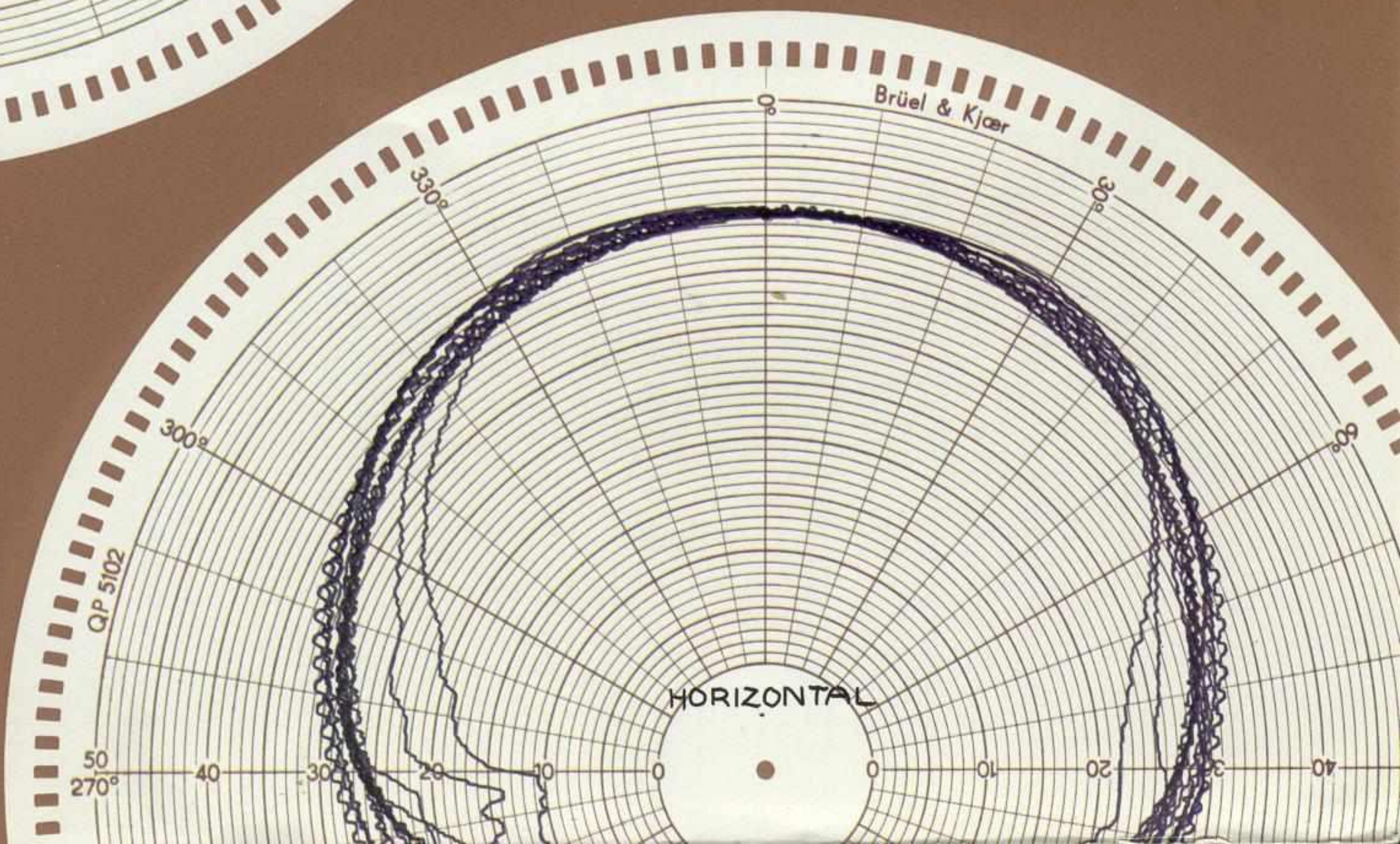


**Before you invest in
new studio monitors,
consider all the angles.**

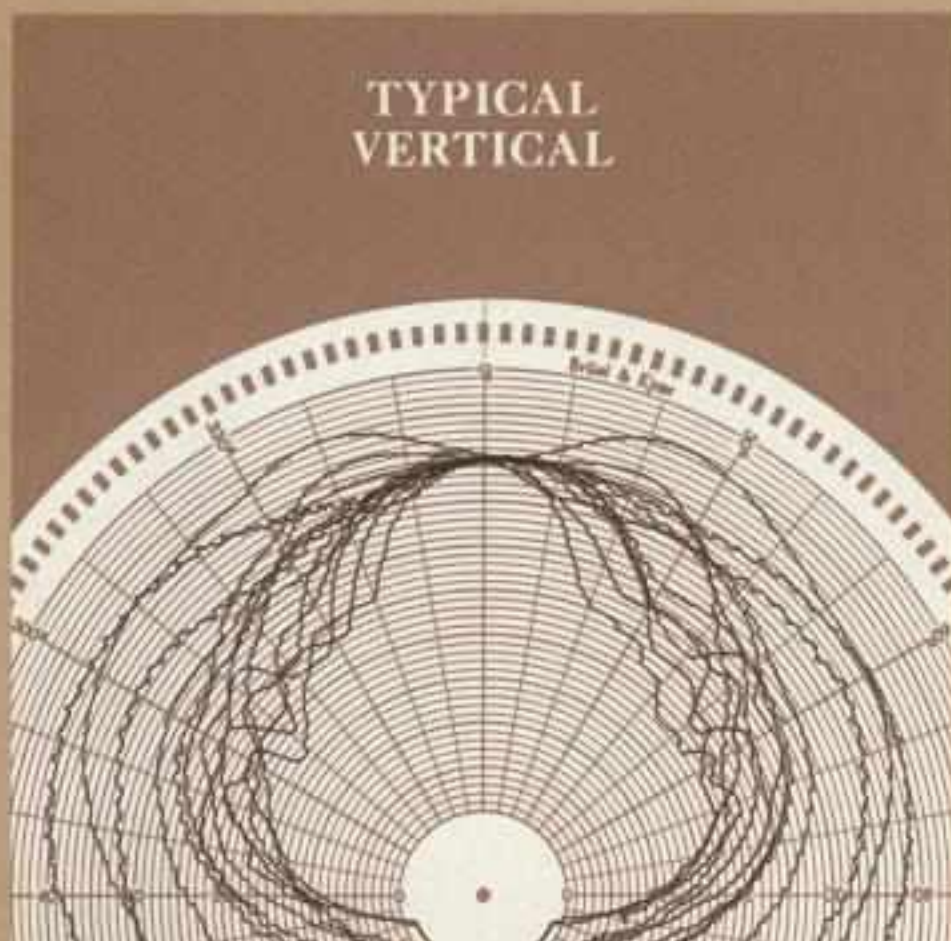
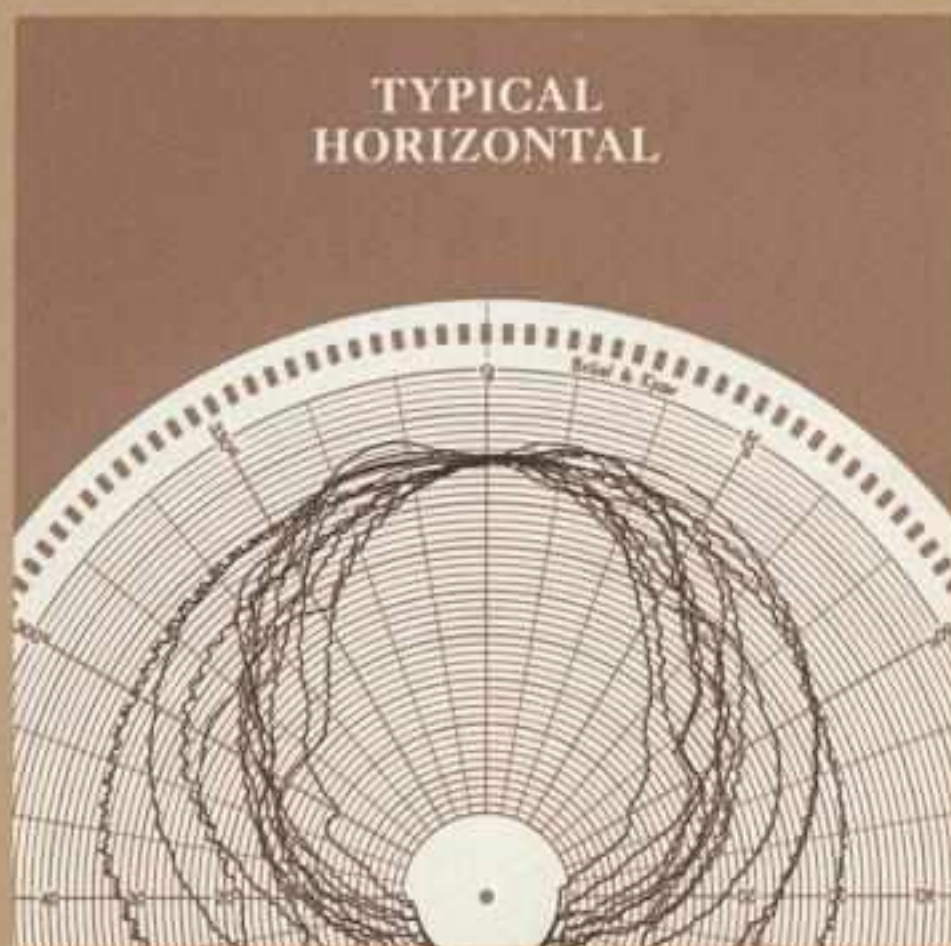


Introducing the JBL Bi-Radial Studio Monitors.

No one has to tell you how important flat frequency response is in a studio monitor. But if you judge a monitor's performance by its on-axis response curve, you're only getting part of the story.

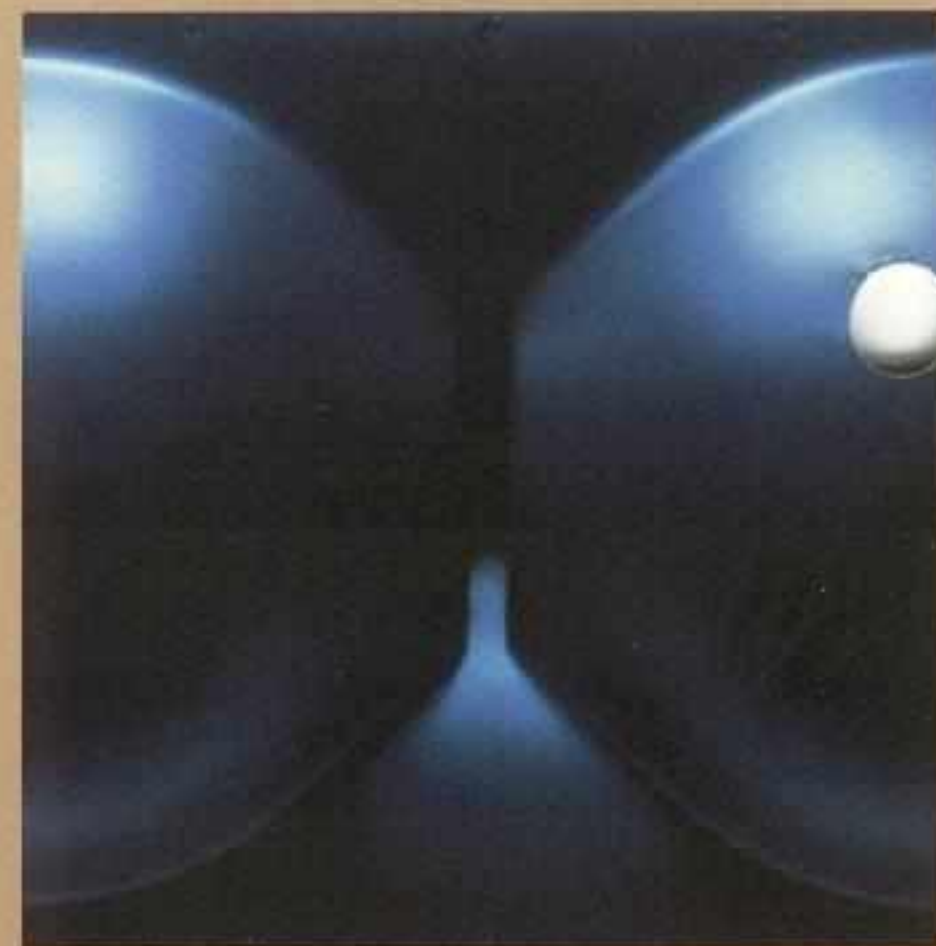
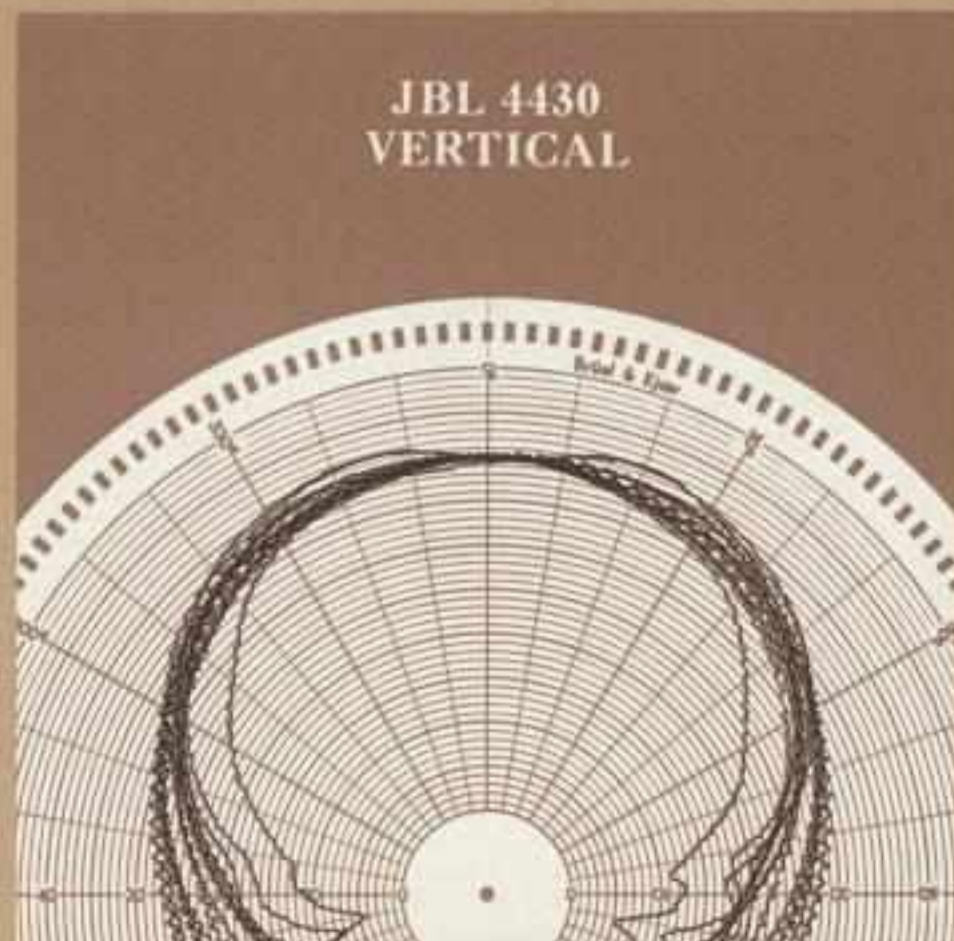
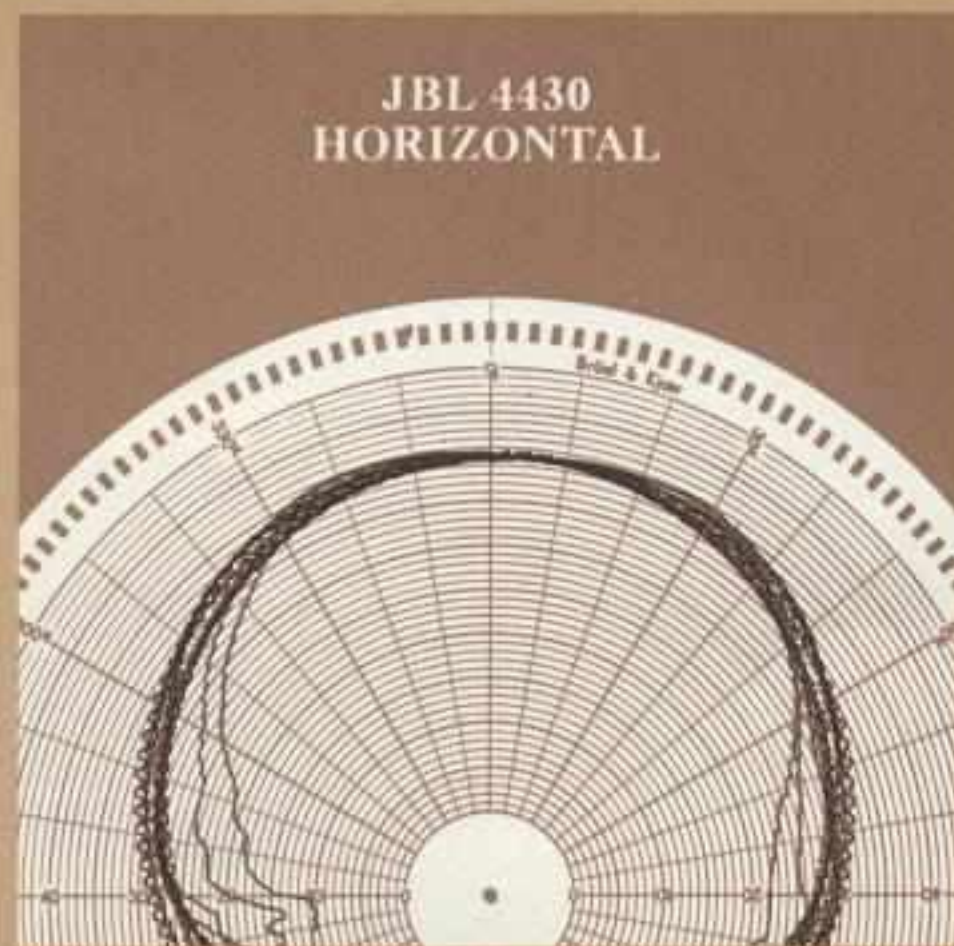
Most conventional monitors tend to narrow their dispersion as frequency increases. So while their on-axis response may be flat, their off-axis response can roll off dramatically, literally locking you into the on-axis "sweet spot." Even worse, drastic changes in the horn's directivity contribute significantly to horn colorations.

Polar response of a typical two-way coaxial studio monitor:



At JBL, we've been investigating the relationship between on and off axis frequency response for several years. The result is a new generation of studio monitors that provide flat response over an exceptionally wide range of horizontal and vertical angles. The sweet spot and its traditional restrictions are essentially eliminated.

Polar response of a 4430 studio monitor:



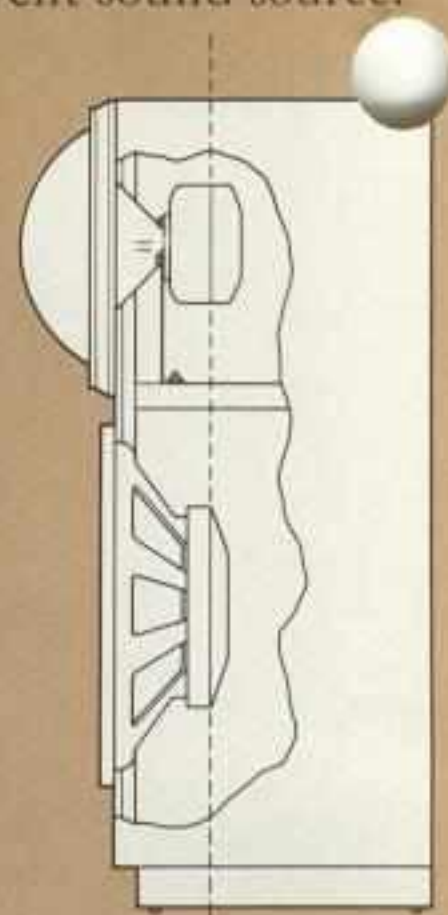
The Bi-Radial Horn

The key to this improved performance lies in the unique geometry of the monitors' Bi-Radial horn! Developed with the aid of the latest computer design and analysis techniques, the horn provides constant coverage from its crossover point of 1000 Hz to beyond 16 kHz. The Bi-Radial compound flare configuration maintains precise control of the horn's wide $100^\circ \times 100^\circ$ coverage angle. Since this angle is identical to the coverage angle of the low frequency driver at crossover, the transition from driver to driver appears seamless and the monitors present a fully coherent sound source.

And the Bi-Radial horn's performance advantages aren't limited to just beamwidth control. The horn's rapid flare rate, for instance, dramatically reduces second harmonic distortion and its shallow depth allows for optimal acoustic alignment of the drivers. This alignment lets the monitors fall well below the Blauert and Laws criteria for minimum audible time delay discrepancies.

The practical benefits of the Bi-Radial horn design include flat frequency response and remarkably stable stereo imaging that remain valid over a wide range of listening positions. The design also allows considerable latitude in control room mounting. Finally, the flat on and off axis frequency response of the horn means that less high frequency equalization will be required to match typical house curves.

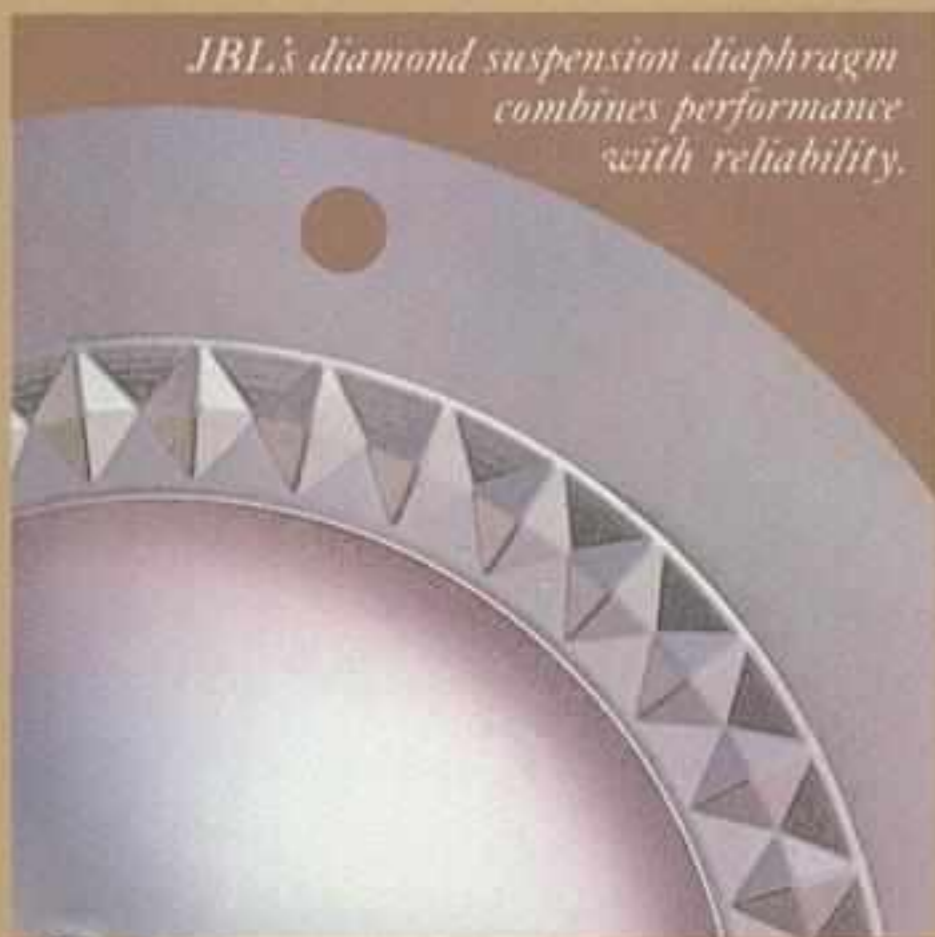
But while the Bi-Radial horn offers outstanding performance, it's only part of the new monitors' total package.



Acoustic alignment of drivers (4430)

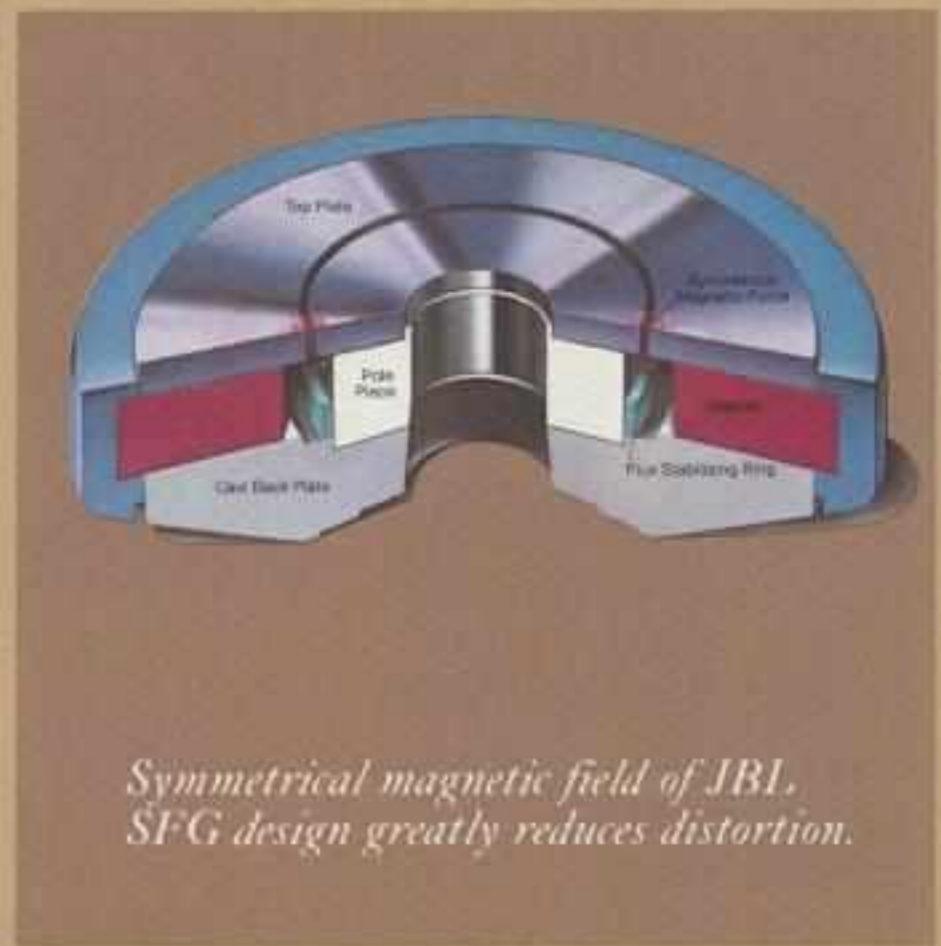
Extended Response in a Two-Way Design

Coupled to the horn is a new compression driver that combines high capability and power capacity with extended bandwidth and smooth, peak-free response. The driver features an aluminum diaphragm with a unique three-dimensional, diamond-pattern surround! Both stronger and more flexible than conventional designs, this surround provides outstanding high frequency response, uniform diaphragm control, and maximum unit-to-unit performance consistency.



JBL's diamond suspension diaphragm combines performance with reliability.

To ensure smooth response to the lowest octaves, controlled midband sensitivity, extremely low distortion, and tight transient response, the Bi-Radial monitors also incorporate the latest in low frequency technology. The loudspeakers' magnetic structures feature JBL's unique Symmetrical Field Geometry (SFG) design to reduce second harmonic distortion to inconsequential levels. Additionally, the speakers utilize exceptionally long voice coils and carefully engineered suspension elements for maximum excursion linearity, and complete freedom from dynamic instabilities for tight, controlled transient response.



Symmetrical magnetic field of JBL SFG design greatly reduces distortion.

Blending the Elements—The Dividing Network Challenge

Tailored to the acoustical characteristics of the Bi-Radial monitors' high and low frequency drivers, the dividing network provides the smoothest possible response over the widest bandwidth while restricting any anomalies to an extremely narrow band. During the network's development, JBL engineers paid considerable attention to on-axis, off-axis, and total power response. As a result, the electrical characteristics of the network are optimized for flat response

over the monitors' full coverage angle.

The network also provides equalization of the compression driver for flat power response output. This equalization is in two stages with separate adjustments for midrange and high frequencies.

Judge For Yourself

Of course, the only way to really judge a studio monitor is to listen for yourself. So before you invest in new monitors, ask your local JBL professional products dealer for a Bi-Radial monitor demonstration. And consider all the angles.

1. Patent applied for.



4430

4435

| Specifications | 4430 | 4435 |
|--|--|----------------|
| Frequency response (± 3 dB) | 35 - 16,000 Hz | 30 - 16,000 Hz |
| Power Capacity (Continuous Program) | 300 W | 375 W |
| Sensitivity (1 W, 1 m) | 93 dB | 96 dB |
| Nominal Impedance | 8 Ohms | 8 Ohms |
| Dispersion Angle (- 6 dB) | 100° x 100° | 100° x 100° |
| Crossover Frequency | 1 kHz | 1 kHz |
| Network Controls | Mid Frequency Level High Frequency Level Switchable Bi-Amplification | |



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