

by Mitch Gallagher

JBL LSR6300

Active monitor system with an acoustic twist

Type: Active monitors and subwoofer
Price: LSR6328P, \$1,339 (each); LSR6312SP, \$1,499; RMC Calibration Kit, \$130, included free with LSR6312SP or a pair of LSR6328P speakers

Contact: JBL, www.jblpro.com

LSR6328P

Drivers: 8" woofer, 1" tweeter

Power amps: Low—250 watts, High—120 watts

Frequency response: 50Hz–20kHz, +1/–1.5dB

Maximum peak SPL: >111dB, 80Hz–20kHz @ 1m

Crossover frequency: 1.7kHz

Connections: XLR+1/4" combi input, 1/4" RMC bypass

Controls: Input trim, DIP switch for sensitivity, HF level, and boundary compensation, RMC Width, Frequency, and Depth, RMC enable

Cabinet design: rear port

Dimensions: 16 x 13 x 12.8 inches

Weight: 39 lbs.

LSR6312SP

Driver: 12"

Power amp: 260 watts

Frequency response: 28–80 Hz (L/C/R inputs), 28–200 Hz (Direct Input)

Maximum peak SPL: >115dB, 35Hz–80Hz @ 1m

Crossover frequency: 80Hz

Connections: Left, Center, Right, and Sub-Direct (LFE) XLR+1/4" combi inputs; Left, Center, Right, and Summed XLR outputs; 1/4" RMC bypass, LCR (bass management) bypass

Controls: Input trim, DIP switch for input trim, sensitivity, signal polarity invert, –4dB bass alignment (@50 Hz), and RMC defeat; RMC Width, Frequency, Depth, and Make-up Gain; Sub-Direct (LFE) Sensitivity

Dimensions: 25 x 15.5 x 11.5 inches

Weight: 39 lbs.

4 our studio works acoustically as one big system: the room, the monitors and their placement, acoustic treatment, wall/ceiling/floor construction and materials, and so on. Two of the models in JBL's LSR6300 series — the LSR6328P and LSR6312SP are designed to compensate for some of the acoustic anomalies in the system.

The LSR6328P is an active 2-way design offering ± 1 dB

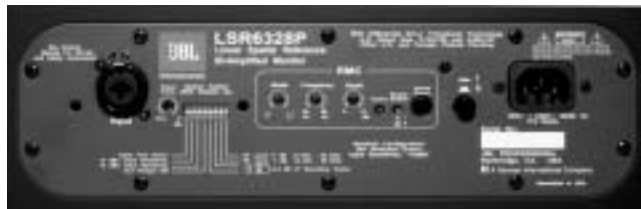
of high frequency adjustment, 0, –1.5, –3, or –4.5dB of low frequency "boundary" compensation, and RMC (Room Mode Correction); a single-band of parametric EQ designed to correct for the worst room mode. The 6328 handles built into its cabinet, making it easy to move and position.

The LSR6312SP is a 12", 260-watt subwoofer with –4dB boundary compensation and RMC. The 6312 has bass

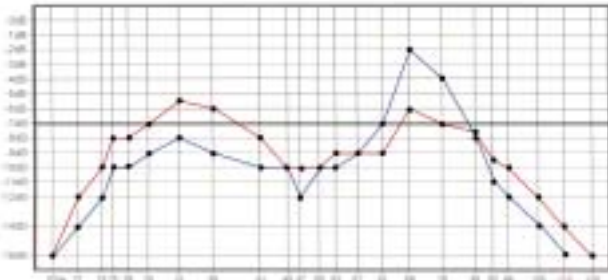
management for front left, right, and center (if you're doing surround) speakers, but none for the rears. For surround work it has a Sub-Direct (LFE) input, which can be set for 0 or +10dB sensitivity. A Sum out allows more than one 6312 to be chained. A big plus is the footswitch jack for bypassing the unit.

Before digging into RMC, I set the monitors up and did some listening. I have to

THE LSR6328P AND LSR6312SP MONITORS FEATURE EXTENSIVE TONE-SHAPING CONTROL, WHICH CAN BE USED TO HELP FLATTEN THE SPEAKER RESPONSE IN THE ROOM. THE BACK PANEL OF THE LSR6328P SHOWS THE ROOM MODE CORRECTION AND DIP SWITCH CONTROLS.



THE LSR6328P MAY LOOK LIKE ANY OTHER ACTIVE MONITOR FROM THE FRONT, BUT WORK YOUR WAY AROUND TO THE BACK AND THE DIFFERENCE BECOMES CLEAR. BONUS: HANDLES ARE BUILT INTO THE SIDES OF THE CABINET.



THIS IS THE RESPONSE CHART FOR THE LSR6312SP SUB IN MY STUDIO. THE BLUE LINE SHOWS BEFORE RMC CORRECTION, THE RED LINE SHOWS AFTER. IT WAS NO PROBLEM TO TUNE THE SUB TO WITHIN $\pm 1.5/-3$ DB FROM 24 TO 95 HZ — QUITE EXCELLENT RESPONSE.

admit to going in with some bias; I've used a lot of JBL monitors over the years, and found many of the older models to be fatiguing to my ears. In contrast, the 6328 is smooth, clear, and nicely balanced. Taken as a "straight" monitor, the LSR6328P is first rate. It has particularly impressive low frequency abilities, and present, detailed midrange. The high frequency and boundary adjustments provide enough power to dial in the basics, although I didn't feel the need in my studio.

The LSR6312SP offers tons of low-end thump. It had no problem filling my largish control room without sounding strained. It transitions smoothly to the 6328. Being able to bypass the sub is a godsend.

SCALING THE PEAK

The Room Mode Correction in the 6328 and 6312 provides parametric EQ for taming a single room mode (resonant peak) between 24 and 95 Hz. But wait, what if you don't know what frequency the worst mode in your room occurs at? And how do you set the bandwidth and depth?

Trust that JBL thought things through. They offer the RMC calibration kit, which includes a test CD, level meter, chart paper, width template, and a momentary switch for bypassing RMC in the speakers.

Here's the drill: one speaker at a time, you play the test tones on the CD. Using the level meter, you measure the level of each tone, and mark it on the

chart paper. When you're finished, connect the dots and you have a basic idea of the response of the speaker in the room. With the Width Template, you measure the largest peak on the page, and using a look-up table in the manual, find the corresponding settings for the RMC frequency, width, and depth. Make the adjustments on the speaker and move on to the next one or the sub (if you have one).

It's easy, and almost foolproof — the only problem I had was that the flimsy plastic Width Template has a lot of slack in its action. I found it good for a rough guesstimate at best. But by looking at the peak on the chart and the lookup table, I was able to get where I needed to go.

I tried the speakers in three positions in my room, and the sub in six places — which reminds me, make photocopies of the chart paper before you start. Once you start fooling with measuring different speaker positions, you'll go through charts fast. You'll learn a lot about your room doing this. For example, the right speaker in my studio had a peak, but the left didn't. It's also revealing to see how small of a distance you need to move the sub to make a big difference in response.

I'm proud to say that my room was virtually peak free, but then again, it's heavily bass-trapped. I finally manufactured a peak in the right speaker and the sub by putting them right against the wall, creating a moderate peak at around 68 Hz. I couldn't get a significant peak in the left speaker regardless of placement. RMC was easily able to tame the peaks and even out the response.

The CD and meter will also help to calibrate the sub level — at least it will get you close. To really dial in any sub, you need to use your ears. I find it best to be conservative; I use just enough sub to fill out an octave or so below the main speakers. You don't notice when it's there, but you miss it when it's gone.

CORRECTED

With or without RMC, the LSR6328P offers top-notch monitor performance. Even without the sub, there's loads of full bottom end. I'm impressed. With RMC dialed in, you'll find the lows tighten up and get more solid, and the mids gain clarity.

Add the LSR6312SP sub with RMC to the equation, and you have a flexible, powerful, full-range system that can serve either near- or midfield needs.

Some may argue that the measurement resolution of the room modes is too broad, or that one band of EQ isn't enough. But I'm here to tell you that RMC makes a big difference — this system works, and works well. **EQ**

Strengths:

- Footswitch bypass on sub
- RMC can be bypassed
- Handles on LSR6328P
- Frequency and depth measurements are easy
- Powerful tone shaping
- RMC makes a real difference in how monitors perform in room
- Clear, balanced detailed sound
- Good dynamics

Limitations:

- Difficult to make accurate Width measurement
- No handles on subwoofer
- Only three channels of bass management (LSR6312SP)



THE LSR6312SP SUBWOOFER OFFERS PLENTY OF POWER FOR DRIVING THE LOW END. IT HAS BUILT-IN BASS MANAGEMENT FOR UP TO THREE SPEAKERS.