

THE RHUMBA LINE

HS 80M + HS 50M
+ HS 10W

Yamaha HS powered monitors? Oh, yes.

by Glenn Bucci

There's been a lot of talk about these monitors, especially the HS 50Ms. They're close in size to Yamaha's famous NS10Ms, and look similar as they also have a white woofer. So are they the same, and do they sound as good?

Let me start off with saying it's not possible for the HS 50s to sound like the NS10Ms. For starters, NS10Ms have a sealed baffle design while the HS 50Ms are rear ported. Sealed boxes have a different distortion profile compared to a vented box. The new HS series also have different cone material and crossovers. Every cone material has its own signature so you'll get a different sound with each material. NS10Ms have fast impulse response and gentle phase shifts with the low frequencies. Though this design can be helpful, generally the bass response in a sealed cabinet is limited. On the other hand, ported speakers have an advantage in loudness, transient response and enhance bass extension. The entire HS series has ported cabinets, so these monitors give you the benefits of the ported design, which has a different character compared to the NS10Ms. And if you're interested in high-quality, sealed designed monitors, one option is to look into the Harbeth 20 monitors that are used with the BBC.

Ok, now that we got that straightened out, let's check out these new monitors.

HS 50M

The HS 50Ms are 2-way powered monitors that have a class A/B design. The frequency response is 55Hz-20 kHz (-10dB). The crossover frequency is at 3kHz. The dimensions are 165mm x 268mm x 222mm (6-1/2" x 10-9/16" x 8-3/4") and each weighs 5.8 kg. There is a 5" polypropylene-cone bass/mid-range driver, and a 0.75" dome for the high frequencies. The cabinet is made of MDF and is painted black. These speakers are magnetically shielded, which allows them to be near CRT monitors.

On the back of the monitors starting from the top, there is a volume knob that's

smooth and easy to adjust. Below that are the balanced phone jack and XLR connection. The phone jack also accepts unbalanced connection as well. In order to tailor these monitors to your room, there is a mid EQ with a "-2dB," "0" (flat), and "+2dB" setting. Underneath this is a room control switch.

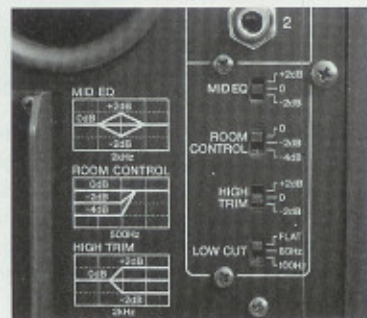


Yamaha states this corrects the low-frequency exaggeration caused by reflecting off ceilings, walls and floors. (Damping material for rooms will be discussed later).

There's a "0" position for a flat frequency response, a -2dB, which decreases the range below 500Hz by 2dB. They also included high- and low-cut switches. The high trim has a "-2dB," "0," and "+2dB" controls, which affect the range above 3kHz. The low cut switch can cut low-frequency range at 80Hz or 100Hz. There's a power switch, which illuminates a white light in the front of the cabinet when turned on. Lastly, there's an IEC socket to connect a power cord to.

HS 80M

These are also 2-way powered speakers with a class A/B design that have a frequency response of 42Hz-20kHz (-10dB) with a crossover at 2kHz. The dimensions are 250mm x 390mm x 322mm (9-13/16" x 15-3/8" x 13-1/16") and weigh in at 11.3 kg. The speaker has an



8" polypropylene-cone bass/mid-range drive and a 1" dome to handle the high frequencies. Like the HS 50M, they are made out of the same MDF material and has straight lines on the square box. The rear panel has the same controls as the HS 50Ms. These monitors also have magnetic shielding which helps when near CRT monitors.

HS 10W SUBWOOFER CLASS H

The HS 10W is a powered class H subwoofer that measures 30mm x 350mm x 386mm

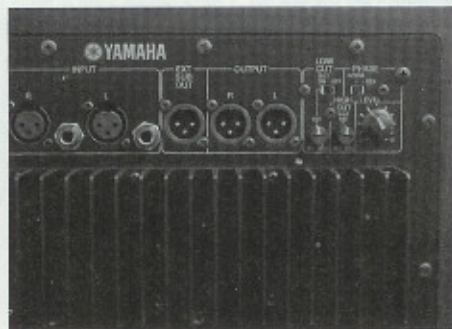
▲ Turn off here before ending. ▲

Gearhead Gearhead Gearhead Gearhead



(11-13/16" x 13-3/4" x 15-3/16") and weighs 12.5 kg. With class H, the rail voltage is modulated by the input signal. One advantage of H class is the power supply rail is a bit higher than the output signal, which keeps the voltage across the transistors small and the output transistors cool. The cabinet features a front-facing port and contains a single 8" polypropylene-cone driver powered by a 150-watt amplifier. The frequency response is 30Hz–180Hz (–10dB). This unit also has a combination of jack/XLR inputs. This subwoofer is front ported, and also includes a white light indicator in the front to let you know when it's on.

On the rear of the unit are left and right inputs that have balanced phone and XLR



input connectors. There's an external sub out connector in case you want to add a 2nd subwoofer. (There are those like Bob Katz who use two subwoofers in their studio, which can help you hear if the bass instruments go up or down while you're in mono.) There are left and right output jacks, a low-cut switch that you set on or off. The low-cut control allows you to set from 80Hz to 120Hz. Next to it is a high-cut control to set the cutoff frequency of the output from 80Hz to 10Hz. There's then a level control and a phase switch. Lastly, there's an IEC socket to connect a power cord to. As you can see, Yamaha wanted to make these monitors user friendly in your studio by giving many options to help optimize the monitors for your setup. It's important to make sure that if you hook up the HS 50s along with the HS

100W for example, the HS 50s low cut setting should be in sync with the settings you have with the subwoofer.

SUBWOOFER GOES WHERE?

Many people with a subwoofer tend to have the volume too loud in their studio. The goal is to have a proper balance between the highs, mids, and lows. It's important to have your studio treated with absorption material since reflections off walls and ceiling become a problem. In regards to bass frequencies, they tend to get into corners and prevent you from hearing a clear representation of your music. Company's such as Auralex and Real Traps have absorption material that you can put in your room to reduce reflections off surfaces. I cannot over emphasize the importance of treating a room. Lower frequencies need separate bass traps, as the mid- and high-frequencies need different treatment compared to the lower frequencies.

Where do you put a subwoofer in your studio?

One problem you need to deal with is standing waves. A common technique is to put the sub in the monitoring position, and then crawl around the floor near the walls. Listen for the place where the bass frequencies sound balanced and even. Generally it's good to put it underneath the wall behind and between the main speakers. This way it has the least negative effect on stereo imaging. I spent about 15 minutes getting the

QUICK PICK

Head Gearhead Gearhead

HS 10W to its proper place on my floor. The subwoofer was about one foot away from the wall. By moving the monitor one foot left or right made enough of a difference to capture the sweet spot. In working with the sub with the other monitors, I spent the time to adjust the volume knob to get an even sound with the mids and high frequencies. In my setup, the volume knob worked well around the 11 o'clock position in my studio. Like I said before, the bass should not dominate the mix but blend in with the mids and highs. I found the subwoofer to feel solid, with a good weight.

LISTEN UP

I set up the HS 50s near field monitors and listened to them through several of my mixes, as well as commercial CDs. I recommend not placing these monitors on a meter bridge, but on stands behind your mixer. I first tried them with the switches set at the "0" (flat response) settings. I found the high end to be crisp, giving good detail with the mids sounding slightly boxy. I preferred the mids in the flat position. The bass was reasonable for a monitor of this size, but there are similar-sized near-field monitors that produce more bass than the Yamahas.

Sam Ash Music was kind enough to let me borrow **M Audio's BX5a's** near-field monitors to compare against the HS 50s. The BX5a's had a stronger bass response, and a more open sound. The highs were a little splashy, but all in all a

decent set of monitors. The HS 50s gave a tighter sound, and though it has a lighter bass, I preferred its tweeter, which gave a smoother sound over the M Audio. In comparison with my Tannoy System 800s, the DS 50s allowed me to hear a brighter high end that stood out more in my mixes. The BX5a's do not offer all the adjustable switches that the Yamahas offer. In being able to get active monitors for only \$400, I found the HS 50s to be of good value. However, if these were my only monitors, I would be reluctant in buying them without the subwoofer, as I found the bass is too light. However, in using them as a second pair of monitors in a studio, they could assist in giving a different insight on the mid and high frequencies.

The subwoofer had a very clear solid sound. When using the subwoofer with either the HS 50s or HS 80s, I found in my studio I preferred the low cut switch set at 100Hz, which gave a more solid sound. However, the size of your room and the amount of sound absorption material will affect which settings would be best for your environment. At normal listening volumes, the bass had a solid, full sound. It gives a reasonable extension for a cabinet of this size. With all the settings offered on the sub, I found it to be very flexible as well. With my **Presonus Central Station**, I was able to solo the sub, as well as adding it with other monitors. The HS 50s I found by themselves sounded a little boxy and two-dimensional.

Gearhead Gearhead Gearhead Gearhead G

When I added the sub woofer, I heard a fuller sound that had a three-dimensional sound. The music had more punch and the music sounded more alive. In using it with the HS 80s, it also added additional bass response, giving a deeper tone compared to the HS 80s on their own. However, the HS 80s still gave a decent bass response by themselves.

In comparison with the HS 50s, I found the HS 80s had a very similar sound and character, however the 80Ms had more of an open sound. With a larger cabinet and woofer, it had a deeper bass response. These monitors may be a better option if you don't

have the money to purchase the HS 50s and HS 10 package. The HS 80s high frequencies sounded more even with the mids and bass compared to the HS 50Ms. In looking at the specs, the tweeter on the HS 80s is a little larger than what is offered on their smaller monitors. In order to compensate, I reduced the high end on the 50Ms to -2dB. With this setting, I found the HS 50s to have a closer sound to the 80Ms. I also found myself preferring this setting as they sounded more even with the mids and not overly bright.

All the monitors come with a manual that explains details of the monitors and

specs. They also go into detail about the placement of the monitors and how to use the subwoofer with the other HS series monitors. For the price and value, Yamaha has offered some decent-sounding monitors. For a pair of active monitors with enough bass, the HS 80s are worth considering if you're on a tight budget. For more bass, a tight mid-range, and a nice high-end, you may want to consider looking at the HS 50s, and HS 10 as a full-system package. Of course, if you work with dance music, you may want to *add* the HS 10W with the HS 80s, as well for any additional bass that may be required.