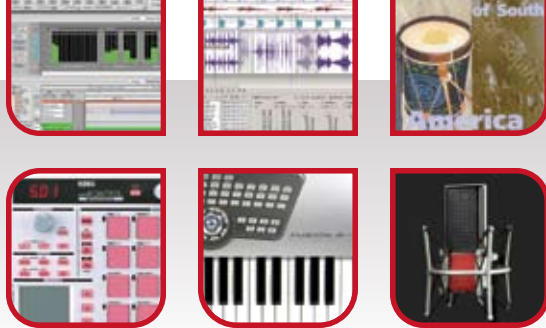


REVIEWS



JBL PROFESSIONAL LSR4326P

A monitor that adjusts itself to your studio.

By Rusty Cutchin

Following the trail blazed by its LSR6300 active monitors, JBL has released the LSR4300 series, which offers similar technology at a more affordable price. Like the 6300s, the 4300 models include Room Mode Correction (RMC) circuitry to tailor the speakers' response to your studio's acoustics, computer-based speaker control and status monitoring using JBL's Control Center software (Mac/Win), built-in EQ, switchable digital and analog inputs, a handheld remote control, and many other features.

Fully Loaded

The LSR4326P (see Fig. 1), a powered 2-way monitor with a 6.25-inch low-frequency (LF) driver and a 1-inch silk-dome tweeter, is the smaller of the two models in the 4300 series.

(Also available are the LSR4328, which features an 8-inch LF driver, and a subwoofer, the LSR4312SP.) The 4300-series monitors can be purchased in pair packs that include the LSR4300 Accessory Kit, which provides a measurement microphone (with custom clip) for use

with the RMC calibration feature, a handheld remote control, a USB cable, and more.

The woofer and tweeter are recessed into a cavity and waveguide, respectively, which aid the monitor's dispersion characteristics. The JBL logo in the bottom left corner of the front panel glows when the monitor is powered up. A horizontal 31-segment LED bar is labeled numerically from -60 to 0 dBfs. Below the bar are the Power, Solo, RMC, EQ on, LF (500 Hz shelf), HF (2 kHz shelf), Preset Recall, and Input Select buttons. (Presets can be stored using the Control Center software.) At the far right are increment and decrement buttons.

The monitor's unique rear panel (see Fig. 2) contains a conical 4-inch port cut into the middle of the heat sink and positioned on a direct line with the high-frequency (HF) driver. One ¼-inch TRS jack and one XLR jack are provided for analog input. Digital in and out (24-bit resolution with multiple sampling rates) are available in both S/PDIF and AES/EBU varieties. A USB port facilitates connection to a computer running the Control Center software, and you

GUIDE TO EM METERS

- 5 = Amazing; as good as it gets with current technology
- 4 = Clearly above average; very desirable
- 3 = Good; meets expectations
- 2 = Somewhat disappointing but usable
- 1 = Unacceptably flawed



FIG. 1: JBL's LSR4326P powered monitors feature the Room Mode Correction (RMC) system, which adjusts their EQ response to your studio's acoustics.

also get a 15V phantom-powered ¼-inch jack for the RMC mic.

Five dedicated LEDs indicate the active input (analog, S/PDIF channel A or B, or AES/EBU channel A or B). A bank of DIP switches sets the speaker ID, which can be Left, Right, Center, L Surround, R Surround, C Surround, Left Extra, or Right Extra. Fortunately, there's one DIP switch for each ID; you don't have to set eight different configurations of switches if you have eight monitors.

You must choose between the XLR or TRS inputs for receiving analog signals, but you can keep a S/PDIF and an AES/EBU source connected simultaneously with the analog source and switch between the three signals using the front-panel, the handheld-remote, or the Control Center software controls. You use the S/PDIF or AES/EBU output on the first monitor (usually L) to pass the second digital channel to the second monitor (R).

Connecting the monitors with a CAT5 cable (included) enables what JBL refers to as Harman HiQnet, which gives you more control options. It lets you change settings on all monitors from one front panel and adjust additional settings using the Control Center software (see Fig. 3).

The software lets you mute individual monitors or the entire system, and gives you finer control over levels than is available on the monitors themselves. You

also get the ability to create and store custom EQ presets. The software also allows you to change the corner frequencies of the high and low shelving EQs, which are preset at 2 kHz and 500 Hz, respectively, with 2 dB of boost or cut for each band. The EQ can't be set differently for different monitors when they're connected to the network.

They Sound Good Too

Setting up the system is easy; JBL provides all the essential components—except the mic stand—that you'll need for RMC calibration. I connected a pair of LSR4326Ps to the analog Control Room outs of a Mackie Onyx 1620 mixer using TRS cables. After making sure the correct DIP switch was engaged on each monitor, I played some contemporary CDs through the



FIG. 2: The LSR4326P's rear panel provides XLR and TRS analog connections, AES/EBU and S/PDIF digital connections, and USB and Ethernet ports for control functions, as well as a phantom-powered input for the RMC measurement mic.

system, comparing the sound to three other sets of quality, midpriced monitors.

It was apparent from the beginning that the LSR4326Ps sounded great. They exhibited good definition in the mids, excellent stereo imaging, and superb clarity across a wide range of source material. The acoustic guitars and fiddles in the Dixie Chicks' *Taking the Long Way* had the requisite balance of attack and tone.

At the other end of the fidelity scale, the monitors reproduced every distressed crackle of Gnarls Barkley's "Crazy," and they showed that they could pump up the bass like bigger-woofer competitors. The 6.25-inch drivers produce a low-end frequency response that extends to 47 Hz (-3 dB), so for most projects, the monitors will provide more than enough bottom, while sounding mud-free at high SPLs. The LSR4326Ps definitely sounded as good as any other monitors I've tested in their price range, none of which offer the same wealth of features.

Later I drove the LSR4326Ps from the S/PDIF out of a Lexicon Omega audio interface. Both the Onyx mixer, with its FireWire interface, and the Omega were receiving source audio from my dual-processor Apple Power Mac G5. The audio processed at the monitor's S/PDIF port was virtually indistinguishable from the sound coming through its analog input, once levels were matched.

Command and Control

After my initial listening tests, I interconnected the stereo pair using the supplied CAT5 cable and inserted the two supplied terminators into the unused Ethernet ports on each speaker. (In a surround system the terminators would go on the first and last speaker connected.) I confirmed that all functions of the right speaker could be accessed from the left speaker's control panel and from the handheld remote. (You point the remote at the

PRODUCT SUMMARY

JBL PROFESSIONAL LSR4326P

active monitor

\$699 each

LSR4326P Pak (two LSR4326Ps and LSR4300 Accessory Kit)

\$1,399

FEATURES	4
EASE OF USE	4
AUDIO QUALITY	5
VALUE	5

RATING PRODUCTS FROM 1 TO 5

PROS: Excellent sound. Room Mode Correction tunes speakers to room acoustics. Multiple monitors can be controlled from one. Built-in networking. Software control over USB.

CONS: Sensitive to power fluctuation.

MANUFACTURER

JBL Professional
www.jblpro.com

left speaker—that is, the one with the Left DIP switch engaged—regardless of the number of monitors connected.)

With the Harman HiQnet facilitating communication between the monitors, and a USB cable connecting the L monitor to my Mac, I launched the Control Center software. The CD supplied with the review package was a Windows disc, but it was a simple matter to download the Mac version from www.jblpro.com/lsr/downloads.html.

The software gives you another level of control that becomes more useful the more monitors you connect to the system. Using the software is the fastest way to switch inputs. If the monitors were connected directly to your computer's audio interface, and you were to lose the handheld remote, then the software would be the fastest way to mute the whole system in the event of sudden feedback or other errant-signal noise.

Tune to the Room

You create the RMC curve by plugging the supplied measurement mic into the RMC Mic jack on the L monitor's rear panel, positioning the mic vertically on a stand at the mixing position, and holding down the RMC but-



FIG. 3: The Control Center software gives you finer control over levels, input switching, EQ, muting, and more. It also displays the specific parameters of the RMC EQ curves (as shown here) that the system has generated.

ton on the monitor's front panel. A series of momentary (and fairly loud) swept sine-wave tones will emanate from the speakers as the monitor measures the low-frequency response from the mic. A few seconds later you have a stored master EQ that you can keep, delete, or defeat.

The RMC EQ curve for my studio featured about a 10 dB cut at 50 Hz. The software displays a representation of a graph that tells you the RMC calibration has been completed. If you click on the graph, a table comes

LSR4326P SPECIFICATIONS

Analog Inputs	(1) balanced XLR, (1) balanced 1/4" TRS, (1) 1/8" RMC mic
Digital I/O	S/PDIF, AES/EBU
Other Ports	USB, HiQnet (Ethernet RJ45) in, out
High-Frequency Driver	1" neodymium, silk-dome diaphragm
Low-Frequency Driver	6.25" neodymium, polymer-coated paper-fiber cone
Frequency Response	55 Hz–20 kHz ±1.5 dB
THD + N (1/2 Power)	<0.02%
Digital Input Sampling Rates	96, 88.2, 48, 44.1, 32 kHz
Digital Input Word Length	24-bit
High-Frequency Equalization	2 kHz shelf, ±2 dB, 1/4 dB increments (default); 104 corner frequencies between 1 kHz and 20.2 kHz accessible through software
Low-Frequency Equalization	500 Hz shelf, ±2 dB, 1/4 dB increments (default); 137 corner frequencies between 19.7 Hz and 1 kHz accessible through software
Highpass Filter	80 Hz in/out, second-order slope
Power Rating	70W (HF amplifier); 150W (LF amplifier)
Dimensions	9.3" (W) × 15.25" (H) × 10.3" (D)
Weight	28.5 lbs.

up showing the precise settings for frequency, depth, and Q set in each speaker. My RMC EQ curve made the monitors sound clearer in the low mids, and although I hadn't previously had a problem with overcompensating at those frequencies, I found that I preferred the mixes made with the new EQ curve. They sounded somewhat meatier but not muddier.

Tough but Sensitive

So with all these features, pristine sound, and an excellent price, what's not to like about the LSR4326P? The monitor does have one characteristic that may be a deal breaker for studio owners on tight budgets. It has a shutoff mechanism that disables all of its controls in the event that incoming power drops below 98 VAC. That means that if you live in an area where power fluctuates, even momentarily, and falls below that voltage, the monitor will shut down to prolong the life of its components.

In my case, several times a day I would look up to see one or both monitors shut down, even though the rear-panel LEDs would still be lit. The only way to get the monitor back online was to unplug and reinsert the power cables. The wiring in my studio, by the way, is only a couple of years old. None of my other studio gear, including two computers and multiple sets of powered monitors, has ever reacted to my studio's normal day-to-day power supply the way the LSR4326Ps did.

According to JBL, the simple solution is a power conditioner. The company says that very few complaints have come in regarding this issue, despite thousands of units in use. A power conditioner is a good investment in any case, and you may need to get one if you plan to use these monitors and your electric service is not rock solid.

The Right Stuff

Though you may need to make adjustments to your setup to keep the monitors powered up, I recommend them highly. They sound great, and purchased in pairs with the LSR4300 Accessory Kit, they provide the ultimate in monitor control, whether you work in stereo or surround, and whether you drive your speakers from a full-blown mixing console or a computer interface with a single analog or digital stereo output. The LSR4326P may be sensitive to power fluctuations, but it's tough to beat on features and sound quality.

Rusty Cutchin is a former editor of EM and a producer, engineer, and music journalist in the New York City area.