

Klipsch La Scala AL5

Producing monumental SPLs from next-to-no-power, this refreshed American behemoth is no brick in the PA wall. Prepare to be stunned by the La Scala's scintillating sound...
 Review: **David Price** Lab: **Keith Howard**

Efficiency, sensitivity and coverage pattern – all attributes that are hard to beat,' says Klipsch's Principal Engineer Roy Delgado [see boxout, p39]. 'The benefits of horn loading have not changed.' He's quite right, of course, but neither have the caveats, not least because attempts to deliver realistic bass typically requires gigantic horns and speakers the size of the average British garden shed.

That's why examples of the brand's superb-sounding flagship Klipschorn are so few and far between on this side of the pond – sheer physical size ruling it out for most UK audiophiles. The 'mini Klipschorn' we have here – otherwise known as the La Scala – has proved more popular in real-world listening rooms despite its 1016x616x643mm (hwd) dimensions and hefty 91kg bulk.

'You can drive it from a good headphone preamp!'

LONG LINEAGE

Latest in a line stretching back to 1963, the £12,000 La Scala AL5 is surely the company's most domesticated, and wallet-friendly, classic Klipsch. Lest we forget, it was originally conceived as a public address speaker, but if you have the space and the funds, then you might find this a fascinating potential purchase because it's not simply a rehash of an ancient design. Instead, it takes the best of Klipsch tradition and alloys it with new, modern drive units and construction techniques. I found it startling to behold, it reminding me that loudspeaker design is first and foremost about the physics of moving air!

Its two-piece cabinet looks anachronistic alongside your average compact-footprint tower floorstander with its umpteen small diameter mid/bass units. Beauty may be in the eye of the beholder but to my tastes, the La Scala AL5 is no oil painting – it's a utilitarian object made only slightly more aesthetically acceptable by the choice of Natural Cherry, Satin Black Ash or American

Walnut book-matched wood veneers. Our cherry review sample had a lightness to it that softened the cabinet's imposing lines; given its vast size, black might be too much for many households. The veneered birch plywood and MDF cabinet – hand-built in Hope, Arkansas – has an appealing scent of freshly cut wood and glue.

The La Scala AL5 has three drive units, all horn-loaded. This, and its size, makes for superlative sensitivity with Klipsch claiming 105dB/1W/1m. KH's Lab Report [p41] suggests a slightly lower value but the La Scala AL5 could still

pump up the volume if driven by many of the headphone preamps featured in *HFN!* The speaker's upper cabinet contains the

new 25.4mm K-771 tweeter, which sports a lightweight polyimide diaphragm loaded by Klipsch's 90°x40° Tractrix horn. The company claims that this combination makes it the most efficient tweeter on the domestic scene. Below 4.5kHz this crosses down to the 50.8mm K-55-X midrange compression driver, with phenolic diaphragm, firing into a large exponential horn.

The lower enclosure sports a 381mm woofer with fibre-composite

RIGHT: Top cabinet houses the new K-771 tweeter and Klipsch's 90°x40° Tractrix horn alongside a 2in K-55-X compression driver and large exponential horn

cone behind a two-fold birch plywood and MDF horn, said to be a smaller version of the Klipschorn's three-fold design. This comes in at 450Hz and is claimed to reach down to 45Hz.

WIRING 'N' WEAVE

The cabinet panels are 25mm thick and feel solid and well damped – the upper section has a removable magnetic grille with a metal-mesh weave and the two boxes are interconnected via a detachable cable. To the rear of the MF/HF enclosure

is a connector panel, finished with an aluminium plate and which sports chunky bi-wirable speaker terminals. The company says that AudioQuest Type 4 copper cabling is used inside.

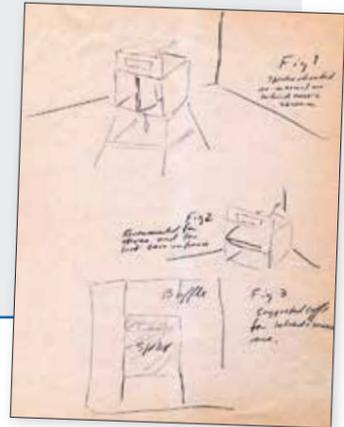
The result is an enormously solid and imposing loudspeaker – only the two-box construction making it manageable for mere mortals (though with two people holding the top enclosure it needs a third to connect the cable beneath). Auditioned in editor PM's listening room, the speakers sat comfortably about 80cm from the boundary wall, slightly toed in. They were, and remain, 'auditorium' loudspeakers that sit directly on the floor but they seem relatively unfussy about their exact positioning. Removing the grille really is worthwhile, however...

LIKE NO OTHER

Here's a loudspeaker that sounds like it looks – big and wide and loud. Certainly the La Scala AL5's distinctive 'workmanlike' aesthetic is like very little else on sale,

SCALA GENESIS

It started life as a public address speaker for Winthrop Rockefeller's Arkansas gubernatorial campaign back in 1963. Effectively a special project for Paul Klipsch's friend, the La Scala soon made its way into the company's official product lineup. As these early scrawled line diagrams show [inset], it was fully horn-loaded yet not as cavernous as the Klipschorn – and went loud without suffering the shouty 'horn sound' of many rivals. Sold as an 'auditorium speaker' with a frequency range of '40-19,000cps', the original K-447 variant's driver complement was a K-33-J (Jensen) woofer and K-400 horn, K-55-V (Atlas) mid driver and K-77 (Electrovoice) tweeter. From then on, incremental changes were made until the La Scala II arrived in December 2005. This had thick MDF cabinetry instead of thinner plywood. Various upgrades followed, either with tweaked crossovers or – with the AL5 – also highly evolved drivers.



and the same goes for its sonics. This is a striking-sounding design, in an almost entirely positive way. It's the aural equivalent of a bright, fresh autumn morning with an azure-blue sky and a chill

blaze in the air, through which the sunshine blazes a path. Listening to this huge loudspeaker makes music feel alive, vivid, tactile, bracing and beautiful. It is most certainly not a case of basking in the warm half-light of a summer's evening, for it doesn't serve up a cossetting sound that balms and soothes you. That's why some might consider the La Scala AL5 to be just too much – a double espresso in a world of wishy washy instant coffee, it will taste too sharp for some palettes.

Take Galliano's 'Prince Of Peace' [Until Such Time; Talkin' Loud PHCR-1191] as an example, for this is an open and clean early '90s live recording with an immediacy that's lost on so many speakers. Here though, you're right in front of the PA stack at the concert, taking in those lightning transients, added to the sort of dynamics that you just don't expect from a modern 'sensible shoes' floorstander. This absolutely defines the sound of this loudspeaker – it's all about speed and impact. It's great in other ways too, but it's almost as if you're so taken by its immediacy that you don't really notice.

KING OF ZING

The Galliano track was brilliantly handled, the La Scala AL5 offering huge insight into the performance, but above all it gave a directness you normally only experience at a live event. I loved the arresting crack of the snare drum and a realistic hi-hat 'zing' that was metallic yet superbly defined. The way the vocals were carried was also special, for this speaker's ability to go loud and quiet with Roberto Galliano's every inflection was quite uncanny. More ➔



LOUDSPEAKER

RIGHT: The two-part cabinet is fashioned from 1in MDF and birch plywood. The lower box carries a 15in K-33-E fibre-coned bass unit, firing towards the rear of the cabinet and out through Klipsch's folded horn



than this, there was a huge sense of headroom – no matter how loud or how quick, it was all water off a duck's back for this vast Klipsch. It was hard to discern any sense of either compression or strain, and the Constellation Taurus Stereo power amp [HFN Dec '17] used for the listening was barely ticking over!

WIDE APPEAL

Another side of this speaker's genius is its ability to retrieve detail. Nirvana's 'Smells Like Teen Spirit' [Nevermind; DGC MVCG-67] is a pretty dense, compressed track true to the 'grunge' genre, yet the La Scala AL5 unlocks it all before your very ears. Actually, it tells you that beneath that top tier of thrashy guitars is a very well ordered and tidy production to be found.

So this speaker allows the listener to zoom right in on individual instruments within the mix with consummate ease, hearing how they interact with other strands. I could discern the various effects pedals on the guitars at different parts of the song, the dry sound of the drum kit and the clean lead vocal work through the verses contrasting with its 'phasey' sound in the bridge. It was all laid out on a plate, and I was gorging...

Next in my long list of loves is the speaker's soundstaging. Given the size of those cabinets you

would expect a commensurately large sound, but the looks still don't prepare you for the sheer scale of the performance. The Beloved's 'The Sun Rising' [Happiness; WEA WMC5-62] is an expansive-sounding slice of

'I loved the arresting crack of the snare and zing of the hi-hat'

'90s techno, yet seemed to take on an entirely new stature via this speaker. It was as if I had been whisked straight to the mixing desk so I could hear exactly where all the various strands had been placed. Some synthesiser

effects and one backing vocal line were hard panned left and right while other elements, such as the bass sequencer and lead vocal, were glued resolutely to the middle of the soundstage.

Few loudspeakers I've heard are so specific about exactly where things are, spatially. In terms of depth perspective, it's not quite so spectacular; things don't fall back far behind the speakers so much – indeed if anything they come right out to greet you in front of your sofa. ☺

LEFT: Architects' and Engineers' specs for the original La Scala K-447 'Theatre Loudspeaker'

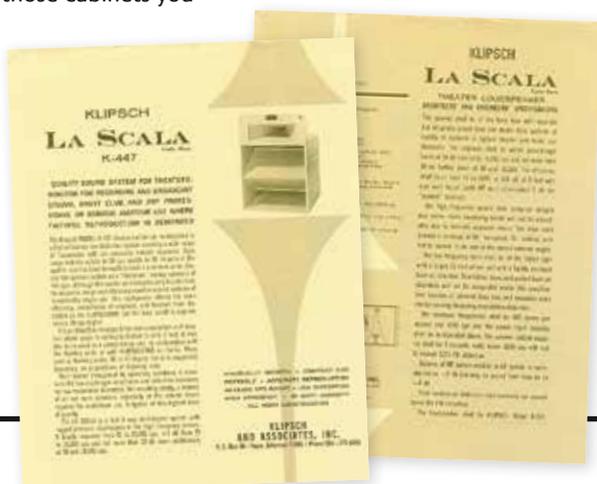
ROY DELGADO

'There are always incremental improvements to be made with our loudspeakers,' says Klipsch's Principal Engineer Roy Delgado. 'The acoustic horn and compression driver are always up for review. For me, a properly designed horn has the same goal as an amplifier – both should act like wire with gain – so a horn is essentially an acoustic amplifier. Therefore as the efficiency of the system increases, it moves more precisely in relation to changes in amplitude, and is thus more faithful to the input signal.'

'Because the system operates further inside its linear operating range, there is no smoothing of the signal, so offers higher resolution. Well designed horns don't really present a problem with properly designed crossover networks, and the only major cabinet design challenge is when the speaker incorporates a low frequency horn.'

The motivation for developing the La Scala AL5 began when a new, high-efficiency tweeter came across Roy's desk. 'It's very hard to find a high-sensitivity tweeter that can keep up with the LF section of either the Klipschorn or La Scala. I found a way to mate it to a Tractrix horn – it remains a longstanding Klipsch goal to use Tractrix in all our products.'

It passed our battery of tests and sounded very good, too. This new tweeter, along with the opportunity to revoice the La Scala's crossover network was the nugget of an idea that led to the project. There are always new concepts coming along to further the art and the science of Klipsch loudspeakers.'



LOUDSPEAKER

KLIPSCH LA SCALA AL5



LEFT: Rear of the mid driver and exponential horn is visible here alongside bi-wire 4mm speaker cable terminals. A flying lead connects the top section with bass box

corner placement and careful choice of ancillaries (avoid clinical-sounding solid-state amplifiers) are all part of its fine-tuning.

Downsides? Well, this loudspeaker proved rather tricky to criticise, particularly as its sound performance readily exceeded my expectations of the design's original 'auditorium' remit. Sure enough, it's not the sort of loudspeaker you can slump back on the sofa with, as you nod off to your favourite

cocktail jazz playlist. Instead, it exists to deliver a vivid and visceral rendition of any recording you care to throw at it – and this the big Klipsch does brilliantly.

Certainly there are other speakers able to offer greater extension and 'hi-fi subtlety' – if you like that sort of thing – but there are very few that bring a 'live' and still deliciously coherent experience into your room. Definitely a loudspeaker for the home demo shortlist. ☺

With all this speed and detail, the firecracker dynamics and pin-point image precision, you might think this loudspeaker is an intensely forward and tiring listen. Surprisingly perhaps, it is not.

ETCHED, NOT EDGY

David Sylvian's magnificently produced 'Orpheus' [*Everything And Nothing*; Virgin VJCP-68248.49] showed this. This recording is based around meticulously played acoustic instruments, and the La Scala AL5 conveyed the performances in a surprisingly couth, delicate and even-handed way. The piano work was natural sounding, with lovely timbre and ringing harmonics. Meanwhile, Sylvian's rich vocals were pin-sharp and vivid yet didn't grate, and the acoustic guitar playing was etched in tone but not edgy.

Cymbal strikes were nicely defined too, without unwanted zing, while strings had a natural rawness to them without edge. Bass guitar was super taut and tight, but there was next-to-no sense of boxiness or cabinet boom. Indeed, if anything, some will bemoan the La Scala AL5's slightly bass-light balance though

HI-FI NEWS VERDICT

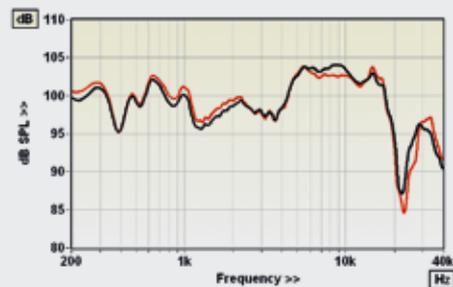
The new Klipsch La Scala AL5 isn't for everyone, yet is superb at what it sets out to do – if that's what you're after, you'll love it. It makes music a living, breathing, tactile entity that has you on the edge of your seat, transfixed. It's also surprisingly civilised for a large horn speaker, making it acceptable to a wider audience than you'd think. An audition is highly recommended then, if your room matches your ambitions!

Sound Quality: 88%

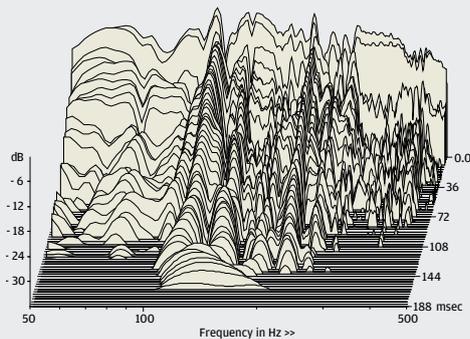


Measuring a horn speaker such as the La Scala AL5 using a quasi-anechoic, time-windowed technique is complicated by the time delays associated with the path lengths through the midrange and bass horns. If the measured impulse response is windowed to remove the first (floor) reflection as usual, you end up measuring the tweeter horn alone as the midrange and bass sections have barely responded. So for the forward frequency responses, measured at 1m on the axis of the tweeter horn, I've extended the time window to include output from the midrange and bass horns and used third-octave (rather than tenth-octave) smoothing to quell the response ripples resulting from the included reflection.

The resulting response traces [Graph 1] should be viewed with some caution but are reliable for determining trends. The ripples in the lower midrange reflect the highly uneven impedance vs. frequency trace in this region (not shown) and the CSD waterfall [Graph 2], generated from the nearfield measurement of the bass horn, clearly shows that the La Scala has multiple resonances here. Generating the CSD conventionally, to view tweeter performance only, shows resonances there too. Bearing in mind the foregoing caveats, we couldn't match Klipsch's claimed sensitivity of 105dB SPL for 2.83V/1m but our pink noise figure of 101.6dB is still impressive, particularly as the AL5 is not tough to drive. Although Klipsch's '8 ohms compatible' doesn't square with our measured impedance minimum of 3.9ohm, the minimum EPDR of 2.0ohm at 60Hz is fairly amp-friendly, although a second dip to 2.0ohm at 377Hz complicates the picture very slightly. KH



ABOVE: Resonances are also seen in impedance plot. Note treble 'step' in axial response above 4kHz



ABOVE: Nearfield low freq CSD plot proves impedance and response ripples are due to horn resonances!

HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83Vrms – Mean/IEC/Music)	101.6/100.6/100.4dB
Impedance modulus min/max (20Hz–20kHz)	3.9ohm @ 11.7kHz 28.6ohm @ 50Hz
Impedance phase min/max (20Hz–20kHz)	–61° @ 55Hz 43° @ 400Hz
Pair matching/Response Error (200Hz–20kHz)	±1.5dB/ ±4.8dB/±5.4dB
LF/HF extension (–6dB ref 200Hz/10kHz)	59Hz / 18.7kHz/18.9kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	0.1% / 0.2% / 0.2%
Dimensions (HWD) / Weight	1016x616x643mm / 91kg