

# Russell K. Red 50Se stand-mount loudspeaker

Chris Frankland

It was three years ago at the UK Audio Show in Daventry that I first heard the Red 120Se loudspeakers from Russell K. I liked what I heard so much that I ordered a pair for review and I have been a convert to the brand ever since.

So when Russell Kauffman phoned me up last year to say he had just put the finishing touches to a prototype of the Red 50Se and asked if I'd like to hear them, I jumped at the chance. Now the Red 50Se is finally in

production and I have secured the very first production pair for review in **hi-fi+**.

For those of you unfamiliar with Russell K., the company was founded in 2014 by Russell Kauffman, who has a long and impressive background in the hi-fi world, starting out in retail with the likes of Lasky's in Tottenham Court Road and KJ Leisuresound in London's Wigmore Street. He then went on to work for some big names in the loudspeaker sector, including B&W, Wharfedale, Monitor Audio and Morel. >>



## » Listen to the brands

His retail experience allowed him to listen to most of the speaker brands on the market and the many prototypes that were brought in for KJ staff to listen to, and this helped him to formulate his own ideas on what he did, and didn't, like when it came to loudspeaker design and to shape the philosophy behind Russell K. designs.

And what is that philosophy? When I ask him that, he sums it up by saying: "The job of a loudspeaker is to turn electricity into something you can hear and it should do it in a way that preserves the fun, joy and expressiveness of the music – the different types of violins, trumpets, the different sounds they have, the people who play them. It is those things that make music so much of an emotional hit. What I have always struggled with, with speakers primarily, is intelligibility. Fast-moving lyrics or instruments that you can't follow. I want to follow it and I want it to sound real."

And I must say that is exactly what I listen for when I review loudspeakers. Maybe that is why I liked the Red 120Se so much.

The Red 50Se is the latest in the range to get the 'Se' treatment. It all started with the Red 150Se in 2018 (see my review in issue 222), then the Red 120Se in 2021. The 50Se comes into the Russell K. range at £3,995 (the standard Red 50 is £2,250), between the Red 100 at £3,250 and the standard Red 120 at £4,950.

## Performance boost

Kauffman likens the Se treatment to an M series BMW and in a nutshell, the Se version of the Red 50 two-way standmount is like a 120Se floorstander chopped off just below the bass/midrange driver, with a reflex port on the rear of the cabinet.

The cabinet, which is slightly wider and deeper than the 120Se, uses 16mm MDF walls and a 19mm baffle and, in common with all Russell K. speakers, is completely



undamped with no added foam, bitumen damping panels or wadding. Kauffman tells me that he has always found that added damping inside the cabinet tends to create problems with stored energy. He was aware, however, that a speaker with no damping or wadding could end up sounding "like a wardrobe", but he found that the use of an internal shelf/brace helps to reduce any boxiness. The Red 50Se has one just below the tweeter, running the full depth and width of the cabinet, with holes drilled in it to allow the bass driver to vent through the reflex port, which is tuned to 50Hz. The arrangement is said to result in a drastic reduction in midrange standing waves and

a strong braking effect at 100Hz to create a "tight and articulate bass".

The Red 50Se uses exactly the same drive units as the Red 120Se, which are custom-made in Poland. The 125mm impregnated paper cone bass/mid driver has a 25mm voice coil with aluminium former and a Faraday distortion-cancelling copper ring and is the same as used in the standard 120. The tweeter is a 25mm soft dome with a ferrite magnet system with an extra magnet compared with the standard 50 tweeter and a metal face plate instead of a plastic one. It incorporates a copper-clad aluminium voice coil on a fibreglass former with a Faraday distortion-cancelling copper ring and has a higher output than the standard tweeter. It is said to be a much higher-quality tweeter than the standard model, with better build quality.

Kauffman believes in keeping crossovers simple so that his speakers are easy to drive. He says a lot of designers decide they need two components for a basic 12dB/octave rollover, then they add a couple more for a bit of equalisation and some more to sort out the impedance. He tries to get one circuit to do it all with component values meticulously fine-tuned so that the phase is carefully aligned through the crossover region. Indeed, I have found that even relatively low-powered valve amps will drive all of the Russell K. range with no trouble at all. »





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### » One component

The bass/mid driver hands over to the tweeter at 1.8kHz with a nominal 12dB/octave rolloff. The crossover is designed with just one component, and no resistors, in the signal path. There are other components, but they are connected to ground. The tweeter circuit has a capacitor in series and an inductor in parallel. A bypass capacitor, one tenth the value, is piggybacked across the main capacitor, which lowers the crossover frequency and also results in a faster response time. There is also a misaligned Zobel network in parallel to adjust the level of the tweeter.

Kauffman also connects the two drivers in phase. The same is true for all Russell K. speakers. He explains: “Whereas a textbook will tell you that with a 12dB filter you should have the tweeter out of phase, I don’t like the way a speaker ‘times’ when you do that. I prefer to keep them positively phased even if I have to do 10 times the amount of work to make it all work properly.”

Another interesting facet of the crossover design is that Kauffman has decided not to use air-cored or ferrite-cored inductors in the woofer circuit as most speakers do. The tweeter uses an air-cored inductor as it is small and its DC resistance is low. But the woofer circuit gets an enclosed field ferrite-core inductor, specially made for Russell K. But why?

Kauffman elaborates: “A ferrite-core has low DC resistance and you need fewer turns of wire, but it saturates and distorts very quickly. Worse still, it is like a radio transmitter and the energy it pushes into other components

on the board has a major impact on the sound. An air-core generates less energy, but needs more turns of wire, so the DC resistance gets higher, which wrecks the damping factor of the amplifier.”

So how is his inductor better? “This inductor that we have specially made has extremely low DC resistance and is as close as you’re going to get to having a direct connection,” he explains. “And it doesn’t pollute the other components, which makes a massive difference to intelligibility. These coils are very expensive but they are worth it.”

The Red 50Se also sees – for the first time – the use of a perspex plate between the speaker base and stand. This is screwed to the underneath of the cabinet. Kauffman explains that the new mounting arrangement allows “the cabinet to keep playing in time with the drivers”. The cabinets are, as he puts it ‘live’ and are made to flex. He has found that simply placing the cabinet on the top plate of a stand inhibits the bottom panel of the speaker and prevents it from vibrating as it should. He adds that the areas of the cabinet that move the least are the corners, so that is where the perspex plate is attached, leaving the rest of the bottom panel free to vibrate “as if it was in free air”.

So now you know everything about the Red 50Se. Except how it sounds. So, to put them through their paces, I hooked them up to an Audio Note TT3 turntable with PSU3 power supply, Arm 2 and lo1 cartridge through and AN-S9 transformer into a Meishu Tonmeister integrated amp. CDs were played on an Audio Note CDT Five





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» transport and DAC Five Special. I used the Red 50Se on Russell K.'s own stands, which were solidly constructed and supported the speakers well. They were positioned around 18in from the sidewalls and 12in from the rear walls, which achieved to my ears the best balance in my 19ft x 12ft listening room.

### It's all in the timing

My first impressions of the speakers were that they had the usual Russell K. qualities – open, uncolored, fast, dynamic and with great rhythmic integrity and timing. On 'Hello Tomorrow' from guitarist Larry Carlton's *Discovery* album, I got a good insight into how he was playing each note, its timbre and shape, while delicate percussion detail was well conveyed with great delicacy on cymbals and hi-hat – how hard or softly they were being struck – while the bass line had good weight and moved well. The Red 50Se delivered an excellent weight of bass for the size of box without compromising the movement and flow of a bass guitar line.

To get the measure of the Red 50Se on vocals, I put on the track 'Mornin'' from Al Jarreau's simply titled *Jarreau* album. They had excellent presence and emotion on his vocals and really captured the unmistakable signature sound, leading edge sparkle and dynamics of the Fender Rhodes piano. The track has a staccato rhythm and this was well handled by the Red 50Se with Jeff Porcaro's stunning drumwork coming across with great energy and pace. And when Jarreau really pushed a note, they handled it without shouting.

The Red 50Se was equally adept when it came to making the most of the fast-moving 'No One Emotion' from George Benson's *20/20* album. The track had great pace and movement and the driving synth bass line was pleasingly weighty and tuneful, while that blistering guitar solo from the talented Michael Sembello came across with just the right degree of projection.

Another great test of speaker openness, accuracy and balance is *The Secret of Climbing* by Stephen Fearing, which was recorded very simply in the living room of Rega founder Roy Gandy with two mics and no post-processing. On 'Red Lights in the Rain', I was impressed with how open and natural Fearing's voice sounded, how the Red 50Se conveyed his impressive vocal power and the weight and body of his lovely custom-made Manzer Cowpoke acoustic guitar. I could hear how each note was shaped, its volume, leading edge and could also hear his fingers sliding along the strings. All in all, an excellent performance.

*Bop City* from jazz singer/songwriter/piano player Ben Sidran is a superbly dynamic recording and on the track 'It Didn't All Come True', the Red 50Se continued to impress with their agility, pace, punch, poise and openness. Vocals sounded natural and full of emotion, while Sidran's fleet-fingered piano play was fluid and detailed and the fast-paced bass line was nimble and tuneful with pleasingly good weight. Drumkit was also punchy, dynamic and powerful and you could really hear just how hard a skin or cymbal was being struck.

I tried one of my favourite tracks from the late, great sax legend David Sanborn – 'It's You' from his classic *Voyeur* album – and the Red 50Se again impressed with their openness and dynamics, allowing me to appreciate the mastery of his sax play and the shape, tone and power of each note. Lenny Castro's hypnotically complex and rhythmic percussion work was also conveyed with great detail, delicacy and syncopation. The Red 50Se gave a great sense of the track's rhythmic ebb and flow.

The Red 50Se never failed to surprise and delight me. Don't be fooled by their compact dimensions, they punch well above their weight and deliver a big soundstage, great dynamics and power with a firm grip on timing and rhythm, making the music flow and getting your foot tapping along. Bottom end performance is excellent with good weight and movement. Their sound is involving, detailed and coherent and simply pulls you into the music. I enjoyed my time with the Russell K. Red 50Se and recommend them enthusiastically. +

### Technical specifications

**Type:** Two-way reflex-loaded standmount

**Driver complement:** 25mm soft dome tweeter, 125mm impregnated paper cone bass drivers

**Frequency response:** 45Hz-22kHz

**Crossover frequency:** 1.8kHz

**Impedance:** 8 ohms

**Sensitivity:** 85dB/1W/1m

**Dimensions (HxWxD):** 310mm x 205mm x 210mm

**Weight:** 6.5kg

**Finishes:** Walnut with metallic black baffle, light oak with white baffle, black wood veneer with metallic black baffle

**Price:** £3,995, €4,995, \$5,450 per pair

**Manufacturer:** Russell K Ltd

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