

PRO AUDIO REVIEW

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Sound Reinforcement

BY WILL JAMES

TCS Audio is a new company related to California-based Carvin. It is offering a wide range of products, including monitors, two-way and three-way concert speakers and line arrays, single as well as double-driver subwoofers. TCS Audio was kind enough to send me a system consisting of their new double 18-inch sub and a trapezoidal three-way speaker.

FEATURES

The TCS Audio system we tested ultimately consisted of four double 18-inch subwoofers, TCS 2800 (\$2,550), and four three-way speakers, TCS 2500 (\$4,500). The sub is loaded in a manifold configuration with two B&C 18-inch heavy-duty 8 ohm woofers in parallel, providing a four ohm total load impedance. TCS rates the 2800 as being capable of handling 1,400

TCS Audio TCS 2500/TCS 2800 Speaker System

watts RMS, with an efficiency rating of 105 dB output with one watt RMS measured at one meter and a useable audio spectrum of 24 Hz to 120 Hz.

The cabinet is rectangular in shape, fashioned from 13-ply Baltic birch, and is finished in a painted, textured black surface, with convenient handles located fore and aft on each side. The front of the TCS sub has a perforated metal, black powder-coated grille, with a black acoustic foam insert that hides the components. Amplifier connection is achieved through two parallel Neutrik NL4 connectors on a recessed rear panel. The top surface of the sub has inserts, or round cut-outs, to serve as receivers for multiples of the same sub cabinet stacked on each other, and keeping the cabinets from walking or vibrating loose. It measures 179 lb., 23 inches tall, 30 inches wide and 40 inches deep.

The TCS 2500 three-way speaker is constructed of the identical Baltic birch 13-ply plywood and a matching perforated metal black grille with foam insert, weighing in at a healthy 235 lb. on the provided dolly. This

cabinet is trapezoidal in shape, with the handles being located in similarly friendly places on the sides of the box, but having fly rails located on the tops and bottoms of the actual cabinets. The three-way speaker cabinet is considered to be a full range box, with TCS Audio rating its usable audio spectrum at 40 Hz to 19 kHz. The individual speaker components are a pair of 15 inch B & C front loaded woofers, two B & C horn-loaded eight-inch cones and one four-inch voice coil/two-inch exit high frequency driver. The rear panel is host to two Neutrik NL8 connectors wired in parallel.

TCS rates this speaker at about 1,900 watts RMS in a triamped mode, and gives dimensions as 48 inches tall, front width of 28 inches, rear width as 17 inches and a depth of 26 inches.



Fast Facts

- **Applications:**
Sound reinforcement, live sound, installation.
- **Key Features:**
TCS2500 - three-way; 15-inch B&C woofer; twin 8-inch B&C cone mid range drivers; 2-inch HF driver; TCS2800 - 18-inch woofer!
- **Price:**
TCS 2500 - \$4,500, TCS 2800 - \$2,550
- **Contact:**
Contact TCS Audio at 800-403-4484, www.tcsaudio.com.

IN USE

TCS Audio provided a BSS Minidrive processor/crossover with the system. Our usual test configuration of power amplifiers consists of a QSC PowerLight 4.0 on the dual 15-inch woofers (lows), a QSC 4.0 on the dual eight-inch woofers (mids) and a QSC PowerLight 1.4 on the two-inch driver (highs), all complemented by two Yorkville AP6040 power amps for the subs. This amplifier rig typically provides more power than the speakers are rated for, but not by a huge amount. As always, our first test is in our audio warehouse, where all review subject speakers get their initial trial run. Playing a CD through speakers in a quiet space always provides favorable results, and this test was no exception. The TCS system sounded clean and clear, as expected in an isolated test environment. We brought the system to a volume that was exceedingly loud several times, and found the TCS Audio speakers to respond very well, with no clipping or distortion. At louder volumes, there were a couple of frequencies that need a little control through use of a 1/3 octave graphic EQ. We found a little cut was required at 400 Hz and 1.6 kHz, but they

otherwise sounded pretty smooth with CD as the input source.

The only proper way to test a concert type speaker is to take it out to a gig and expose it to all the rigors of a real world experience. We used the TCS Audio system at several fair and festival type scenarios. The subs stacked very nicely, and the interlocking feet kept the speakers from doing any "walking," even at very high volumes. The subs had excellent depth and thump, and we found two per side to provide a formidable amount of low frequency. They responded very nicely to more sustained sounds like bass guitar and did well with high transient sounds like kick drum as well. We employed the subs as mains subs, side-fill subs and drum fill subs, and they seemed to be really at home in the side fill mode, but performed very well in all applications. They have a nice "reality" frequency response of about 50 Hz to 100 Hz and actually were quite efficient at that range.

The TCS 2500 three-way speakers were exposed to virtually all of the same tests, and did very well in all applications, but excelled as side fill speakers, especially in the vocal range. The dual eight-inch speakers, coupled with the HF driver, had a nice presence in the

vocal, guitar and snare range. Even at very close distances, there were no harsh, nasty frequencies that came right out and barked at us, which is a nice characteristic of smaller B&C cones at close range (unlike the nasty bite of many compression drivers at close range). As main speakers (the application for which they were probably intended) the combination of two subs and two three-ways per side proved to be a hearty full range system. A normal amount of EQ was required to smooth them in a couple of ranges, but no more than any other speaker system I have encountered.

SUMMARY

The TCS Audio speaker system held up very well to a variety of cruel and unusual punishments, or in other words, the normal amount of rock and roll abuse. The subs were tight and smooth, the three-ways were clear and friendly. All-in-all, a very usable system, that I recommend for both club and moderate concert applications.

*Will James, owner and chief engineer of Atlantis Audio and Lighting, is a contributor to **Pro Audio Review.***