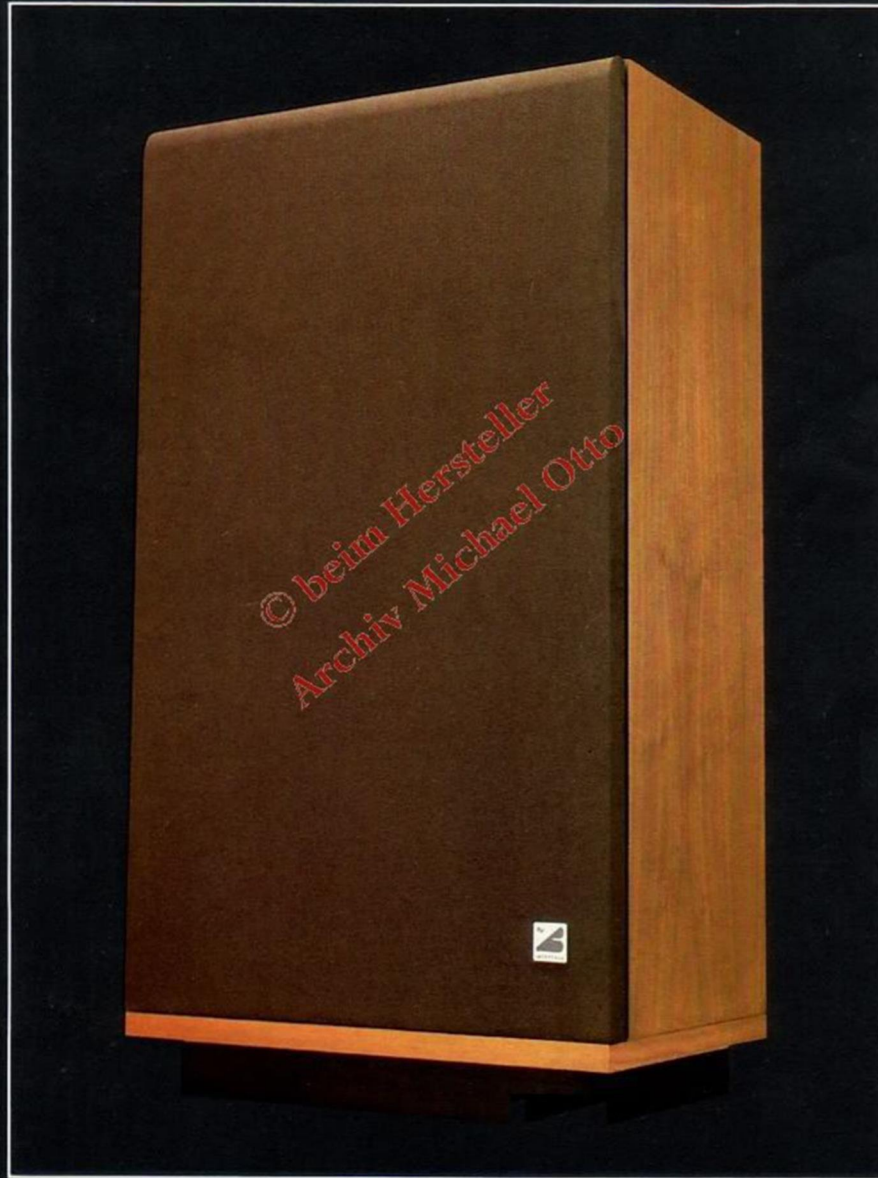




High Fidelity
Speaker Systems



Interface: B

Series III



Interface:B Series III

It takes something special to design a great speaker

Most speakers in the Interface:B's price range offer "something special." It may be knobs or buttons, exotic drivers or a cabinet with a strange shape. And of course, there are all kinds of esoteric theories.

"Revolutionary" drivers and exotic theories make good advertising copy. But often they don't make better speakers, because they only solve small problems of speaker design without tackling the big ones. A speaker with rough frequency response, limited dynamic range or bad dispersion sounds bad – no matter how many exotic theories or gadgets are designed into it.

That's why we directed our energies toward solving the major problems. As a result, the Interface:B is a speaker without gimmicks, and we think you'll agree it sounds better than those "revolutionary" competitive models. And better sound – not theories – is what hi-fi is all about.



Specifications:

Frequency Response:	26-20,000 Hz; ± 2.5 dB 30-18,000 Hz, 1 meter on axis
Dispersion Angle:	125° \pm 30° in the 500-8000 Hz octave bands; 75° in the 12,500 Hz $\frac{1}{3}$ -octave band
Recommended Amplifier Power:	3.6 watts per channel minimum; 250 watts maximum
Sound Pressure Level:	92 dB at 1 meter, 1 watt in
Midband Sound Pressure Levels in a Typical Listening Room:	90 dB average, 100 dB peak with a 3.6-watt amplifier; 108 dB average, 118 dB peak (10 ms) with a 250-watt amplifier
Maximum High-Frequency Sound Pressure Level in a Typical Listening Room (10,000 Hz):	101 dB long-term average
Broadband Power Capacity (above 30 Hz):	25 watts long-term average; 250 watts peak (10 ms)
Crossover Frequencies:	42 Hz acoustic; 1500 Hz electrical
Transducers:	12" low-frequency radiator; 8" midrange/woofer; 1½" Super-Dome™ tweeter with acoustic lens
Impedance:	8 ohms nominal; 5 ohms minimum
Size:	29¼" x 16" x 11" hwd
Cabinet:	Walnut veneer
Weight:	42 lb

Bass you can feel

The Interface:B's bass response is just 3 dB down at 30 Hz. And despite the claims made by some other manufacturers, that kind of response is virtually unprecedented. In fact, 30 Hz is the practical low-frequency limit of most recordings. You'll discover a whole new dimension to records and tapes – bass you can feel, clean and authoritative, without "boom."

It's the result of our optimally vented design (the system explained on the back cover), which uses a special 12" low-frequency radiator to reproduce the bass below 42 Hz.

This significantly lowers distortion in the upper bass and mid-range. You'll hear the difference in superior vocal reproduction and in natural string sound.

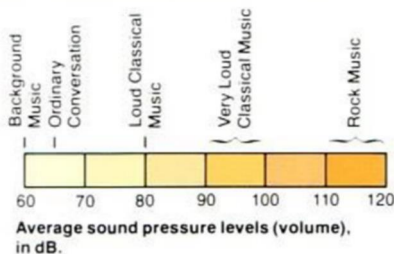
A little goes a long way

The Interface:B is a highly efficient speaker. In a typical listening room, just 3.6 watts will drive it to an average sound pressure level of 90 dB with peaks to 100 dB (which is a lot louder than background music). Most competitive speakers require four times as much power to reach an equal volume.

The Interface:B lets your amplifier operate at lower average power (and lower distortion). This leaves extra power in reserve to realistically reproduce musical peaks, so you can hear the wide dynamic range of real music. The Interface:B's high efficiency gives you the performance of a high-powered amplifier without paying a high price for wasted power.

Most manufacturers choose to ignore one important aspect of realistic performance – the ability to play music at live concert volume. There's a good reason for that – they can't do it. In fact, some of the most highly-regarded speakers in the world can't produce average sound pressure levels much over 90 dB in a typical listening room and most won't play louder than 100 dB without gross distortion.

The Interface: B will effortlessly reproduce sound pressure levels of 108 dB with peaks up to 118 dB.



As you can see from the chart, this means you can listen to almost any kind of music at live performance volume. You may not always want to, but it's nice to know you can.

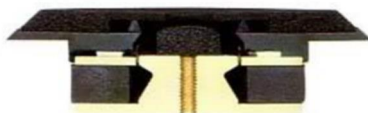
Accuracy

Uniform total acoustic power output is probably the single most revealing aspect of speaker performance – and one you seldom see. It combines frequency response and dispersion into a single measurement which closely predicts the way a speaker will sound in your listening room.

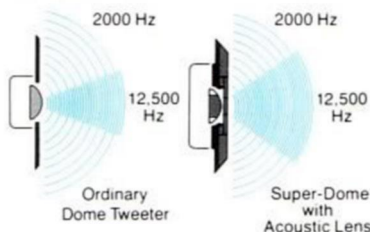
The Interface: B has exceptionally uniform total acoustic power output. Its 8" midrange/woofer provides wider dispersion at mid-range frequencies than any 10" or 12" driver. Unlike most 4" or 5" midranges, the Interface: B has a large 1½" voice coil. This means the speaker can handle more power and provide higher sound pressure levels than a smaller driver.

The Super-Dome™ tweeter

Designing a highly efficient speaker system such as the Interface: B requires close attention to every detail. We found that conventional tweeters just couldn't measure up to the high performance standards of the Interface, so we developed one that could – the Super-Dome.



The Super-Dome tweeter combines the efficiency of a cone tweeter with the superior sonic quality and wide, uniform dispersion characteristics of a high-performance dome tweeter. But we didn't stop there. The Super-Dome has two to four times the efficiency of a typical dome tweeter! In addition, it has an amazing 25-watt long-term power handling capacity, which is five times the rating of most conventional tweeters! What does this mean to you? It means a difference you can hear, plus freedom from the fear of tweeter "burn-outs" and complex fusing arrangements.



The Interface acoustic lens improves dispersion in the highest octaves.

Another unique feature of the Super-Dome is its acoustic lens. Unfortunately, the factors which combine to produce

high efficiency and high power handling capability usually work against wide, uniform dispersion. The lens (made from high-density Acoustifoam™), is acoustically transparent at low frequencies but becomes opaque at high frequencies, where a decreased angle of dispersion would normally occur. This reduces the effective dome size and produces the improved wide, uniform high-frequency dispersion necessary for precise localization of sound, both lateral and front-to-back.

All Super-Dome features combine to let you hear the wide dynamic ranges of contemporary recordings without any sacrifices.

Something special

The Interface: B is "special" in the best sense. It is an accurate transducer – one that turns an electrical signal into beautiful, realistic music. You can certainly buy speakers with more gimmicks. But we don't think you can buy a better-sounding, more accurate speaker for the money.

The equalizer

An active electronic equalizer is an integral part of the Interface: B's design. Its low-frequency contour extends bass response without increasing the size of the cabinet. (The same response without the equalizer would have required a cabinet twice as large.) The amount of the boost is quite small so the equalizer places no strain on your amplifier.



The equalizer also contains an active filter which removes distortion-producing subsonic noise, and allows you to tailor high-frequency response to the acoustics of your room. The equalizer can be connected in the tape monitor circuit of most amplifiers or receivers or between the preamplifier and power amplifier.

Equalizer Specifications:

Total Harmonic Distortion:

Less than .01%, 1 V RMS input, 20-20,000 Hz

Intermodulation Distortion:

.005%, 1.5 V RMS equivalent sine wave input

Maximum Input Signal:

7 V RMS sine wave, midband

Noise Output:

80 dB below 200 mV, 20-20,000 Hz bandwidth

Controls:

High Frequency Slope (Power Off, 0 dB, -3, -6 dB at 10,000 Hz); Tape-Source

Power Requirement:

110/120 V, 50/60 Hz. 3 W

AC Accessory Outlet:

200 W unswitched

Dimensions:

2" x 8" x 7" hwd

For complete speaker and equalizer specifications and a detailed description of test conditions, send for an Interface: B Series III owner's manual.

Before you build great speakers, you've got to have a system.

Most speakers use one of two basic design systems. The first, acoustic suspension, uses a sealed enclosure. The second, bass reflex, is characterized by a hole (also called a vent, duct or port), in the enclosure.

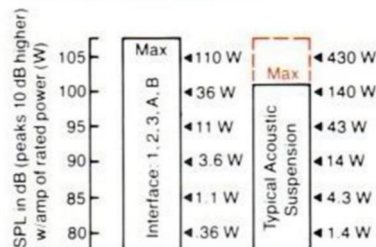
Both systems have definite weaknesses. Acoustic suspension speakers can provide good bass response only if they are inefficient. They also demand such long cone excursions that distortion is inherently high. Bass reflex speakers are typically more efficient, but lack deep bass, and suffer from bumps in their response curve.

A better way

Electro-Voice pioneered a third way to design speakers. We call it "optimally vented design," and every Interface speaker uses it. It's based on the sophisticated scientific analyses of an Australian scientist named A.N. Thiele (pronounced Teel). This way of designing speakers has so many advantages, it makes the other systems obsolete.

Efficiency

Every Interface speaker is at least 6 dB more efficient than an acoustic suspension speaker of the same size. That means one watt into an Interface speaker produces exactly the same volume as four watts into an acoustic suspension system.

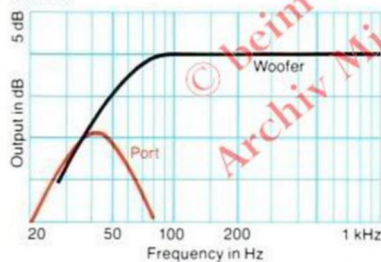


The efficiency of Interface speakers gets the most out of your amplifier.



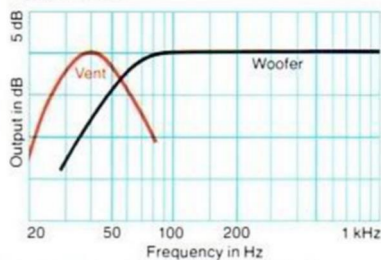
Bass...really

Here's a typical bass reflex frequency response curve. The red parabola is the acoustic output of the port. Unfortunately, its volume is so far below the woofer's that it adds little, if any, audible bass.



Typical bass reflex speaker. You can't hear the output of the port.

But in an optimally vented Interface speaker, the output of the vent matches the woofer's output. So the vent actually acts like a second woofer which significantly improves the bass response.



Interface optimally vented speaker. The vent acts like a woofer.

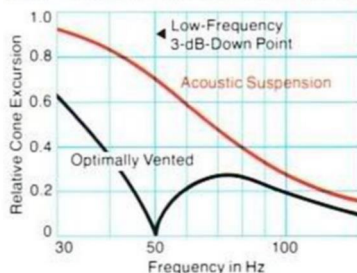
How can a hole do that?

At mid and high frequencies, the air in the vent is too heavy to move. But, if the speaker has been optimally designed, a very small movement by the woofer at low frequencies produces a very large movement of the air in the vent. The air in the vent moves in and out like a piston (exactly like a speaker cone).

So Interface speakers provide exceptional bass no bass reflex system can match. An acoustic suspension system would have to be four times the size of a vented and equalized Interface speaker just to have the same bass response and efficiency. Those aren't opinions, they're scientific facts. It's part of our system.

Low distortion

This chart shows that an acoustic suspension or bass reflex woofer



Our optimally vented speaker has lower cone excursion because the vent does the work.

has to move farther and farther to reproduce lower frequencies. So distortion goes higher and higher. But an optimally vented woofer's excursion actually decreases at lower frequencies. The vent does most of the work, leaving the woofer free to handle the important upper bass and midrange. That means lower distortion and more accurate sound.

Wide dynamic range

Interface speakers are rugged as well as efficient. You can play your music at a realistic volume if you want to, and you'll have amplifier power left to reproduce musical peaks – like the thump of a kick drum or the attack of a brass ensemble. Instead of distortion (or a burned out speaker), you'll hear the effortless, natural sound of live music.

Accuracy

We've also designed accuracy into every Interface speaker. We've paid close attention to crossovers, smooth frequency response, wide dispersion, uniform total acoustic power output, and we don't believe in the "east coast/west coast sound" or in "rock" or "classical" speakers. We make accurate speakers – speakers that sound like music.

Why buy any other speaker?

Our optimally vented "system" gives Interface speakers a lot of advantages – efficiency, wide dynamic range, deep bass, low distortion and accuracy. So if you're serious about getting the best sound for your money, you want Interface speakers.

Electro-Voice continually tries to improve existing products, as well as to create new ones. So, the specifications in this Interface brochure are subject to change without notice.



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