

Speakers of the House

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PROAC STUDIO 1

Art Dudley did a fine job of reviewing these loudspeakers in Issue Six, but in the meantime I purchased a pair of my own (as did Art), and thus decided to add my thoughts on this little wonder.

ProAc differ from most audio manufacturers in that they build products to satisfy their own standards, and let the costs fall where they may. In other words, ProAc don't manufacture loudspeakers to meet a specific price point, as is common industry practice. This goes a long way towards explaining the remarkable performance, and build quality, of the ProAc Studio 1.

Externally, the Studio 1 is unremarkable, save for its appealing dimensions and flawless finish. Deeper than it is wide (16"H x 8"W x 9 3/4"D), the ProAc presents a trim and elegant shape, made even more attractive by the superb wood-veneer finish covering all surfaces except the rear panel. Teak, walnut, and black ash are the standard finishes, and others may be special ordered.

Nominally, the Studio 1 is a two-way, ported loudspeaker designed for stand mounting. Rated sensitivity is 88 db/1 watt/1 meter, and impedance is given as 8 ohms. This, of course, tells you nothing of why the Studio 1 is so amazingly good. A closer look is in order.

Remove the grille (black cloth over beveled particleboard), and above the front-mounted port you'll see two superb drivers. The tweeter is a 1" dome, ferrofluid cooled and damped, featuring a

titanium diaphragm thinner than a single human hair. Titanium is far stiffer than aluminum for a given mass, and this translated into superb transient response. Further contributing to the tweeter's quickness is a powerful double-magnet motor assembly which maintains close control over the dome's movements. The tweeter is built for ProAc by MB-Electronics of West Germany.

The bass/midrange driver is equally impressive. Built for ProAc by the Danish firm ScanSpeak, it reflects an obvious concern for maximizing the rigidity of the diaphragm while minimizing its mass. [If ProAc ever decides to change their company slogan (it's currently "Clearly More Accurate"), they should consider "Built For Speed".] While nominally a 6 1/2" driver, the actual cone area is actually quite small, due to the cone's sharp flare. Between the ultralight foam surround and the oversize dust cap, barely an inch of cone area is visible (the rest of the cone area lies behind the dust cap, of course). The cone itself is made of paper with doping applied to the rear surface. The oversize dust cap is significant ---- its greater diameter places it further out towards the middle of the cone's radius, adding stiffness to the region between the surround and voice coil. The voice coil, at 40 mm diameter, is huge for a cone this size, and this combines with the oversize magnet to offer superb damping and control over the cone's entire distance of travel.

The driver's pole piece is vented to reduce back pressure in the motor assembly; this helps dissipate heat, and improves dynamics. The driver's frame is cast magnesium, and is rigidly fixed to the cabinet with six allen head bolts, yet another example of the top-notch build quality found in this loudspeaker. Both the tweeter and bass/midrange are mounted flush on the front baffle, yielding reduced diffraction and enhanced mechanical coupling.

Crossover components are first rate, and are mounted on a glass-fibre circuit board. High-quality wire connects the crossover to the drivers (the connections are soldered, of course), as well as to the special five-way binding posts. These are beautifully machined, rhodium-plated pieces from John Michell (ProAc found rhodium-plating sounded better than gold-plating). The cabinet, built to ProAc specs by MQ Cabinets (this owned by Mo Iqbal of Monitor Audio fame), is composed entirely of Medite (medium-density fibreboard), unlike many speakers which use MDF only in the front baffle. The cabinet is veneered on both sides to avoid warpage, and is heavily damped with bituminous pads. Anechoic grade foam is used throughout the interior.

ProAc recommended placing the Studio 1 on stands around 20" high, thus my Linn Sara stands (at 20" tall) turned out to be a fine match. I have often used the Studio 1 pointed straight ahead with good results, but ProAc suggest

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turning the speakers inward slightly, and this does tend to open up the soundstage somewhat. I sited the ProAcs well out into the room, about 2 1/2 feet from the back wall, and roughly 3 1/2 feet from the side walls. One can position the Studio 1s a little closer to the back wall, to enhance bass power, without degrading bass definition too much, but they should be a least 18" out from the rear wall.

On to the sound. The Studio 1 provides a stunning combination of electrostatic-like clarity and dynamic punch and drive. On the track "Danny's All-Star Joint" (from the *Rickie Lee Jones* LP), the opening bass guitar line was extremely crisp and tight, the attack and decay of each note easily appreciated. The cymbals and fingers snaps that accompany the bass riff were amazingly crisp and clear, and surrounded by air and ambience. When Jones' voice came in, it was remarkable how detailed and immediate it sounded. As more instruments were added, the sound never became muddy or confused. The electric piano was easily followed regardless of how frenetic or boisterous the mix was. The sense of "aliveness" and vitality made the performance sound much more real, more believable.

I next played the title track from John Coltrane's brilliant *Giant Steps*, and the ProAcs again dazzled with their amazing clarity and rhythmic coherence. Paul Chamber's acoustic bass on this track zooms along at breakneck speed, and the Studio 1 never missed a note, capturing both the rhythmic and melodic content of the music. Coltrane's tenor saxophone was crisp, snappy, and extremely well defined. There was no tendency for notes to smear or blur together. Tonally, the sax was spot on. To be sure, there is not the slightest bit of euphonic warmth or richness in the sound of the Studio

1, but it is not a bright or thin-sounding speaker. Rather, it clearly reveals the quality of the components preceding it. Use a bright moving coil cartridge with it, and yes, saxophones will sound hard and strident. In this respect, the Studio 1 is one of the most neutral speakers I have heard in this price range.

Paul Simon's *Graceland* was a lot of fun, the remarkable bass power and extension of the ProAc giving tracks like "You Can Call Me Al" real power and impact. Just as impressive is the tremendous sense of clarity and transparency with this speaker --- small details that are all but buried in the mix through other speakers ring out crisp and clear (but not in an overbearing or unnatural way). The performances here were bathed in recording acoustic and air, and this made them sound more alive and vital.

Stravinsky's *Firebird Suite* (1910), as performed by the LA Philharmonic under Erich Leinsdorf (Sherfield Lab 24), sounded gorgeous through the ProAcs. String tone was particularly good, vivid and clear without any shrillness or piercing quality. The bass drum came across with startling impact, all the more surprising given the Studio 1's compact size. When I put on the Henryk Szeryng performance of Bach's Sonatas and Partitas for Solo Violin (DG 2709 028), the violin sound did sound a tad thin, but that was due to the AT-F5 cartridge I was using. Note attack and dynamics were outstanding, with no tendency to sound compressed or rounded off. The music seemed to open up and breathe in a way few comparably-priced speakers can match.

To me, the ProAc Studio 1 is one of the most remarkable loudspeakers I have ever heard; certainly it is the best compact speaker I have encountered (though note I

haven't heard the WATT, or a couple of other esoteric, i.e. expensive, models). The Studio 1 has tremendous note attack and definition --- it captures the attack-sustain-decay of notes with amazing fidelity. Bass extension and impact are far better than the diminutive cabinet would imply, but more importantly the ProAc conveys the pace and rhythmic progression of music superbly, giving vitality and drive to the performance. Imaging and soundstaging are also superb, if not quite up to the standards of the the Spica Angelus.

What it all boils down to is this: Music sounds more real, more believable through the Studio 1. Again, a caution: The Studio 1 is extremely revealing, and thus will readily highlight any weaknesses or tonal aberrations in your ancillary equipment. Use a bright MC cartridge, and you'll scorch your ears. The Studio 1 is very intolerant of brightness or stridency from associated components, and one can easily condemn the ProAc as bright when in fact the problem stems from a harsh-sounding amplifier or cartridge.

Given the Studio 1's stunning sound quality, as well as its superlative build quality and finish, and finally its extremely reasonable retail price (the importers aren't getting rich off this model), you may agree that the ProAc is one of the best buys in audio today. I strongly urge anyone shopping for loudspeakers to hear this model --- it truly is something very special indeed.

-Kent Bransford

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