Audience ClairAudient The ONE

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The ONE and 1+1 Loudspeakers

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Audience ClairAudient 1+1

Audience has been making some of my favorite high-end audio cables and power conditioners since 1997. In the 2000s they began designing line source loudspeakers with various numbers of identical (sort of) drivers from major suppliers but couldn't get the designs where they needed to be until they designed their own 3-inch, full-range driver, which became the foundation of their ClairAudient line of loudspeakers. Audience has produced loudspeakers with as many as 32 drivers per channel, all the way down to The ONE that has a single driver on the front and a single passive radiator on the back. Next up the line from The ONE is the 1+1, with one driver on the front panel, one driver on the back panel, and passive radiators on the left and right sides. As is always the case with small so-called full-range drivers, large cone excursions are required to reproduce bass frequencies. One of the biggest problems with conventional drivers is that in long excursions, the voice coil can leave the magnetic gap and all control of the driven surface of the cone is lost momentarily, causing a dramatic increase in distortion at excursion extremes. Audience designed their driver with a dual magnetic gap, making it impossible for the voice coil to ever leave the control provided by having the voice coil in the magnetic gap. Exceptional cone stiffness and radiation qualities were also required of the full-range drivers. Audience chose titanium with constrained layer damping to further control resonances in the cone. There are many more details in the design of the driver. Making a 3-inch diameter driver operate much below 300 Hz requires some pretty serious design effort. It wouldn't be unusual for a 3-inch driver to be the size of the midrange driver in a three-way loudspeaker design, and crossovers would likely be in the 300-Hz to 800-Hz range and again at 2500 Hz to 3500 Hz (rough estimates). Everything has to be just right to "stretch" the operating range of a 3-inch driver so that it can operate comfortably from, say, 50 Hz to over 20,000 Hz. The rubber surround that attaches the edge of the driver to the frame of the driver has to be just right so that the drive surface is always aligned (centered) but still allowed to move in and out a considerable distance without distortion that would come from the rubber being too stiff or too short for the needed excursions. The longer magnetic gap is going to shield the voice coil from cooling air so you have to have a path for cooling air to pump heat out of that one critical spot. Your radiating surface has to deal with very "beam-y" high frequencies, as well as more or less omni-directional frequencies below 100 Hz and wavelengths from 0.6 inches to as long as 30 feet. It's not easy and you can bet there's a lot going on in that driver that Audience doesn't want to disclose.

The ONE

With the perfection of the driver design, Audience was finally able to achieve the levels of performance they had been seeking. The entire ClairAudient product line arose from this single driver. The ONE, at $995 per pair, is Audience's entry-level loudspeaker. They envision it being used primarily in two applications: nearfield listening, like gaming or computer desktop music for those who enjoy some high-quality music while they work or amuse themselves with other computer pastimes; and for use in smaller rooms where the loudspeakers will be placed close to one or two walls. There is only so much a single 3-inch driver can do in a loudspeaker enclosure that's only 5.5 x 7 x 7 inches even with a passive radiator to help extend bass response. So Audience relies on reinforcement of bass frequencies by a desktop or tabletop immediately under the loudspeaker or from the loudspeaker being placed a foot or so from one or two walls. I did place The ONE on stands well away from walls just to see what would happen. The frequency balance tilted towards more prominent upper midrange and treble frequencies. It wasn't unpleasant, and some listeners might like all the detail this can bring out, but it's not really natural sounding to me. I much preferred the more balanced sound I got from The ONE loudspeakers when they were close to walls or were being used nearfield for gaming or music on a tabletop.

The ONE can be overdriven by an owner trying to get them to fill a large-for-them space with reference-level or near reference-level movie sound, or by someone hell-bent on achieving maximum party-level playback. Even though the voice coil can move a long distance in the magnetic gap, there's still a limit to the motion. When you hit that limit, there is a "tic" from the loudspeaker. This indicates you are about to damage the loudspeaker so you need to back off on the playback level quickly. Conventional loudspeakers tend to get harsh and distorted when you approach the limits of their output capabilities because the voice coil isn't staying in the magnetic gap and the cone is beginning to experience breakup. But the stiff cone and long magnetic gap in Audience's driver keeps distortions very low and you can't really tell from the sound of the loudspeaker that you're right on the ragged edge of the loudspeaker's limits. I did experience the dreaded "tic" sound a few times during the review but backed off on the playback volume immediately. It doesn't take much to stop it. Just 1 or 2 dB less on the surround processor's display was all it took. A reviewer needs to find the limits of a product, but an owner shouldn't push the speakers so far that they hear the "tic" noise. That noise, even if it happens just one time, can mean permanent damage to the driver or drivers.

Audience sent seven of The ONE loudspeakers so I could create a surround sound system with identical loudspeakers in each location. During all the listening to The ONE system, I never once heard a "tic" in either the side surround or rear surround channels. When it happened, it was always in one of the front three channels. Of course, my theatre room is much larger than any room Audience would recommend you use The ONEs in (13 wide x 28 deep, 9 foot ceiling in the front, 8 foot ceiling in the back). So it was not a surprise at all that getting satisfying playback levels for movies had The ONEs on the ragged edge of what they could do safely. This first use of The ONEs was clearly outside Audience's intended envelope of performance for this loudspeaker.

Moving five of The ONEs to a much smaller room (12 x 13 feet) and setting up a 5.1 system for gaming and movies was much more appropriate for The ONEs. Here they made sound as loud as I'd ever want it, and there was nary a "tic" to be heard. Furthermore, placement within nine inches or so of one or two walls fleshed out the sound of The ONEs so they were more balanced and natural sounding. Gaming was crazy good with $2,500 worth of The ONE loudspeakers and a circa $1,000 Onkyo AVR. Soundtracks were often

SPECIFICATIONS

Features – Audience ClairAudient The ONE Loudspeaker
Small size ideal for near-field listening (gaming, desktop music, etc.)
Can be stand-mounted but need to be close to 1 or 2 walls to reinforce bass response
Single 3-inch driver, no crossover or equalization, driver is connected directly to binding posts
Single passive radiator on back panel
High gloss black finish
Multi-way insulated binding posts
Optional desktop/tabletop bases tilt loudspeakers up for nearfield listening ($75 per pair)
Magnetic speaker grilles
Dual gap, long excursion motor assembly keeps voice coil inside the magnetic gap even at maximum excursions, little or no increase in distortion at high playback levels
Crossover-less design maintains time and phase coherency better than conventional loudspeakers
Driver cone construction is titanium-based with constrained layer damping
For a nominal fee, impedance can be customized to 4 or 16 Ohms rather than the standard 8 Ohms

Features – Audience ClairAudient 1+1 Loudspeaker
Small size ideal for systems requiring minimal visual impact of theatre components
Performs well in nearfield or mounted on stands or brackets
Two 3-inch drivers, one front, one rear for bi-pole radiation pattern
Two passive radiators, left and right sides
High-gloss black finish on front, top, back, and bottom. High-gloss wood veneer on side panels.
Multi-way insulated binding posts
Magnetic speaker grilles
A35 driver has dual gap, long excursion motor assemblies that keep the voice coil within the magnetic field over the full range of excursion, reducing distortion when there are large excursions for bass frequencies
Crossoverless design maintains time and phase coherency better than conventional loudspeakers
Titanium driver cone construction with constrained layer damping
Dual drivers improve power handling and bass response
Bi-pole radiation pattern can produce large sonic images in many rooms, making off axis listening better for those not seated in prime seats
For a nominal fee, impedance can be customized to 4 or 16 Ohms rather than the standard 8 Ohms

Specifications – Audience ClairAudient The ONE Loudspeaker
Dimensions (WHD In Inches): 5.5 x 7 x 7
Weight (In Pounds): 4
Impedance: nominal 8, minimum 6
Sensitivity/Efficiency: 84 dB for 1 watt at 1 meter
Amplifier Power recommendation: maximum 25 RMS continuous (watts)
Frequency response: 50-23,000 (Hz) requires placement close to a wall or on a table to go as low as 50 Hz
Maximum SPL for 1 pair: 98 (dB)
Designed in: USA
Assembled in: USA
Warranty: 5 years
MSRP: $995 per pair

Specifications – Audience ClairAudient 1+1 Loudspeaker
Dimensions (WHD In Inches): 6 x 9.75 x 8
Weight (In Pounds): 7
Impedance: nominal 8, minimum 6
Sensitivity/Efficiency: 87 dB for 1 watt at 1 meter
Amplifier Power recommendation: maximum 50 RMS continuous (watts)
Frequency response: dependent on placement; 22 Hz – 43,000 Hz measured at 1 meter with roll-off at the extremes; typical room response (-3 dB point) will be 40 Hz to 80 Hz (depending on placement) to more than 20,000 Hz
Maximum SPL for 1 pair: 104 (dB)
Designed in: USA
Assembled in: USA
Warranty: 5 years
MSRP: $1,800 per pair

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exceptionally enveloping and sounds behind or beside you would alert you to something you might have missed or been confused about if there were just two loudspeakers. Movie sound was so good that as long as I was sitting around three feet from the 32-inch monitor, the experience was satisfyingly cinematic. If I was going to set up a permanent system in a small room like this, a 54-inch flat panel viewed from five feet would be just about perfect. That would allow placing the side-surrounds in the back corners of the room somewhat behind the viewer's seat. The three front channels could be nine inches or so from the wall behind them. When everything is scaled properly for an ideal viewing experience, even a smaller room can make a satisfying home theatre given a really good video display and loudspeakers as good as The ONEs.

Nearfield listening with The ONEs certainly brings out their strengths. With small conventional loudspeakers, it can be four or five feet from the loudspeakers before the two or three drivers (with crossovers) come together as a coherent soundfield. With a single full-range driver and no crossovers, the sound is coherent the moment it leaves the loudspeaker. Sit as close as you like. In fact, the closer you sit to the loudspeakers, the less loud they have to be to get to a satisfying listening level. This can be a major factor for those constrained by neighbors or other family members in the same home being sensitive to the SPLs you'd like to use in your theatre or gaming setup. I found The ONEs captivating from three feet away while gaming. If you can organize a surround setup for gaming, the experience is addictive from the first five minutes.

In the big room, the center channel got some bass reinforcement from the large and heavy equipment rack that normally holds a very large and heavy center-channel loudspeaker. The main channels were on stands and were a bit lightweight in bass. The side and rear surrounds were near walls and fared very well, sounding rich and natural. I used a 90-Hz crossover point to the subwoofer for the bass-shy main channels, and 80 Hz for the center and surround channels since their bass extended deeper due to their placement. That relieves The ONEs from having to produce the longest excursions to reproduce deep bass frequencies, avoiding the "tic" happening at inopportune times. So even though The ONEs shouldn't have done all that well in the big room, they were still impressive when used within their limits.

The experience of hearing a single driver with no crossover and only a rear-mounted passive radiator to help out in a fairly narrow band of bass frequencies was quite interesting. The superior coherence of the sound doesn't whack you over the head; it's more subtle than that. But if you've spent years or decades listening to loudspeakers with crossovers, hearing something as good as The ONE with a single driver is a new experience. It's a sound that strikes me as "clean," a strange adjective to attach to sound, but it's difficult to explain what you hear any other way. You realize you're not hearing something you've always heard before. It's not obvious exactly what it is, but you'll find the experience extremely satisfying. The only other single-driver loudspeakers I've ever heard have been built around a Lowther driver (and related designs made by others) that are typically used with low-power audiophile tube amplifiers. I have never been impressed with the sound of (usually very large) loudspeakers employing a Lowther driver with its characteristic "whizzer cone" for treble reproduction. In fact, the worst reproduction of audience applause I've ever heard came from five-figure, Lowther-equipped loudspeakers at a CES show. Applause sounded like four or five popcorn makers popping corn at the same time. The ONEs are nothing like that listening experience. Think Ford Model T compared to a great modern car; the difference is that huge.

The simplicity of The ONEs helped the loudspeaker all but disappear. The cabinet is so small and so stiff that you simply don't hear any cabinet resonances to color the sound, as is inevitable with larger loudspeakers selling for prices the average working person can't deal with. Only the most expensive large loudspeakers have cabinets "dead" enough to rival the lack of resonances you get with The ONE. Detail and clarity are fantastic with The ONE, revealing everything there is to hear in the recording. You definitely don't want to skimp on the amplifier for The ONE. Better amplifiers made The ONEs sound better. You won't need a huge powerhouse amplifier though. Even though The ONEs are less efficient/sensitive than average (84 dB per watt at 1 meter), they present an easy load to the amplifier, and you'll be fine with as little as 50 "real" watts, which are not to be confused with AVR watts where you'd probably want 100 watts in order to have adequate power. With bass reinforcement from a desktop or nearby walls, the sound was full and well balanced. There was no evidence of The ONE coloring the sound in any identifiable way. The ONEs excelled at conveying emotion and feeling in music. Coldplay's often dreamy-sounding music was frequently magical through The ONEs, even though the sound quality of their recordings isn't as good as the music deserves. George Thorogood & the Destroyers' "Bad to the Bone" had just the right amount of swagger, cigarette smoke, beer, bourbon, and boot sole to make it perfect.

Movie playback was really interesting. When the soundtrack involved ambient sound, where you don't really want to be able to localize the sound to any loudspeaker location, The ONEs were completely "invisible." I could not tell where the sound was coming from. But if there was a directional sound, like a door opening or if something was bumped or dropped, it was simple to localize the sound. This is as it should be in great home theatre sound. You might think that such small loudspeakers have no business in a big room, but blockbusters like *Thor: The Dark World* and *Pacific Rim* were both excellent with The ONEs in the seven channels with the moderately priced Hsu Research VTF-III Mk IV doing subwoofer duty. For blockbusters like these, if playback levels were very high, I could avoid the dreaded "tic" by simply setting the crossover point 10 or 20 Hz higher without having to reduce playback volume. That removed enough bass excursion that high-ish playback levels could be maintained without worrying about overdriving The ONEs.

1+1

Audience also sent a pair of the 1+1 loudspeakers ($1,800 per pair), the dual-driver big brother to The ONE. The first thing that struck me when listening to the 1+1 for the first time, after having been using The ONEs for a month or so, was "They sound just like The ONE with more bass and a little more finesse." I don't know exactly where that extra bit of finesse came from though. Perhaps it has something to do with the bi-pole radiation of the 1+1 since they have a driver on the front and back panels. There is still a passive radiator for each driver, moved to the center of the left and right sides of the 1+1. The extra driver helps the 1+1 do bass considerably better than The ONE, and I never once heard a "tic" from the 1+1. Bass response is still reinforced by room boundaries, but even with the 1+1s placed on stands well away from walls, I still thought the bass was respectable. I found that using a 70 Hz-crossover point with the 1+1 was just perfect. It gave the 1+1 plenty to do below 100 Hz but still kept the biggest bass excursions in the subwoofer. Audience says most people will get bass flat to 40 Hz to 80 Hz with the 1+1, depending on where they are placed in relation to nearby walls. The farther from walls, the higher the -3 dB point will be. When Audience measures the 1+1 in lab conditions at one meter, they get bass response flat to 22 Hz with treble extending as high as 43,000 Hz. Of course, conditions in a room at typical listening distances aren't going to produce those sorts of numbers for frequency response. But because the room is such a factor in frequency response of these small wonders, Audience is hard-pressed to produce a single set of specs that define what a user is likely to get at home. With the 1+1s placed in the worst possible location for bass

reinforcement in my large theatre room, well away from walls, I could hear the 1+1s moving air at 31.5 Hz, though, I doubt this was useful bass response. 40 Hz was present but down in level. 50 Hz and 63 Hz were respectably present, though, down in level a bit from 80 Hz. 80 Hz and above were solid. With the 1+1s closer to a side wall, 63 Hz and 50 Hz did come up in level, without 80 Hz getting any louder. So it would seem that Audience is representing what you'll get in your real-world room pretty well in spite of not having a conventional loudspeaker response spec based on -3 dB points.

Music was especially captivating with the 1+1s. There's an extra measure of ease, as if the 1+1 is more relaxed and confident than the upstart The ONE. Bruce Hornsby's piano playing on Don Henley's song "The End Of The Innocence" was especially revealing of how natural and accurate the 1+1s can sound. Hornsby has a signature phrasing, where he noodles down the keyboard with some regularity. With no crossovers to different drivers, that piano sound has a coherence I can't remember hearing before. Grand piano is really difficult for loudspeakers to reproduce well, but the 1+1s did a heck of a good job. I was able to hear all the individual elements of the sound separately if I wished, or as an overall single sound if I preferred that. The individual sounds include the hammers hitting strings, the directly radiated sound from the strings, the sound that bounces off the soundboard and passes through vibrating strings again, then directly into the room, and the sound that bounces off the sound board and bounces off the underside of the open lid before making it into the room to be recorded. Each of the sounds is distinct, but many loudspeakers homogenize the sound into a single overarching sound. It's something special when you can hear a well-recorded piano sound so much like it sounds when you are in a room with one being played live. Of course, the recording has to capture that sound also and that doesn't happen most of the time. You only get great grand piano sound from a fairly limited group of recordings in the rock and pop genres.

For movie sound, the 1+1s didn't perform much differently than The ONEs on a moment-to-moment basis. But the 1+1s were certainly more "at ease" in the big room, feeling more like they belonged in that space than the single-driver little brothers. But as I accumulated time watching movies, my notes looked the same for both models. Great disappearing act when reproducing ambient sounds, but excellent focus when reproducing directional sounds. They have the same ability to produce the emotion and feel in music also. In the nearfield application and in the small room, the differences seemed even smaller. Yes, the 1+1 still had a slight edge in how easily it seemed to reproduce sound, but it wasn't a big deal in a smaller space. I could live very happily with The ONEs in a small room or as nearfield loudspeakers on a desktop or tabletop.

An interesting effect when using the ClairAudient loudspeakers was that all the "civilians" who stopped by and got demos or who watched an entire movie always thought it was the "big" loudspeakers making all the sound, when it was actually the tiny Audience loudspeakers, so small that they almost went unnoticed by guests. If you want small loudspeakers for your theatre system but you want the best possible sounding small loudspeakers you can find, these may just be as good as small loudspeakers get.

Conclusion

The ONE and 1+1 are great little loudspeakers. Though their physical size is very small, the sound they make can fill a room. Having full-range drivers without crossovers and sturdy resonance-resistant cabinets allows these loudspeakers to produce supremely coherent sound, with excellent detail and surprising amounts of bass for such small loudspeakers. Their size and performance can be a great asset in many home theatre systems, especially those in smaller rooms. The ONE, in particular, is amazingly good as a nearfield monitor for use with computers or gaming systems, while the 1+1 can work well in medium-sized theatre rooms. Both models are highly recommended. WSR