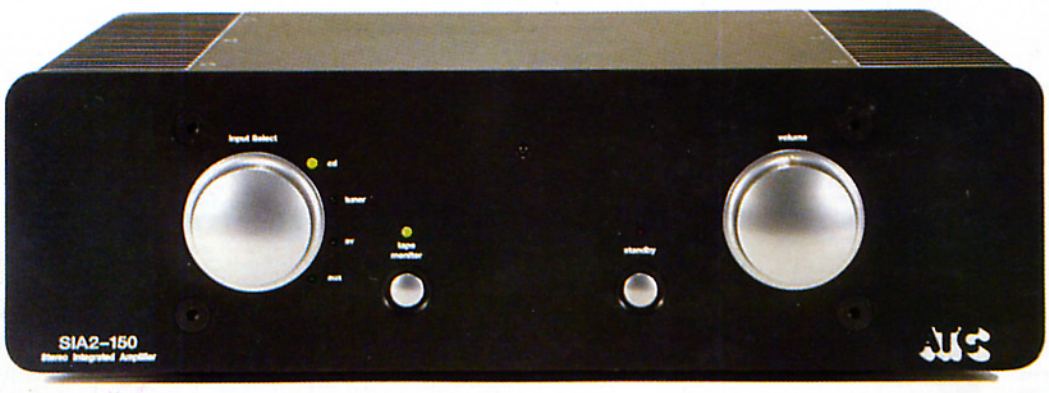
Some like it Hot



Andy Grove flexes his muscles and grapples with ATC's 150W SIA2-150 powerhouse integrated amplifier.

The first thing I noticed about this amplifier was its not inconsiderable mass, evident when I lugged the beast from the delivery van to my front room. I was expecting a normal 150W per channel integrated, which doesn't have to be large; this machine obviously had some serious iron under its bonnet.

After some head-scratching trying to work out how to open the Russian doll style packaging I was eventually presented with the SIA2-150. Now, to my eyes, this isn't the prettiest looking puppy in the litter. The construction is of Allen bolted aluminium plates with big-ass heatsinks flanking the main box - all in black. It looks more like it's been designed to withstand a nuclear strike! The front panel is simple and functional with two large silver aluminium knobs and two push button switches, one for standby, one for the tape monitor.

This Spartan presentation is probably down to ATC's well known and envied experience within the recording world. A recording engineer does not want to know about nice wooden side cheeks or irritating, superfluous and never used features.The amplifier is furnished with four inputs, all line level, the usual tape in/out and two sets of speaker binding posts. All connections are gold plated and the binding posts are from WBT - Herr Thoerner's posts even allow you to use banana plugs if you like (two prongs up to superfluous regulations!). The 'no fuss' remote control operates all of the front panel features. The volume control is a motorised potentiometer rather than a cheap volume control IC and the selector switch is the type that goes round and round infinitely while the LEDs flick between the various inputs.

The manual was fine, with enough diagrams to explain setting the unit up and operating and advice on cabling and positioning of the unit.

After my external examination and tyre kicking exercise I lifted the bonnet to check out the iron. Underneath was the cause of my near hernia. A chunky E-I mains transformer of what looks like 600VA. The circuit topology of the SIA2-150 is a little different to cooking amps as it uses a "Grounded Source MOSFET" topology. Usually solid state amplifiers use their output devices as buffers drawing their current from the power supply rails. In this case though they are acting as transconductance devices driving the power supply, which is in turn connected to the load.

This has technical advantages. Firstly, the FETs are driven from a small, low voltage supply which is completely isolated from the main output supply, eliminating interaction. Secondly, the slew rate of the overall amplifier can be vast, only the output devices are required to react at speed, and here they are very quick Hitachi MOSFETs.

The devices are obviously set at quite a high bias current, as the heatsinks get quite warm. A quick phone call to ATC indicated that the devices came out of class A at about 8W output, which means that most of the time you will be listening in Class A. The main reason for this type of topology being less popular is probably that of cost. As the output power supplies are electrically active they need to be isolated from each other and from ground. This demands an expensive transformer with one winding per channel.

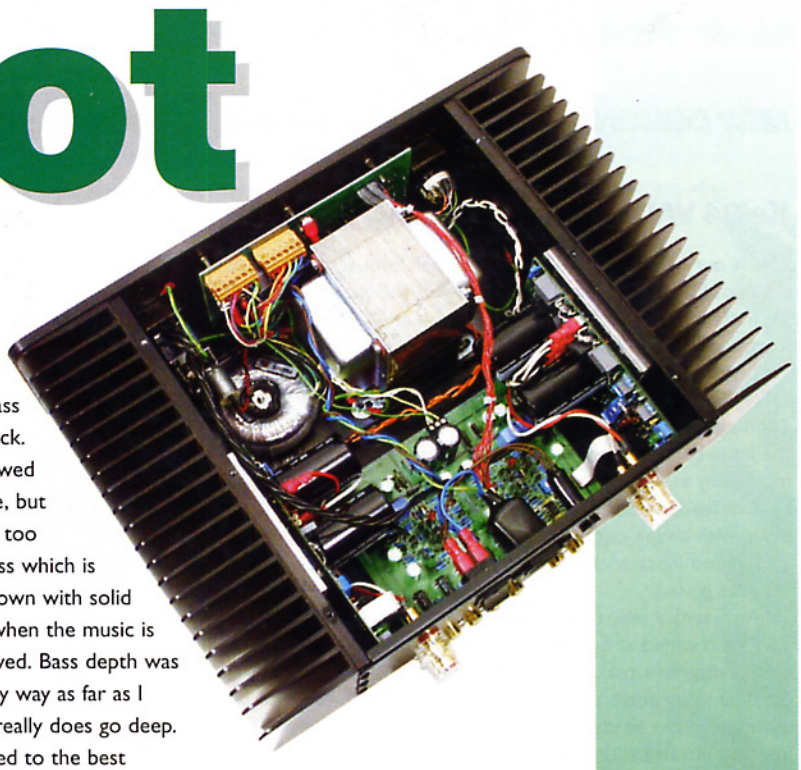
Another power supply is required for the preamp sections. Here a separate transformer is used which also supplies the power, via yet another winding, to the control logic.

Another interesting feature of the SIA2-150 is that it has a gain control circuit similar in action to that seen in professional amplifiers. When the amp approaches clipping the gain is automatically reduced to avoid it. This protects the speaker from damage due to overheating and loss of control of the drive unit's mass.

I wasn't sure what to expect in terms of sound quality. The unit's appearance had a negative psychological effect upon me. But I have heard similar topology poweramps before and they're usually very sweet. First on, after a few hours warm up was the Jeff Healy Band's 'See The Light'. The SIA2-150 thrust his bluesy, gravelly voice out into the room, showing off the imaging capabilities of my QUAD ESL989s. I could almost feel his breath on my face - snares and cymbals really cut through with a 'watching it live' sound and with the firm underpinning of the bass and kick drum made for an exciting experience.

Old fashioned rock doesn't really go that deep in the bass, so I tried a track from Madonna's 'Ray Of Light' album, 'Frozen', with its sampled and synthesised bass lines and drum track. The SIA2-150 showed excellent grip here, but without becoming too robotic and soulless which is quite often a let down with solid state amps, even when the music is electronically derived. Bass depth was not curtailed in any way as far as I could discern - it really does go deep. However, compared to the best around the SIA2-150 was a little neutered and electrical sounding, which could be due to the amp's enormous circuit complexity.

At the end of the day this is a very competent product from a company with an enviable reputation in the music business. It's not a stunner, but it is very good and worth hearing.



ATC SIA2-150 £1250

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MEASURED PERFORMANCE

This is a powerful amplifier with a few interesting differences. Output measured 136W into 8ohms and 182W into 4ohms, for a 0.2% distortion threshold. That's not normally a qualification I bother to make, but with this amplifier the clip point is not sharply defined, as it is on most amplifiers. ATC, like NAD, like the idea of an amplifier going into overload gently, something valves do (when feedback is low). The SIA2-150 goes into overload very gently however, obscuring the output overload threshold somewhat. Our spectrum analyser clearly showed, however, the point at which distortion rose rapidly and the 0.2% level represents that threshold. At a 1% distortion level the output power would be higher. At a practical level it gives the amplifier an easier sound, especially when pushed to give a lot of volume.

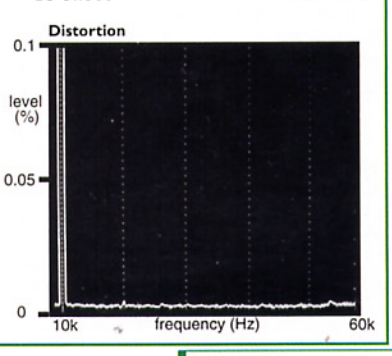
Worked within the above limits the SIA2-150 gives a good, clean performance, with little distortion at low levels, right across the audio band. A lot of amplifiers even these days start to get a little out of shape at high frequencies, but not this one. It handled full power tests and worked cleanly into a 4ohm load too, so the ATC is likely to sound smooth enough in use.

Frequency response extended flat past 150kHz, meaning there's a lot of bandwidth available. It should suit DVD-A and SACD people, where there's a notional requirement for reproduction up to 100kHz. The bass end of things was a little curtailed though, gain rolling off below 18Hz, an unusually high lower limit. It may conceivably be an attempt to improve d.c. stability internally.

Input sensitivity was on the low side at 400mV for full output. This is low for some older cassette decks and tuners, which produced 300mV, but satisfactory for modern sources which produce 500mV-2V.

This amplifier is well enough engineered and has some interesting differences. It's likely to give a good account of itself and sound a little different from the norm. **NK**

Power	136watts
CD/tuner/aux.	
Frequency response	18Hz-150kHz
Separation	92dB
Noise	-108dB
Distortion	0.006%
Sensitivity	400mV
dc offset	9/14mV



World Verdict

A fine sounding amp with bags of power. Relays music with good emotion but lacks that last ounce of fluidity to carry it off.