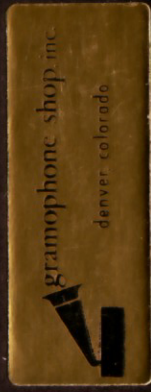


Book





The Very Best In Sound

The most important single component in a high quality high fidelity music system is the loudspeaker. In the final analysis it is the speaker which determines the character and properties of the music reaching the listener's ear, because the loudspeaker, of all the components in the system, is most capable of adding, omitting and modifying all or portions of the transmitted sound. Only speaker systems of the highest quality provide that exciting fidelity, natural realism and true tonal balance which enable the music lover to truly enjoy his favorite music to the fullest.

Bozak speaker systems are famous for such high quality. With their clean, true-pitch bass, clearly defined mid-tones, and clear, warm treble, the Bozak family of fine speakers and speaker systems has long stood in a class by itself.

Loudspeakers for Every Taste

Bozak loudspeakers are ideal for every kind of musical performance, from soloists and small groups to big bands and full symphony orchestras.

We at Bozak enjoy listening to all types of music but we do admit to a preference for the classical variety, some of our favorites being used as illustrations in the paragraphs below. The chief reason for this preference is that only speaker systems of the very highest caliber can hope to re-create the complex sounds produced by symphony orchestras, opera companies and large choruses. Dozens of different instruments, played by a hundred musicians, place such stringent demands on a speaker system that the ability to reproduce this type of music may be considered the final test of a speaker's quality. Coping with the fine detail and texture of orchestral sound found in the classical repertoire is simply beyond the capabilities of most loudspeakers.

It is not surprising that professional musicians themselves recognize the superior quality of Bozak and choose Bozak speakers for their own home high fidelity systems. Nor is it surprising that many symphony orchestras — including the New York Philharmonic, Boston Symphony, St. Louis Symphony,

Chicago Symphony, Cincinnati Symphony, Detroit Symphony and others — all own Bozak Speakers.

The Function of a Loudspeaker

A loudspeaker's function is to reproduce as much of the original performance as possible without interjecting any sound of its own. It must faithfully re-create all of the sound produced by each individual performer, all of the harmonics or overtones which give each instrument its distinctive timbre or quality and fill in the interstices in the musical fabric.

With a Bozak loudspeaker an English horn is clearly itself, not merely an oboe in low register. Similarly, in one piece we particularly like, Berlioz' *Symphonie Fantastique*, the sudden appearance of the E-flat clarinets in the fifth movement is always startlingly audible on a Bozak. The instruments sound as bizarre as Berlioz intended they should, and are plainly E-flat clarinets, not the kind usually encountered. In the same manner, when Beethoven introduces trombones in the last movement of his *Fifth Symphony*, they sound like trombones and not like the combination of horns and trumpets used previously. Hearing all these details in a piece of music greatly increases our listening pleasure and illustrates an important point:

Bozak adds enjoyment to every musical performance.

Inner Voices

Just as Bozak speakers accurately reproduce each note and re-create the actual quality of every instrument in the orchestra, they also carefully separate the individual choirs of the orchestra, lucidly projecting all the activity of any score with astonishing realism. The intricate brilliance of such masters of orchestration as Berlioz and Ravel is often heard for the first time through a Bozak speaker. In their works, where the exact articulation of every inner voice is essential, each musical component is clearly defined, without fuzziness, distortion or undesirable blending of discrete notes into one overall pattern of sound. With Bozak, musical clarity may be taken for granted.

To see how Bozak distinguishes and projects every voice, listen to the first movement of Mahler's *Sym-*

phony No. 4 and notice how each voice in the orchestra can be clearly distinguished from the others. Or try excerpts from Verdi's *La Traviata*, where the distinct clarity and the exact reproduction of each voice is vital to the proper realization of the music.

Almost any score demonstrates this remarkable Bozak ability to bring out music that is so often obscured. Replay any of your own favorites on a Bozak and see how they take on a new depth, brilliance and a concert hall realism.

The Virtuoso Loudspeaker

How does Bozak re-create music with such life-like realism? In a word, *naturally*. Just as no single instrument in an orchestra can cover the entire musical spectrum by itself, so no single loudspeaker can re-create it. In every Bozak speaker system, the audible frequency range is divided into bass, midrange and treble, in much the same way as the orchestral choirs are divided. When a larger, more spacious sound is required, Bozak does not substitute a larger speaker, but rather adds more speakers in each range, just as when an orchestra needs a bigger string sound, it adds more violinists, not bigger violins.

In each of these three areas Bozak has designed a unique speaker whose size and design details are dictated solely by the laws of physics. These loudspeakers bear no resemblance to the common, dopesmeared devices now being assembled into equipment mass-produced for the so-called "high fidelity" market. Rather, these are uniquely designed loudspeakers, processed and fabricated entirely within our own plant to rigid specification, carefully supervised from the initial compounding of the paper-wool cone to the finished, integrated instrument.

Every Bozak system has at least one 12" **bass** speaker to provide the sense of feel and ease for effortless sound re-creation that has become a Bozak trademark. These Bozak bass speakers are of extraordinary design and construction. A unique and exclusive variable density cone, with a 50% wool content, is an important factor for the outstanding performance of this speaker, which produces true-pitch bass notes without coloration.

In the **midrange**, the region of melody, are found the tones which make up much of the timbre of all sounds. Bozak speakers for the midrange are unique in both design and construction. Based on the laws of physics, they are so sized that the diameter of the speaker cone does not exceed the wave lengths of the sounds they are designed to reproduce. This, plus a patented* structural design that enables the cone to vibrate as a rigid disc without break-up, results in velvet-smooth response and broad spatial coverage, again without coloration.

The **treble** tones contribute sweetness and warmth to sound. In the treble range Bozak has produced tweeters that are also unique in both concept and construction. An aluminum diaphragm is nested in a bed of rubber which prevents spurious peaks and ringing and thereby assures a smooth, broad response free of harshness.

The use of line-array tweeters, unique to Bozak, produces the broadest possible horizontal coverage to provide uniform listening throughout an entire room.

An extremely important component of every speaker system is the **crossover network** which divides the audio spectrum into separate frequency ranges and feeds each to the appropriate loudspeakers. In a Bozak speaker system, the crossover rate is a "slow" 6 dB per octave, which permits a gradual shift from speaker to speaker, and eliminates the sense of musical "disembodiment" produced by faster crossover rates. In addition, the 6 dB per octave rate renders the Bozak network inherently free of transient distortion and ringing, common characteristics of speaker systems with crossover rates above 6 dB per octave.

Ultimate Sound Re-creation

With the development of fine solid-state power amplifiers, the inherent superiority of the electronic crossover network have recently become attainable, providing those seeking the ultimate in sound re-creation with a measure of realism impossible with conventional high level crossover networks.

With the conventional high level crossover technique a crossover network is interposed between

*U.S. Patent No. 3,093,207

the power amplifier and the loudspeakers it feeds. This network noticeably affects damping and transient response, the degree of the affect being determined by the nature of its design.

In the Bozak electronic crossover technique of bi-amplification the division between the bass and mid-frequencies is made at low level and ahead of the power amplifiers. The dividing network is between the pre-amplifier and the power amplifiers. Each channel has a bass range power amplifier and a mid-treble range power amplifier. The former is connected directly to the bass loudspeaker without any interposing networks to affect damping and transient response. This produces a solid, precisely defined bass because of full utilization of the high damping factor available in solid state amplifiers.

The mid and treble frequencies are divided at high level at the output of their power amplifier. For optimum performance the power rating of the low and high amplifier is the same.

This technique with Bozak loudspeakers and fine solid state electronic equipment and a good program gives the ultimate in sound recreation. The difference is like the removal of a veil that has been obscuring the image. There is new detail, finer definition, all enhancing ones library of music as well as the performance of his loudspeakers. Qualities that are never realized using the best amplifiers with conventional high level crossovers.

Finely Crafted Furniture

Over and above a purely musical superiority, Bozak offers the broadest variety of elegantly designed, finely crafted furniture styles available in the high fidelity field. All speaker enclosures and equipment cabinets are expertly handcrafted in our large modern cabinet shop and represent, we feel, the finest expression of the cabinetmaker's art.

All Bozak furniture is rigidly constructed of ¾" Flakecore overlaid with selected veneers of genuine hard wood exquisitely finished. The loudspeaker enclosures are of the infinite baffle type, completely enclosed. Grille cloths, in warmly rich fabrics, are always in keeping with the tone and period of the

furniture style in which they are used, and may be easily changed to match any decor.

For beauty and a wealth of fine details, through a wide range of both modern and traditional styling, the Bozak collection of fine furniture for high fidelity remains unsurpassed.

An Investment In The Future

Despite the fact that Bozak is unsurpassed for performance and craftsmanship, the pleasure of Bozak quality is easily available to every music lover, regardless how modest his means. Even the newcomer to high fidelity may begin his listening pleasure with a full-performance Bozak loudspeaker system of considerable size, which can be enlarged and augmented as budget permits.

Unlike some loudspeakers, those by Bozak do not deteriorate through the years; if anything, they tend to improve with age and use. As a result, Bozak speakers are not discarded, not traded in, nor are they considered interim speakers to be tolerated until the listener can "trade up" to what he really wants. Instead, each Bozak speaker is a life-time investment in musical pleasure, a carefully matched component in a system that eventually can be developed into the ultimate in high fidelity sound re-creation, the Bozak Concert Grand.

At Bozak there is one line, one quality. There are no "cheap", no "expensive" models — just *different* Bozaks for different purposes. All are equal in craftsmanship and tonal quality, matched in power. The bass, midrange and treble speakers combine into various two-way and three-way speaker systems; in addition, there is a single wide-range speaker for special applications. The mutual compatibility of all four speakers creates an unmatched flexibility of use and makes possible the Bozak's unique Plan of Systematic Growth. This concept of step-by-step expansion of a speaker system without altering the mounting or obsoleting a single component is described in detail on page 18.

Every step of the way the Bozak owner has the satisfaction and enjoyment of the very best in sound — the Bozak family of loudspeakers described on the pages which follow.

The Concert Grand



B-410, Moorish
225 lbs.
36 $\frac{3}{4}$ " W x 18 $\frac{1}{4}$ " D x 50 $\frac{1}{4}$ " H

Model B-310B and Model B-410

Ever since its introduction in 1951, this magnificent 14-speaker system has remained unmatched for its ability to accurately re-create any sound or combinations of sounds across the entire music spectrum. The Concert Grand is the supreme achievement in the faithful re-creation of sound.

Each system contains 4 8-ohm B-199A bass speakers, 2 16-ohm B-209B midrange speakers, 4 B-200Y treble pairs, and an N-104 crossover network installed in a rigidly constructed, heavily damped 16-cubic foot infinite baffle. The speaker panel and front half of the sides, top and bottom of the cabinet are 1 $\frac{1}{2}$ " thick for extra rigidity. The midrange speakers are completely isolated from the woofer compartment.

Because of cabinet styles the treble line array in the B-410 Classic is located differently from that in the B-310B. The Model B-310B and Moorish B-410 have the speakers mounted symmetrically with the treble speaker array in the center. The Model B-410, which has its treble array at the side, is furnished in mirror-image pairs with left and right hand versions to assure balance and afford a maximum of flexibility in stereo system setup. The difference between the two versions of the Concert Grand is a matter of personal taste between the cabinet styles illustrated.

Frequency response: 28 to 20,000 Hz

Impedance: 8 ohms

Crossovers: 400 and 2,500 Hz at 6 dB/octave

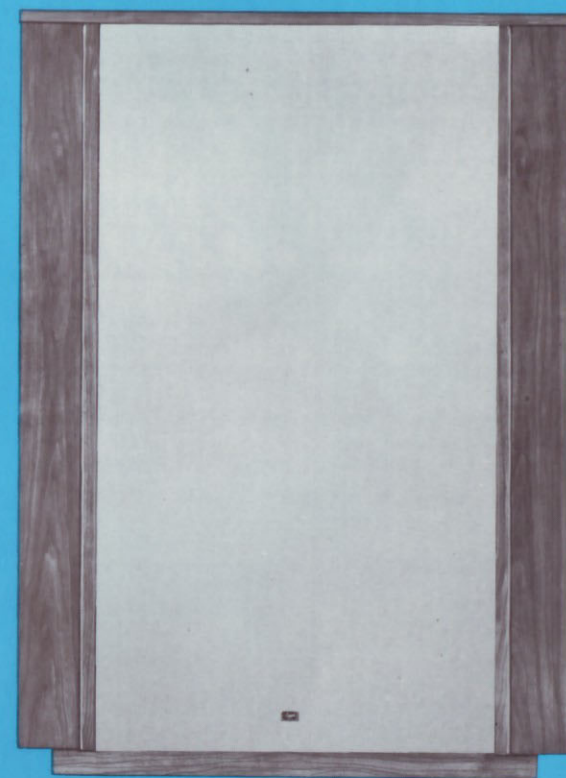
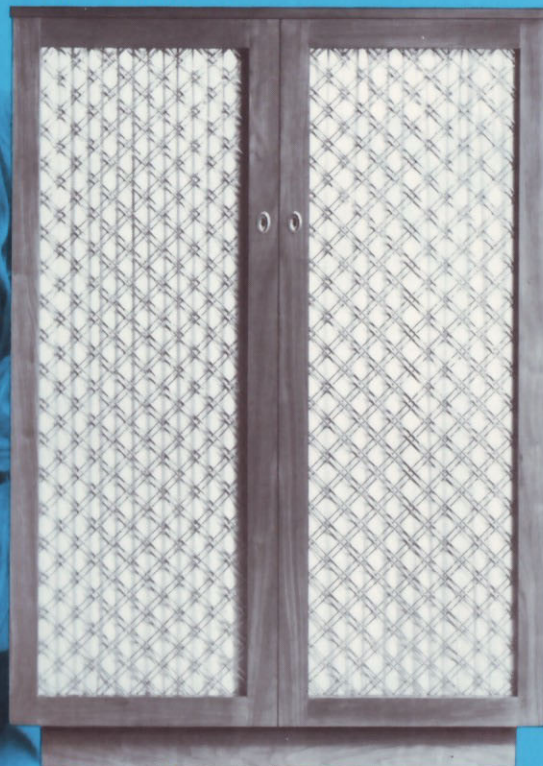
Power handling capacity: 150 watts program

Finish: Matte walnut

Available wired for bi-amplification on special order.



B-410, Classic
225 lbs.
36" W x 19" D x 52" H



B-310B, Contemporary
225 lbs.
36" W x 19" D x 52" H

Photo by Robert Hupka



Symphony Series

Symphony No. 1 (Model B-4000A)

Symphony No. 2 (Model B-4005)

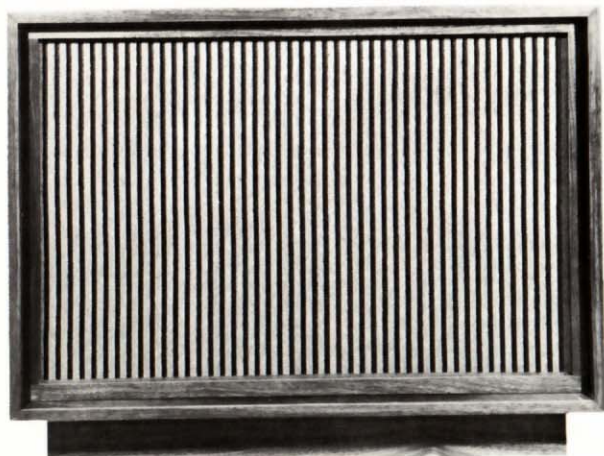
Performance that compares to much larger speakers in moderate size cabinets styled with traditional elegance . . . briefly describes Bozak's popular Symphony Series.

No other speaker systems in the world — save Bozak's supreme achievement, the Concert Grand — reproduces music with full realism; true, rich bass; exquisitely delineated midtones and smooth, warm highs. Musical performances that can't be duplicated outside the concert hall.

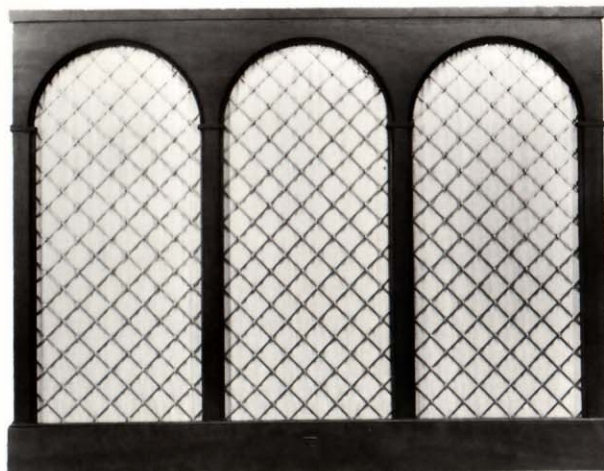
Symphony No. 1 is designed in high-boy, mirror-image left and right pairs which provide ear level listening of the midrange and line-array tweeters. This in conjunction with the broad horizontal dispersion of the tweeter array, assures the finest stereophonic sound regardless of listeners' sitting position.

The superior performance and outstanding acceptance of the high-boy models have led us to add a low-boy model to the Symphony No. 1 series.

Symphony No. 2 (B-4005) is a horizontal lowboy version of Symphony No. 1. Essentially the same as the Symphony No. 1 in performance and construction, it utilizes the same components except for the B-200YA sector-of-sphere tweeter array which is used in place of the B-200Y line array.



B-4005, Century
150 lbs.
36" W x 20" D x 27⁵/₈" H



B-4005, Moorish
190 lbs.
39" W x 20¹/₄" D x 30" H

Frequency response: 35 to 20,000 Hz

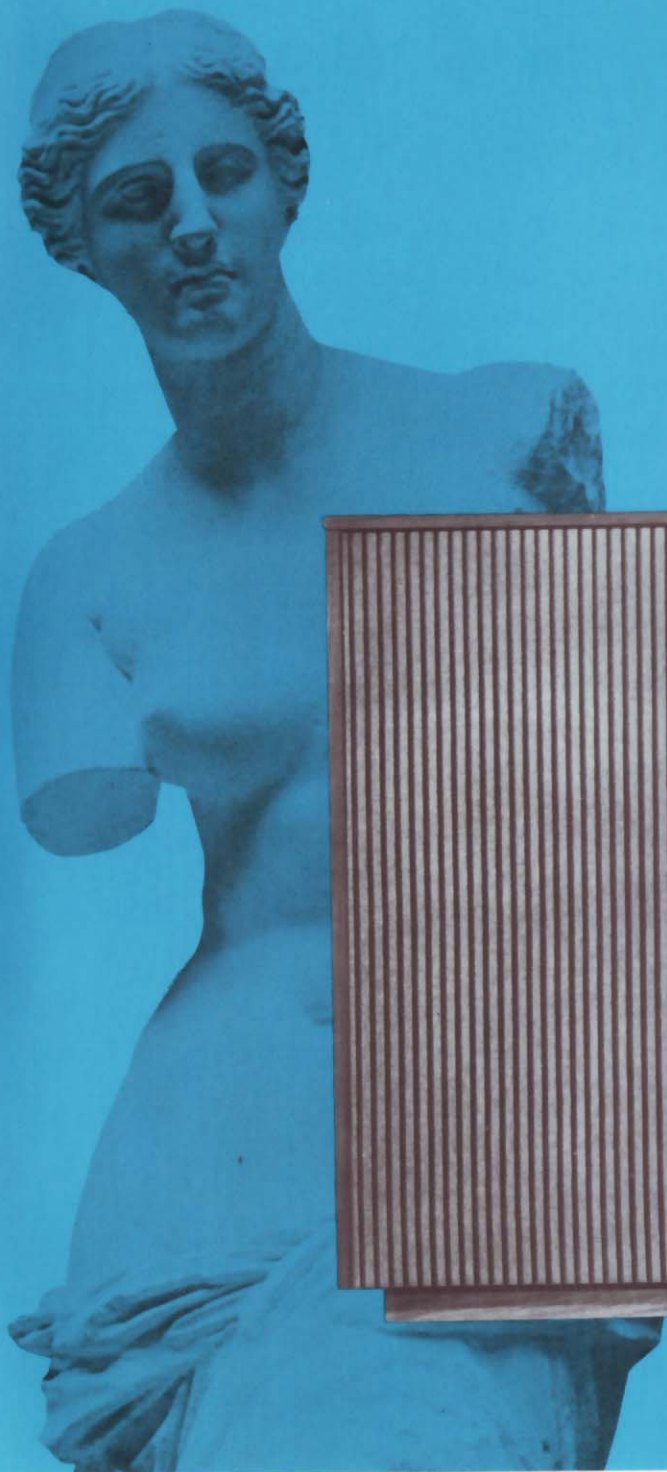
Impedance: 8 ohms

Crossovers: 400 and 2,500 Hz at 6 dB/octave

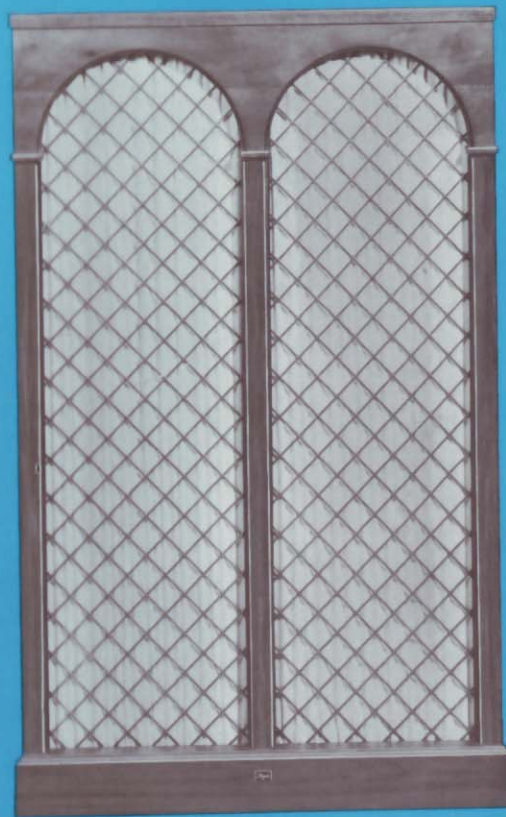
Power handling capacity: 100 watts program

Finish: Matte walnut

Available wired for bi-amplification
on special order.



B-4000A, Modern
165 lbs.
26 $\frac{1}{4}$ " W x 15 $\frac{5}{8}$ " D x 44 $\frac{1}{2}$ " H



B-4000A, Moorish
165 lbs.
27" W x 16 $\frac{1}{8}$ " D x 44" H



B-4000A, Classic
165 lbs.
26" W x 15 $\frac{5}{8}$ " D x 44 $\frac{1}{2}$ " H

Bozak[®]

Concert Series



B-305, Moorish
185 lbs.
39" W x 20 $\frac{1}{4}$ " D x 30" H

CONCERTO GROSSO (Model B-305)

A magnificent musical instrument by all standards, the B-305 Concerto Grosso has long been an established favorite among those who demand the finest performance in an attractive, medium-size speaker system.

Concerto Grosso is an integrated three-way seven-speaker system designed to satisfy the most exacting demands of the discriminating music lover. Precise fidelity throughout the entire dynamic and tonal range, startling presence in even the larger rooms, and famous Bozak bass-through-treble realism – all make the B-305 system an important member of the Bozak family of speaker systems.

The system includes two 8-ohm B-199A bass speakers, a B-209B 16-ohm midrange speaker, two B-200Y dual treble speakers and an N-10102A crossover network connected as an N-102 crossover network. The enclosure is a rigidly constructed 8-cubic-foot infinite baffle.

Model B-305 Century and Moorish enclosures may be used in ensemble with the matching style equipment cabinets shown on page 11.

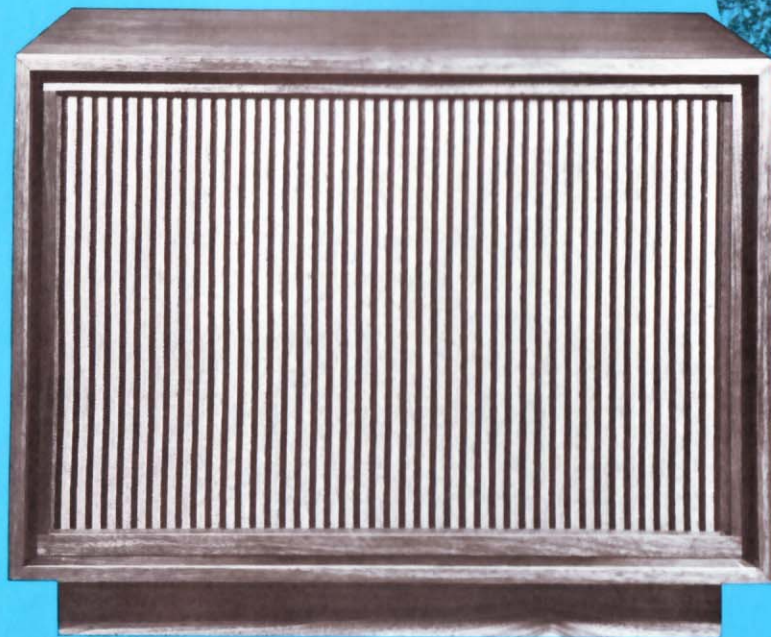
Frequency response: 35 to 20,000 Hz

Impedance: 16 ohms

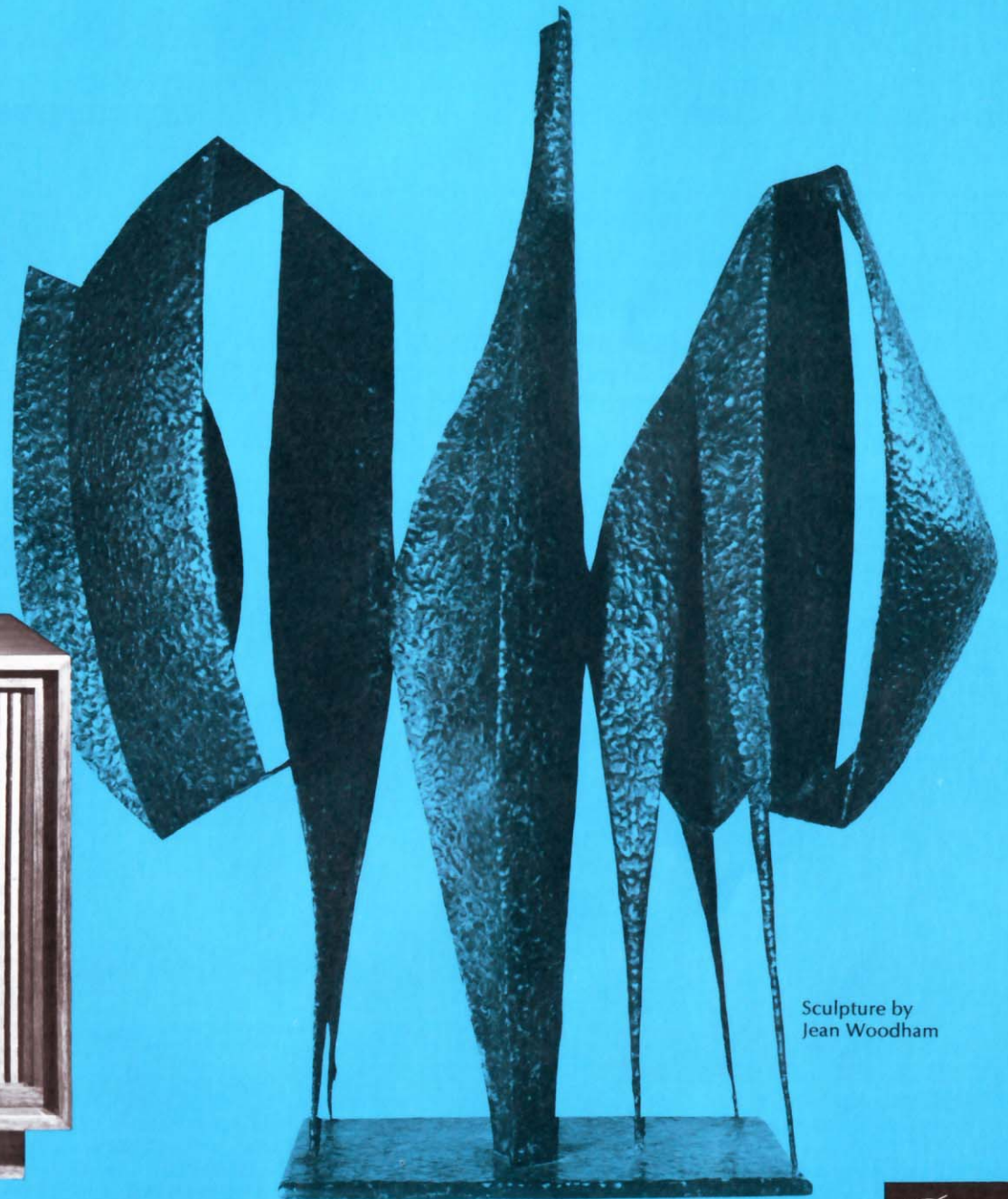
Crossovers: 800 and 2,500 Hz at 6 dB/octave

Power handling capacity: 75 watts program

Finish: Matte walnut



B-305, Century
145 lbs.
36" W x 20" D x 27⁵/₈" H



Sculpture by
Jean Woodham



Concert Series

CONCERTO IV (Model B-300)

The Concerto IV, the basic unit in the Bozak Plan of Systematic Growth, is a wide-range two-way system of astonishing realism mounted in a rigid 5-cubic-foot infinite baffle. It is designed as the basic stereo system for rooms of small to average size and utilizes the famed B-207B coaxial speaker.

The B-300 may be converted to the B-302A at any time by the addition of a B-209B 8-ohm speaker and a N-10102A crossover network. For speaker complement and specifications, see page 13.

CONCERTO V (Model B-302A)

The Concerto V (Model B-302A), the second step in the Plan for Systematic Growth, is the ultimate in a moderate size (5-cubic-foot) speaker system. It is similar to the B-300 except that a midrange speaker has been added to bring into sharper focus the middle frequencies of the spectrum.

The Concerto V is the most imitated speaker system in high fidelity. Almost every speaker manufacturer has attempted at one time or another to duplicate its special characteristics of sound re-creation; none has ever succeeded.

For speaker complement and specifications, see page 13.



Century The firm, clean lines of Bozak's Century furniture design have made it a favorite with professional decorators as well as with music lovers. Although contemporary in flavor, Century has the rare quality of being able to blend well with nearly any decor, a result of its basic simplicity. Hand-rubbed finishes in matte and lacquered walnut.

B-300 90 lbs.
24" W x 20" D x 27 $\frac{5}{8}$ " H



French Provincial Traditional and authentic are two words that best describe Bozak's rendition of this ageless classic style. The gathered silk grille cloth with its overlay of bronzed metallic grillwork sets off the genuine wood surfaces. Carved details are deep and true, marks of real craftsmanship. Finishes available are light or dark fruitwood on genuine cherry.

B-300 90 lbs.
28" W x 19" D x 31" H



Moorish The warmth of Iberia is reflected in this styling in which graceful arches frame the bold metal grille overlay in a pattern of distinctive elegance. In any room Bozak's Moorish styling adds a just right accent note. Hand-rubbed finishes in matte and lacquered walnut.

B-300 90 lbs.
27" W x 16 $\frac{1}{8}$ " D x 30" H



Italian Provincial The dignity and strength expressed by the artisans who created the first Italian Provincial stylings are captured today by Bozak. Authentic detailing in the wood is accented by the gathered silk grille cloth with its overlay of antiqued metal. The wood is genuine cherry finished in a light or dark fruitwood finish.

B-300 90 lbs.
24" W x 18 $\frac{1}{2}$ " D x 30" H



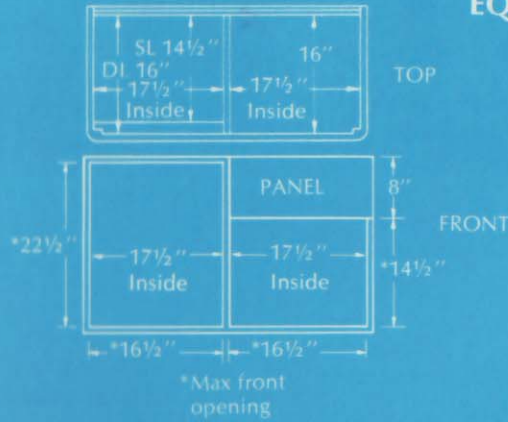
Mediterranean This newest addition to the Bozak family of furniture styles has a massive feel reminiscent of the Graeco-Roman art forms. Straight, simple lines are combined in such a way as to become highly decorative; truly a distinctive style for a distinctive room. The full, gathered grille cloth, in a rich burgundy, is set off by insets of genuine wrought iron. Distressed oak in warm, distinctive antique finish.

B-300 120 lbs.
27 $\frac{1}{2}$ " W x 20 $\frac{1}{8}$ " D x 28 $\frac{1}{8}$ " H

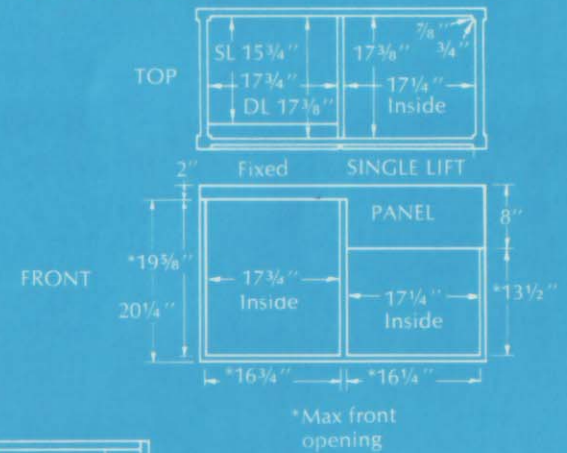
EQUIPMENT CABINETS



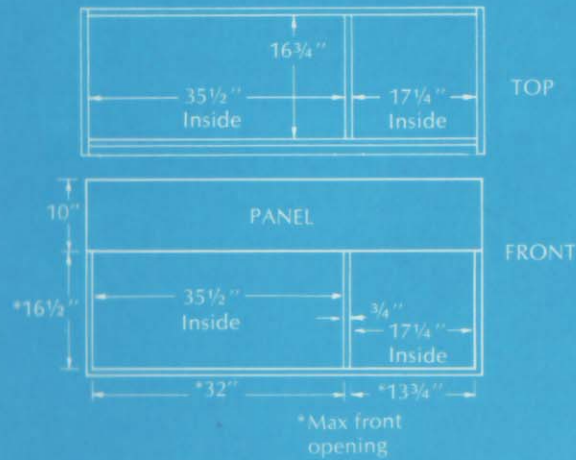
C-305 French Provincial Equipment Cabinet
130 lbs.
40" W x 20" D x 31" H



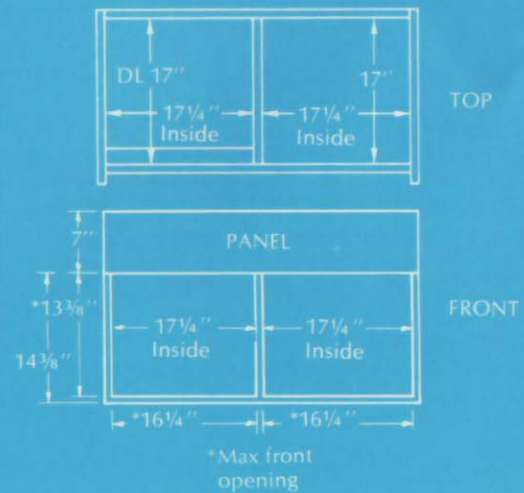
C-305 Italian Provincial Equipment Cabinet
130 lbs.
38" W x 20" D x 30" H



C-305 Moorish Equipment Cabinet
175 lbs.
56 1/8" W x 20 1/2" D x 30" H



C-305 Century Equipment Cabinet
130 lbs.
36 7/8" W x 20" D x 27 5/8" H



Bozak®

Compacts

CONCERTO II and CONCERTO III (Models B-312 G and B-313 G)

These are compact versions of the Models B-300 and B-302A. They are mid-size speaker systems suitable for use either on a shelf or free-standing on the floor. For free-standing use, matching floor stands are available in configurations for horizontal or vertical speaker placement.

Model B-312G is a two-way system employing a B-207B which consists of a B-199A bass speaker and a B-200Y pair of treble speakers mounted coaxially. The crossover network is built in.

Model B-313G is a full three-way speaker system in the most compact enclosure feasible. In addition to a B-199A bass speaker and a B-200Y treble speaker it employs a B-209B midrange speaker to provide the smoother response and more uniform distribution which characterize three-way speaker systems. The crossover network is Bozak's standard N-10102A.

Frequency response: 40 to 20,000 Hz

Impedance: 8 ohms

Crossovers: B-312G, 2,500 Hz (electro-acoustical)
B-313G, 800 and 2,500 Hz at 6 dB/octave

Power handling capacity: 50 watts program

Dimensions: 24½" W x 17¼" H x 12½" D

Weight: B-312G 60 lbs.; B-313G 70 lbs.

Finish: Matte walnut



(Model B-301)

Tempo 1 BOOKSHELF SPEAKER

Frequency response: 40 to 20,000 Hz

Impedance: 8 ohms

Crossovers: 1200 Hz and 3,600 Hz at 6 dB/octave

Power handling capacity: 40 watts program

Dimensions: 23½" W x 14½" H x 11½" D

Weight: 40 lbs.

Finish: Matte walnut

Tempo I is designed especially for those with an ear for superb sound but with limited space. It has more true tonal quality for its size than any other bookshelf speaker available.

The design of Tempo I is totally unique to Bozak and incorporates features not found in any other small loudspeaker system. By use of a special 12" high compliance bass driver incorporating the unique Bozak variable density diaphragm it is able to produce bass without coloration.

A 4½" driver with exceptional transient capabilities yields unusual clarity in the midrange section. The velvet smooth treble utilizes the celebrated single B-200Y driver.

The three sections are connected to a three-way 6 dB/octave network crossing over at 1200 Hz and 3600 Hz. The unit is provided with a switch for adjusting to three types of operation: Soft, Normal and Bright.

It is thus possible to accommodate a variety of tastes and to adjust for three different types of environment. In attractive genuine walnut veneer with removable grille cloth assembly.

The Bard



Frequency response: 50 to 10,000 Hz

Impedance: 8 ohms

Power handling capacity: 30 watts program

Dimensions: 18" Dia. x 21" H x 12" D

Weight: 25 lbs.

(Model B-1000A) Outdoor Speaker

For permanent enjoyment outdoors of indoor music systems there is no speaker that approaches Bozak's Bard in musical performance. Its rugged waterproof construction, handsome appearance, and year round usefulness make it an asset for any porch, patio or pool. It is unsurpassed among outdoor speakers for tonal richness and intimate, personal sound reproduction.

The Bard was specifically designed for outdoor applications. Its handsome hemispheric steel enclosure with gold trim enhances open air reproduction. Its wide-range B-800 speaker is completely waterproof and impervious to all types of weather. Finished in a choice of eggshell white or soft beige enamel, the Bard is provided with a convenient carrying handle for easy transportation.

Panel-Mounted Bozak Speaker Systems

All Bozak speaker systems except the compact Models B-301, B-312G and B-313G are available as panel-mounted systems, ready for installation in a wall or in an existing enclosure.

These panel-mounted systems are identical to complete Bozak systems in enclosures, except that crossover networks are mounted on the back of the panel rather than the bottom of the enclosure. Thus, these illustrations of panel-mounted systems also show the layout of speakers in the corresponding complete Bozak systems.

In selecting and installing panel-mounted systems, it is important for maximum performance that they be mounted in a rigid enclosed cavity of at least 4 cubic feet for each bass speaker in the system. For example, a Model P-410P system requires an enclosure of at least 16 cubic feet to achieve its full performance capability.

Performance specifications for complete Bozak systems in enclosures are identical to those indicated for panel-mounted systems.



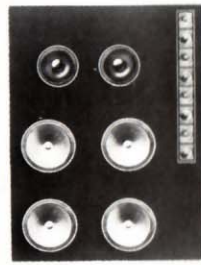
**Concert Grands
Model P-310BP**

31" W x 46¹/₁₆" H
x 1¹/₂" Thick

The ultimate in realistic music reproduction. Model B-310B with its tweeters in centered line array and Model B-410 offered in mirror-image pairs with tweeters at the right and left edges.

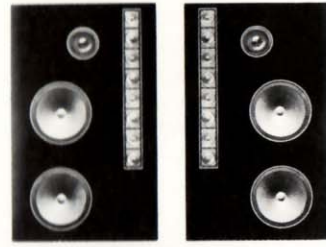
Total number of speakers 14
Speaker complement: B-199A Bass 4
 B-209B Midrange .. 2
 B-200Y Dual Treble 4

Crossover: N-104 LC Network
Frequency response: 28 to 20,000 Hz
Impedance: 8 ohms
Crossover frequencies: 400 and 2,500 Hz at 6 dB/octave



Model P-410P

34³/₁₆" W x 46¹/₁₆" H
x 1¹/₂" Thick



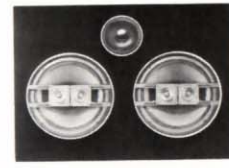
**Symphony No. 1
Model P-4000AP**

25" W x 41" H x 3/4" Thick

Second only to the Concert Grand for the most natural sound. Mirror image left- and right-hand versions assure symmetry of reproduction.

Total number of speakers 11
Speaker complement: B-199A Bass 2
 B-209B Midrange .. 1
 B-200Y Dual Treble . 4

Crossover: N-104 LC Network
Frequency response: 35 to 20,000 Hz
Impedance: 8 ohms
Crossover frequencies: 400 and 2,500 Hz at 6 dB/octave



**Concerto Grosso
Model P-305P**

35" W x 23" H x 3/4" Thick

Bozak's standard three-way medium-size speaker system, provides amazing presence in even larger rooms.

Total number of speakers 7
Speaker complement: B-199A Bass 2
 B-209B Midrange ... 1
 B-200Y Dual Treble . 2

Frequency response: 35 to 20,000 Hz
Impedance: 16 ohms
Crossover: N-10102A LC Network
Crossover frequencies: 800 and 2,500 Hz at 6 dB/octave



**Concerto V
Model P-302AP**

23" W x 27¹/₂" H x 3/4" Thick

Bozak's basic three-way speaker system, the Model 302A is the second step in the Bozak Plan for Systematic Growth. Suitable for rooms of moderate size.

Total number of speakers 4
Speaker complement: B-199A Bass 1
 B-209B Midrange ... 1
 B-200Y Dual Treble .. 1

Crossover: N-10102A LC Network
Frequency response: 40 to 20,000 Hz
Impedance: 8 ohms
Crossover frequencies: 800 and 2,500 Hz at 6 dB/octave
Power Handling Capacity: 50 watts program



**Symphony No. 2
Model P-4005P**

35" W x 23" H x 3/4" Thick

Recently introduced, a major Bozak system for those wishing "Symphony" sound in a low-profile horizontal.

Speaker complement: specifications same as Symphony No. 1



**Concerto IV
Model P-300P**

23" W x 27¹/₂" H x 3/4" Thick

This is the basic Bozak two-way speaker system and the first step in the unique Bozak Plan for Systematic Growth.

Total number of speakers 3
Speaker complement: B-199A Bass 1
 B-200Y Dual Treble .. 1

Frequency response: 40 to 20,000 Hz

Impedance: 8 ohms
Crossover frequency: 2,500 Hz (electro-acoustical)

Power Handling Capacity: 50 watts program
All speakers and crossover are mounted in a single frame. This coaxial configuration without panel or enclosure is Bozak's Model B-207B.

NOTE: Model B-300 is convertible to Model B-302A.

Bozak Component Speakers

All Bozak speaker systems are combinations of these components. They have design and manufacturing features that are not duplicated by any competitive units. Untiring qual-

ity control ensures that no component ever leaves the Bozak factory without testing and inspection to assure that all specifications shown are met.

B-199A Bass Speaker



Response*, 40 to 4,500 Hz / Impedance, specify 8 ohm or 16 ohm / Power rating, 25 watts / Resonance, less than 40-Hz in free air / Voice coil, ribbon wire on 1½" aluminum form / Field, 13,000 Gauss (6½ lb. magnet structure) / Dimensions, 12½" OD, 5⅜" deep / Mounting: 11" dia. cutout with four equally-spaced bolt holes on an 11¾" dia. circle / Recommended enclosure, infinite baffle stiffened and acoustically lined / Cavity, 5 cu. ft. for one, 8 cu. ft. for two, 16 cu. ft. for four / Weight, 9½ lbs.

*... extended by use in multiples.

B-209B Midrange Speaker



Response, 65 to 16,000 Hz / Working range, 150 to 3,500 Hz / Recommended crossovers, 400 (or 800), and 2,500 Hz / Impedance, specify 8 ohm or 16 ohm / Power rating, for use singly in Bozak 25- to 75-watt Concert Series systems / Resonance, none acoustically / Voice coil, 1½" / Field, 13,000 Gauss (6½ lb. magnet structure) / Dimensions, 6½" OD, 3" deep / Mounting, 5½" dia. cutout with four equally-spaced bolt holes on a 6" dia. circle / Enclosure, in woofer cavity or ½ cu. ft. lined cavity / Weight, 7½ lbs.

B-200YA Treble Array



Response, 1500 to 20,000 Hz / Recommended crossover, 2500 Hz / Impedance, 8 ohms / Power rating, for use in Bozak 100-watt systems / Voice coil, ¾" diameter / Field, 14,000 Gauss (8 lb., eight magnet structures) / Dimensions, 12" wide, 6⅜" high, 4¾" deep / Weight, 14 lbs.



B-200Y Treble Speaker Dual Unit

Response, 1500 to 20,000 Hz / Recommended crossover, 2500 Hz / Impedance, 8 ohms (two 16-ohm sections in parallel) / Power rating, for use in Bozak 25-watt systems / Voice coil, ¾" diameter / Field, 14,000 Gauss (2 lb. two magnet structures) / Dimensions, 6½" wide, 3¼" high, 1⅞" deep / Weight, 2½ lbs. / Mounting, coaxially on B-199A, or as described elsewhere.



B-800 Wide-Range Speaker

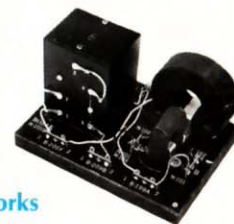
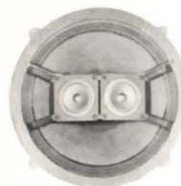
Response, 50 to 16,000 Hz / Impedance, specify 8 ohm or 16 ohm / Power rating, 25 watts / Voice coil, ribbon wire on 1½" aluminum form / Field, 13,000 Gauss (6½ lb. magnet structure) / Dimensions, 8¼" OD, 3¼" deep / Mounting, 7⅞" dia. cutout with four equally-spaced bolt holes on a 7⅞" dia. circle / Weight, 8½ lb. / Enclosure, 1½ cu. ft. min.

B-800A

A highly damped version of the B-800 with same specifications for use as a midrange speaker.

B-207B Full-Range Two-Way System

One each B-199A bass and B-200Y mounted coaxially on a rugged cast-aluminum frame with 4-mfd condenser / Response, 40 to 20,000 Hz / Crossover, 6 dB/octave at 2500 Hz / 25 watts / Dimensions, 12⅞" OD, 6" deep / Mounting, 11 dia. cutout with four equally-spaced bolt holes on a 13¼" dia. circle / Weight, 14½ lbs. / Enclosure, infinite baffle, minimum 5 cu. ft. for one, 8 cu. ft. for two units.



Crossover Networks

N-10102A This is a convertible network useful throughout the Concert Series by simple modification. By a change of connections it can have 8-ohm crossovers at 800 and 2500 Hz for the B-313G and B-302A, and 16-ohm for the B-305; the addition of the N-25 Condenser Bank and change of connections make it 8 ohms at 400 and 2500 Hz for the B-310B and B-410. 8" x 6" x 5½" H, 5 lb.

N-104 Specifically for B-4000A, B-4005, B-310B and B-410; 8 ohms; crossovers at 400 and 2500 Hz. 8" x 7" x 5½" H. 6 lbs.



Bi-Amping Networks

N-106 A low-level electronic stereo two-way crossover used in bi-amplification. It is inserted between the control/pre-amplifier unit and the power amplifiers to separate low and mid frequencies at low-level. Input power is 115-volt AC. Crossover is 6 dB per octave at 400 Hz. One is required in a bi-amp system.

N-107 A speaker network which, in bi-amp systems, provides midrange treble crossover. It is a passive LC network requiring no external power. Crossover is at 6 dB per octave at 2,500 Hz. One is required for each speaker system when using N-106.

Enclosure Kits

By providing ready-for-assembly kits for two of our popular enclosures, we are able to help you to enjoy Bozak quality reproduction for a more modest investment. Not only does the assembly of a kit permit you to invest some of your time in your Bozak system to decrease your monetary investment, it also can give real satisfaction in a job well done. Further, you have an opportunity of applying a much wider choice of finishes than is available from the factory.

Bozak kits are complete down to the last screw. All wooden parts are cut, all holes are drilled. A few simple handtools are all you need. In only a few hours even a person with no woodworking experience can assemble a Bozak enclosure.

Finishing Kit

To ease the work of finishing your completed walnut kit, Bozak has developed a furniture finishing kit which provides a matte walnut finish similar to that applied to Bozak factory finished enclosures. This kit has been especially prepared to provide professional looking results in a home workshop atmosphere.



E4000 KM
Modern Enclosure Kit



E300 KM
Modern Enclosure Kit



The Unique Bozak Design



In music, the sound waves generated by scores of instruments played singly or together have incredibly complex patterns. In addition, each instrument has its own individual sound-wave pattern or timbre, which distinguishes it from other instruments and makes it recognizable. And musical notes at all pitches and intensities are of many types — short or long, staccato or sustained, percussive or liquid.

Sound Re-Creation

Obviously these characteristics of musical sound — pitch, intensity, timbre — impose severe demands on the loudspeaker. To complicate the matter further, it is not possible under the laws of physics for a single loudspeaker to give anywhere near perfect reproduction (piston action) throughout the full audible frequency range. Here one fundamental premise is that the diameter of the speaker cone must be less than the wavelength of the highest frequency it is called upon to reproduce. Thus, the ideal range of a 12-inch speaker is limited to a maximum of approximately 1000 cycles, and progressively smaller speakers must be employed to reproduce the higher frequencies properly. That is why quality speaker systems are composed of bass, midrange and treble speakers, each designed to give the best performance in its own range in balance with its partners.

The Variable Density Bass Cone

As the sounding board is the heart of the piano, the cone is truly the heart of the loudspeaker. So exacting are the demands on the cone that only with a full understanding of its behavior, and strictly-controlled cone-making facilities, can speakers be produced which give optimum performance at all times. A pioneer in cone-making, Bozak today has the most comprehensive facilities for such production in the entire industry.

Originated by Bozak, the variable-density cone was developed to achieve the smooth response that is characteristic of the 12" B-199A bass speaker. It is

compounded of felted paper pulp according to an exclusive formula and process whereby the density of the material is greatest at the apex and gradually lessens toward the periphery. This structure gives the cones low mass — thus low inertia — with high effective stiffness, preventing breakup (“flapping”) and the radially propagated waves that are the primary cause of “peaky” response. The low resonance of the bass cone is revealed by the “dead cone” sound of the dull thud when flicked with a fingernail. The B-199A cone acts as a virtually perfect piston within its range in a three-way system.

Midrange

In the 6” midrange loudspeaker, piston action in its operating range is most important and it is here that the performance of the Bozak design is most outstanding. Whereas in the woofer we use the variable density cone, in the B-209B midrange speaker we employ a patented rigid diaphragm constructed in the form of a sandwich of light aluminum and two thin films of neoprene rubber. For optimum damping, these are tied together through perforations in the aluminum. It is unlike any other speaker.

Treble

The velvet smooth reproduction of high frequencies by the Bozak B-200Y tweeter is again achieved through unique design. These units employ a dual cone construction. The outer 2” effective diameter cone is nestled in a bed of foam rubber completely damping out any spurious peaks and vibrations in its working range. The range above 10 KHz is handled by the 3/4” aluminum center dome. This also is damped with a foam rubber abutment, thus continuing smooth response beyond the limits of audibility. By use of the tweeter line array, which is unique to Bozak, we are able to achieve the broadest full-power high frequency coverage available today.

Efficiency

To an engineer, efficiency refers to the ratio of output power to the input at any single frequency. As we have seen, the human ear has its greatest sensitivity, or efficiency, in the middle frequencies;

* U.S. Patent No. 3,093,207

so, too, do amplifiers and loudspeakers, unless special precautions to the contrary are taken in design. A high midrange efficiency speaker system will have a hump in the middle frequencies 6 to 10 dB higher than the bass and treble. When this characteristic is superimposed on the similar characteristic of the ear, an uncorrected speaker system can sound very loud indeed for a limited input of power. This kind of imbalance may seem impressive at first hearing, but it soon becomes evident that bass and treble are lacking. Bass boost, which introduces distortion if used more than very moderately, cannot compensate for the absence of low-frequency sensitivity in an amplifier or speaker.

In comparing Bozak speaker systems with unbalanced systems, bringing the overall loudness of the Bozak up to the same apparent level as that of the others will make strikingly evident the robust, true-pitch bass — crystal-clear middles — sweet, natural highs — and tonal unity that distinguish Bozak sound.

Enclosure

Enclosure problems are largely confined to the bass range. Ideally, the response of a bass speaker should be as nearly perfect as possible, and the role of the baffle should be as passive as possible, neither adding nor subtracting anything in the pattern of waves. There are many types of “active” baffles intended to smooth out bass response, but they really introduce spurious harmonics or resonances and often deteriorate or destroy any transient response the speaker may possess. All Bozak speakers are designed for use in passive baffles.

The most passive of all baffles is the true infinite baffle (a very large wall); close second, and more practical in the average home, is the infinite baffle enclosure. Neither of these will affect the phenomenal transient response or outstanding smoothness of the B-199A. Uncomplicated in design and construction, an infinite baffle enclosure is a rigid, acoustically lined, totally enclosed cavity of adequate volume that can be built to almost any shape desired.

The Final Choice

The designs and materials factors discussed here have just one purpose — the Bozak ideal: to re-create faithfully your favorite music in all of its subtle detail and thrilling power. However, without the extraordinary care and skill of Bozak craftsmanship this ideal could never be fully realized in your home. Exceptional in this day of mass-produced goods of all types are the many fine handcrafted details, special toolings, and quality controls and tests, which go into the manufacture of Bozak speakers and complete systems. This superb craftsmanship, plus fundamentally valid design, give you the listening ease, realism and fidelity that have won for the Bozaks world-wide respect.

Manufacturers often point to performance specifications, particularly to their wide frequency range, as an indication of their equipment’s quality. But how does one relate this to listening quality? Everyone publishes nearly identical specifications, but these are of interest only as theoretical abstractions since one cannot significantly relate them to listening quality.

It helps to listen to something you are completely familiar with in live performance. Be sure to compare music note for note. Avoid the temptation to switch from speaker to speaker, hearing one phrase on the first and an entirely different phrase on the second. Listen to the identical passages on each speaker and attempt to judge which sounds better to you at that moment.

Equally important, avoid buying in a hurry, since a speaker system should be considered as a long-term investment. Allow for all the variables of mood and impression and, when finally ready, make your decision.

We are fully confident that your choice — after thoughtful tests — will be none other than Bozak, which we are pleased and proud to call:

The Very Best in Sound.



The Bozak Plan for Systematic Growth

"Unique" is the word for the Bozak system of increasing your listening pleasure as budget permits. All Bozak component speakers are carefully matched so that your system can grow naturally.

Start modestly with the basic Bozaks if you wish, and add speakers as you want to — just as an orchestra would add more instruments. The illustrations to the right show how you can plan for the music system that best fits your home and individual taste. It shows the panel mount

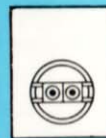
for each enclosure, and how component speakers may be added. And, since they are Bozaks, you can be sure of the finest reproduction whichever system you select, whatever your budget.

Our systematic growth program is divided into two series, the Concert and the Symphony. All component speakers are identical in performance specifications but do have different impedances. Because of this you should not start a particular series and later switch to the other.

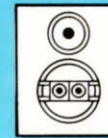
START WITH YOUR CHOICE OF ENCLOSURE STYLE.

To Reach: **Concerto V B-302A**

Begin with
E-300 Enclosure
and B-207B
Co-Axial Speaker

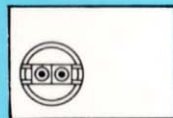


Add B-209B
8-Ohm Midrange
and N-10102A
Crossover
Network

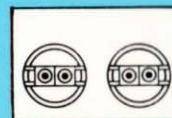


To Reach: **Concerto Grosso B-305**

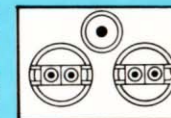
Begin with
E-305 Enclosure
and B-207B
Co-Axial Speaker



Add another
B-207B Co-Axial
Speaker

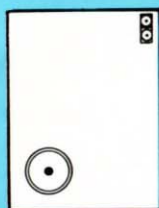


Add B-209B
16-Ohm Midrange
and
N-10102A
Crossover
Network

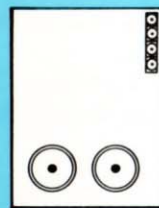


To Reach: **Concert Grand B-410**

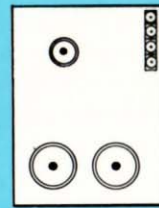
Begin with
E-410 or E-310B
Enclosure
B-199A 8-Ohm
Bass
B-200Y Treble
Pair
and
N-4 Condenser



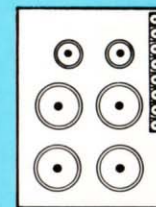
Add second
B-199A 8-Ohm
Bass
and second
B-200Y
Treble Pair



Add B-209B
16-Ohm
Midrange
and
N-10102A
Crossover
Network



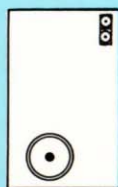
Add two more
B-199A 8-Ohm
Bass
a second
B-209B 16-Ohm
Midrange
two B-200Y
Treble Pairs
and N-25
Condenser Bank



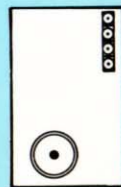
CONCERT SERIES

To Reach: **Symphony No. 1 B-4000A**

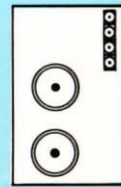
Begin with
E-4000 Enclosure
B-199A 16-Ohm
Bass
B-200Y
Treble Pair
and N-4
Condenser



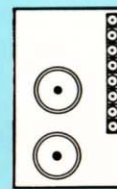
Add another
B-200Y
Treble Pair



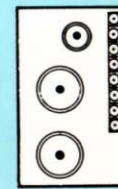
Add a second
B-199A
16-Ohm
Bass



Add two more
B-200Y Treble
Pairs
and a second
N-4 Condenser



Complete
with
B-209B
8-Ohm
Midrange
and N-104
Crossover
Network



SYMPHONY SERIES



Sculpture by
Jean Woodham

WARRANTY

All Bozak loudspeakers are guaranteed for five years against failure due to defects of materials and/or craftsmanship. All Bozak cabinets are guaranteed for two years against defects in materials and manufacture. The above applies only if the Registration Card supplied is returned to The R. T. Bozak Manufacturing Company within ten days of purchase.

Bozak[®]



The R. T. Bozak Manufacturing Company

Box 1166, Darien, Connecticut 06820

Export: Elpa Marketing Industries, Inc. New Hyde Park, New York 11040 U.S.A.