

YAMAHA NS-10M

YAMAHA  
MODEL NS-10M

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Archiv Michael-Otto*

The audio world's greatest  
small accomplishment

# Big sound that fits anywhere

Whether to select a large or a small speaker should not depend so much on size, but rather on whether the small speaker has accurate sound characteristics and sound quality equal to larger speakers. The new Yamaha NS-10M is one small speaker that can deliver great sounds with the best of the bigger speakers—and as such it has dramatically changed the audio world's thinking about small speaker performance. The sound: all Yamaha. Clear, smooth treble. Solid bass. Luxurious mid-range. So even though this is our smallest speaker, you get sound quality comparable to large floor type speakers and even studio monitors like our outstanding NS-1000Ms. Impressive. To accomplish this, we built some equally impressive features into the NS-10M—precision soft dome tweeter, left-right symmetrical design, all-wood finish, an efficient 90 dB sealed system.

For all its great sound, the NS-10M measures just 15" (H) x 8-1/2" (W) x 7-7/8" (D) [382 x 215 x 199 mm], making it the perfect speaker for areas where you have to compromise on space but refuse to compromise on sound.

Give it a listen. Compare it to even large speakers. You'll hear what we mean when we say the Yamaha NS-10M is the audio world's greatest small accomplishment.



## Soft-Dome Tweeter for Caressing Highs

One important reason for the NS-10M's big-speaker sound is the use of

a 1-3/8" (3.5 cm) diameter precision soft dome type tweeter. This offers several advantages. First, the dome shape of the diaphragm maximizes the tweeter's dispersion characteristics. Second, the precise softness of the dome absorbs harmful resonance from the diaphragm to produce a natural tone quality with negligible distortion.

The diaphragm is uniformly coated with a resilient heat-hardened resin by a special process to obtain the ideal combination of softness and durability. In addition, the accordion-pleated tangential edges are formed as a part of the diaphragm to prevent volume changes due to adhesives.

For a 2-way speaker, the NS-10M features low distortion throughout its entire wide range, together with high sound accuracy and impressive volume, thanks to the superior performance of this remarkable soft dome tweeter.

## Light, White Cone Keeps the Music Clean

The lighter the cone, the better its ability to move in response to delicate signals and thus capture the subtle nuances of every sound. This is particularly true when a sensitive tone arm and cartridge is being used. Here, too, the NS-10M excels. Because the NS-10M's 7" (18 cm) woofer incorporates imported wood processed in a special way for optimum response. The cone is a conical straight type for good movement, and weighs a mere 1/8 oz. (3.7 grams). Consistent sound quality is further

enhanced by more uniform thickness and density of the cone material by sheet manufacturing.

The white cone's lightweight woofer, then, is the second reason for the NS-10M's impressive sound quality.



## Sealed Enclosure Promotes Solid Bass

The third reason for the amazing sound depth of the NS-10M is its genuine sealed type construction. With the sealed type air suspension method, the air acts as a spring to control the cone paper by expanding when the cone paper moves out and contracting when it moves in. This gives greater power to the speakers to produce a bigger sound, and the low sounds can be boosted even further through the speaker's tone control. Further, the mechanical resistance of the edges has been minimized to produce

superior linearity, expansion of low sounds, and natural tones.

Sealed type construction—it's the best way to build a small speaker. As one listen to the NS-10M's great bass sound will convince you.

## High Efficiency and Power-Handling Capacity for Vibrant, Powerful Reproduction

The NS-10M owes much of its powerful reproduction performance to a perfect blend of efficiency and power-handling capacity. You get the most out of any amplifier—large or small. The performance of amplifiers with smaller power output is enhanced by the NS-10M's 90-dB efficiency level, while 50-watt power-handling capacity means that even amps with fairly large output won't cause any breakup or distortion. The balance is just right to fill even large listening areas with clean, unstrained music.

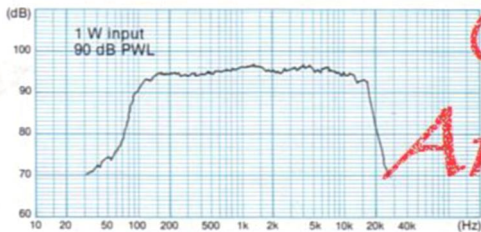
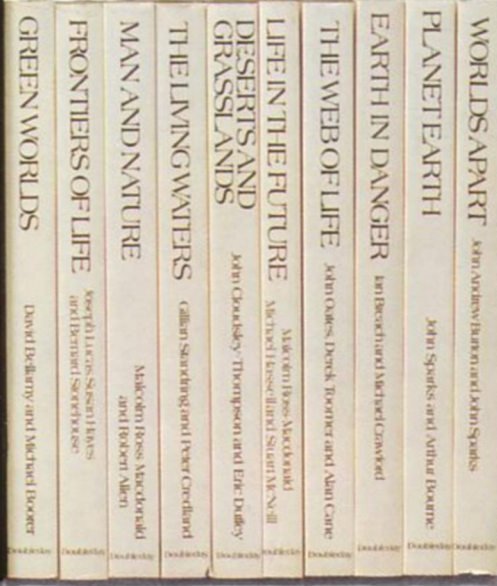
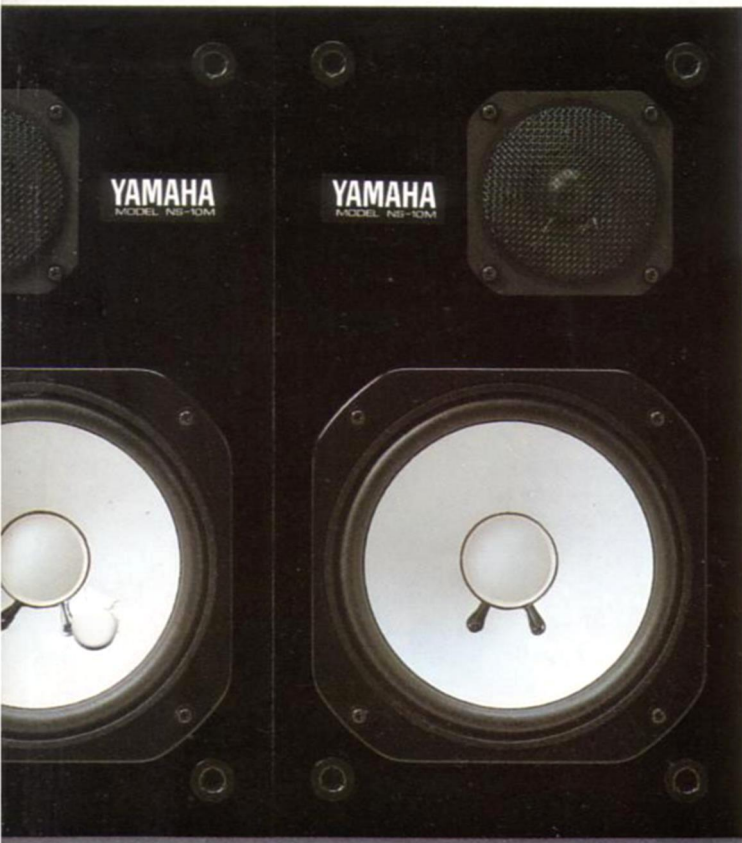
You can choose your system with confidence—the NS-10M brings out the best in any amplifier, with overwhelming sound depth and richness.

## Dynamic Power Distribution

The NS-10M's outstanding power response characteristics are another reason behind its great sound. To achieve the optimum response characteristics, Yamaha not only took line measurements



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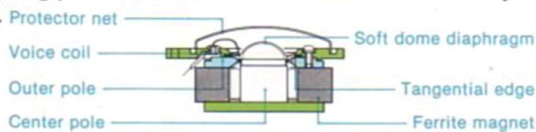
of the frequency and efficiency at the front of the speaker in an anechoic chamber, but also measured the total energy radiated in all directions in a reverberation chamber.

As a result, the high-efficiency 90 dB response provides incomparable listening pleasure for speakers of this size.

### Low Distortion, Silky-Smooth Response

The precision soft dome tweeter of the NS-10M is formed as a single unit with the tangential edge, a combination weighing just 1/50 oz. (0.6 gram).

A large ferrite magnet is used to produce a strong magnetic field of 14,000 gauss, which, together with the 1-3/64" (27 mm) voice coil incorporating heat-resistant copper-clad aluminum wire and the lightweight bobbin, delivers high-resistance input and high efficiency. The outer pole is provided with air holes to



allow air to enter and leave for smooth movement of the diaphragm. As a result, the frequency range is an impressive 1.5–20 kHz, and distortion is low. The directional characteristics are also superb due to the small diameter of the dome.

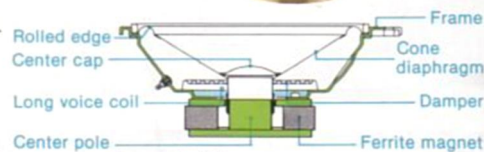
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### Bigger Bass Response from a Better Woofer

The NS-10M utilizes a sheet-constructed white cone to optimize the piston

range and cone movement. The 7" (18 cm) diameter conical straight type cone weighs only 1/8 oz. (3.7 grams). Despite its size, sheet construction density and thickness are uniform, and the cone has a supple body for powerful, massive lows.

A large ferrite magnet produces a powerful magnetic circuit of 10,800 gauss. And thanks to the use of a voice coil with heat-resistant copper ribbon wires wound edgewise and a lightweight voice coil bobbin, efficiency and high input resistance are superb. A high compliance rolled edge is adopted to minimize the influence of temperature changes, and features high flexibility for greater response.



### Top-Design Crossover for Outstanding Definition

Yamaha's speaker design technology is drawn on fully to ensure unsurpassed music quality. For instance, the entire circuit is designed to minimize distortion and prevent deterioration of transients as they pass through the network. And MP (metallized paper) condensers and top-quality materials are used in the network to ensure sound that will satisfy even the most demanding audiophile.

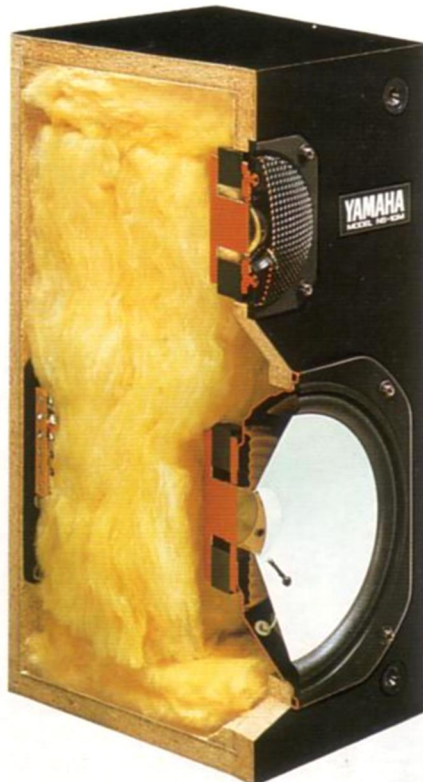


### Perfectly Balanced Sound Symmetry

The NS-10M is the only speaker of its size with the professional left-right symmetrical design. This is not a gimmick—it's the best way to set up a small speaker system to obtain big-speaker sound. By distinctly separating the left and right channels in the speaker system itself, stereo performance is greatly enhanced, so that even if the speakers are on your bookshelf they deliver concert hall sound quality. This high-quality left-right symmetrical design makes the NS-10M decidedly different from other small speakers. Where it counts. In the sound.

### Super-Solid Construction, Super-Solid Sound

The final reason behind the NS-10M's



sound superiority is its solid cabinet construction.

The tonal quality of the speaker is greatly influenced by the material used for the cabinet, its thickness and shape, and its acoustic qualities. And for speakers with sealed construction, like the NS-10M, the cabinet must be airtight.

For the NS-10M, a special high-strength adhesive is used at all joints to produce a single cabinet of exceptional rigidity. In addition, filling materials have been selected for their acoustics, based on Yamaha's experience in making musical instruments such as pianos and guitars, to skillfully utilize resonance to obtain the greatest projection. The result—a noticeable improvement in sound response, density, and presence compared to other small speakers.



## SPECIFICATIONS

Speaker Type	2-way bookshelf
Frequency Response	60 Hz to 20 kHz
Power Handling Capacity	25 W continuous, 50 W maximum
Nominal Impedance	8 ohms
Sound Pressure Level	90 dB/W/m
Woofer	7" (18 cm) white cone

Tweeter	1-3/8" (3.5 cm) soft dome
Crossover Frequency	2 kHz (12 dB/oct)
Cabinet	Real wood, black finish
Dimensions (H x W x D)	15" x 8-1/2" x 7-7/8" (382 x 215 x 199 mm)
Weight	13 lbs. 3 oz. (6 kg)

Specifications subject to change without notice.

For details please contact:

SINCE 1887



# YAMAHA

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