

hi-fi news

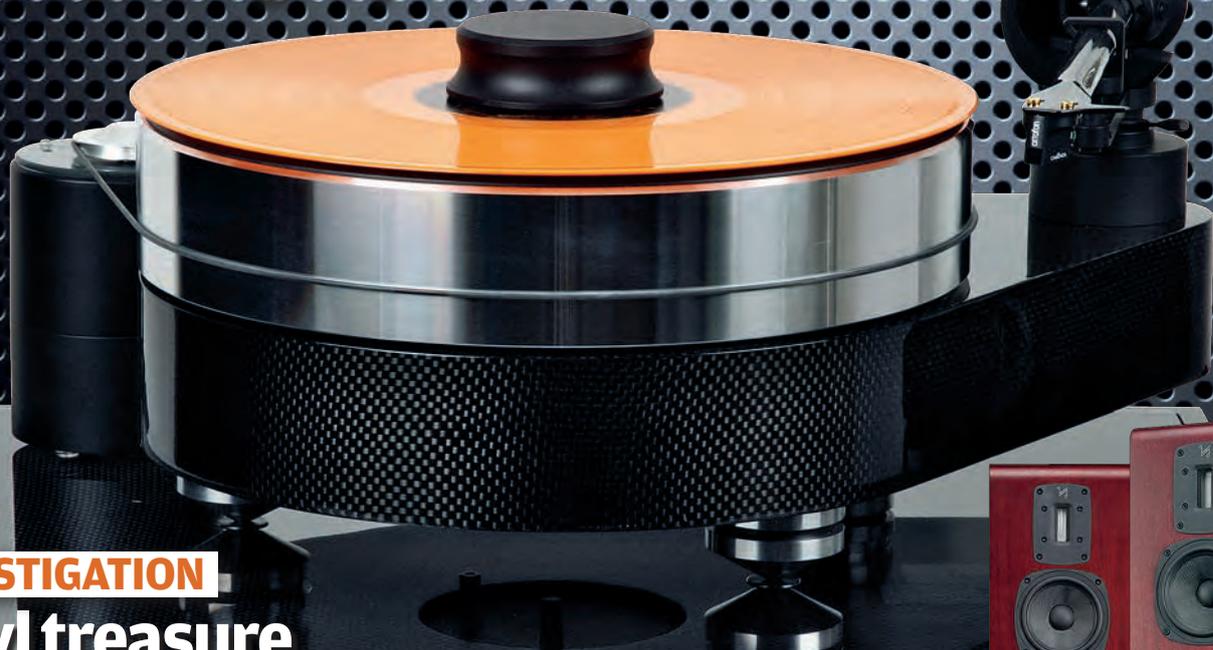
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& Record Review

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Audio Research

GSi75 tube integrated

Audio Alchemy

DDP-1/PS-5 preamp & DAC

Jeff Rowland

Model 625 S2 power amp



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Audio Research GSi75

If 'all-in-ones' leave you cold, imagine a high-end contender without compromise, an upsampling USB DAC, a phono stage and KT150 valves – the Audio Research GSi75
 Review: **Ken Kessler** Lab: **Paul Miller**

When I first saw prototypes of the G Series, at the parent company's design studios in Italy in early 2014, I was told that the styling cues were inspired by, and paid homage to, the very earliest Audio Research models. The look, it turns out, would be as far as that backward glance would extend (pun intended) because the G Series represented a *new* family of products [see *HFN* Jan '15], below the Reference models but overlapping with and extending above the existing catalogue of non-Reference models.

As retro as the styling may be, the G Series is the company's bridge to the future. With the GSi75, the third model to arrive in the new line-up, Audio Research has embraced the 21st century audiophile's needs even more so than with the G Series separates.

ALL-IN-ONE FOR GROWN-UPS

Yes, it ticks all the boxes that represent the demands of traditionalists, in that it is all-valve, has balance and mono facilities, user-adjustable valve bias and even features a phono stage with two levels of gain. Its circuitry enjoys trickle-down benefits from the Reference range. But £14,500 also purchases an integrated DSD-compatible USB DAC, a valve headphone output with ¼in socket and an all-metal remote control to command an extensive menu of user-defined settings.

This is an 'all-in-one' for grown-ups, who want more than some small, compromised box with built-in speakers, but who wouldn't want to house pre/power separates. Despite ARC fitting it all into one chassis, the GSi75 is rather large at 483x263x518mm (whd) and weighs a wholesome 25kg. That said, it is still an integrated amp if we're not being precious about it, and speakers and sources are all you need to add to create a full system.

RIGHT: This top shot clearly shows the matched pairs of KT150 pentodes and 6H30P double-triode driver tubes while the phono and USB DAC stages are housed within the casework

There is one attitudinal change in the unit that is atypical of ARC, despite the comprehensive standalone DACs in its catalogue: the GSi75 begs for a computer to be included with the turntable, CD player or transport or FM tuner you may feed it. ARC is serious about the brave new world so the carton contains a CD for installing drivers on Windows machines (Macs, one the other hand, recognise it as soon as you connect the USB).

It was so uncharacteristic of high-end audio that I had to remind myself I wasn't playing with something from a huge Japanese multinational. I was listening to downloads on a MacBook Air within *seven seconds* of making the connections, and I have never heard anything sound so good via iTunes. All I had to do was match the

inputs' levels to ensure that I was A/B-ing it with all sources at the same volume.

Don't let that example of easy set-up dissuade you from taking a deep breath and approaching this with care. Here's one product that implores you to pour a glass of Guado Al Tasso and study the owner's manual. But before doing this, I slotted it in between the SME 30/12 with Series V12 arm and Clearaudio Goldfinger [*HFN* Jan '15], Marantz DV8200 SACD/DVD player (a £110 find at the recent John Howes Audio Jumble), the Musical Fidelity Nu-Vista CD player [*HFN* Dec '15] and Wilson Alexias [*HFN* Mar '13]. And there was much to learn to optimise everything.

While the front panel's source and volume rotaries and the five buttons command nearly everything, the remote





adds from-the-listening-position switching for MM/MC phono stage gain and other elements that actually tailor the sound. The unit automatically upsamples digital inputs to 352.8/384kHz straight out of the box, but the user can also experiment with 'Fast' and 'Slow' digital filter types.

GREAT DIGITAL PROCESSOR

The GSi75's digital inputs include USB, coaxial and optical, while the phono input is joined by three line-level inputs, one of which can be set in processor or 'unity gain' mode. This total of seven inputs should satisfy the majority of users – if you did need to expand, a second preamp or an external DAC would be easy to accommodate.

While I did try other DACs, and used both the line and digital outputs on the Marantz and Musical Fidelity players, the digital processing in the GSi75 delivered

'The harmonies kicked in and the sound filled out like a soufflé rising'

sound so solid, so coherent, so smooth and so rich that I felt no need to contradict the unit's *raison d'être* as a one-stop (amplification) purchase. During my time with it, I fed digital sources via each of the three inputs and found myself favouring coaxial for the CD transports; but playing around with USB and assorted high-res downloads proved more rewarding than I had anticipated.

But, aah! the phono stage! I set it at 100ohm and the higher of the two gain options and it sounded fantastic with the Goldfinger. Its gain is switchable between 45dB or 62dB for use with MM or MC cartridges, while input impedance is selectable at 47kohm and 1kohm, 500, 200 or 100ohm. Because this can be done via remote or through the front panel, I was able to A/B the settings from the hot seat.

As for omissions in the GSi75, one could argue that Wi-Fi or Bluetooth might suit

ABOVE: This unit features the company's new styling, essentially an update of the original ARC products' look from the 1970s. Two rotaries and five buttons control everything on offer

some, but the computer-via-USB capability should deal with all streaming concerns. What was curious for ARC was the lack of a single balanced-via-XLR input.

PEELING AWAY THE LAYERS

After my recent experience of the KT150 valve, thanks to the Reference 150 SE [HFN Dec '15], I knew that the GSi75 would deliver the sort of sound I adore. Even fresh from the distributor, with a mere eight hours on it, the GSi75 exhibited composure and finesse, allied to more grunt, than I expected. Remember: the REF 150 SE has twice the valve complement. This amplifier only has two per channel, driven by 6H30s, so I could hardly have expected it to approach the sheer force of a separate stereo power amplifier with twice the output tubes [see Lab Report, p47].

'Rock The Boat' by the Hues Corporation [The Very Best Of The Hues Corporation, Camden 74321 603422 (CD)]; and Freedom For The Stallion, RCA APL 1-0323 (LP)] allayed any fears that the GSi75 would find the Wilsons a challenge.

Opening with some conga-type percussion, whucka-whucka guitar, strings and gorgeous harmonies, the first track possesses a sound that swells and fades. It is nascent disco, before the production swamped the music. The GSi75 preserved the lushness, the sweep, while all of it was punctuated by that crisp guitar work. Better still, the lead vocalist sounded breathy and sincere, while the backing vocalists meshed with such fluidity that it became rather overwhelming. ➔

WATT'S GOING ON?

At the risk of infuriating those who are slaves to numbers, my experience with the GSi75 demonstrates to me that valve capabilities continue to contradict their factory specification. And you should know that, as much as I worship my Audio Research REF 75, it struggles to behave convincingly with my resident Wilson Alexia loudspeakers, despite its complement of two KT120s per channel. On the other hand, the GSi75, fitted with just two KT150s per side and also rated, like the REF 75, at 75W per channel, drives the Alexias with ease.

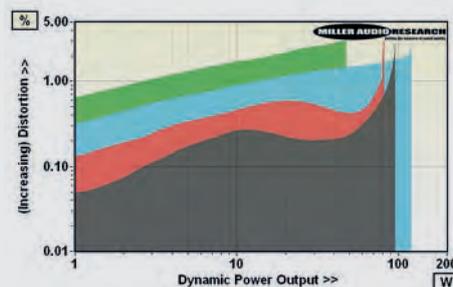
According to the published data from Tung-Sol, which manufactures the valves, the specifications for the KT120 and the KT150 are nearly identical. Regardless of this, the GSi75 with KT150s emphatically slaughtered the KT120s in the REF 75, never running out of breath and extracting from the Wilsons playback levels far in excess of what I find normal. Can I explain this disparity? No. Will I be fitting KT150s to my treasured REF 75? Absolutely.

LAB REPORT

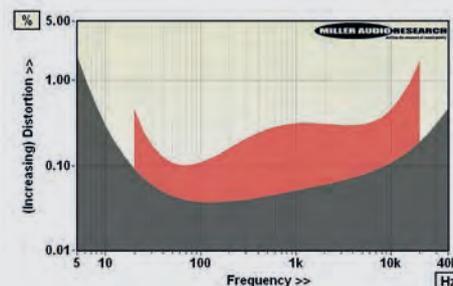
AUDIO RESEARCH GSi75

With half the KT150 tube complement of ARC's range-topping GSi150 power amp [*HFN* Jan '15], this fully integrated GSi75 model offers almost exactly half the output power – 2x80W into 8 and 4ohm (via 8 and 4ohm taps) at between 1-2% THD. There's some small headroom to stretch the GSi75's envelope under dynamic conditions, amounting to 95W, 85W and 118W into 8, 4 and 2ohm loads before dropping back to 48W/1ohm, and distortion increasing almost linearly with output into these lower impedances [see Graph 1, below]. Into 8ohm, distortion increases from 0.05%/1W to a flat-ish ~0.2% (maintained from 7-20W) after which it increases again to 0.25%/30W, 0.35%/40W, 0.45%/50W and 0.65%/60W. Versus frequency the GSi75 holds to a respectable 0.4%/20Hz up to 10W – a reflection of those massy output transformers – while limited compensation means THD increases again above 10kHz to 1.7% at 20kHz. The fact that it's as low as 0.45% at 10kHz is more important from a subjective standpoint [see Graph 2, below].

The moderate 2.10–3.05ohm output impedance coupled with the GSi75's inherent treble roll-off (–1.1dB/20kHz into 8ohm and –1.2dB/20kHz into 4ohm) suggests overall tonal balance will depend as much on the amp/cable/speaker combination as the 'colour' of any harmonic distortions. Noise, too, will play a role, as our sample of the GSi75 betrayed rather more PSU-related harmonics than the GSi150, its A-wtd S/N ratio below average at 77dB (re. 0dBW). (No USB DAC tests are published here as the tube stage dominates its overall performance.) Readers may view an in-depth QC Suite report for Audio Research's GSi75 amplifier by navigating to www.hifinews.co.uk and clicking on the red 'download' button. PM



ABOVE: Dynamic power versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (cyan) and 1ohm (green) speaker loads. Maximum current is 7.7A



ABOVE: Distortion versus frequency at 1W/8ohm (5Hz-40kHz, black) and 10W/8ohm (20Hz-20kHz, red)

HI-FI NEWS SPECIFICATIONS

Power output (<2% THD, 8/4ohm)	82W / 78W
Dynamic power (<2% THD, 8/4/2/1ohm)	95W / 85W / 118W / 48W
Output impedance (20Hz-20kHz)	2.10–3.05ohm
Freq. response (20Hz-20kHz/100kHz)	–0.04dB to –1.10dB/–10.7dB
Input sensitivity (for 0dBW/75W)	66mV / 590mV
A-wtd S/N ratio (re. 0dBW/75W)	76.8dB / 95.6dB
Distortion (20Hz-20kHz re. 10W/8ohm)	0.11–1.67%
Power consumption (Idle/Max. o/p)	233W / 430W
Dimensions (WHD) / Weight	483x263x518mm / 25kg



ABOVE: MM/MC phono and three line ins (on RCAs) are joined by optical, coaxial and DSD-ready USB digital inputs. The 4mm speaker connections have 8 and 4ohm taps

I worked my way through college in Orono, Maine, selling hi-fi systems to that track 43 years ago. I heard it at least 100 times in six months. The GSi75 peeled away a layer to let me hear tiny details I had somehow missed. Staying with music of that vintage and genre, I slipped in the Detroit Emeralds' 'Feel The Need' [*Greatest Hits*, Westbound CDSEWD 119 (CD); and *Feel The Need*, Atlantic K50372 (LP)].

The brass added to the instrument line-up of the Hues Corporation, underscoring the strings and backed with energetic guitar, filling the room from the outset. And yet – bang! – the harmonies kicked in and the sound filled out even more, like a soufflé rising. Suddenly, I was 22 and the allure of hi-fi once again matched that of opening a fine wine. True, the intoxicants differed then, but high or not, this track moved me.

TURNING BACK THE CLOCK

Now I was hearing it in a way I could not have imagined back then, via an optical disc alongside the vinyl. The latter bettered the digital in every way imaginable, but the former no longer sucked. But the GSi75 made it clear that each format had its strengths and weaknesses.

A decade earlier, and we're listening in on the Reprise studios playing host to Dean Martin's son and his two buddies. Dino, Desi & Billy's *Our Time Coming* [Reprise RS-6194], though a bunch of kids backed by studio pros, delivered four albums that have, say, the same charm – or lack of – when watching *Bugsy Malone* after the original, Paul Muni, version of *Scarface*. I don't care how brilliant Jodie Foster is now: nothing is worse in the field of acting than brats playing adults.

Not that Dino, Desi and Billy were brats. It's just that their voices

hadn't broken. Despite this, it sounds like the greatest-ever teen band thanks to the Wrecking Crew. With the ARC in the midst of it all, the assembled might of James Burton, Don Randi, Hal Blaine, *et al*, benefited from transient attack, bass extension, an open soundstage, a sense of air – thus positioning them in the room with undeniable veracity. The half-century in between had disappeared.

Turning to SACD, and the delights of vintage mono, I listened to 'Mood Indigo' from Duke Ellington's 1950 milestone, *Masterpieces By Ellington* [Analogue Productions CAPI 4418-SA]. From the opening tinkling of the pianos, above gentle bass, I enjoyed the same sensation as slipping into a warm bath. Which is pretty good, considering that I prefer showers.

A minute or so in, and the clarinet of Jimmy Hamilton sounded more lifelike than any recording of this age really ought to do. Johnny Hodges' alto sax was again so fresh, so vivid, so real that I now understood the irony of Chad Kassem calling his SACD label 'Analogue Productions'. I simply couldn't fault one second with the GSi75. ☺

HI-FI NEWS VERDICT

For this addict to the KT150, it was a joy hearing it in another context entirely. My expectations were low because I – stupidly – assumed that all-in-ones must suffer sonic compromises. The GSi75 undermines that thinking better than any product I know because, unlike other features-first all-in-ones, the sound is sensational. If I wasn't an 'old school' snob enamoured of separates, I'd ditch the lot for this.

Sound Quality: 88%

