

JBL LSR4328

Monitors that compensate for your room's lumps and bumps... without creating their own problems? It can be done.

Text: Brad Watts



► I admit to not being a rabid fan of JBL monitors. I pushed a pair of domestic JBL monitors to hell and back during the late '80s. They were hand-me-downs and I really can't remember the model. They were a huge domestic three-way affair with a weird top-end transducer based around a horn with these crazy fins radiating outward. When I had eventually decided to replace them with something a little smaller, again I went for some JBL nearfields – there wasn't a lot of choice at the time. They were the 4206s. They looked kinda pregnant with the woofer slightly extended from the rest of the cabinet. While they lasted me a couple of years they eventually proved to be a poor choice for building mixes. On the positive side they did endow me with a profound hatred for metal dome tweeters – I know they've got better but I still think they're harsh and hard work. It was these uncomfortable memories that came flooding back when asked if I'd review JBL's latest offering. As you can imagine, my initial reaction was a steadfast 'not today thanks', until I did a little web research. Lo and behold, JBL had forfeited their titanium tweeter concept on this model! They've gone back to a silk dome tweeter! Okay then, I'll have a listen.

The LSR 4300 series is quite a step for JBL. There's a whole bunch of technology crammed into these bundles of joy. They're the first set of monitors I've seen with a USB port and a remote control, but most encouraging is their ability to calibrate themselves to the room they reside in. But first let's have a look at the nuts and bolts of the 4300 series before we delve into their 'hi-tech' tricks. The range consists of three models. A 6.25-inch bass driver model, an eight-inch driver design (the units I'd been sent to appraise), and a 12-inch sub cabinet. Like most powered monitors nowadays the 4300s are aimed at both the stereo and surround monitor markets. The cabinets are coated in what almost looks like a rubberised graphite finish – non reflective and quite serviceable. 19mm MDF is the cabinet material of choice with the front baffle constructed from shock absorbing ABS plastic – the same stuff the Danes make Lego from. Mounting screw points are provided on the base of the cabinets and will fit any industry standard fitting.

The actual drivers consist of a polymer-coated paper fibre cone eight-inch bass driver, with the top end being looked after by the previously mentioned 25mm silk dome tweeter (hoorah!). In keeping with JBL's more

traditional design philosophies, the tweeter is set within a large recessed 'waveguide'. If you wish to refer to the JBL parlance you'd be looking at an 'elliptical oblate spheroidal waveguide'. Check the Need to Know box for more specs.

Moving on to the connectivity side of things. In a nutshell, I've never seen a monitor with as many connection possibilities. Analogue connection can be either XLR or TRS balanced with a simple switch to choose between +4 and -10 voltages. That's simple enough. Further digital connection is possible via AES/EBU and coaxial S/PDIF with the opportunity to switch between both digital inputs. Sample rates up to 96k are supported. Alongside the signal inputs you'll find two ethernet connections. These transmit and receive Harman HiQnet (JBL is a Harman group company after all). This is a networking protocol designed for communication between each monitor whether it be part of a stereo system or part of a surround arrangement. Up to eight surround points are catered for not including LFE sub cabinets.

HOOK UP

Hooking up the system is much simpler than other network-based monitor systems I've encountered – there's no need to concern yourself with TCP/IP addresses, you simply make the relevant ethernet connections (with the supplied cat-5 cables) and then choose the position each monitor occupies via a clearly-labelled dip switch (the left monitor set to 'Left', centre monitor set to 'Center' etc). Once these network connections are made the entire system becomes 'self aware'. I'll explain further. The front of each monitor houses a selection of buttons and a horizontally-mounted LED bargraph meter. The buttons will allow adjustment of volume, soloing, EQ adjustment and, of course, power status. Adjust volume on one monitor and the rest follow suit. The LEDs behave as peak level meters when not providing setting readouts. Initially I was a bit annoyed with there being yet another set of meters in the scheme of things and quickly went to the manual to see if the feature could be defeated. Fortunately this is possible via the brightness control – simply turn brightness down to zero. Turn it back up for clients though. The shelving EQ for each monitor is adjustable ± 2 dB in 0.25dB steps. The intention here is obviously for tailoring the monitors to the acoustic abnormalities of different room environments. This is ►►

fine if you know what you're doing and have access to the requisite measuring equipment. If you don't have the know-how and the gear JBL has come to the rescue with what I feel is one of the most exciting things to happen to nearfield monitoring in years.

CORRECTIVE SERVICES

RMC or 'Room Mode Correction' will analyse the characteristics of the room and adjust equalisation to suit. Sound neat? I reckon so. The procedure involves placing the supplied electret microphone on a stand in the listening position and pressing the RMC button on any of the monitors (the electret mic takes its power from the dedicated mic input found on the monitors rear panel). At this point it's best to cover your ears or leave the room as each unit lets out two rather large sweep tones. Within about 15 seconds (for a stereo pair) the onboard DSP has analysed the frequency response of the room and applied any corrective equalisation as necessary. Low frequency resonances are what the system corrects for as high end is best attacked with physical acoustic treatments. The on-board analyser has the smarts to identify specific frequencies and Q, then apply a parametric filter to only that component of the signal that causes any problem. The system can instigate filters at up to 73 frequencies (1/24th octave centres) between 20Hz and 160Hz, with variable Q from 1 to 16 (1/11 octave bandwidth), with 3- to 12dB of attenuation. It's pretty darn snazzy!

Software control doesn't stop at mere DSP filters and networking. Each monitor's USB port can be connected to your XP- or OSX-endowed computer for further control of the system's attributes. In fact, a number of features are only accessible via the 'LSR Control Center' software. Custom EQ presets can be created and stored in the monitor's memory or on disk, EQ settings can also be downloaded from speakers or loaded from disk. The corner frequency is for the high- and low-shelving

EQ is adjustable for each – both start at 1kHz and extend down/up to 19.7Hz and 20.2kHz respectively. Independent monitor level trim controls in 0.25 dB increments along with independent speaker muting and soloing as well as overall system Mute and Dim. You can view any filter and delay settings made for each monitor during RMC calibration. Delay settings can be displayed in feet, metres, or milliseconds. Complete system configurations (including system volume, EQ presets, input selection, and other settings) can be saved to and loaded from the host computer. Another interesting aspect to the 4300 series when using the software or the supplied remote control is there being no need for any device to attenuate the monitoring level. Everything can be done from the software with stable tasks such as volume, muting, dimming and so forth available from the remote control. Overall this equates to huge marks in the snaz-factor and versatility stakes.

MIX FOR HOURS

Of course the big questions behind all this jiggery is how do they sound and how much will it cost me. To be perfectly honest I was undeniably impressed with the 4300 sound reproduction. JBL has made the right decision with the soft dome tweeter. The monitors provide smooth and realistic audio. Every hearing-savvy cohort that popped in to have a listen also agreed. This round of enthusiasm was reinforced when we instigated the Room Mode Correction equalisation – it works extremely well. I'd happily mix with these for hours on end. As for cost? Well this has to be another of the 'Built in China' success stories. For the typical cost of monitors this size (around the \$3.5k mark) you get quite a lot of monitor along with the intelligence to place itself within any room you put it in. Brilliant, quite frankly. ■



NEED TO KNOW

Price

LSR4328P (including RMC hard/software): \$3495 a pair.

Contact

Jands
(02) 9582 0909
sales@jands.com.au
www.jands.com.au

Pros

Great-sounding monitors
RMC an excellent innovation
Easy to set up multi-channel configurations
Well priced

Cons

Not THXpm3 approved like the LSR6300 series.
Ethernet/HiQNet connection to remote control would be nice.

Summary

The Room Mode Correction EQ is very well implemented, works and is genuinely useful – especially when moving from studio to studio. All the DSP trickery in the world would count for nought if these speakers sounded terrible. They don't... quite the opposite.

Specs

Frequency Response ± 1.5 dB:
50Hz – 20kHz
Amplification: Class A/B
monolithic amps
HF: 70W, LF: 150W
Max Continuous SPL: 106dB at 1m
THD + Noise: <0.02%