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ATC SCM100ASLT Tower



ATC HTS11 On-wall

ATC 7.1 Loudspeaker System

Doug Blackburn

ATC (Acoustic Transducer Company) is one of those loudspeaker companies with a name that pops into my consciousness from one source or another every few years, but until this review, I had never experienced their sound until hearing them power a newly released multi-channel version of a Pink Floyd album, and it was an awesome thing to hear. How do loudspeakers get selected for this sort of release party? In this case, Pink Floyd was (and is still) a client of ATC as are the BBC, the Royal Opera House, Coldplay, The Killers, and many others. That demo happened in Denver probably circa 2010. I didn't know anything about the company, so this review was a new exploration for me. ATC is headquartered in Stroud, England on the western edge of the Cotswold region known for the classic English beauty of rolling hills and incredibly photogenic villages and towns evocative of a much earlier time in history. Stroud is located north of Bristol/Bath and west of Oxford. The company was founded in 1974 to make drivers for the professional sound equipment market. By the 1980s they were making not only drivers but complete professional loudspeakers as well. In the 1990s, ATC produced their first audiophile loudspeakers and electronic components. More recently, the founder, Billy Woodman, has stepped back from day-to-day operation of the company, and his son Will has taken over as CEO.



ATC SCM11 Bookshelf

Billy Woodman continues to oversee design and engineering.

ATC's audiophile and home theatre enthusiast loudspeakers benefit from ATC's long history of manufacturing loudspeakers, drivers, and their on-going research into driver technology. While there's nothing particularly exotic looking about any of the ATC loudspeaker models in the review system, as you will find as you read through this review, the sound quality of these loudspeakers is truly something special. ATC has addressed the needs of audiophiles by offering their stereo and home theatre loudspeakers with



ATC C6CA

standard finishes that include satin black, satin white, and a number of real wood veneers. Premium finish options include wood-veneer upgrades and high-gloss finishes instead of satin finishes. ATC will even offer personalization if it is feasible and the customer can handle the additional cost. The wood-veneer finishes on the towers and subwoofer sent for review were quite different (intentionally, so I could see some of the different veneer finishes). The towers had a rich brown English Crown Cut Walnut veneer with beautiful high-gloss finish. The subwoofer was finished with an amazing-looking burr magnolia veneer with high-gloss finish. The surrounds arrived with the satin black finish, and the loudspeakers used for the rear surrounds came with a satin-finish cherry veneer, one of the standard finishes.

The front left and right loudspeakers were large floorstanding models weighing about 150 pounds each. The SCM100ASLT is part of ATC's Tower product line. It is the middle of three related models and has a 12-inch woofer. The SCM50ASLT has a 9-inch woofer and the SCM150ASLT has a 15-inch woofer. All models are active with three built-in amplifiers and active crossover circuitry designed and manufactured by ATC in England. The woofer has a 200-Watt amplifier, the midrange has a 100-Watt amplifier, and the tweeter has a 50-Watt amplifier in all three loudspeaker models. Furthermore, all three of these Tower models share a very similar sonic signature. You choose the model based primarily on the size of the space you need to fill with sound, bass response required, and your SPL requirements (the SCM150ASLT produces the highest SPL output). All of these models have a bass port on the front, but it is not used in the conventional way for extending bass response by half an octave or so. Instead, the port in these loudspeakers is tuned to control the excursion of the woofer. That reduces distortion and has the secondary benefit of some bass extension.

One of the areas ATC has researched extensively is the role of magnetic hysteresis in modulation of a woofer's permanent-magnet field. Here is what ATC has to say about this: "The majority of bass driver motor systems employ permanent magnets. But the magnetic field generated can be modulated by the opposing magnetic field generated around a loudspeaker voice coil [DB note: the amplified music signal is applied to the voice coil, so not only does this field around the voice coil range from zero to some maximum amount, half of the time, the music signal has a negative voltage, so the field around the voice coil reverses polarity constantly as music plays or as other sounds are reproduced.]. This modulation is one source of distortion within a loudspeaker driver. Saturating the steel components that make up the motor system immediately around the voice coil is one way to reduce this source

Features

All drivers, loudspeakers, and electronics manufactured by ATC in England
Wide range of finish options for many models: standard; premium; and custom
Same neutral sound quality from all models
All models strive for lowest possible distortion
Many models available as conventional passive loudspeakers or as active loudspeakers
ATC avoids having more than one midrange driver or tweeter per loudspeaker
Warranty: 6 years

Specifications

ATC SCM100ASLT Tower

Three-way; 380 Hz and 3,500 Hz crossovers, 4th order slopes (active) models
Frequency Response: 32-22,000 Hz (+/- 6 dB)
Matching (pairs): +/- 0.5 dB
Sensitivity: N/A (active)
Amplifier Power: 200 woofer; 100 midrange; 50 tweeter (Watts, continuous)
Nominal Impedance: N/A (active)
Maximum SPL: 115 dB
Dimensions: 42.126 H x 15.63 W x 22 D (inches)
Weight: 149.6 (pounds)
Designed in: England
Manufactured in: England
MSRP: \$36,999 per pair in standard finishes / \$49,999 per pair in premium finishes

ATC C6CA

Three-way; 380 Hz and 3,250 Hz crossovers; 4th order slopes (active)
Frequency Response: 38-22,000 Hz (+/- 6 dB)
Sensitivity: N/A (active)
Amplifier Power: 200 woofer; 100 midrange; 50 tweeter (Watts, continuous)
Nominal Impedance: N/A (active)
Dimensions: 14.57 H x 37.4 W x 24 D (inches)
Weight: 182.6 (pounds)
Designed in: England
Manufactured in: England
MSRP: \$20,999 each in standard finishes

ATC HTS11 On-wall

Two-way passive; 2,200 Hz crossover
Hidden wall-mount bracket
Matching: +/- 0.5 dB
Frequency Response: 50-23,000 Hz (+/- 6 dB)
Sensitivity: 85 dB
Amplifier Power: 75 to 300 (Watts)
Nominal Impedance: 8 (Ohms)
Dimensions without grille: 19.3 H x 12 W x 5.4 D (inches)
Weight: 24.3 (pounds)
Designed in: England
Manufactured in: England
MSRP: \$1,399 each / \$2,798 pair



ATC C6 Subwoofer

of distortion, but this is not always possible, especially with the short-coil, long-gap motors ATC employs. Another method is to use specialist magnetic materials within the driver magnetic system to reduce these effects and the distortion they cause to a musical signal. While the drivers used in ATC loudspeakers may not look particularly special or different at first, once you start to look at the fine details, design, and properties of the systems, you'll find that there are many features that separate ATC's products from other manufacturers. Many loudspeaker manufacturers are simply using off-the-shelf (or lightly 'customized') drivers from third-party driver manufacturers. ATC has a huge belief in component-first design, and this is where you will find many of the details that set our loudspeakers apart."

ATC's newest soft dome tweeter does away with something that has become ubiquitous in conventional dynamic tweeters... "ferro-fluid." This material is present in most tweeters in order to reduce heat buildup, provide dampening, and to protect the driver from failure under stress. ATC was able to eliminate ferro-fluid in their newest tweeters by building the dome tweeters with two "stacked" suspensions. One suspension is attached to the edge of the tweeter dome, and the second is attached to the voice coil former. This replaces single suspension and ferro-fluid in most other tweeters. The dual suspension design allows tolerances inside the magnetic gap to be tighter than ever, and that helps dissipate a lot of heat. Coil and dome motion are both tightly controlled with the two suspensions and the very tight (comparatively) tolerances in the magnetic gap. ATC's tweeter design means there is no ferro-fluid to slowly (over years) dry out and get progressively stickier over time, reducing performance of the tweeter. The soft dome is made by ATC starting with polyester fabric with a polyester coating. Even in the tweeters, ATC uses a much-larger-diameter voice coil than is typical for most tweeters. Drive applied to the dome is more finely controlled (in both directions) by the dual suspensions and tight tolerances in the magnetic gap, reducing distortion compared to more typical tweeters.

ATC's current midrange driver is quite different-looking than most midrange drivers. The outer ring has the appearance of a short waveguide, but it is actually an inversion of the curvature of the midrange dome and is called a phase correction flange. The driver radiating surface is made from a woven fabric formed into a dome and treated with a proprietary coating ATC developed. The diameter of the radiating surface is 3 inches and the voice coil

Specifications

ATC SCM11 Bookshelf

Two-way passive; 2,200 Hz crossover
Magnetic grille attachment
Low-Frequency Limit: 30 Hz @ -2 dB or 20 Hz @ -6 dB
Sensitivity: 85 dB
Amplifier Power: 75 to 300 (Watts)
Impedance: 8 (Ohms)
Maximum SPL: 108 (dB)
Dimensions: 15 H x 9.13 W x 9.3 D (inches); grille adds 1.1-inch to depth
Weight: 24 (pounds)
Designed in: England
Manufactured in: England
MSRP: \$2,199 per pair

ATC C6 Subwoofer

Adjustable phase, variable cutoff frequency; variable gain; stereo inputs
XLR connections
Power cord IEC socket
Single 15-inch driver
Amplifier Power: 450 continuous; 1,000 peak (Watts); class G
Frequency Response (-6 dB): 18 Hz-250 Hz
Maximum SPL: 115 dB at 1 meter (continuous)
Power Requirement: 100 or 115 or 230 (factory set) 50/60 Hz
Dimensions: 17.8 H x 15.4 W x 18.1 D (inches)
Weight: 132 (pounds)
MSRP: \$17,999 each in standard finishes; \$20,999 each in premium finishes

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diameter is the same diameter as the dome-radiating surface. The voice coil is shorter than you find in more conventional drivers, and the magnetic field it moves within is much longer than you will find in more typical midrange drivers. This achieves ATC's goal of maintaining a uniform magnetic drive field over the entire excursion of the driver. Conventional drivers have magnetic fields that get progressively weaker as you approach the limits of motion of the radiating surface. The midrange driver also uses two suspension systems to help maintain perfect alignment of the voice coil in the magnetic gap, allowing the air gap between the voice coil and magnets to be smaller. As with the tweeter, this improvement in the midrange driver increases the magnetic field strength in the gap and helps to remove heat from the electro-magnetic driver

“...The Sound Quality Of These Loudspeakers Is Truly Something Special.”

components. The magnetic field strength is so high that the pure iron front plate and pole piece adjacent to the voice coil is under constant magnetic saturation, eliminating magnetic hysteresis effects, and therefore, reducing distortion. ATC made their first dome midrange driver in 1976, and they have been perfecting design details ever since (over 40 years!).

All three drivers are mounted to a thick black baffle that mounts to the front of the loudspeaker enclosure. The front-mounted baffle leaves a “step” between the body of the SCM100ATSLT and the protruding black baffle. The woofer is centered in the enclosure, but the woofer and tweeter are offset and vertically aligned to each other. Shifting the midrange and tweeter to the edge of the baffle reduces diffraction since there is nearly no baffle on one side of these drivers. Each matched pair of SCM100ATSLTs is made with the tweeters and midranges mirror-imaged so that you have some room-placement flexibility. That “step” between the loudspeaker body and the black baffle holding the drivers allows ATC to create grilles to protect the drivers or to please spouses (or both) so that the frame of the grille is hidden in that “step.” That means sound radiated by the drivers never “hits” the edge of a support frame for the grille that causes inevitable reflections unless the edge is damped with felt or some other material.

The “A” in the model name of the SCM100ASLT loudspeakers stands for “Active,” meaning it has built-in amplification and active crossovers. ATC makes less-expensive versions of the ‘50, ‘100, and ‘150 models with passive crossovers and no built-in amplification. ATC loudspeakers with a “P” in the model name indicate passive models. Why offer active and passive versions of the same loudspeakers? ATC says using active crossovers and their three separate amplifiers results in a loudspeaker with superior phase response and more dynamic range. The active loudspeakers remove 20 dB of intermodulation distortion that you’d have if you drive a passive version of the loudspeaker in question with a single amplifier channel. That distortion comes from back EMF generated in the loudspeaker interacting with the output of the amplifier.

The SL in the model names and in the name of the woofer driver itself refers to Super Linear magnet technology specific to woofers. There are a number of properties in the SL ATC loudspeakers that improve performance compared to more conventional loudspeakers. Ferrite rings inside and outside the voice coil reduce magnetic hysteresis and remove 10 dB to 15 dB of third harmonic distortion in the operating range of 100 Hz to 3,000 Hz. ATC says this specific reduction in distortion is so significant that it allows you to hear information within favorite recordings that you never heard before.

The Tower series loudspeakers (left and right channels in the review system) have a range of finish options to suit any owner’s

budget or desire for something that looks as special as it sounds. Standard finishes include: satin black, satin white, cherry, black ash, oak, walnut, and maple. There are two levels of premium upgrade. One is exotic real-wood veneer like English Crown Cut Walnut. The second exterior finish upgrade is high-gloss polyester lacquer instead of satin finishes. If these loudspeakers will be placed behind an acoustically transparent projection screen, the satin black will be the best option from a technical/image-quality point of view. Some light leaks through acoustically transparent screens, and you can see reflected light or LEDs through woven acoustically transparent projection screens, so you don’t want the loudspeakers behind the screen to be anything but black.

The C6CA center-channel (A for Active again) loudspeaker shares the tweeter and midrange with the SCM100ASLTs. They are mounted in the center of this horizontally aligned loudspeaker with the tweeter on top, close to the midrange driver’s frame. The two 9-inch SL woofers are the same model used in the SCM50ASLT. They flank the tweeter and midrange. This driver arrangement avoids the comb filtering problems you get with two midwoofers flanking a center tweeter (aka MTM). There is a forward-facing “port” for each woofer as with the tower models. And here too, port is in quotes because it is not used conventionally to extend bass by half an octave or a little more. Instead, the ports provide proper loading for the woofers. The cabinet design is like the Towers in that the drivers are mounted on a baffle that stands proud of the front edge of the enclosure itself. The C6CA has the same sort of grille that prevents the frame from being a reflection point for sound radiating to the sides of the drivers. This is a huge center-channel loudspeaker, easily the largest center-channel model that has ever been in my system. In fact, I could not have reviewed the SCM100ASLTs and the C6CA and the C6 subwoofer if ATC’s U.S. distributor, Lone Mountain Audio hadn’t offered to come here with two people to unpack, move, and set up the loudspeakers, then return to move, and repack these loudspeakers at the end of the review. The size and weight of the Towers, Center, and Subwoofer are just too much for one normal person to handle. You need AC power and a line-level interconnect cable for the amplified loudspeaker models. The recommended line-level inputs are XLR connections, but the active models can be driven by unbalanced (RCA) cables also.

The pro audio market is very accepting, even demanding of, loudspeakers with built-in amplification and active crossovers. ATC’s expertise in active loudspeakers for the pro market makes it easy for them to offer some active loudspeaker models in a passive version—one with conventional passive crossovers that requires an external amplifier channel. Two pairs of binding posts with jumpers are installed at the factory so bi-wiring is not mandatory for the passive loudspeaker models. The LCR loudspeakers

don't have loudspeaker cable binding posts since the amplifiers are inside the loudspeakers. On the outside of the active models, you see the two handles and the substantial black anodized cooling fins on the back of the LCR active loudspeakers in the review system.

The C6 subwoofer is a big, 132-pound brute. It is slot loaded around the bottom edge and has all the electronics and settings inset into the back of the subwoofer. The review sample was finished in a premium wood veneer in burr magnolia, with beautiful shades of muted yellows and light browns with medium brown trim around the edges and high-gloss finish. The enclosure is larger than the average subwoofer enclosure, which allows ATC to produce a subwoofer that has lower distortion than any subwoofer I can recall hearing... ever, at any price. The bottom few inches of the subwoofer, where the driver vents allow sound into the room, is finished in satin black and the much lighter beautiful wood veneer "floats" above the black base looking very classy. This subwoofer isn't built for maximum deep bass extension, though. The driver is also an ATC design that incorporates all of ATC's design elements used in woofers designed for conventional full-range or near-full-range loudspeakers. That means the narrow voice coil, strong saturated magnetic gap, and precision suspension.

The HTS11 on-wall models were used for side surrounds. These are midsized passive two-way loudspeakers intended to be used in medium-sized rooms. The drivers are ATC's 1-inch Neo soft dome tweeter, and the woofer is a CLD series 6-inch driver. Both of these are used in ATC's pro studio monitors, so the HTS11 is designed to reproduce powerful dynamics, all the detail captured in the recording, all done with the same neutral tonal balance as the Towers and center channel. I did indeed find much better than the normal sonic match between surrounds and the LCRs. All of the HTS series models can be purchased as a vertical model that is taller than it is wide, or as a horizontal model that is wider than it is tall. When constructed horizontally, the tweeter and mid/woofer remain oriented vertically in the enclosure with tweeter on top. The horizontal version may fit in spaces the vertical version won't. Finish options are satin black or satin white. The HTS11 is sold as a single loudspeaker and is priced at \$1,399 each (\$2,798 per pair). A complete system could be created with HTS11s and/or the larger and smaller on-wall models. The horizontal version, the HTS11C, makes an ideal-matched center channel when the remainder of the loudspeakers are the vertical style.

The SCM11 bookshelf model was used for rear surrounds. These are classic-looking, medium-sized bookshelf loudspeakers. The sides are curved and the rear panel is maybe half the size of the front baffle. These two-way bookshelf loudspeakers share drivers with the HTS11. The SCM11s are part of ATC's "Entry" series. These are priced as a matched pair for \$2,199. Standard finish options include black or white satin, cherry, and black ash. Premium finishes are not offered for this model range. The other models reviewed have conventional fabric grilles, but the SCM11 has a metal "screen" grille cover that has thin elements forming small hexagons that are completely open. The hexagons are too small for fingers to get into, even small fingers, but big enough to let sound through without disturbance. Light veneers or white paint show right through this open mesh grille. The "look" of the loudspeaker with and without the grilles is strikingly different, so you get to choose the look you prefer. Or your children or pets may *require* that you use the grilles.

In spite of four different models of loudspeaker being used for

the seven main channels, the loudspeaker-to-loudspeaker consistency in the sound of pink noise setup tones was much better than I experience with most systems. The first thing I did was listen to some music to see how the rest of the review was going to go. That first listen confirmed how consistent the sound is from model to model. The HTS11 and SCM11 models also shared the effortless and strong dynamic performance of the Towers and center. Total cost of this system as reviewed is \$96,994. ATC is providing amazing neutrality in their loudspeakers at every price point. They don't get weak in the knees when a pair of loudspeakers costs \$50,000 or more, and they stick to their low-distortion, full-dynamics design ethos from bottom to top. ATC has a very large product line, and the system reviewed here is probably less than half the cost of a system made of top-of-the-line models from ATC's lineup. ATC has several loudspeaker models, for example, that are considerably more expensive than the SCM100ASLT Towers and could be used in each loudspeaker position. You could also put together a surround system for a medium-sized room using ATC models that cost far less and still get an excellent measure of ATC's dynamics, detail, and low distortion.

Active loudspeakers have no issues around impedance since their amplifiers are built-in and should be optimized for each driver by the manufacturer. ATC makes a lot of passive loudspeakers also and there you do have the issue of impedance. There are a lot of loudspeakers out there, especially more expensive models that have impedances so low over at least part of the operating range that they can interfere with the best performance of your amplifier. Multi-channel amplifiers are much happier with loudspeakers that legitimately have 6- or 8-Ohm impedance specs without dips to crazy low values like 2 or 3 Ohms. I looked at ATC impedance specs for about 10 of their passive loudspeakers, and all of them were rated as having 8-Ohm impedance. That means you can drive them with just about any amplifier, though, trust me, you'll want something really good to go with ATC loudspeakers.

Subjective Listening Results

I'll start out by saying I thought I knew what low-distortion loudspeakers and subwoofers sounded like, but hearing this system has put a whole new face on what low distortion sounds like. All of these ATC models share the ability to reveal more detail and more just-like-live (unamplified) sound than any other system I've reviewed. This is a very expensive loudspeaker system, and I often find that when companies start making loudspeakers as expensive as these are, something odd happens. Companies get insecure about sending an expensive loudspeaker or system out into the world if it doesn't have some identifying characteristic that makes people freak out about the "great" sound quality, when the expensive model can be shown to have more deviations, more "color" (inaccuracy), and perhaps sounding overly detailed because of a linear or rising high-frequency response. When an accurate loudspeaker is measured in a real room it will have a gentle downward slope as frequency increases since that is the correct response for a room with average or better acoustics. ATC is clearly avoiding that self-defeating stance with every ounce of corporate culture and design they can muster. I have heard some spectacularly neutral loudspeakers over the years, but they tend to be rare compared to loudspeakers that seem, whether intentional or not, to have some sort of "house sound." Here is the crazy part of this... I've attended stereo and home theatre shows for

decades, on and off. I always make sure to listen to loudspeakers that other people said were fantastic and compare what I heard there with what I remember from the most neutral-sounding loudspeakers I've encountered over the years. People think an awful lot of expensive loudspeakers sound great when they are anything but great-sounding.

I have been trying to think of a way to explain just what makes these ATC loudspeakers sound so good, even when the electronics are quite competent but nowhere near the prices of five-figure surround processors or \$40,000 worth of amplifier channels. I used an Asian-brand surround processor (a year and a half old) with an MSRP in the \$2,800 range, and a seven-channel AudioControl Savoy G3 amplifier (under \$4,000 for seven channels). These are extraordinarily performing moderately priced components, so don't expect every amplifier or processor in these price ranges to produce the same results. I was actually expecting that I would want to change to much more expensive amplification and surround processing to hear everything the ATC system could deliver, but in the end there wasn't much more left to give. The sound I heard was better than anything I've had in my listening room, ever. Other loudspeakers may be impressive when they reproduce instruments that sound just like what you know those instruments sound like in live unamplified (no microphones) performance. But the ATC system makes those instruments sound like they are playing live in your room, and that is rare. Better yet, ATC doesn't do this with only relatively simple recordings, say, a singer playing guitar or piano, this system did the same thing with an entire symphony orchestra at full chat behind chaotic action scenes with noises of all kinds, from ambience to explosions.

Let's say you have this cool flat surface made from some sort of material with no mass, and the job of this surface is to represent sounds in music being played back. In an ideal system with zero distortion, each sound reproduced creates a spike in your ideal flat surface. The louder the sound, the taller the spike. And the less movement over the rest of your cool flat surface, the lower the distortion you are hearing. If your surface is conveying the performance of a more typical system, your single big spike representing the input signal would appear on your special visualization surface as a big tall spike, but there would also be an array of smaller spikes of lower amplitude spread around the surface, and the surface itself would be choppy and contain waves in it that shouldn't be there. This is because that big spike distorts and produces varying amounts of distortion, noise, and time errors. When the big spike is reproduced without distortions, the rest of your nifty magic surface will remain undisturbed by other things that aren't part of the original recording. It's almost like conventionally designed loudspeakers are at constant war with each dynamic peak (which need not be huge), producing lots of random surface disturbances that aren't supposed to be there. It's almost like distortions are a hand just under the surface of your magic visualizer, whipping the surface into waves, spikes, and lumps that aren't supposed to be there.

The 20-dB improvement in distortion from using active crossovers and one amplifier per driver is so bleepin' obvious when listening to familiar music and soundtracks, I'm not sure why there are still so many loudspeakers that can't perform at the level of this ATC system. I hear piano like no other system that has been here... the attack of pressing the key is extremely accurately rendered so you can easily tell just how hard the piano player struck each key. The sound of air within the sound of a drum

being played is often missing or is reproduced way too low in volume to be accurate. The ATC system delivers a clean dynamic peak when the drum-head is struck, but after the initial strike, drums produce this airy decay of the drumhead resonating as the stimulus of the strike fades. That airy resonance of the head is missing so often, or is missing some part of that sound (soft dynamic impact or little or no "air" in the decay) that while the sound may seem accurate, if you heard that drum played live, you'd know what you were hearing was not accurate compared to live. Not every music album and not every movie has sounded so good that you hear all of that detail in every instrument, though. A fairly recent remastering of Billy Joel's *Piano Man* for example, reveals that the original master did not capture much of the presence of the piano. The ATC system can't replace detail not present in the original recording. But, how does *Piano Man* sound, everything considered? It sounds like it was recorded without much attention to the quality of the sound beyond getting everything on the master tape. The ATC system doesn't make that recording sound bad, but it can't make it sound great either. Yes, the piano notes are articulated well by the ATC system, as well as they are captured on the master tape. Dynamics are nice, pitch is nice, harmonics are nice, but the magic isn't in the master tape so we don't get to hear it at home.

There were a lot of surprises with the ATC system. Some recordings I thought were just okay turned out to have much more there to enjoy than I was expecting. Pretty much anything the Beatles recorded from *Rubber Soul* and forward has an amazing new liveliness, and the recent remastering of *Sgt. Pepper's Lonely Hearts Club Band* is just amazing to hear. Everything about the sound has more information being delivered. Bass in the remastered version reveals a whole new foundation to the music that just plain hasn't been there in previously released versions of this extraordinary album. Earlier versions of this icon of music didn't have much bass, it was equalized right out of the mix to keep cheap record player cartridges from jumping out the groove when confronted with the large stylus excursions caused by strong bass frequencies on LPs. The best-sounding Cat Stevens albums (*Tea For The Tillerman*, *Mona Bone Jakon*, and *Teaser And The Firecat*) are just plain wonderful to hear in all their sonic glory. The detail in guitars, massed voices, and the scope of the sounds used to energize each song were so lovely, it was like hearing these recordings properly for the first time. I probably listened to, literally 100 or more albums during this review. Not every track on 100 albums, but at least a few tracks. And some of the albums refused to allow me to stop them and move on to something else.

I've often said it's more difficult to evaluate the sound quality of loudspeakers using movie soundtracks than using music without video. There are several reasons for that. Your eyes take over a lot of your consciousness and "processing power," so the moving images de-focus your attention from sound to image pretty quickly. Nevertheless, every familiar movie soundtrack, at least the ones from movies with large enough budgets that they can afford to pay for really good sound quality, produced either steady streams of more convincing sound from ambience to explosions to crashes to nightclub interiors to the sound of large public spaces full of hard surfaces, all are elevated to a more convincing reality than I have experienced before in my room. I have said that before in, I think, two other loudspeaker reviews. I'm not being intentionally redundant... I would take the ATC system over the previous systems I used that description for, no question. Visitors used to watching

movies here don't often notice that the picture or sound are especially good (or bad), but several noticed something different about the quality of the bass, mid-bass, and upper-bass octaves sounding startlingly real compared to what they are used to hearing here. The mayhem in the scenes of combat with bizarre aliens in *Edge Of Tomorrow* (aka *Live. Die. Repeat.*) was even more complex and nuanced than I'd ever heard before. I found the bass octaves the easiest difference to hear, but as I became accustomed to the bass quality, I started noticing other things happening in the mids and highs that really heighten the sense of danger and tension. Even relatively simple things like starting the helicopter became much more complex in that individual sounds stand clear of each other... they affected each other less so you could hear each detail more clearly, so the loud engine and rotor on the helicopter didn't mask other sounds going on at the same time. Sounds from the helicopter itself and sounds of the generated wind doing things, and the other sounds helicopters make while running, were all perfectly coordinated and remained easily audible. The dynamic punch of this system made the wind generated by the rotors cause my entire room to pulse with pressure during the increasing rotation speed of the engine. I thought I'd heard this movie as well as I was ever going to hear it, but the ATC system proved that to be a bad assumption. *Spider-Man: Into The Spider-Verse* was almost as good as visiting an amusement park. The soundtrack of this movie is as brilliant as the writing, voice talent, and animation. Talk about a movie where the visuals distract you from paying attention to the sound! Nevertheless, the center channel was a big standout during this movie, delivering some of the best dialogue quality I've ever heard in a movie, animated or otherwise.

Too often, higher-performing (and typically more expensive) loudspeakers sound strained or stressed during scenes with very dynamic sound, even if you aren't causing the problem with very high SPLs. Prior to hearing the ATC system, I didn't even realize what was happening with most other systems that have been here. Some soundtracks get strident when things get louder or yelling is going on. You can't make it go away, so you are at the mercy of the system reproducing the sound. A lot of systems get edgy and annoying during those scenes, but the ATC system simply presents what is in the soundtrack without making it worse. If the sound is approaching ice-picks-in-your-ears harshness with another system, at the same SPLs, the ATC system will let you know the sound recording isn't great, but the annoyance with the hard or harsh soundtrack never develops. You might wish the sound was better, but you don't have to turn the sound down during the loudest scenes nor turn the volume up to hear the quietest parts of the soundtrack clearly.

Something else I had to get used to was that I could use SPLs several dB higher than normal and not feel like I was being beaten up by aggressive and dynamic soundtracks. The ATC loudspeakers can be played at that louder-than-normal level for an entire two-hour movie without ever feeling like I have to reduce the SPL in the room because of fatigue. Everything is so low in distortion and harshness that the higher playback level seems correct because sound effects are powerful and well-recorded dialogue remains clearly audible from whispers to yelling. Movies and TV shows with dialogue that is recorded with less than the best audio techniques are not made wonderful sounding. Whatever makes dialogue hard to hear at times on more conventional loudspeakers, when the soundtrack itself wasn't mastered with great clarity,

is not present with the ATC system, but you can easily tell the sound quality is not as good as some other programming. The programming that could use better capture and mastering of dialogue isn't necessarily limited to low-budget programming or movies. It seems random and afflicts every studio or programming service. The ATC system handled those soundtracks in a way that lets you know the sound quality isn't the best, but you end up not being as annoyed by it as you might be with more typical loudspeakers. I never had to turn on English subtitles to fill in unintelligible syllables or words so I wouldn't miss anything. You'd be surprised how often that (subtitles on) happens with other systems, even fairly expensive ones.

Conclusion

It should be obvious by now that I really like what ATC is doing with all of these loudspeaker models. The sound they get from all the models in this system is to die for. The outstanding characteristics are: amazing dynamic capability; loads of detail and nuance; zero listening fatigue at any sane listening level; steadfastly neutral sound; and distortion so low that more typical loudspeakers sound poorly designed in comparison. There is absolutely nothing about the sound quality that I have an iota of reservation about. Yes, a sound system retailing for over \$90,000 *should* sound fabulous. But I can tell you that while many systems are available from many manufacturers in this price range, I've never heard one sound like this ATC system. If you have heard an ATC system at an industry or enthusiast show and thought the sound was good, you haven't really heard anything until you get these loudspeakers into your own room. It's quite an experience. I'm going to have to get one of those tear-drop tattoos to remind me how hard it was to see the guys from Lone Mountain Audio (ATC US Distributor) pack the loudspeakers up for their trip home. ATC should be on everybody's list to audition, they are that good. Instead of recommending the ATC loudspeakers, I'm just going to say that for the time being, this ATC system is my new reference for how every system should sound. **WSR**

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