

# Affordable\$\$Audio

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## *Audio Space Reference 3.1 Integrated Tube Amplifier*

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### **Specifications:**

Input Impedance: >56K ohm (RCA/Direct In)

Output Impedance: 4, 8, 16 ohm

Output Power: 22W/ch in Triode; 40W/ch in Ultra-linear (Class-A push-pull)

T.H.D.: < 1%

Input Sensitivity: >200mV, 3-5mV (mm phono in)

S/N Ratio: > 80dB (hum noise < 3mV)

Tube Compliment: 4 x KT-88, , 2 x 6SN7, 4 x 12AX7

(ECC83)

Dimension: 18.5" x 16" x 8" (DxWxH)

Weight: 65 lbs

Price: \$3,390



Audio Space is an established Hong Kong-based manufacturer of tube amplifiers whose products are gaining increasing attention in the mainstream US audio press following generally positive but sporadic reviews over the last five years, and the sort of teasing one-liners one finds in articles summarizing reviewers' experiences at various audio shows. After reading that Albert Von Schweikert himself felt these amps mated particularly well with his speakers, and as an owner of a pair of VR5s, I was delighted to have the opportunity, courtesy of the ever-encouraging Alfie Lew of Audio Space, to place a Ref 3.1 integrated in my system.

The Audio Space Ref 3.1 (K88) is a beautiful-looking piece of audio equipment that represents something of a mid point in the range of products this company offers, from a sub-\$1k integrated to power amps for \$20k, each one a tube design. The Ref 3.1 (K88) is a Class A push-pull design offering 22w in triode and 40w in switchable ultralinear, which employs 2x6SN7, 4 x 12AX7, 4 x KT-88 output tubes (a 300b version is also available) and point to point wiring. All inputs are single ended, there is no remote control offered but there is a built in MM phono stage, (which I was not able to test) wrapped up in an aluminum framed chassis with open top that is exceedingly easy on the eye. One look at the product and you will not be surprised to learn that Audio Space is a major amp manufacturer that has been around for years and keeps the old production tooling for previous designs in case they ever need to resurrect parts. Clearly, this company is in the audio business for the long haul and builds accordingly.

The amp comes well packed in one box, complete with a pair of white cotton gloves and a cloth for maintaining the glistening finish. It's not light, thanks to the beefy transformers which load up the back so you need to be careful when lifting or moving it but I connected the Audio Space to my system easily. One power cord, two pairs of interconnects and my speaker cables all lined up easily such that I had the amp on and warming up in minutes. The amp sits on four sharp legs offering at least the appearance of suitable isolation and four sizeable polished footers provide protection for your floor or shelf. Bias checking is simply enabled by a front panel switch, with modifications made for each output tube by a simple screw turn. I found I needed to check the bias a couple of times for the first week before the

amp seemed to settle, but even with the bias less than perfectly set on the appropriate point, the sound was something special.

I've not had tubes in my audio system since I was a child playing with my father's radiogram (yes, that dates me but not that much really as I grew up in Europe). Since then I have used tube amps for guitar playing regularly but always felt them a poor fit, lifestyle-wise, with my audio gear. The thought of regularly fussing with bias, carefully rationing my listening time so as to make the most of tube life, remembering always to switch off and then having to wait for the tubes to warm up again when I wanted to listen just put me off. Further, the arrival of a child in my house gave me all the more reason for creating a system with minimal temptation for prying fingers (I kept my turntable out of the way for the first couple of years too). But, and it's a big but, I wonder now if I might have been exercising too much caution. The Audio Space 3.1 is as close to unfussy as one can imagine in a tube amp. Did I say it looks beautiful, yes, but it works beautifully too. Switch on, wait a minute, and music starts to flow. Within ten minutes it's sounding good, within an hour it sounds superb.

### The sounds of life pouring out into your room

There is, you always hear audiophiles say, just something about tubes. Well, take it from a dyed in the wool solid-state guy, it's true. When playing guitar myself I always loved tubes and put this down to the more organic feel I get from pushing vibrating string sounds through a responsive, breathing amplification system that warms up as I do. But with audio systems I always felt that this sonic quality should be on the recording if the musician played tube amps, not required again in the reproduction chain at my house. After living with this amp for a couple of months, I am not so sure. In fact, I am unsure of several of my previous assumptions and inherited biases about tube amps after this experience. There are the obvious clichés: bloom, air, resolution, musicality, etc. but none quite capture what this technology possesses. It's really a case of, as others have put it so memorably, the lighting of music from within. Timbre, baby, that's where it's at and the Ref 3.1 gives you timbre you can taste!

The human voice resides in the range of sound to which we seem most sensitive, and in this range, tubes have an ability to provide qualities that seem to caress the ears of listeners. It's easy to forget about bass extension or upper air liveliness when you find yourself listening to a woman singing in close-mic'd proximity. Diana Krall's *Love Scenes* (Impulse Records, 1997) sounds good on every system I've played it on, but with the Ref 3.1, seduction drips from her voice and every subtle nuance of her breathing oozes through hypnotically as she urges you to peel her a grape or (my favorite, 'send out for Scotch'! On "I don't know enough about you", there's a Christian McBride bass solo with electric guitar gently comping behind, and while I've heard that track dozens of times, on the Audio Space I experienced a greater sense of two musicians interacting than I ever perceived before. The bass was round and full, with a sense of body that had real presence in my room. The accompanying chords from Russel Malone's guitar providing emphasis with realistic attack and tone. Jazz guitar is a telling source in this regard, the little changes in tone from neck position, the slightly varying decay of different strings in an arpeggio or strummed chord, the little details of skin sliding on metal and wood, seemed with this amp to be so much closer to what I experience when playing the instrument myself through a warmed-up Fender amp.

On brass the realistic reproduction of this amplifier is perhaps most obvious. The bite of Tomas Stanko's trumpet (Stanko Quartet, *Suspended Night*, ECM 2004) is vivid and present between the speakers. Saxophones sound so real on the right recordings that you almost feel the rush of air blasting through the instrument and out at you. David 'Fathead' Newman comes through on Ronnie Earl's *Grateful Heart* album (Bullseye/Rounder, 1996) in a more palpable manner than I've previously heard, and this is one of my most played recordings over the last decade. This is truly high fidelity. If you value a sense of real instruments being played in your room, then you will get hours of joy with this unit.

Obviously tubes are known for weaker or softer bass reproduction than solid state and this is true of the Audio Space amp compared to my reference, the venerable BAT VK500. There is bass, and indeed it took several weeks to really appear, before this it was sort of mushy and ill-defined. Over time this state of affairs improves noticeably, and becomes more than acceptable, but you are not going to get the sort of rock solid control found with a big solid-state or the ultra delineation that I find typical of bass from Class-D designs. These amps seem to open up the bottom end too, giving you a taller sonic picture. However, the bass you do get with the Audio Space is ample to underpin the music, allowing the most important aspects of other instruments and vocals to pour out at you. Depending on the type of music you like, you may not miss anything, or indeed, you might prefer this emphasis.

If there is a loss in the lower range, (and we might debate this, depending on taste and settings) it's easily offset by what this amp gives you in the mid and upper ranges. There is a harmonic rightness to the sound that seduces you into listening, relaxing you into your listening chair and calling you towards the reverie of great music. On small combo

jazz, such as the Tord Gustavsen Trio (*Being There*, ECM Records, 2004) I found myself giving up on dissecting the music, or caring about soundstaging, and just listening. The sound of his piano hung in my room, alive with overtones. The reproduction of drums and cymbals on this recording is crucial to the musical effect and here, the Audio Space was little short of superb. In my review of the W4S MC4 in the September issue I'd noted how the amp could just not get cymbals right, compared to my reference. Well no such problem with the Audio Space 3.1. In fact, the little amp gave such life to this aspect of the recording that I'd say it improved on the BAT VK500. Air, sweetness, the ability to distinguish easily between a brush and a stick stroking the metal or the skin, the dynamic range of percussion used deliberately by the artist and recording engineer, the Audio Space always seemed to get this right. It might, oddly, be that the Ref 3.1 is not as detailed as the BAT in the upper registers, since putting the BAT in caused me to imagine I was hearing more in the very upper end, but sometimes, less is more, and the Ref 3.1 actually provided sounds that were more like real percussion to my ears.

The Audio Space comes with a pair of front-panel toggle switches that allow the owner to select from two levels of negative feedback (0db and ~3db), and triode or ultralinear operation on the fly. These do seem to have combinatorial effects though I generally preferred the feedback setting on zero, which pushed the soundstage forward in my room noticeably. Alfie Lew tells me this switch, a first within tube designs, was originally intended to help purchasers in Hong Kong adjust the soundstage for small listening spaces, creating a less in-your-face reproduction. In my larger (25'x17') space, I liked the zero setting, and did not feel at any time the music was aggressive or in my face at all, but I could imagine this being really important for near-field listeners or people using the amp in small room. Flick the switch and indeed the soundstage moves, forward or backward with predictable regularity. While I generally also preferred the triode setting, it became obvious to my ears that on most rock music the amp sounded a little better on the ultralinear setting, and, in terms of the bass issue mentioned above, if you found the triode setting just a little too soft, even on small scale acoustic music, switching to ultralinear could give most bass a little tightening up. In this case, ultralinear and low negative feedback offered a very good alternative and I think between these settings, most listeners could find a combination that worked for them. Purists won't like this, neurotics will second-guess themselves every night, but these controls really did make sense in my room.

I tried the amp on both 4ohm and 8 ohm taps, (and briefly on the 16ohm taps too) generally preferring the 8 ohm by a small margin. For kicks, and because I could, I employed the 4 ohm taps for the woofers and used another pair of cables on the 8-ohm and then the 16 ohm taps for the upper modules of my VR5s. Was any one setting best? Tough call. It got to the point that I just cared less about playing with the set up and left the 4 and 8 ohm combo in place, this sounding fine on everything I threw at it.



On rock music, I swear the Audio Space 3.1 just did electric guitar in a manner that bewildered me. Could it really be the case that Ritchie Blackmore's strat had more of the tube distortion one hears live when a pick hits a string, even on a 1975 studio recording that I've played forever? Color me purple but it sounded like it to me. Did the wood body of Matheny's guitar seem to resonate just a little bit more in the space between my speakers? And it was true of vocals too. When Lucinda Williams sang 'Going back to Greenville', the backing female vocals seemed a little more layered in the soundstage, and peppering percussion revealed itself on Van Morrison's 'Venice' from the wonderful Wavelength album.

These sometimes tiny details, the type you only recognize from feeling an instrument resonate on your lap as you play, or hearing unamplified human voices harmonize in a physical space near you, seemed present where I'd not observed them before. Sometimes I'd find myself listening with new ears and appreciation to music I'd loved for decades. Starker playing Kodaly, a favorite, was breathtaking (the *Sonata for Unaccompanied Cello, Op 8*, recorded in Japan, particularly so), with richness of tone and presence enough to stop anyone in their tracks

I need to emphasize here that it is not simply a resolution or detail issue. For every detail I gained in the midrange and uppers, I probably could point to a slight smudging or rounding in the lower regions compared to other amps, so it's a trade-off in that sense. But what is important is how this particular trade made sense to my ears, how truer the sound seemed to the real palpable presence of a musician in proximity, even on large scale orchestral recordings, such as



the wonderful du Pre version of Elgar's *Cello Concerto in E minor* which I've loved always on my BAT. If you spend your audio life waiting for the split second impact of explosive percussion or the ultra-deep resolution of a bass organ note in order to 'appreciate' your system then you have bigger problems. If you love music, I suspect you will love this amp. Quite simply, the Audio Space has something that other (solid state?) amps I've experienced don't possess in quite the same way. It's seductive, and once you've experienced it, it is hard to give up.

### Can you live with just one box?

An integrated, at this price, removes the need to another pair of cables, it requires less shelf space than a pre and power combo, and it employs only one power cord. If you are an aftermarket tweaker you can do the math. At a list price of \$3390, this competes with many components that only do half the work, or combos that are more compromised in quality. If you had told me before I heard this amp in my system that I'd be able to live with 22w of tube power I'd have expressed disbelief, and in truth, there is enough difference between the 22w triode and the greater 46w ultra-linear mode that suggest the need for a few more watts on some music is genuine, but, and it's a real but, what the triode mode gave me with the Von Schweikerts would be good enough for most of my music, most of the time. This little beauty has caused me to re-think just what I value in my listening room. I can only imagine how much fun there is to be had with this company's less affordable products if they can coax this quality of sound from a \$3k integrated but I think for many people, this will be all the amp they need.

Switching power cords had, to my ears, some effect. The Virtual Dynamics David PC wrought a little better performance from the amp than the stock cord but not in a way that makes it an inevitable upgrade. Feeding the amp through a PS Audio PPP seemed to help too, but this caused the PPP's fan to run almost as much as I experienced with the larger BAT, a source of irritation that has caused me ultimately to take my BAT off the conditioner, despite the small sonic decrement that results - better this than intermittent fan noise that drowns out quiet passages. The Audio Space was not quite so demanding on the PPP but it does draw current and since it runs super quietly, any fan noise becomes intrusive. The only serious dislike I have is the amount of usable control offered by the volume pot. With my speakers, I barely had to turn the pot to have the music loud enough, and this meant I had little ability to fine tune the volume, it never going up more than a quarter of its circumference before the volume was too much. This gain setting could be modified by the manufacturer and Alfie told me they might be considering this.

### Summing up

All told, the Audio Space Ref 3.1 is an exceptionally fine piece of equipment that will beguile and engage some people to the point of them not wanting (or at least not needing) anything more. It offers aspects of sonic reproduction that are as good as I've heard and really does match well with the sensitive Von Schweikerts. It makes music listening fun, does not require hours of turn-on to work well, and will give you pride of ownership on looks alone. Yes, it runs hot, yes it will need periodic re-tubing, and no, it does not support balanced connections or allow you to control it remotely from your chair, but if your lifestyle can sustain the modest demands of tube living, you could build an amazing system around this integrated amp that would challenge far more costly set ups, it's as simple as that. Much as people fret about tube replacement or the cost of tube rolling, at least you get to keep the main component, which in the long run is going to be far cheaper than swapping gear in and out of your system in search of the perfect match. In a world of big buck wires and six-figure speakers, the Ref 3.1 defies logic. How can something this good be built and delivered at this price? What we have here is affordable audio at its very best; highly recommended.

### Associated equipment

Digital: Marantz S11-S1 SACD player

Vinyl: VPI Airies/JMW10/Benz L2 WoodBody, PS Audio GCPH phono stage

Speakers: Von Schweikert VR5SE speakers

Cables: PS Audio Transcendent interconnects, Audio Art SC5 speaker cables

Power Conditioner: PS Audio PPP

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