

Getting Active with ATC SCM 40A Speakers

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ATC are makers of studio monitors. I expect every reader of this review has at least one recording in which an ATC speaker was used in producing it. And we're talking some exceptional recordings, think Pink Floyd, Mark Knopfler, Diana Krall, and great recording engineers, again think Doug Sax, George Massenburg and Bob Ludwig and even Walt Disney Concert Hall. If you're curious, look [HERE](#).

Most ATC speakers are poised below heart attack expensive but well above an impulse purchase. While ATC's "Elite Domestic" speakers reach up to \$70,000, this review samples the top of the HiFi Entry Series, well below that price. The ATC SCM40A speaker here is at the top of their "HiFi Entry" series. In a passive configuration (SCM 40) you're looking at \$6999, this iteration with included amplification (SCM 40A) asks more (\$12,999). Well, maybe those figures are not for the tender hearted.

ATC's nomenclature reflects their products, their acoustic sound and the brand itself—straightforward, reliable and richly informative. The model number references the internal unoccupied volume of the speaker. The model 40 has 40 liters, the model 7, 7 liters... ATC are notoriously conservative in their reported measurements, the 40As report 48Hz—22kHz, but see below. In practice even ATC's smallest speaker, a seven liter affair, can do an acceptable job in a normal sized room, despite its stated 60Hz—22kHz range.



I've written extensively on ATC speakers the past twenty years. Collectively, I've owned three of their

passive speakers (7, 20 and 35 liter varieties) and my current active speakers for nearly fourteen years. I've also written reviews about their active 10s, 20s, 50s and 100s speakers. Despite striking levels of transparency, ATC speakers share sonic characteristics between models more than any brand I've heard.

If you've heard ATC 7s, you'll essentially get the same sound from their 20s, 50s or even 100s. The larger speakers will play more loudly without distortion. They will fill larger rooms more easily. And, the larger speakers will deliver greater macro dynamic envelope. However, they all share the same timbre—ATC call it timbre matching. I'm not sure how they match timbre and remain amongst the most transparent speakers I've heard, but they do.

Thus, in some sense when shopping for an ATC speaker you should probably check two boxes at the same time, how much money you will spend and how big your room is. Fellow *PF* reviewer Michael Wechsberg came to visit and listened to the 40A for a couple of hours. We then inserted my ATC SCM 20-2A speakers and the sound family was immediately evident to him.

As with all current iterations of its speakers, domestic and studio, each and every driver in a current model ATC cabinet was both designed and manufactured by ATC. YG Acoustics, Magico, Dynaudio and ATC are the only brands I know of who do that, pretty good company. ATC's new speakers are presented in a handsome, lute-like shape resulting in a much more appealing presentation. My wife's one beef with ATC speakers was their utilitarian look. For those with such qualms, this iteration of ATC are quite appealing.

ATC Drivers

ATC make several iterations of drivers, some of which are more highly specified and reserved for their larger, more expensive models. These tend not to be for the timid or those looking for all beauty all the time—drink up if that's what you want. The studio monitors, which start at the 20s and go to a 300 liter versions employ ATC's low distortion "Super Linear" bass drivers, as well as midrange units with slightly larger magnets and efficiencies that better match the bass drivers. Finally, ATC have produced their first tweeter, said to have taken six years of development.

I believe the 40A is the first ATC HiFi Series speaker to use their new tweeter. Previously ATC used well known and respected drivers from Vifa and SEAS, mine use the former. ATC's new tweeter features a dual suspension which yields more precise control of the driver, allowing a narrower magnetic gap, which yields greater efficiency and improved power handling while also avoiding "anharmonic rocking modes." I presume "anharmonic rocking modes" means the driver remains both dynamic while avoiding non-piston (rocking) performance. Perhaps even more interesting is the design eliminates the need for ferro fluid, due in part to improved heat conduction. As ferro fluid dries or evaporates from heat over time, performance will change and we can extrapolate that the sound degrades.

Active

Nearly every multi-way speaker has a crossover. A speaker crossover takes the output from the amplifier and divides it into different ranges of frequencies, below, above or between frequency limits and chosen to best suit the drive units employed in the speaker design. This is done essentially with coils (lots of turns of wire), capacitors and resistors. An issue with all passive crossovers, including

ATC's, is that they are very difficult to optimise and a component change will not just modify the filter frequency for instance but, will also change magnitude, impedance and phase. Collectively those in-circuit passive devices can reduce efficiency as much as 2dB (when compared to an equivalent active system).

The ATC 40A on hand here is an active speaker, which includes not only "active filtering" (crossover) but also amplification for the speaker. The amplification is handsomely and stylishly bolted onto the back of the unit. ATC argue there are four benefits to active amplification / equalization: 1) active crossovers are more accurate; 2) lower intermodulation distortion; 3) improved frequency response; and 4) lower cost for a higher production—you're not paying for the amp's casing or extra connectors.

Active crossovers are more accurate because the phase (timing) can be controlled independently of the magnitude and cut-off frequency of the filter. Driver performance under load doesn't change with voice coil temperature—such changes could lead to different sound characteristics at different SPLs. It would appear active equalization is more of a scalpel than a passive crossover's cleaver.

ATC assert these attributes from active amplification and filtering create a more stable stereo image and support the tonal balance of their speakers. This should also allow for better matching between speakers. ATC speakers, passive and active, are delivered matched to within 0.5 dB per speaker—pretty phenomenal performance.

Drivers

The 40A bass driver is a 164mm driver that I believe is a CLD (constrained layer damping) model. The 40A's mid-dome driver is similar to ATC's more expensive mid dome drivers using a smaller magnet than the driver in the larger models. The tweeter, too, is a bit less highly specified than the tweeter in the top range models. The 40A is the only model in the ATC HiFi Entry series to be powered. I guess most audiophiles want to go on safari to find the perfect amp. Ironically, the powered ATCs have exactly the amplifier the driver maker thinks you should have. Though it takes away the hunt, active speakers bring the Goldilocks the package home.



First, there is a characteristic ATC sound. The sound is less about coloration than performance characteristics. For my taste and experience, ATC combine much of the dynamic characteristics of horn drivers, while leaving behind the shouty, cupped hands sound. Even more importantly, they also don't bleach their timbre the way horn speakers seem to do. They also show the immediacy and speed of electrostats, if perhaps not quite as much resolution. They are, however, much more able to play loudly and dynamically than electrostats as well as having much larger sweet spots than electrostats tend to have. While some electrostats require you to sit in a thimble sized sweet spot, ATC speakers tend to have wide dispersion characteristics which free listeners from sitting in each others' laps. Of course, I suppose it depends whose sitting in your lap whether that would be a problem or not.

If you've heard active ATCs previously, it's been from their studio lines with the SL drivers and more highly or tightly specified midrange drivers. They're not for everyone. In the wrong system they can sound a bit hot and analytical with the wrong ancillaries. In my experience previous active ATCs require you to hunt for a good preamplifier for them to sing. CAVEAT : I love their precision but don't hear live music sounding "precise," perhaps that means I want some coloration? So be it, I do like a bit of sweetness. Their bass performance is neither bloomy nor billowy which some misperceive as "full bass."

The 40A represents a kinder, gentler presentation than the studio line. With active equalization and power, you still have ATC precision. Think Olympic athlete versus a fit weekend warrior, there's a bit more roundness, without losing richness of timbre. I expect the 40A will integrate with more preamplifiers and systems with more ease, it sounded positively lush with my YBA preamplifier. Compared to the studio line the presentation is a bit more pleasing than precise.

While I noted that the new tweeter is more precisely controlled, in the listening seat you'll not hear a buttoned down precision, so much as a lighter and more elegant touch, surprisingly reaching down into the upper midrange. It is most certainly not bright. The treble was sweeter, more relaxed and a more delicate presentation than my Vifa sourced tweeter. Oddly, I'd call that more accurate. They are, to my ears, an order better than previous models.

Still, vocals are extraordinarily clear and clean—likely due to ATC's mid-dome driver which covers the range from 350Hz to 3.5kHz—essentially single driver reproduction of the vocal range. With vocals produced from a single driver, performance is enhanced. The mid-dome driver did its ATC magic. Well recorded vocals have a clarity, immediacy and "speed" that few other cone driver brands have.

So it was that I first heard "Până Când Nu Te Iubeam" by Pink Martini with Storm Large on vocals. It was fascinating to hear—it's a bold, over the top melodramatic presentation that starts slow and doesn't speed up. Summarizing the lyrics as "Since I fell in love with you, I've been restless, I'm dying, this longing is tearing me apart" without even slightly holding back. I started the song thinking it comically horrible but ended enraptured by the boldness and clarity of Large's vocals. I was totally sucked in by the drama.

Linda Ronstadt sounds angelic on Nelson Riddle's arrangement of *What's New*. And the vapid Holly Cole sounds positively bored, though with a rich and vocal texture, ditto on my audition of death by Diana Krall on "Let's Face the Music and Dance" from *When I Look in Your Eyes*—while the piano playing is fine, her vocals seem to mistake ennui for a death scene. Andrea Bocelli's tenor was clear and clean and Mark Knopfler's gargling vocals deep and textured. Not so well recorded vocals, like Abba still sound acceptable, even enjoyable, if you like those pop knitters.

The bass on the 40A is also full with good pitch definition. I thought bass reached into the upper 30s, Michael Westberg thought it into the 40s. On Gabriela Lena Franck's Mestizo Waltz (Reference Recordings RR908), the bass massaged my listening room with weight and pace. The 40A passed the techno bass test that is Infected Mushroom's *Army of Mushrooms*. The CLD drivers in the 40A speakers sound a little less "tight" than ATC's SL drivers—slightly less resolving and slightly less "tight" sounding. Compared to most speakers, the 40As will sound terrific.

ATC are at their best playing at or above moderate volume levels. They really shine when played loud. If you have ever hankered to crank up a song you love, there are few better speakers than the 40A for that experience. Try "Până Când Nu Te Iubeam" loud and you might find yourself laughing in a way a lower volume level won't suggest. In fairness, at low volume levels, other speakers may sound more fully realized. Contextually, Usain Bolt is less interesting to watch jogging than sprinting. Speakers that sound terrific at lower volume levels will also not likely be as fully realized at fun volume levels. Pick a horse, a destination and get on with it.

I like the place the 40A plays in the ATC line. It's an angel's balance of the somewhat kinder, gentler domestic line with a slice of the precision of their studio line. Absolutely recommended.

SCM 40A

\$12,999 a pair

ATC

<http://atcloudspeakers.co.uk>