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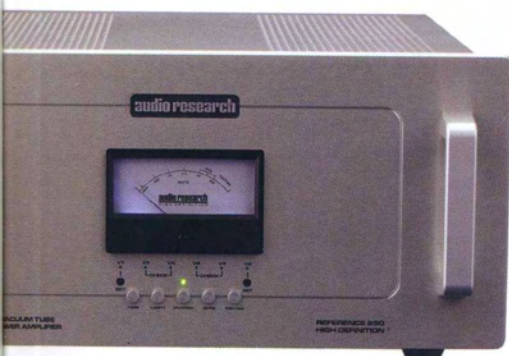
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# Anthony Gallo Acoustics Reference Strada 2 monitors with TR-3d subwoofer

by Chris Martens



**A**nthony Gallo has always been an iconoclastic loudspeaker designer and thus his speakers neither look nor sound like the majority of their competitors. Nowhere is this more apparent than in Gallo's otherworldly Reference Strada 2 monitors (£1,500/pair) and their companion TR-3d subwoofer (£800). Veteran audiophiles might at first take this sat/sub system to be a mere "lifestyle" or "home theatre" product, but know this: beneath its stylish exterior the Reference Strada 2 package packs serious audiophile-calibre performance capabilities.

To come to grips with the Reference Strada 2, it is helpful to understand some of the engineering principles that inspired its unorthodox design. From the outset, Mr. Gallo has sought to produce speakers with high-rigidity, low-diffraction enclosure systems. With this end in view, Gallo's "think-outside-the-box" solution has been to use semi-spherical enclosures made of spun stainless steel, with openings on one side for the drive units. Each Reference Strada 2 uses two such spherical enclosures housing wideband carbon-fibre mid-bass drivers, with the spheres attached at opposite ends of a die-cast metal backbone frame, flanking Gallo's signature cylindrically shaped CDT3 tweeter. The whole assembly resembles a space age "barbell" of sorts, one finished in silver and black (though an all-black option is also available).

The assembly is astonishingly rigid and robust (try the time honoured knuckle-rap test and you'll get, well, bruised knuckles for your troubles), whilst offering virtually no sharply creased edges to cause diffraction. In the interest of enhancing enclosure rigidity Gallo mounts his mid-bass drivers from within their spherical housings and then uses sturdy compression rods to press the drivers against the mouths of the enclosures. An advantage of Gallo's approach is that not even the driver frames are visible from the outside, again helping to eliminate possible sources of diffraction.

A thorough discussion of Gallo's CDT (cylindrical diaphragm tweeter) driver could fill an entire white paper, so a brief description must suffice. In simple terms, the CDT is a semi-cylindrical tweeter whose diaphragm is made of a film-like piezoelectric material called Kynar. As audio signals flow back and forth, the ▶



► thin-film material expands and contracts, generating nearly textbook-perfect semi-cylindrical wave fronts offering an extraordinary 180 degrees of horizontal dispersion with 120 degrees of vertical dispersion. Because the Kynar film is low in mass and does not need to travel far in order to produce adequate output, transient speed is excellent whilst distortion is low. One further benefit is that the Kynar diaphragm acts a high-pass filter, meaning that the tweeter literally serves as its own crossover network (though a transformer is used to match the tweeter's output level with that of the mid-bass drivers).

Further reasoning that the best-sounding crossover network is no crossover at all, Gallo has configured the Reference Strada 2 so that its two mid-bass drivers are allowed to run full range, using natural roll-off at the high and low frequency extremes to govern their operating band. In turn, the CDT3 tweeter, serving as its own crossover network, takes up where the mid-bass drivers leave off, handling upper midrange and treble frequencies with speed and finesse. In short, the Reference Strada 2 is for all intents and purposes a

completely crossover-less, wide-bandwidth compact monitor.

The innovations don't end there, though, because Mr. Gallo, much like his counterparts at KEF, has done considerable research into the feasibility giving compact speaker enclosures the physical characteristics of much larger enclosures. KEF's solution was the firm's ACE (acoustic compliance enhancement) technology, whilst Gallo's ingenious answer involved creation of a proprietary enclosure damping material called S2. (Our understanding is that S2 is a type of shredded polyolefin film, though Gallo does not generally discuss the material's exact formulation). Either way, the result, as Gallo says, is that the "Stradas perform as though the speaker enclosure is significantly larger than it actually is." Finally, the Reference Strada 2 uses Gallo's Optimized Pulse Technology (OPT), which is described as, "an impulse correction and synchronization system designed to integrate the low, middle, and high frequencies into one unified sound source."

The TR-3d subwoofer (the larger of the two subs offered by the Gallo) applies many of the same design precepts that inspired the Strada 2. Thus, the TR-3d eschews traditional box-type cabinetry in favour of an all-metal, cylindrically shaped enclosure with the woofer fitted in one end of the cylinder and the subwoofer amplifier and controls in the other. Designed to rest on its side, the TR-3d looks more than a little like the depth charges seen on WWII-era destroyers and some quip that, if turned up too loudly, the TR-3d can sound like a depth charge, too. The sub uses essentially the same ceramic-coated aluminium woofer originally used in the Nucleus 3.5, backed by a rock-solid 300-watt amplifier equipped with line-level and speaker-level inputs and a useful set of controls, including a bass trim switch with settings for 0, +3, or +6 dB of boost centred at 30Hz.

Overall, the intent behind the Reference Strada 2 system is for it to provide much performance comparable to the now-►

▶ departed Nucleus 3.5 floorstander, but in a more compact and less expensive format that gives a greater variety of placement options and is, thanks to its powered subwoofer, comparatively easy to drive. By design the Reference Strada 2 monitors can be wall-mounted, tabletop-mounted, or placed on optional floorstands (£400/pair). If placed within about a foot of an adjacent wall, the Strada 2 enjoys a significant degree of bass reinforcement and offers surprising low-end extension, whilst when stand-mounted the speaker delivers less bass extension but superior imaging, soundstaging, and overall transparency. In short, the Reference Strada 2—like all Gallo speakers in my experience, benefits from being given plenty of breathing room. Accordingly, our review samples were mounted on matching Gallo floor stands and placed well away from nearby wall surfaces.

How does the Reference Strada 2 system sound? Four observations that come quickly to mind are that the system sounds highly three-dimensional, is rich in musical detail and information without sounding analytical, offers unexpectedly muscular and incisive dynamics, and generally sounds “bigger” than it appears. Let’s explore each of these qualities in turn.

The almost eerie three-dimensional quality of the Reference Strada 2 system hinges, I think, on its rigid and diffraction-resistant enclosure design and the exceptionally broad, 180-degree horizontal dispersion of its CDT3 tweeter. Together, these design features enable the sound to break free from the speaker enclosures in an unusually compelling way. Visually, you register the fact that the stand-mounted speakers are positioned several feet from your listening chair, but the soundstage seems to lead a completely independent life of its own—as if the soundstage were a freestanding entity and not an illusion being created by the speakers at all. On well-recorded material,

such as David Chesky’s *Jazz in the New Harmonic* [Chesky, Binaural+ CD], the Reference Strada 2 system can and does transform the acoustics of your listening room into those of the recording venue itself. This, I think, is the epitome of “disappearing act” imaging, where the key is to keep the listener’s attention firmly centred upon the performance and the space in which it unfolds—and not upon the speakers. It’s a difficult trick that the Reference Strada 2 system somehow masters with ease.

One area where I think the Reference Strada 2 has clearly improved on previous models is in extracting considerably more low-level information from recordings, yet without upsetting the underlying smoothness that has long been a hallmark of Gallo designs. In practice, the Strada 2 is arguably the most information rich Gallo we’ve yet heard, delving deep into textural and transient details to give you a clearer picture of what’s happening in and between the notes. With that said, however, let me add that I do think the passive woofer system used in the Nucleus 3.5 offered a smidgeon more tautness, definition, and control than the Reference Strada 2 system’s TR-3d subwoofer. But please don’t misunderstand me; the TR-3d is quite clean sounding and well controlled as powered subs go. It’s just that the sub’s amplifier tends to produce a slightly warmer, more rounded, and more full-bodied sound than strict accuracy would require. Even so, the Reference Strada 2 system is right in the thick of the hunt amongst the higher-resolution speakers in its price class, although top honours in that department might rightly go to hybrid electrostats from MartinLogan or to one of the planar magnetic models from Magnepan. What the Gallo does so beautifully, however, is to find a fine balance point between resolution on the one hand and gracefulness on the other. ▶



▶ Whilst the Strada 2s are obviously very compact they nevertheless are capable of surprisingly vigorous output levels and demonstrate the sort of turn-on-a-sixpence dynamic agility that allows them to track with sudden changes in musical energy levels. A good example would be the at times fierce and always exuberant horn section swells heard in Clark Terry's Chicago Sessions 1995-96 [Reference Recordings, HDCD], where the horn section often operates in subdued "cruise mode" during the body of a song, only to explode into the musical foreground with almost shocking force. Similarly, some of the oblique percussion notes captured on the eponymous new age/jazz recording Gaia [Windham Hill, CD] leap forth from the speakers with startling realism, making it a gripping experience to hear the Gallos at play, even at low volume levels. It is one thing to hear relatively large speakers handle these sorts of material well, but quite another to hear small satellite-type speaker pull off the feat. I credit the Strada 2's expressiveness and agility partly to its rigid enclosure design, partly to its innovative S2 damping materials, and partly to Gallo's OPT technology. In any event, the Strada 2 speaks with a more muscular, definitive, and dynamically incisive voice than its diminutive size might lead you to expect.

Above, I alluded to the Reference Strada 2 system's ability to "play big" and frankly this is more than a matter of simply being able to play loudly (although the system can do that, if you have an amplifier equal to the task). Rather, if you expressed the Strada 2's "play big" factor as a mathematical formula it might look something like this: small size x muscular and agile dynamics x wide-open 3D soundstaging = a huge scope of presentation. Many of us are drawn to the idea of a bantamweight that can punch far above its weight class and the Reference Strada 2 system certain is that. To appreciate what I mean, listen to Ry Cooder's and Manuel Galban's Mambo Sinuendo through the Strada 2 rig and note how the system produces a huge soundstage, evincing a dark, warm, and faintly mysterious Cuban vibe. Talk about being transported to a different time and place...

Are there caveats we should address? I can think of a few. First, because dispersion of the CDT3 driver is so broad, one must avoid potential unwanted reflections from nearby surfaces (walls, furniture, TV screens, etc.). During my listening tests I solved this problem by using more speaker toe-in than usual and by placing room treatments on adjacent wall surfaces at the first reflection points. Second, in order to enjoy the smoothness I've described, do give the speakers as much or more run-in time than suggested by Gallo; this will help the speakers smooth out and open up considerably. Third, listen with your ears positioned at or very near tweeter height (if you listen from above or below the centreline of the tweeters, smoothness, coherency, and focus will be diminished). Finally, don't skimp on electronics or cables. Whilst the Reference Strada 2 system may look like a mere "lifestyle" product, it demands audiophile-grade ancillary components to give of its best (hint: be sure to bring plenty of clean power to the party).

The Reference Strada 2 system is a lovely and effective problem solver. It is compact, easy on the eyes, and will fit in spaces where larger floorstanding speakers will not. Best of all, though, it reads as an elegant "lifestyle" speaker that turns out to deliver legitimate, audiophile-grade, big-speaker performance. +

## TECHNICAL SPECIFICATIONS

### Gallo Acoustics Reference Strada 2

**Type:** Acoustic suspension 2-way, three-driver stand-mount or wall-mount monitor

**Driver complement:** two 100mm mid-bass drivers, one CDT3 (cylindrical diaphragm transducer) piezoelectric Kynar tweeter.

**Frequency response:** 68Hz – 20 kHz +3dB (in room with boundary reinforcement; loudspeakers within 30cm of wall).

**Suggested subwoofer crossover frequencies:** Stand mounted, 80 – 120Hz; wall-mounted, 40 – 80 Hz

**Impedance:** 8 Ohms nominal

**Sensitivity:** 90 dB @ 1W/1m

**Dimensions (H x W x D):** 34.3x12.7x19.1cm

**Weight:** 5.2 kg

**Price:** Speakers, £1,500/pair; matching floor stands, £400/pair

### Gallo Acoustics TR-3d powered subwoofer

**Type:** Acoustic suspension, powered subwoofer.

**Driver complement:** 250mm long-throw ceramic-coated aluminium woofer.

**Frequency response:** 18Hz – 180Hz ± 3dB (in-room)

**Onboard amplifier output:** 300 watts RMS, 600 watts peak

**Controls:** continuously variable active crossover, 50Hz – 180Hz with LFE bypass switch; phase switch, 0/180 degrees; bass EQ trim with settings for 0, +3, or +6dB @ 30Hz centre frequency.

**Dimensions (H x W x D):** 30.5x27.3x 34.3cm

**Weight:** 12.7 kg

**Price:** £800

**Manufacturer:** Anthony Gallo Acoustics

**URL:** [www.roundsound.com](http://www.roundsound.com)

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