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# Yamaha DSR Series DSR112 and DSR118W

By: Mark Johnson

As the economy continues to present challenges (that's a nice way of putting it), having products that can serve more than one function is key in today's marketplace. In the audio industry, digital mixers are prime examples. A single digital console can mix house, send a monitor mix, send broadcast stems, provide basic system alignment, provide a front end for multi-track for recording, and add powerful effects processing to the mix.

Now what about loudspeaker systems? Enclosures with drivers loaded in them—they're just speakers, right? More manufacturers are producing loudspeaker systems that can be used in multiple situations. Their quick-and-easy setup makes them ideal for AV support for corporate events, hotel AV, DJs, houses of worship, and solo or small ensemble musicians. These are primarily portable systems that can be installed, if desired; they can be used as main systems or monitors; and are available at an attractive price point. While not capable of full-on large-scale pro audio applications, these systems provide a cost-effective solution for small-to-medium sized applications, filling a much-needed gap. No large arrays here, just basic systems that are easy to set up and easy to operate. Furthermore, with all the obvious advantages that self-powered loudspeakers have to offer,

it's no wonder that these systems often are self amplified—particularly with the advancements in packing powerful DSP and just-as-powerful amplifiers in relatively small and light-weight packages.

The Yamaha DSR Series is one such set of products; it comprises three different main loudspeaker models and a subwoofer. The DSR Series product lineup provides scalable components to build everything from a single loudspeaker to pretty serviceable midsize or monitor systems. I tried a pair of DSR112s and two DSR118W subs. The DSR112 is a self-powered, two-way loudspeaker with a 12" low-frequency driver and Yamaha's Wide Dispersion CD Waveguide high-frequency horn. The amplifier is a two-channel Class D design with 850W for the lows and 450W for the highs. The DSR118W subwoofer employs a single 18" driver powered by an 800W Class-D amplifier.

Normally, I have review products shipped to my house, but for this I had them delivered directly to the facility where I would perform the review. Good thing...I can get a fair amount of gear in my Mini Cooper Clubman, but this was just a bit too much. The system arrived in four rather large shipping boxes on a pallet. In dealing with large objects, even the packing materials and how they are



boxed up is important. The speakers were well-protected and the AC cables and manuals had their dedicated places within the packaging.

### A snap to set up

Setup was a breeze. There are a couple types of AC connectors that you will typically see on systems such as this. There's the Neutrik PowerCon, or the ubiquitous IEC cable that's on the majority of pro audio electronic gear. For the DSR series, Yamaha opted for the IEC connector, but added a nice locking feature that provides a positive, secure connection. No accidental pulling out of the cable or partially seated cables. And if the cables happen to get misplaced—when does that ever happen?—a standard IEC cable can be used in its place. The universality of the connector, combined with the locking feature, gets good marks here. It's hard sometimes to judge the value of a seemingly minor feature until you find yourself in a situation where the AC cable gets dislodged or kicked out entirely, or you can't find an AC cable that fits.

### I/O and controls: Less is more

Often in a loudspeaker system design, the K.I.S.S. principle (Keep It Simple, Stupid) will be espoused. But, when trying to make something that will be all things to all people, the designers get hung up with I/O and control bling, and ultimately add lots of adjustments and switches that they think people will want or need. I'm not a huge fan of many switches and controls on products, which will be handled a lot. It's very easy to inadvertently switch or change a setting, even for those with the best of intentions. And, as is often the case, those changes will go unnoticed until one sounds different or louder than the other or there's feedback. In this case, the controls are just about what I'd want on a system of this type. Input on the DSR112 is balanced via either XLR or 1/4", and you can use one or the other (but not both simultaneously). The "thru" XLR connector is paralleled to the input jacks. The input sensitivity is switchable to mic or line level. Having a mic level input is handy if all you need to do is make announcements and you don't want to set up a mixer, etc. This is great for non-technical people who just want it to work. Setting the level control knob at 12:00 with the mic/line switch out roughly matches the +4dBu output of a mixer or other line level source.

LED indicators include peak (lights when input is 3dB below clipping. This is akin to warning lights in cars; if it comes on, it's probably too late, and, since it's on the back, who's going to see it?); limit; protection (mutes the speakers or, in some cases, mutes the speakers and shuts down the power supply.); power; and front LED disable. About the front LED (and the disable switch): There is an LED on the lower left front of the speaker that indicates if the system is on. Since, in some instances, having a light on the front of a

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A rear view of the DSR112.

speaker can be distracting, the designers at Yamaha have made it switchable. For those who choose to leave it on, not only does it indicate power, but, if the limiter kicks in, the LED will increase in intensity relative to the amount of limiting.

There is also a high-pass filter (HFP) switch, which rolls off everything below 120Hz, which helps if you're adding a sub, using the speakers as vocal monitors, or just for vocal announcements, and a D-Contour (dynamic contour) switch. Switching in D-Contour initiates a three-band compressor, which adjusts the level of the frequency ranges, depending on the overall output level. For instance, at low listening levels the lows and highs are raised to provide an equal loudness contour more tailored to how we hear (think smiley-face EQ). Then, as the overall level is increased, the boost is decreased. I thought the effect was fine for a low-level-listening, background-music situation, though it still affected the sound at higher levels, and I preferred to have it off on vocal source material. Yamaha suggests that it may be useful in situations where you might want to accentuate the rhythmic aspects of dance music, for example.

The DSR118W sub is outfitted with stereo line level

inputs (and paralleled outs), a level control a polarity switch, and a front LED disable switch. Indicator lights are the same as the others in the DSR line.

Line-X; it's not just for pickup truck beds. In this case, it's the finish for the speaker cabinets and it works well. The finish looks good and Yamaha claims that it is very durable and should last many years.

One person can actually move the speakers around (even the subs), but I'd recommend having a friend or cohort to help, if possible. And the set up is quite simple. I initially set the system up with the DSR112 mounted on a pole fitted in the socket on the top of the sub. Rear panel settings for the DSR112 were HPF "on" and D-Contour "off." I turned on the source and turned up the level controls on the speakers to the recommended 12:00 position. (There's a detent on the rotary level control at that position.) Things got pretty loud pretty fast, so, after a few minor level adjustments at the front-of-house console to verify a good clean signal path and a good initial listening level, I headed back to the speakers.

Yamaha advertises that its Wide Dispersion CD Waveguide Horn (90°H and 60°V) provides a wide, more rectangular soundfield than a conventional 90 by 60 horn, and while I didn't measure, I did walk to the edges of the coverage and it is pretty wide and even.

### Turn 'em on and crank 'em up

The system was set up in a semi-controlled environment, on the stage of a somewhat reverberant 1,400-seat auditorium; so I had the ability to move around a bit and get some distance from the speakers. The overall sound quality was pretty good, with a much more extended HF than I had anticipated. I'd much rather have it there and be able to EQ it out if needed than have not enough HF to begin with. On vocal material, intelligibility was good even to the back of the room (about 75' from the speakers). Personal preference, program material, and environment will dictate what settings you use, but, for me, with music as the source, I liked the DSR112 set to about 3:00, the D-



Connections on the DSR118W.

Contour and HPF switched “off,” and the sub at about 12:00. With that, I was able to get a good full low end with enough mid-bass punch and not have it sound “muddy,” and still get clean vocals.

### Never did get those LEDs to shine


I always like to put the pedal to the metal, open her up, and see what she’ll do. I must admit that I was a bit surprised I was not able to get the peak or limit LEDs to light, and I was able to get the sound a lot louder than I would be comfortable listening to for an extended period.

I also set the system up as a monitor for a Pearl e-Pro Live electronic drum set. We were able to get a really nice drum sound. The DSR112, along with the sub, worked well and provided more than enough low end to get a good kick sound (and feel); the DSR112 handled the attack of the snare and toms, along with the highs from the cymbals.

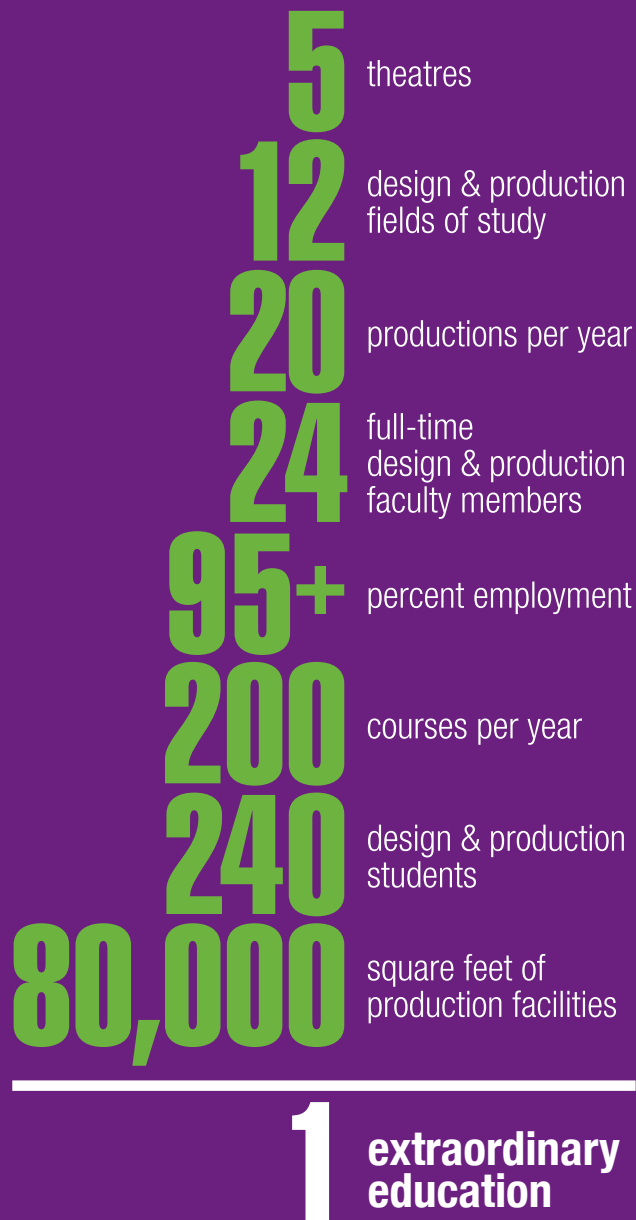
The 50° angle for placement of the DSR112 as a floor monitor keeps the high frequency coverage off the floor and allows for working close up near the speaker or even a little farther back off the monitor.

### Get a handle on it and mount up

Ergonomics count, even for speakers, and especially for this type of speakers. How easy are they to carry and move around and how easy to set up are as important as the boxes’ sound. Yamaha fabricated extra deep handles with ergonomics in mind—although another handle on the side might be handy to have as well. Threaded M-10 inserts are fitted on the top (two) and bottom (one) of the enclosure for suspending. Perhaps the only thing that maybe misses the mark is the placement of the controls. Once the speaker is placed on a stand or pole and set to operating height the controls and I/O can be difficult to reach because they are now at the top of the cabinet. In a lot of AV work, having the ability to set the speaker at trim height and then turn it up and make level adjustments would be easier if you didn’t have to grab a chair or stepladder or road case to reach the controls.

The manufacturers suggested retail pricing for the products in the DSR Series is: \$1,199 for DSR112, \$1,349 for DSR115, \$1,649 for DSR215, and \$1,499 for DSR118W. The pricing is in line with the competitive products from the other manufacturers. This is a very competitive market segment with a plethora of manufacturers producing flexible multi-application systems such as this. So, it’s important to produce a product that’s easy to use (transport and operate), sounds good, and is durable as well. The DSR Series from Yamaha hits all those marks and would represent a solid investment for anyone looking for a small-to-medium-sized system, especially one that might have to pull double (or triple) duty and be used in a variety of applications. 

## It all adds up:



Joseph P. Tilford, dean

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