There's no doubt that, like the Italians, the French have flair. Or a chic 'je ne sais quoi'. Check out the country's main audio companies (especially the loudspeaker manufacturers) and you will find distinctive products incorporating innovations and examples of lateral thinking of a standard that would make engineers from other parts of the planet green with envy. Hand-crankable propagation-aligning spinal rib-like enclosures à la Focal's Utopia? Spherical enclosures bearing quad-axial drivers chez Cabasse? Ceiling-reaching stacked enclosures with exotically-designed bullet-shaped tweeters per Triangle? I could go on...

Atohm is another French speaker manufacturer, and a relatively new one at that, but one with a somewhat more conventional penchant for beauty in design and sound. Thierry Comte, who was formerly Technical Director at Triangle, has decided to go it alone and is now at the helm of Atohm, designing products that reap the benefits of his vast experience in loudspeaker design and production. The subject at hand is the entry stand-mount speaker in the flagship GT range—the GT 1.0.

**THE EQUIPMENT**
The GT 1.0 speakers come solidly triple-box packed and double-bag protected. The 'bag inside a bag' arrangement serves not only to protect the stunning finish (more on that later) but one of the sacks is soft enough to serve as a polishing cloth. No matter how pedantic you may be, as you un-bag the GT 1.0, you won't fail to be impressed by the build quality and overall fit and finish of the cabinetry.

Also in the box—and most unusually—you will find that Atohm actually provides a choice of two baffle grilles. Both attach via embedded magnets with the full-sized bullet-shaped grille just about covering the speakers' fascia while opting only for the smaller circular one provides protection for the 153mm mid/woofer (that's its overall diameter, the Thiele/Small diameter is 114mm, for an Sd of 102cm²). Of course, this last grille is removable as well for that 'à la naturelle' look—my preferred option.

The GT 1.0's drivers are of very high quality and, according to Atohm, are designed...
This is a stunning-looking little transducer: My review samples were dressed in an immaculately-applied gloss lacquer over gorgeous Rosewood. The GT 1.0 is also available in black and white piano gloss (I saw an example of the white gloss at the distributor’s warehouse, and it was absolutely stunning).

I quickly found that the GT 1.0 needed a bit of running-in with the tweeter sounding a tad forward and sibilant and the bass a bit lean straight out of the box. Given some moderate level music playback for a break-in period of around 50 hours tamed and loosened things up remarkably. In fact the bass ended-up being surprisingly full for a speaker of its size (that huge magnet pays dividends).

La musique

We have all heard the term ‘disappearing act’ when it comes to speakers… hell, some of us lucky ones have even experienced it. Well the GT 1.0s certainly are the archetypal summation of that term. These speakers project a slightly forward soundscape that is totally independent of the enclosures; to the point of tricking the ear-to-eye information process. But you expect this from small stand-mount speakers, right? Well… yes. But, boy, these Atohms perform that trick well. The soundscape was an amalgam of a wide and open soundstage spreading well beyond the speakers’ edges, very good depth, and precisely-placed images.

Its low-frequency performance is assisted by means of the enclosure being a bass reflex alignment, using a rear-facing port (43Ø×150mm).

Atohm specifies the GT1.0’s response as 45Hz to 30kHz with no dB latitudes, its sensitivity at 89dB SPL at a distance of one metre for an input level of 2.83V and a 6Ω nominal impedance. The crossover between the drivers is quoted as being at 2.5kHz. Good-quality binding posts are featured around the rear and are placed just below a large rotary knob which allows tweeter level trimming of ±1dB for fine-tuning to room acoustics.

A wide and open soundstage spreading well beyond the speakers’ edges, very good depth, and precisely-placed images...
power and dexterity relatively intact. And while coping remarkably well with such difficult material in terms of dynamic fidelity, the driver duo also excelled at detail retrieval, instrument separation and accuracy to harmonic structure. It’s a fast sound too, with a sense of bee-bop pace that jets the music along, while the transient snap and vivid micro-dynamic detail on tap here renders small finger-nail and steel string interactions dramatically real-sounding.

In my test room, which is rather large, I perceived the speakers’ upper range to be a tad laid-back, or recessed. The rear tweeter level adjustment was very useful here and adjusting it appropriately served to add a bit of sparkle to the upper frequencies. I notched it up to the +1 position and heard a subtle but easily-perceptible increase in treble detail and extension.

This level of overall sophistication and resolution will place some demands on your ancillary gear. As with any great speaker, the playback source and driving amplification need to be on-par. Also, I’d recommend that very solid, good-quality stands, of appropriate height, are absolutely essential in order to place that top-notch tweeter at ear height and for its proper integration with the equally adept mid/bass driver. Also worthy of note is that as much as it’s one hell of a little driver, so that it can’t defy physics, it punched less like a welter-weight and more like a middle-weight. So what it does do is quite remarkable.

**CONCLUSION**

I was quite taken by the little Atohm GT 1.0. It is very refined in its handling of tonal colours and delicate detail. Its amazing sound-staging capabilities surprised me any number of times and its dynamic aptitude, although not quite stretching to the level of larger floorstanders, is impressive... especially in small to medium-sized rooms, given the diminutive enclosure and the size of the bass/midrange driver.

So, bearing in mind that the GT 1.0 is the entry point to the GT range, and all things being equal, I expect to hear even greater things from its larger stable-mates. It’s certainly evident that French newbie Atohm has a very bright future.

*Edgar Kramer*
**TEST RESULTS**

The performance of the Atohm GT 1.0, as measured by Newport Test Labs, was excellent. Graph 1 shows an averaged response measured in-room, using pink noise as the test stimulus, and you can see that from 100Hz to 10kHz the traces on the graph vary by no more than ±2dB. In this case, the upper limit is the graphing limit, but you can see that below 100Hz, the bass response of the GT 1.0 rolls off quite quickly, which is to be expected considering the small size of the bass/midrange driver and the moderate size of the cabinet.

The second graph (Graph 2) shows the high-frequency performance of the Atohm GT 1.0 in detail. The measurement uses a gating technique that simulates the environment of an anechoic chamber. There are three traces, which show the response at the three different settings of the attenuator on the rear panel. You can see that the attenuation is not quite uniform, with a bigger difference in level between the ‘high-def’ (+1.5dB) position and the ‘linear’ (0dB) position than there is between the ‘linear’ position and the ‘smooth’ (~1.5dB) position. You can also see that although the control starts operating at 1.5kHz, it has no substantive effect below 4kHz, so it will have no effect on fundamental musical notes, only on their harmonics.

Atohm has done a wonderful job with its grille design, because it’s virtually acoustically transparent. There is a significant 2.5dB difference across the region 3–4kHz, but I doubt that this would be audible. (Graph 3.)

Low-frequency performance of the Atohm GT 1.0 is shown in Graph 4. You can see that the Atohm driver rolls off quite steeply below 100Hz, to a minima at 47Hz. The response above 100Hz is smooth: part of the roll-off is due to limitations in the measuring technique used (nearfield acquisition). The port has been tuned far lower than I might have expected: as you can see, it delivers its maximum output at 38Hz, though the port does contribute to the bass output significantly from around 27Hz to 110Hz. There is some unwanted output from the port across the region 300Hz–1.2kHz, and also at 1.8kHz, but because the levels involved are very low and the port is facing away from the listening position in any case, I don’t think they’re important. They don’t appear to be resonances, because they don’t show up on the impedance modulus.

As for the impedance, the Atohm GT 1.0 is a very well-behaved design within the audio band, never dropping below 4Ω and when it approaches this impedance (which it does at 20Hz, 50Hz and 200Hz) it does so only briefly. However outside the audio band (above 20kHz), the Atohm GT1’s impedance continues to fall up to the measurement limit (30kHz), whereas it’s preferable for a designer to ensure that his speakers’ impedance increases with increasing frequency in order to ensure that all amplifiers will remain completely stable and that their automatic (usually VI) protection circuitry won’t trip.

The nominal impedance of the GT 1.0 is technically lower than Atohm’s claim of 6Ω, with Newport Test Labs showing that according to the IEC 60268-5 standard (Section 16.1), it should have been stated as 5Ω to comply with IEC regs. The pair matching is outstanding; you can barely see any differences at all between the left and right speakers (identified by the red and yellow traces). Interestingly, setting the treble control to ‘high-def’ appears to have a very slight effect on the level of the system resonances at 34Hz and 90Hz. The differences in impedance caused by using the treble control clearly show why the frequency contouring is different at the different settings (as shown in Graph 2). Phase angle is superbly constrained to around ±30° which is an excellent result.

The final graph prepared by Newport Test Labs is a composite that ‘overlays’ several graphs to give a more complete overall picture of how the Atohm performs. This shows that the frequency response of the Atohm GT 1.0, as measured by the lab, is 7.5Hz to 28kHz ±3dB. Increasing the window by only the smallest fraction (to ±4dB) would see the response extend downwards further, to just below 60Hz. Sensitivity, as measured by Newport Test Labs, was 86dBSPL at 1 metre for a 2.83V input. This is ‘way short of Atohm’s claim, but is more in line with what I would personally expect for a design of this type. No doubt the reason for the difference is that Newport Test Labs uses wideband pink noise when it is testing loudspeakers, and then averages the response over several octaves, whereas it’s likely Atohm uses the sine-wave-based ‘spot frequency’ method that is more commonly employed by speaker manufacturers, largely because it gives better figures. This—and the sensitivity and the diminishing impedance at high frequencies—aside, the Atohm GT 1.0 is a well-designed loudspeaker that exhibits a flat and extended frequency response.  

*Steve Holding*