

ATC SCM50 ASL

Standmount active three-way loudspeaker

MARTIN COLLOMS RE-ACQUAINTS HIMSELF WITH ATC'S STUDIO-DERIVED SCM50 SPEAKER, THIS TIME IN ACTIVE FORM COMPLETE WITH 350W OF ONBOARD AMPLIFICATION. OVERLEAF WE ALSO REVIEW THE COMPANY'S ENTRY-LEVEL PASSIVE SYSTEM

No, dear readers, this isn't a double take on the ATC loudspeaker I reviewed in our Oct-Dec 2017 Issue 11-4, where this £10,000 a pair design acquitted itself very well indeed. In fact that *SCM 50PL* passive attained our top quality category, Audio Excellence. With active versions also available of many ATC designs, we now take a briefer look at the active version of that 'PL', namely the *SCM50 ASL*. Julian Musgrave discussed the ATC design philosophy (Vol. 13 No1 Jan-Mar 2019: 'In Pursuit of the Super-Cleans'), which led to his renewed affirmation for their active approach and also his affection for the *SCM50 ASL*.

This loudspeaker design includes the equivalent per stereo channel of three MOSFET power amplifiers totalling 350W. As tri-amped active loudspeakers go, in peak loudness terms this will likely equate to some 500W per channel if they were used in a conventional stereo amplifier arrangement. Mix and match power amplifiers for an active design are essentially ruled out thanks to the significant complication engendered by custom external active crossover networks, and note that the audio cable is now at line level for the sole XLR input. Volume level control is thus delegated to a matching preamplifier or a music source equipped with an output level adjustment.

The *SCM50 ASL* may be driven either balanced or unbalanced with suitable connections. There are no controls on the loudspeaker save power on/off plus a trimmer slot to tweak input sensitivity to better match the source. There is a modest weight increase of 7.8kg per loudspeaker for the active version over the passive, and the amplifiers used are linear, using a mix of bipolar transistors together with MOSFET output devices.

As in the passive version, the bass is a 235mm heavy duty piston driver, the mid a 75mm custom dome with double suspension and linear magnet plus a 25mm tweeter, also with a double suspension. All of the drivers are of in-house design and manufacture, and behave particularly well at high powers commensurate with their studio monitor

pedigree. This enables the speaker to drive larger rooms than might be anticipated.

Some enthusiasts have been understandably confused by the ATC ranges and pricing. For example, this particular active model offers three technically very similar versions with the same drivers and amplification. There's the plainer professional monitor version, the *SCM50 A PRO* at £12,500 inc VAT, while the *SCM50 ASL* we have here is the domestic version, with a choice of veneers, and complete with grilles and ATC low mass, welded steel box frame stands at £13,000. Finally the £14,400 *SCM50 ASLT* is a domestic tower version, where no stands are required (unless you are very tall!). At extra cost luxury finishes are also on offer for the towers.

Some self-powered speakers use DSP (or digital signal processing), for driver and system equalisation, this usually including the crossover implementation, as in the *Kii Three* (HIFICRITIC issue 12/4). However ATC's active filter crossover use all-analogue circuits, company founder and designer Bill Woodman explaining this choice thus:

"The (analogue) crossover filters are of the Linkwitz-Riley type, are fourth order and critically damped. What is significantly different is that a variable all-pass filter is configured across each crossover point and is adjusted to ensure that the group delay through the crossover region is correct and therefore the loudspeaker system will exhibit a true minimum phase response. This helps to maintain accurate timbre of reproduced sounds as well as stabilizing the location of performers in the stereo sound field."

ATC quotes a tightly toleranced 70Hz – 20kHz ±2dB axial reference frequency response for the *SCM 50 ASL*, with pair matching an impressive ±0.5dB over that range, promising sharp image focus. The -6dB bass rolloff is at a low 38Hz with a desirably low rate of rolloff, closer to an infinite baffle design. It is rated at a very high 112dBspl/1m sound level, continuously, so it will effortlessly drive larger rooms to high sound levels, and is quite unafraid of heavy rock programme. The passive review sample had previously met similarly tight figures on test, so we have no reason to doubt these.

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The line input impedance is 10kohm balanced via XLR sockets, where 1V input delivers a nominal 110dB SPL at 1m (unbalanced connection is also possible, by wiring the XLR plug suitably). The speaker may be ordered for use on a choice of mains voltages – 100, 115, and 230/240V operation, 50/60Hz – and idles at a quite high 90W, drawing up to 350W (per channel) short term at full power. Input fold back protection is included in case of overload, initiated by fast FET muting at the input. Excess heat is dissipated by a large finned alloy sink on the rear panel and thus should not be too near a sunlit window or a radiator. There are large protective grab handles fitted to the heat sink assembly.

Sound Quality

The 200W direct coupled amplification in the bass promises excellent low-end power; the mid headroom matches it with a 150W feed, while the high frequencies get 50W, in fact equivalent to 200W headroom in view of the higher voltage sensitivity of this driver and its smaller program share.

Living up to the performance advantage legend for active loudspeakers, the *SCM50 ASL* launches powerful dynamic soundstages of precise focus and great stability, allied to seemingly effortless low frequencies, the latter imbued with power, slam, grip and clear tune playing; in these latter respects it sounds rather more like a massive sealed box than a reflex tuned system.

This loudspeaker is immediately impressive, with sparkling but not overemphasised musical detail. In addition its noise floor inherently very low, characterised by impressively deep and spacious imaging, a very good start. In fact it continued to impress over a wide range of music inputs, if on occasion expressed with a slightly detached quality, though note that here I am comparing it with the passive version I reviewed previously, then driven by £20,000 worth of Naim *NAP500DR* stereo power amplification, and with commensurately costly loudspeaker cables.

While grip, detail, clarity, definition, bass tune playing, and not least image depth, are all very strong for the active, I found that initially the passive system won out on more subtle aspects of perceived pace, rhythm and timing, which I had reported to be substantially involving and upbeat. The Naim power amp used then is more less state of the art for timing so it can be said that this could a big hurdle for the active all-in-one to leap.

However I also need to note that with the selected cables, the aforementioned Naim powered 'passive' combination totals £35,000, as

compared with our 'self contained' active, initially working with a modest generic interconnect, totalling under £14,000. Alone this comparison clearly defines the self powered loudspeaker under review as a conspicuous win on value, never mind outright performance.

This matter aside, the *SCM50 ASL* really does cover its tracks well, with the kind of dynamics, clarity, and dry, well-controlled bass tune-playing which compares well with great closed back headphone reproduction. That's high praise indeed, notwithstanding that sense of sheer grip on the local acoustic environment. Further, its studio monitor heritage is abundantly clear from its even-handed treatment of all kinds of programme and that huge dynamic range.

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The system

Constellation *Inspiration 1.0 pre*, Townshend *Allegri* control units; Naim *NAP500DR* power amplifiers, Naim *SuperLine* phono pre with Linn LP12 player with *Keel* chassis and *Radikal* motor control, Naim *Aro* arm, Lyra *Delos* Cartridge, Naim *UnitiCore* network server and S/PDIF source; Linn Klimax *Katalyst* streamer-DAC, NAIM *ND555 Streamer-DAC*, *555 PS(DR)*, Wilson Audio *Sasha DAW*, *Magico S-5II*, *Quad ESL63*, *BBC LS3/5a* (15ohm) speakers; Naim *FRAIM* racks; Transparent *XL MM2*, *Crystal Ultra Diamond*, and Naim *NAC AS* speaker cables, Naim *Super Lumina*, Transparent *MM2XL* and Van Den Hul *Carbon TFU* cables.

So far, our *SCM 50 ASL* was judged more than competent working with the Belden wiring loom grade twisted pair plus plain ground wire cable that ATC supplied, (*Type H8760 a 2 Conductor 18AWG (16x30) Tinned Copper, PO Insulation, Overall Beldfoil® Shield, PVC Outer Jacket*). But I suspected that there was additional potential, so – reaching for more, just to see what might be possible – I installed new loan stock *Chord Sarum T*, supplied in SE to Bal configuration, 2x8m, at a near-heart-stopping £9,200 a set. If you ever wanted to hear interconnect cables sound different, this was that time, and that place. Now I could hear my NAIM *ND555* streamer breathe fully, imaging became spectacular in clarity, scale and dynamic power. More upbeat in character overall, sibilants were also now first class, vocals were superbly projected in space and time, the images deeply textured and believably dimensional.

Imaging extended beyond the lateral spacing of the enclosures, indicative of great clarity and phase coherence. The track *River* on John Martyn's *The Apprentice* was effortlessly spacious yet was delivered with great precision, while Leftfield's *Inspection Check One* was in the exhibition class for rhythm dynamics and power, and utterly gripping. Grand piano was exceptional as was cathedral organ, making both a pleasure to audition, while timing was also significantly improved with the *Chord* cable, though I still felt that in this respect this active version didn't quite match that the passive equivalent worked in combination with the Naim power amplifier; both configurations being fed from the Townshend *Allegri*. Low in aural fatigue you could listen for hours. I noted that I almost always left the grilles off. A good dealer will help guide appropriate cable choices.

Conclusions

Like the ATC *SCM 50 PL* passive version reviewed last year, the *SCM50 ASL* also squarely hits the HIFICRITIC Audio Excellence level for sheer all round ability, and not least on grounds of a truly massive dynamic range delivered by this active version. Without a doubt this is High End Audio on a budget. Whilst ATC's provision of a cooking, Belden balanced interconnect for the review did it no favours, such is the high potential of this design that significant expenditure on the interconnects will be worthwhile. As befits a true monitor this loudspeaker system has little character of its own preferring to let the music tell its own story. It demands to be heard. I certainly enjoyed my time with it, and it is highly recommended for performance and value.

Lab results

Distortion was already very low in the passive *SCM 50*, and here the benefits of direct amplifier connection for the review active showed up in even better figures, thanks to lowered impedance connections to the driver voice coils, this seen particularly in the upper bass and lower mid.

For the same reasons the frequency responses are a little tighter with better driver integration, while compression effects are also less, leading to the more expressive dynamics and the greater dynamic range observed. Regardless of its domestic clothing this is a classy studio monitor.

Fine in-room bass is available to almost 30Hz, and with audibly low port coloration – an impressive result. The grille dulls the sound a little, in places by up to 1.5dB, and while the frequency response is a little smoother with it on, I preferred the speaker run naked, despite a small loss of smoothness. The PRO version is designed without a grille.

The maximum sound level of 115dB is excellent, for a truly massive dynamic range (I had to use ear defenders at times, and it will easily drive larger spaces), but note that a pair idles at 180W: for planet-saving, when not in use for longer periods, do power them down.

(No graphs for this review: Readers, please see the ATC SCM 50 passive review for additional relevant test data, in HIFICRITIC Oct-Dec 2017 Issue 11/4)

Results and Specifications

Type	Active Loudspeaker
Make	ATC
Country	manufactured in the UK
Model	SCM 50 ASL
Moving coil	3-way active stand mount, reflex loaded, stand included
Price (per pair) (finishes)	£13,000
	Veneers: Black Ash, Cherry, Maple, Oak, Pippy Oak, Rosewood and Walnut
Size (HxWxD)	71.7 x 30.4 x 48.0cm
Weight	48.9kg, 108lb
Type	3-way critically tuned reflex (3 rd order) 23.4cm pulp cone LF, 75 mm dome MF, 25mm silk dome HF, 75 mm front located flared reflex port
Sensitivity XLR	137mV bal in 90dB @ 1m (1V gets full power, is adjustable)
Amplifier loading	10k ohms (includes FET input overload protection)
Frequency response: axial	60Hz- 23kHz +/- 2.0 dB (listener axis, very good)
Frequency response off-axis	very good
Bass extension	34Hz -6dB, 31Hz in-room, (very good)
Max loudness, in-room	115dBA for a stereo pair, (will drive large rooms)
Placement	Stand mounted, free space 0.3-0.8m from front wall
Warranty	6 years
Power supply	100, 115, 230V (factory set)
Frequency	50/60Hz 90W idle, 350 W at full level