



# G-force

Arcam's new Class G SR250 is so much more than just an old seventies receiver with a pretty face, reckons **David Price**

There's something I like to do with my hi-fi when no one's around, but I'm rather reticent to say. Yes, that's right, I like watching movies through my prized stereo system! I'm not into surround sound of course – which just isn't the done thing for all us stereo-types – but I do stand my loudspeakers either side of my TV. Then, every now and again, I break out my Blu-ray player and pipe it through my DAC and amplifier, then out through my speakers – and enjoy my favourite films in glorious high-fidelity sound.

You don't need umpteen speakers; even in stereo your cinematic experience can be dramatically enhanced. Arcam's new FMJ SR250 2.0 receiver has been designed expressly for this purpose. Inside is much of the FMJ A39 – a fine-sounding Class G stereo amplifier

(HFC 394) – plus a decent DAC and a plethora of codecs for cinema use. There's also seven HDMI inputs and three outs, which means it becomes the centrepiece of your AV system, as well as your hi-fi. No fiddling around with cables is needed to switch from music to sound and vision.

Actually, the Arcam is more than this. Uniquely for a two-channel product, it also contains a powerful room correction algorithm, one that is far more effective and less invasive than any I have previously tried. It is highly sophisticated, so takes half an hour or so to set up, but this done it works like a champ. Dirac Live works by getting the user (or preferably your dealer) to take a number of measurements and then upload these to a central computer at Dirac Research, which then does some sophisticated calculations to compensate for the failings of your

## DETAILS

**PRODUCT**  
Arcam FMJ SR250  
**ORIGIN**  
UK/China  
**TYPE**  
Two-channel receiver  
**WEIGHT**  
15.1kg  
**DIMENSIONS**  
(WxHxD)  
433 x 171 x 425mm  
**FEATURES**  
• Quoted power output: 2x 90W (8ohm)  
• Cirrus Logic CS42528 DAC  
• Inputs: 4x coaxial; 2x optical; USB; 7x HDMI; 6x RCA  
**DISTRIBUTOR**  
Arcam  
**WEBSITE**  
arcam.co.uk

speakers, room and listening position. It comes up with a new 'equalisation map' that gives a flatter response and also corrects things in the time domain – more of which later.

The SR250 is basically an evolution of the old two-channel receivers that we used to buy in the seventies. Which is to say it has an amplifier and a radio receiver in the same box. In the case of this Arcam, that means both FM and DAB. But to this a Cirrus Logic CS42528 DAC chip has been added, and an analogue control section based loosely on the high-end C49 preamplifier – complete with its special distortion nulling technique and multiple power supplies to negate inter circuit block noise. (Arcam says that the video stages have no influence on the audio section, by the way.) There's a resistor ladder volume control, which is claimed to add no distortion.

A large toroidal transformer helps the power amp section punch out a claimed 90W per channel. It's notable for running in Class G, which means it has two power envelopes. The first is as a Class A with no crossover distortion, but when called upon to deliver over 23W, it goes into Class AB to really raise the roof. This isn't unique to Arcam, but the Cambridge company has developed it more than anyone else recently. The SR250 can run as a 'straight-through'

stereo amplifier, with no processing, from a line-level analogue input, or you can use its onboard DAC and/or home cinema codecs should you wish. You can use it as a preamplifier, or bi-amp it, or hook it up to the massive P49 power amp should you wish. In other words, it's a versatile beastie and everything is configured easily in its set-up menu, which is best

**The do-it-all ability of the FMJ SR250 is reflected by its size**

navigated via your TV. The unit gives access to internet radio stations via the network connection (also needed for Dirac Live setup), which also interfaces to UPnP audio servers. The rear USB port supports memory devices. There's a free MusicLife iOS UPnP and control app downloadable from Arcam's website, and a bundled system remote control.

The Dirac Live system deserves an article in its own right, as it's so powerful and comprehensive. But when the SR250 is connected up to the internet, and to a Mac or PC, you can do a basic configuration in around 15 minutes. It's a case of plugging a microphone into the computer then moving it around the room (the software tells you where to place it). The system does a series of frequency sweeps and the data is sent off to Dirac HQ where the numbers are crunched by supercomputers and the system sends back a frequency and time domain-corrected 'map' for the SR250. You can then run this in either corrected or uncorrected mode, and hear the difference. In my room, the 'before and after' frequency and impulse plots correctly identify a number of issues I've long been aware of, and a couple I'm not.

## Sound quality

Running in direct mode with Dirac processing turned off, the FMJ SR250 is a clean, crisp and open-sounding device. Don't think that this means that it is sterile though, because the great thing about this receiver – and the amplifier that it's descended from – is that it combines a wonderful

sense of openness and detail with a natural musicality that makes listening a very involving experience. To me, it is this that makes this current generation of Arcam amplifiers truly great, and it's something that in all honesty I couldn't say of the products the company was making five years ago.

Hook up a high-quality analogue source to the SR250 via the line inputs, and you'll be amazed by the scale, power and get up and go when playing Boz Scaggs' *Lido Shuffle*. At the same time, though, it has a totally

## When I switch Dirac Live on there is a quite profound change to the sound

unexpected transparency that makes most solid-state amps sound mushy and polluted. You don't quite get the blindingly transparent sound of full Class A amplification and the SR250 is just a bit softer and more opaque, but you still get a strong taste of it. There's an inherent smoothness and incision that's hard not to live with when you go back to a Class AB or Class D design. But don't go thinking it's some soft, fat old smoothie in the style of a budget valve amp – it isn't. It's a well-lit and quite forensic sound that doesn't have any excess warmth. It's not the sort of thing to buy to sweeten up an otherwise cold-sounding system.

Via its own digital inputs, driven from a Teac CD transport, the SR250 ▶

## CONNECTIONS



## Q&A

**Andy Moore**  
Product manager, Arcam



**DP: Why did you choose to fit Dirac?**

**AM:** We first met with the company two years ago, having investigated many other options. Dirac was found to be unique in its ability to fix in-room speaker performance in a non-intrusive manner. Full Dirac live is implemented within the FMJ SR250 and both multi-channel AV receivers, namely the AVR550 and AVR850. You will also find Dirac within DataSat. It's so effective because it has three modes – Frequency, Phase and Impulse domains. The listening room is one of the major obstacles in putting together a system; many rooms are not only compromised in shape, but also the required speaker placement and listening positions. It is startling the way a system will snap into focus when Dirac is engaged even in the most compromised of listening rooms.

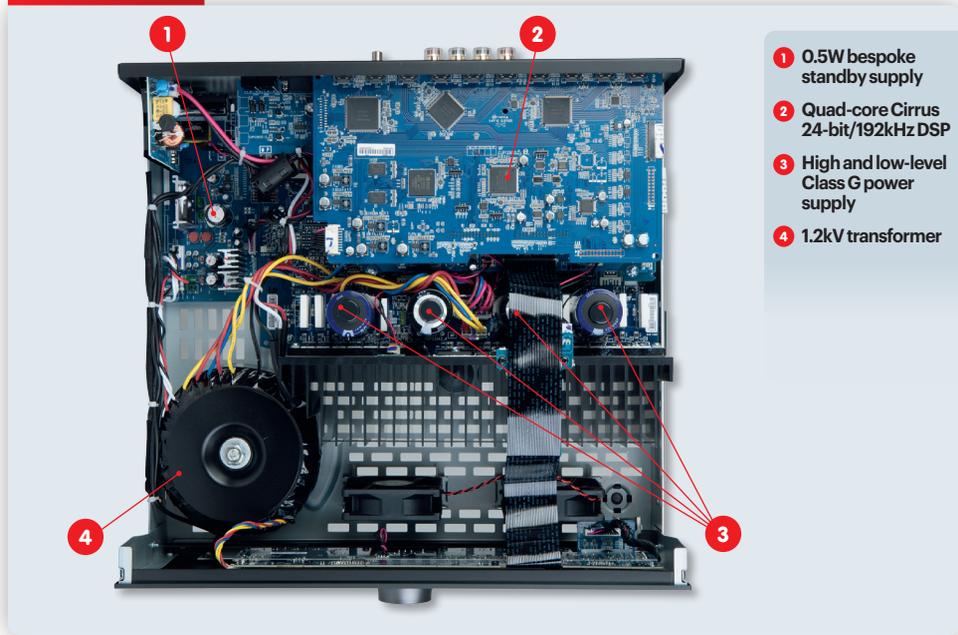
**Why make a 2.0 receiver?**

We have noted that many two-channel enthusiasts connect not only audio sources to their system, but also AV sources such as Blu-ray players, Apple TV, satellite boxes, etc. In this instance, the video has to take a direct route to the TV and this is becoming a problem as many modern sources have either HDMI or S/PDIF outputs, and the customer also needs to change the TV input to line up the source with the audio. Now add the fact that a conventional amplifier does not include lip-sync adjustment, and that's a real bind. The beauty of the SR250 is that it sorts all these problems, and more.

**How have you managed to keep the audio circuitry pure?**

One of the biggest challenges faced in a combined analogue/digital design be it audio or video is noise. To eradicate noise the SR250 uses expensive multi-layer circuit boards and multiple isolated power supplies and we also implement board layout techniques that have been refined over many years – we have a wealth of experience in all required disciplines. First and foremost the SR250 is a purest 'clean' audio device that also does a number of very clever and useful tricks.

### IN SIGHT



- 1 0.5W bespoke standby supply
- 2 Quad-core Cirrus 24-bit/192kHz DSP
- 3 High and low-level Class G power supply
- 4 1.2kV transformer

### HOW IT COMPARES

There's no direct rival for this Arcam. Either you're talking a DAC/stereo amplifier combo, or a multi-channel AV receiver. It's a testament to the SR250 that it gives the best of both worlds, and more – providing you don't want multi-channel. The NAD T 777 is probably as good an example of the latter as you'll get, being a fine surround-sound design with enough power to rattle the floorboards in your AV room, and a vast number of facilities including DAB radio, etc. It's a little more expensive than the Arcam at £2,600, but is a true 'do-it-all' design. Sonically, though, it can't quite compete as a stereo amplifier. It sounds good, but doesn't have the focus and grip of the Arcam.

is excellent. It's punchy, crisp and tight – with just a slight lack of depth perspective and fine detail reminding you that this isn't a high-end digital converter. The DAC onboard the Arcam is certainly the match of most £500 designs, and that means system buyers can save this amount and spend it on better speakers. Running via coaxial in, it makes a very nice noise with Coldplay's X&Y, giving a large, powerful and confident presentation that lacks depth perspective but more than makes up for it with a wonderfully wide soundstage, a tuneful and powerful bass and a sweet and smooth treble. This Arcam really is something of a muscle amp, considering its price.

When I switch Dirac Live on, there is a quite profound change to the sound. I've heard many 'room correction' systems and normally I sit listening to the sound of heavy, ham-fisted DSP that solves some problems while introducing others. Not so here though; regardless of source it works a treat. Despite cutting out a big bass boom in my room, it gives subjectively more (upper) bass, pushes the top end up slightly (just as it should) and cuts out an upper midrange peak. The system sounds much smoother, but interestingly it is snappier and more musical too when playing some classic Gregory Isaacs, in the form of *Night Nurse*. Bass is certainly more tuneful and there is a more positive central image. Despite this, there's no 'heavy breathing' from the Dirac system, and on balance it's definitely better in than out. If I lived in a room with ideal acoustics and was able to

position my speakers perfectly, I think it would be better out – but it's a remarkably effective sticking plaster for imperfect acoustics and a huge boon for many end users.

### Conclusion

Arcam's FMJ SR250 is a genuinely innovative product, quite unlike anything else around. It's a dream solution for stereophiles who love watching movies too, and don't want to drown in a sea of cables. It's also brilliant for those with rooms with highly imperfect acoustics, as it's able to tune your speakers to your room in a far more powerful way than the usual expedient of introducing more soft furnishings or fiddling with your cables. Dirac on or off, it sounds superb for its price and has a welter of handy facilities, from decent-sounding DAB radio to a fine built-in DAC. It's one of the company's best products for years, and so comes heartily recommended ●

### Hi-Fi Choice

#### OUR VERDICT

- SOUND QUALITY**  
★★★★★ **LIKE:** Smoothness; detail; power; Dirac; AV flexibility
- VALUE FOR MONEY**  
★★★★★ **DISLIKE:** Nothing at the price
- BUILD QUALITY**  
★★★★★ **WE SAY:** Ingenious niche product that brilliantly hits the spot
- FEATURES**  
★★★★★

#### OVERALL

