

ARC AUDIO ARC602 Coaxial Speaker REVIEW

WORDS AND MEASUREMENTS BY GARRY SPRINGGAY

So you finally decided it's time to upgrade those crappy OEM speakers. Good for you. When it comes to making big improvements for minimal cost, car speaker upgrades offer the single biggest performance gain per dollar spent. Speakers are a critical part of any audio system because they ultimately have total responsibility for the conversion of the electrical signal from the amplifier to the mechanical vibrations that create sound.



arcaudio.com

Choosing wisely here will simply make any other upgrades that much better. And thanks to companies like ARC Audio, you don't need to break the bank to get very high quality sound, with products that are specifically designed for serious audio enthusiasts on a budget, like the \$289 [USD] ARC602 coaxial speakers that we are taking a closer look at here. Designed to deliver an optimum balance of acoustical performance on a modest budget, the ARC series of speakers use advanced technology and materials without resorting to expensive features and manufacturing techniques.

FEATURES

ARC series speakers and the ARC602s in particular are built to deliver sonic characteristics you typically expect from a home audio system. That means excellent intelligibility and frequency response, but with an emphasis on the mid-bass region that is so critical to good performance in a car.

To accomplish this goal, the ARC602s incorporate technological trickery generally reserved for high end components or home audio products, like the ability to bi-amp the system, or the CNC cut, rear tuned diaphragm which is used to

improve low frequency performance, or the multi-stage voice coil tempering process, which is said to improve long term power handling and improve the speakers performance at high volumes.

Built around a 6.5-inch cast aluminum basket with bright machined highlights, a black fiberglass cone and a silk dome tweeter, the appearance of the ARC602 is that of an expensive, high-quality product.

The speaker woofer is powered by a 14 oz. ferrite magnet, which provides the magnetic energy to drive a 30 mm aluminum voice coil wound on a Kapton former. This assembly is centered in the



REVIEW

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gap by a cotton Nomex linear-type spider, and drives the laminated hybrid fiberglass/Rohacell cone. During development, other materials and combinations were tried and tested, but the Rohacell structural foam core proved to have the best performance.

Connecting the outer edge of the cone to the basket is a butyl rubber surround for high excursion and good reliability in the harsh automotive environment.

The high frequency output for the ARC602 is handled by a doped silk dome 28 mm tweeter driven by a neodymium motor. The tweeter is mounted on a pivot post and can be angled to provide better response from the listening position. As mentioned previously, the tweeter can be driven by a separate amplifier or you can use the first order passive crossover included in the kit. The passive crossover is a 4 μ F 100 volt Mylar capacitor, which results in a crossover frequency of 9,900 Hz.

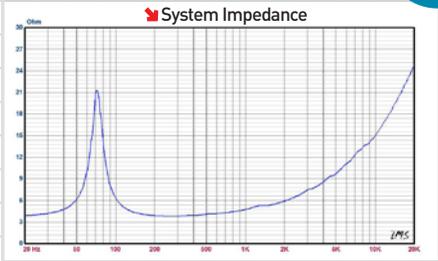
The ARC602 comes with sturdy black mesh grilles highlighted by a chrome trim ring.

LISTENING

I'm looking forward to auditioning the system, so I mount the speakers in my baffles using the supplied passive crossovers. I begin by my listening session sitting directly on axis, listening to a few audiophile recordings of very good vocals. When listening to a set of speakers for the first time, I often begin with well-recorded vocals such as those found on the recordings of The Manhattan Transfer, Rebecca Pidgeon, Jennifer Warnes, MARC Cohn, and Bruce Hornsby. If a system does well with both male and female vocals, chances are it is pretty decent overall. The ARC602s definitely do not disappoint. The system has a very natural presence and a sense of space. Sitting directly on axis is not generally a luxury we get when dealing with 6.5-inch coaxials in

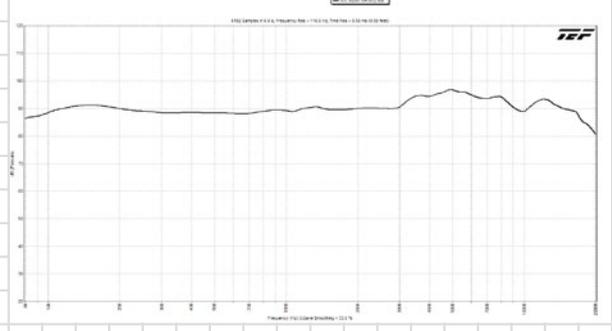


THANKS TO COMPANIES LIKE ARC AUDIO, YOU DON'T NEED TO BREAK THE BANK TO GET VERY HIGH QUALITY SOUND, **WITH PRODUCTS THAT ARE SPECIFICALLY DESIGNED FOR SERIOUS AUDIO ENTHUSIASTS ON A BUDGET.**



3 - Arc Audio ARC12 System Impedance
System Impedance
VI Method @ 2.0 Vrms

Frequency Response





the doors of a car, and I'm pretty sure this fact was not overlooked by the ARC Audio engineers. Directly on axis the top end was a bit bright and had a hint of sibilance, but moving them as little as 20 degrees off axis made the top end smooth and natural while still retaining excellent detail. It's always nice to see that a manufacturer actually designs the product to provide optimum performance for its intended application. Revealing instruments like the acoustic guitar and piano are very good references to determine speaker timbre and accuracy and, once again, the ARC602s perform excellent, with a smooth natural sound with good realism. Occasionally I note a bit of "thickness" in the lower midrange, but the ARC602s are designed to have great low frequency response – it's a worthwhile

tradeoff when you're trying to overcome road noise.

The definition and clarity of the system is excellent, and the warmth in the bottom end does not detract from the definition of instruments like string bass and pipe organ. Really good speakers reveal subtle sounds in recordings that lesser speakers can't, so when you can hear the finger snaps in the beginning of Rickie Lee Jones' Danny's All Star Joint, you know you're listening through some good stuff.

ON THE BENCH

After a lengthy and very pleasant listening session, I move the system to the lab for the usual frequency response and impedance curves. No surprises here, with the system measuring pretty much exactly how it sounds.

CONCLUSION

It's not often that I get excited about a simple pair of coaxial speakers, but the ARC602 coaxial speakers are good enough that I can close my eyes and pretend I am listening to a much more expensive set of components. No, they wouldn't replace my reference bookshelf speakers, but they could certainly replace a \$500 pair of components I recently heard.

Sure, you can buy cheaper 6.5-inch coaxial speakers, but you can also spend much more on a highly-touted component system and still not match the sonic quality of these coaxes. For under \$300, they offer excellent value and sound that's uncommonly good. Check them out for yourself at an ARC Audio dealer near you. **PAS**



For additional photos, visit pasmag.com/ArcAudioARC602