

QSC K Series Powered Loudspeakers

Flexible, powerful and sturdy, the 1000W components of the K Series perform “on a different level”

QSC Audio Products was one of the first in the audio industry to produce low-weight, high-output power amplifiers that employed some aspect of digital technology. I still own some of these first-generation QSC PowerLite amplifiers and employ them regularly on shows.

Features

With the same innovative spirit, QSC is offering a new line of powered speakers, the K Series — so called, because they house a kilowatt [hence the “k”] of amplifiers — two 500W amplifiers. These high- and low-frequency dual amps both draw their current and voltage from a single switch-mode, high-output/low-heat power supply that adds a mere 6 lbs. to the package. Energy management allows for an “idle” mode when no signal is detected for five minutes. [“QSC product manager Justin O’Connor notes, “There are many switch-mode amps out there, most of them are not Class D, and most people don’t realize there is a difference. K Series is Class D.” — Ed.]



Each two-way K Series cabinet — K8 with eight-inch woofer, K10 with 10-inch woofer, and K12 with 12-inch woofer — features the same 1.75-inch diaphragm/1-inch exit compression driver. The cabinets — other than the birch KSub with dual 12-inch woofers — are made of a high-impact, low-vibration synthetic material that will withstand a lot of abuse. The cabinets [all except the KSub] offer rig points that, with the addition of optional eye bolts, permit flying of individual boxes; additionally, a pole mount cup per cab, a feature called Tilt-Direct, offers a 7.5-degree angle tilt [for the tops only].

Each K Series full-range cabinet has a unique waveguide to function with each of the varying woofer sizes in the product line. The K Series’ dispersion design is referred to by QSC as DMT — or Directivity Matched Transition, matching the varying frequency directionality issues associated with woofers of varying sizes.

[QSC’s O’Connor explains the DMT design philosophy: “Low frequencies are omni-directional; high frequencies are directional. This happens gradually as frequency gets higher. A woofer in a two-way system will have a narrowing coverage as it gets closer to the frequency where it crosses over to the HF driver. With the DMT designs, QSC has matched the waveguides to the same coverage as the woofer for that box at the crossover frequency [2 kHz]. This prevents a transition from a very narrow woofer coverage to a very wide HF, and it gives a very smooth



response in the frequencies around 2 kHz over the entire listening area.” — Ed.]

The woofers are assisted with some notable extension for their size by the digital Excursion Limiter. [O’Connor explains this limiter: “It’s a proprietary filter system that prevents the woofers from over-excursion with the use of very narrow filters applied only to momentary peaks without the kind of “breathing” that you hear in typical broadband limiting of other powered speakers.” — Ed.]

This filter is also used as part a processing mechanism called DEEP [Digital Extension and Excursion Processing]; essentially, it is an onboard, low-frequency processor that provides a frequency bump in the low extremities.

The K Series offer a wide choice of input connections — XLR, TRS or RCA pairs — and parallel outputs via XLR connections.

In Use

QSC sent us the entire K Series line, two per model, so we had some latitude for placing the product in typical job “torture tests.” On several concert shows, my

►Contributor of the Month:

Will James Leach

Live Audio Engineer

Scottsdale, AZ

"I am 55 years old, and I started doing this stuff back in the early '70s by pushing speakers and cases and twirling wire. I married my wife, Skip, in '77, and then embarked upon a career in on-air radio from '78 to '81. I exited the radio industry in '81 (as I was far too attached to the music) and immediately created Atlantis Audio [a full-service audio-production firm for concerts, conferences, festivals, and other events — Ed].

By the mid '80s, we added a modest lighting package to our

list of gear, then added stage and roof over the years. We currently work with acts such as LeAnn Rimes, Sugarland, Gary Allen, Neal McCoy, Little Big Town, and — as illustrated in this QSC review — Emerson Drive. It seems like we work with a ton of country acts, but they sure are nice folks to work with.

"We have three kids, all of whom have been raised in the business, and all work with us regularly. The time has flown by, from the days of pulling a one-axle trailer with my pickup truck to now loading two semi-trucks at a time to head out to some great gigs.

"To quote Jerry Garcia, 'What a long, strange trip it's been.'"



Will James and his wife Skip at the Jay Leno/Chris Berman party following Super Bowl XLII.

guys preferred the K8 cabinets for cue speakers. We reserved the K12s and KSubs for front-fill application at an Emerson Drive concert on July 4, 2009.

I must note that one of the outstanding features of the K speakers is the bass response option. You can leave the box "FLAT," switch it to the "DEEP" mode, which allows the cabs to be used in standalone full-range mode, or switch the box into "EXT SUB" and the sub can be connected to the two-way box for extended low-end frequencies.

Generally, we keep kick drum and bass guitar out of the front fills, as those instruments tend to muddle or overdrive the fills. This is not the case with the K12/KSub pairing; with it, you can now provide Full-Range mix to the front fills, eliminating that nasty time/phase issue usually experienced when subs are 30 feet away and the front fills are right in front of you.

During the Emerson Drive show, I was able to fight my way to the front of a standing crowd of 12,000 people to have a listen to the system as a three-way speaker rig. I was knocked out: First, it was a great mix; and secondly, these were some great-sounding speak-

ers. What a combination! The powered front fills had some of the best definition I have heard in that application.

On one of our hip-hop gigs with Tech N9NE, we used the K12 as speakers for the DJ. Again, we utilized the three-way K12/KSub application. Post-show, the DJ reported to us that this was one of the best, if not the best, speaker systems he had ever used on stage.

Summary

Using them for every application we could find — stand-mounted mains, stage-mounted front-fills — in every situation, the Ks excelled. The cabinets are very tough, as are the components. Surviving excessive heat, rain, and direct sun, these QSC K Series speakers get my highest recommendation.

Product Points



- Great-sounding due to the excellent technology which QSC has obviously spent R&D time and energy
- great-looking, durable boxes.



- A little heavy for the Cordura bags they offer as an option (if you take them on the road, get cases).

Score As a result of this comprehensive evaluation, the K Series receives the reviewer's highest recommendation.

Fast Facts

Applications

Standalone/portable PA; installation; concert front fill; DJ

Key Features

Self-powered cabinets featuring dual 500W amplifiers; modern, innovative electronics; selectable bass response settings; lightweight ABS composite cabinets

Price

\$759 list (K8), \$899 list (K10), \$999 list (K12), \$1,199 list (KSub)

Contact

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