

Hi . . . Mr. Hi Fi

BRADFORD
Perfect
BAFFLE

Looking for the Perfect Speaker Enclosure?

Well, Mister,

this
is
it...



Radically new idea in speaker enclosures. Not a bass reflex or folded horn.

Just what you want in a speaker enclosure

Look

ALL THE BASS. Full, rich, clean bass, clearly distinguishing each contributing instrument, down to the lowest speaker frequency.

NO BOOM. Absolutely no boom. Boom, or "one-note bass", is not high fidelity.

NO FALSE PEAKS. Does not "augment" bass by false peaks that are really distortions.

NO RESONANCES. No false cabinet or air resonances.

NO DISTORTION OR LISTENING FATIGUE. Speakers are flush-mounted. No resonant cavities to cause distortion and listening fatigue.

ANY SPEAKER. Accommodates any speaker . . . any size, weight, make or shape.

NO TUNING. No speaker matching or port tuning.

ANY ROOM POSITION. Operates in any room position . . . no corner necessary.

VARIABLE DAMPING. Improves impulse reaction . . . transient response . . . by automatically providing correct speaker damping through perfect coordination of pressure relief valve with cone excursion. Really an acoustic spring acting uniformly over the entire rear surface of the cone.

COMPACT. Four different sizes for 8", 10", 12" & 15" speakers. Baffles only 2" larger than speaker size.

STEREOPHONIC. Ideal adjunct for stereophonic or binaural systems because of unique combination of compactness, adaptability to any room position and incomparable sound.

REAL HARDWOODS. Genuine, selected hardwoods on 3/4" plywood.

INCOMPARABLE CONSTRUCTION. Solid. Lock-mitered joints. Hand made by master craftsmen.

FINISHES. Mahogany, Korina Blond, Satin Ebony, Walnut and unfinished Birch. Hand-rubbed like finest custom furniture.

DECORATIVE. A gem of cabinetry. Enhances any decor.

INEXPENSIVE. Ultimate quality and performance at a price within any budget.

GUARANTEED. Unconditionally guaranteed to outperform any other enclosure regardless of size, weight or price.

If you want the very best speaker enclosure, and will not be misled as to real performance by deceptive size, weight or price, ask your audio dealer for a demonstration today.

The Solution of the Enclosure Problem

Enclosure Function

The primary purpose of a speaker enclosure is to prevent destructive sound cancellation that takes place at low frequencies, when the front and rear waves, emanating from both sides of the speaker cone, merge. Wave merger cancels bass; narrows frequency range; and destroys high fidelity.

The Perfect Enclosure

It is obvious that no rear waves can escape from a totally enclosed cabinet, and it would be the perfect enclosure, except for one reason. The air pressure within the cabinet acts as a cushion upon, and thereby restricts, cone movement. This causes loss of life and color.

Bradford Perfect Baffle

The Bradford Perfect Baffle is totally enclosed, yet it relieves cone pressure by an ingenious device that operates in unison with cone movement. Consequently, free cone movement and full life and color are retained.

Large Enclosures Obsolete

Conventional enclosures, like the bass reflex and folded horn, are inconveniently large. Size is not a function of the Bradford Perfect Baffle for it is the pressure relieve valve, not mere bulk, that gives superior performance. Therefore, this Baffle need be no larger than the speaker itself. The larger the enclosure the greater its capacity for generating spurious echos, standing waves and false resonances.

Correct Scientific Principle

Since this design conforms to an ultimate scientific principle, the Bradford Perfect Baffle is the only enclosure that can give you the utmost in sound reproduction.

Boom Is Not High Fidelity

Boom is that dull, heavy thud, instead of a true, clear bass tone, that you hear at low frequencies in many, even expensive, enclosures. They are called "boom-boxes." Boom is also called "one note bass", "juke-box bass", or "bullfrog bass." Why demand perfection from all other audio components and then tolerate a boom-box that destroys their value. You don't get boom from a live orchestra in a concert hall so why should you want it in your home? Nobody has to buy a boom-box.

The Bradford Perfect Baffle does not boom . . . absolutely never.

False Bass

Bass reflex and back-loaded folded horn cabinets are resonant systems. They "augment" bass by the excitation of a resonant cavity in the enclosure. They do not follow the input signal, but generate a spurious bass of their own. Thus, they may "appear" to give good bass, but, when compared with a true bass system, the bass is found to be false and the tones blurred and muddy. Transient response is poor because these resonances permeate and fuse the tones instead of permitting them to be clear, individual and distinct. Mere loudness in the lower frequencies is sometimes mistaken for good bass. This is caused by a distortion peak that emphasizes one or more harmonics while suppressing the fundamental. This is not true bass, and it is not high fidelity.

Why Limit Yourself to a Corner?

If you don't put a folded horn in a corner, the bass drops out. Why buy an enclosure that tells you where to put it? Are corners always available, now, or at some future time? But even in a corner, frequencies over 150 cycles get lost in the folds of the horn thereby eliminating the use of full range, coaxial or triaxial speakers. Moreover, have you ever noticed the peculiar megaphone effects that come from a folded horn? Reason? It is a megaphone.

Tuning the Bass Reflex

Unless the speaker completely matches the bass reflex enclosure, i.e. unless the size of the port is carefully adjusted by experts to the particular resonant characteristics of each speaker, you will not get true bass. Instead you will get a heavy, muddy response that is not high fidelity.

The Curse of Listening Fatigue

Nothing could be more fallacious than the claim that an enclosure can produce more, better or deeper bass than the speaker can supply. You are asked to believe that a bare wooden box that neither creates, stores, borrows, transforms or transmits energy is, in effect, an amplifier of speaker output.

This fantastic notion has had so much ballyhoo that its sponsors may even believe it themselves.

It should be obvious to anyone that an enclosure, of any design, is an inert body; that it is not a source or medium of energy; and that it can add no energy or improvement to speaker output. An enclosure may, by structural impediments, impair, but it cannot improve, speaker performance. The perfect enclosure would simply let the speaker do its best without introducing distortion, and since most speakers are excellent reproducers, who should want more?

It is true that an enclosure may emphasize certain low frequencies by the excitation of a resonant cavity as in a bass reflex. But this "gain" is not a facsimile of speaker output for it is wholly synthetic and is limited in range to a few narrow peaks. Moreover, since every such gain must be followed by a corresponding loss, the false gain or peak thus produced is always followed by a sharp cutoff, or loss, of bass.

The so-called folded horn is nothing but a twisted, angular megaphone. It may, like a megaphone, concentrate, cast and direct sound with apparent loudness at certain frequencies, but this "gain" is achieved by a compensating loss of sound quality, or distortion. Thus, in either case, fidelity is sacrificed for distorted volume.

The enclosure-amplifier theory is contrary to elemental laws of physics and therefore is a myth.

Energy, the capacity to do work, may be changed in form, but it cannot be created or destroyed. Loudspeaker output is energy in the form of sound derived from electrical impulses that are fed into it from the amplifier.

Whence comes the second source of energy that supposedly enables the folded horn, or bass reflex, to amplify speaker output? From nowhere, of course, because none is supplied to it, and it can create none itself.

An amplifying tube adds energy, and therefore amplification, to an input signal because it is independently energized by electric current. But in the case of the speaker-enclosure combination only one, the speaker, is energized.

It is obvious that any apparent bass emphasis which the folded horn "adds" to speaker output is accomplished by compression, deformation and reflection of air waves as they emanate from the speaker cone, and since no energy is added, this apparent gain is achieved only by compensating introduction of distortion. "In no case is there a pure creation or production of power without corresponding exhaustion of something to supply it." (Faraday, Conservation of Energy) As a rubber band is stretched, so must it narrow. In physics, even ad writers can't get something for nothing.

Unfortunately, so-called "response curves" have helped perpetuate the enclosure-amplifier myth. Such curves may show pressure, volume or gain, but they do not show what part or how much of it is distortion. Consequently, what, at low frequencies, may appear on a graph to be strong, linear bass, may be nothing but distortion. Response curves are, therefore, a deceptive guide to the evaluation of a speaker system.

Some people are deceived by the false bass gain of the bass reflex and folded horn because they cannot always detect its concomitant distortion. It exists nevertheless and though they cannot hear it, they can feel it, and it is felt in the form of listening fatigue.

Hence, the unsuspecting often wonder why they feel so tired after listening to some speaker systems.

Listening fatigue is not measured by graphs, response curves or mathematical formulae. It is not revealed by "scopes." It is personal, subjective, psychoacoustic. It works on the victim's nervous system. Why suffer from listening fatigue, when you don't have to?

The Bradford Perfect Baffle is not a bass reflex, folded megaphone or Helmholtz resonator. The speaker is flush-mounted. There is no resonant cavity to create distortional peaks, and there is no horn to create distortional loudness. Consequently, there is no listening fatigue.

The Bradford Perfect Baffle gives all the speaker can produce... no more, no less. Don't be deceived by claims that could not possibly be true because they are contrary to natural law.

If you want to know what the Bradford Perfect Baffle can produce, with any speaker, look at the speaker specifications. That's it.

BRADFORD Perfect BAFFLE

(Patent Pending)

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Manufactured By
BRADFORD & COMPANY

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