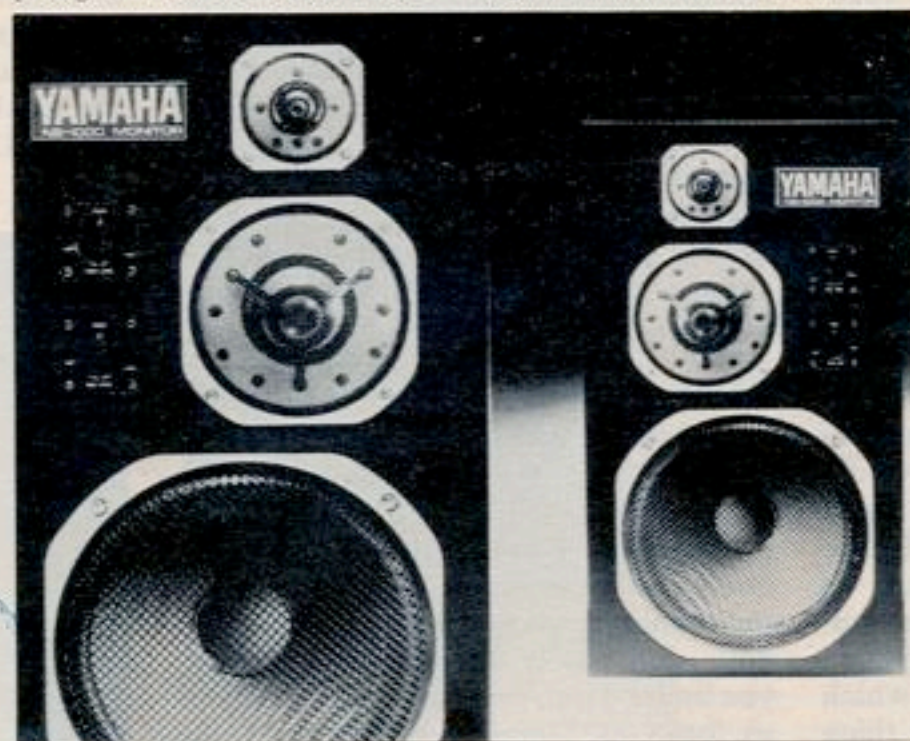
This is called transparency. It can be noticed best in complex musical passages and can be best described

possible for a midrange driver. It extends the linear portion of its response curve.

The midrange driver's frequency response is so wide that we can select only the choice flat section of its frequency response, thereby eliminating the peaks and valleys most competitors are forced to use.

The Beryllium Dome creates simply the flattest response; least colored, most natural sounding midrange of any speaker around.

Carefully designed acoustic equalizers flatten the frequency



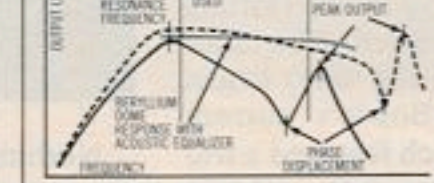
as highly defined and finely detailed. Only Yamaha has it.

## Midrange: The Voice of Your Speaker.

It's no secret that between 500 Hz and 6 KHz is where most audible differences in speakers occur.

It's where we hear the human voice, and it is the hardest part of the frequency spectrum to reproduce accurately.

Once again, beryllium solves the problem of uneven response. Since it's so lightweight, the dome can be made larger and lighter than before



response curve even further.

The NS-1000 M Monitor is so accurate that you may even hear enhanced detail in a recording you once thought already perfect.

## Re-thinking the Woofer.

Some respected speaker manufacturers buy their low frequency drivers wholesale.

Yamaha doesn't buy them. We make them.

Even the very cone material itself was researched and developed and manufactured specially by Yamaha. (It's made much more dense than most cones. That means a tighter, cleaner sound.) And the frame is cast in our own foundry so we can control quality.

A plucked string of a bass sounds like a plucked string bass note.

Instead of a dull thud.

## The Tangential Edge and Other Extras.

Yamaha designed a special suspension

system that holds the beryllium dome to the speaker frame with less contact allowing it to move more freely. It's called the Tangential Edge. (You may not hear the difference at first, but you will.)

The crossover system was specially designed to have a very low DC resistance, increasing the system efficiency.

Most highly accurate systems need a large amp to drive them properly. The NS-1000 M Monitor requires only 15 watts RMS to fill an average room with loud music, yet can handle RMS power outputs exceeding 100 watts.

## By Our Own Skilled Hands.

Yamaha's philosophy is one of self-reliance.

That's why, for example, we build the critical speaker components (like cone materials and speaker baskets) rather than purchase them.

That includes the speaker enclosure made from material designed for anti-resonance characteristics. (Our piano making experience was essential here.)

There are enough speaker system modifications and copies around, already.

## Proudly Presenting the NS-1000 M.

It's not inexpensive or easy to find. The NS-1000 M is sold as right and left-hand units, and by the pair only.

They cost \$960.00 the pair, when you can get them.

Yamaha is making them as fast as we can, but you may have to wait a short while until your Yamaha Audio Dealer has a pair for you to audition. (He also features Yamaha speakers based on the same technology and quality at less money.)

Patience, please.

## Part of the Yamaha System.

The NS-1000 M Monitor is the ultimate air suspension speaker system.

That is a strong claim to make. In the future, Yamaha will present the ultimate power amplifier, tuner, preamplifier, and turntable.

Actually advancing the state-of-the-art of the major components of a music reproduction system.

In short, the ultimate system. We're convinced that no matter what you think is the best today, we'll make you dissatisfied with it.

Don't say we didn't warn you.