

ProAudio Review

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CONTRACTING |

REVIEW

by David Rittenhouse

TOA SR-S Series Line Array

It seems that nice things now come in thin packages...

Line array is a term now that is talked about as much as the ever-increasing price of gas. So you may ask "Why is TOA, an installation-based company, even flirting around line array technology?" Well, in the original derivative of line arrays, column speakers, you are using a linear source from closely spaced drivers that in the early years were in almost every install box to be found. Now with modern improvements in processing and crossovers it would be a shame not to reharness this and market it to the install arena and hopefully improve boardrooms and lecture halls everywhere.

FEATURES

The TOA SR-S Series, slim line series speakers are offered in two configurations: the SR-S4L (\$1,554), which is a straightforward linear design; and the SR-S4S (\$1,656), which is a slanted 10 degrees-vertical design. Both are full range or biamp, when using a processor. Coverage angles are stated at 90 degrees horizontal for both boxes. Frequency response is rated at 70 Hz to 20 kHz when in biamped operation. Power handling is rated at 600W continuous at 8 ohms and a

sensitivity of 94 dB (1W, 1 meter).

Each cabinet is loaded with eight 4-inch woofers and 24 1-inch high frequency tweeters. These are lined up in a narrow column that is only 160 mm wide by 895 mm tall. It is this close



spacing that allows the linear projection to achieve the true physics of a line array. This

also allows uniform sound pressure that resists attenuation with distance. In turn, because output levels do not become higher in proximity to the cabinets this allows a more consistent resistance toward feedback. Both configurations are wired with terminal and Neutrik Speakon connections.

In order to run the cabinets in biamp mode you do need to make an internal wiring change. This, however, is quite simple; although, a digital processor is recommended to set crossover frequencies and EQ curves. The TOA processor is the model DP-0206, or specs for programming your own processor can be found in the owners manual. The SR-S Series options include weather-resistant models, multiple mounting hardware options including wall mount, and standmount and a 70V transformer. The cabinets only weigh 16 kg (35.2 pounds). TOA has backed this product with a five-year warranty.

IN USE

TOA sent me one of each, L and S, to play with. This was already an interesting prospect, in many ways, due to the nature of the product. These are intended for permanent installation; yet I was going to have to return these to TOA. So I thought, let me beat these up around our shop and through various conditions and environments. So, first things first, after unboxing the cabinet it was straight to the bench to run them full range with my standard Steely Dan tracks.

The speakers sounded wonderful even in single amp (full range mode). I was surprised with the natural vocal presence of the cabinet with out any EQ.

Looking through the manual I found the recommended processor settings for both full

FAST FACTS



APPLICATIONS

Installation

KEY FEATURES

Two way; eight 4-inch woofers; 24 1-inch tweeters; line array configuration; biampable

PRICE

SR-S4L - \$1,554, SR-S4S - \$1,656

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range and biamp mode. Now, you do not need a DSP for full range operation but the recommended setting is a 5 dB boost at 16 kHz with a Q factor of 1.414 and a HPF (12 dB) at 60 Hz. With this input running through a dbx 4800, the SR-S4L sounded good. The biggest noticeable aspect was it seemed a bit "biting" in the 7 kHz - 8 kHz range. When I ran a standard Shure SM58 through it I was happy with the vocal projection and clarity that you do not find it a conventional cabinet, let alone a ceiling-

mounted speaker that you see as a standard so much in the installation world.

In biamp mode with the correct processor settings I found smoothness and well-rounded projection as well as the standard 3 dB increase. Biamp mode was the best of all with less of a "bite" in the upper high end. Some minor EQ was required for me to make the cabinet a little friendlier to playback sources and the room /warehouse. Basically, I boosted 250 Hz and 500/630 Hz 3 dB to bring back some "beef" in the vocals in order to project at 80 feet. Due to the physics of line arrays, the feedback rejection and ability to tune the room was quite easy and efficient without any major "hacking" of the EQ that can ruin the vocal quality and produce the lovely tunnel effect that you hear from an improperly tuned system or just a bad engineer. I did find that the minor time adjustment in the processor settings to be beneficial, but noticed that, depending on the room you are in, and the degree of reflections these speakers can make or break you on that important high end install.

| SUMMARY

Overall, I found this to be a great leap in technology for TOA and a smart move in

improving the standard of installs. I, unfortunately, did not have the mounting hardware or the extension plates to use this system in more ways; but from what I was able to do and hear I was very impressed. If all installs in churches, gyms and lecture halls could have a sound system that sounded like this and got the sound to where it was needed, hopefully the stereotype of the mic always feeding back in the movies will one day be washed away.

David Rittenhouse is a live sound engineer at RCI Sound Systems.

PRODUCTPOINTS



- Great clarity
- Small, compact
- 0 degrees and 10 degrees cabinets



- Some tweaking needed
- Multiple hardware configurations and extensions plates
- Only in white

SCORE

Overall a great product for a needed market.