

# BOZAK

*The Very Best in Sound*

This catalog contains general information on the basic Bozak Loudspeakers and the four Speaker Systems into which they are commonly assembled. For complete technical details, and help in the selection of a Speaker System see our booklet Systematic Growth, available from Bozak Dealers or our Service Department.

# BOZAK Speaker Systems

## B-207A

Mounted in an infinite baffle, this two-way coaxial system will give the finest one-woofer performance with a good 20-Watt amplifier. The sound is clean and balanced from 40 to beyond 16,000 cycles on a robust foundation of the most powerful bass from any driver, regardless of size and price. The B-199A Bass and B-200X Treble speakers are mounted coaxially in a sturdy cast-aluminum frame, with a wired-in 4-mfd filter giving a "slow" 6-db-per-octave crossover at 2500 cycles with perfect phasing, no transient distortion, and smooth, peak-free response. The B-207A fits standard cutouts for 12" and 15" speakers, and is ready for mounting and connection to the 8-ohm taps of a clean amplifier. The minimum enclosed volume that can retain the quality of sound of which this speaker is capable is five cubic feet—as in the E-300 Enclosure shown here.

Response	— 40 to 16,000 cycles; useful beyond 20,000. Extended downward by use in multiples.
Impedance	— 8 ohms.
Power Rating	— 15 Watts; peaks to 30 Watts.
Dimensions	— OD of mounting ring, 15"; depth behind panel, 7".



B-207A

Baffle Opening	— Fits cutouts for 12" and 15" Speakers.
Weight	— 13 pounds
Enclosure	— Infinite baffle; minimum 5 cubic feet, optimum 9 cubic feet.

### Panel-Mounted P-302A

Dimensions — 23" x 27½" x 1¼" fir plywood.  
Weight — 32 pounds  
Other specifications same as B-207A.



Response	— 40 to 16,000 cycles; 20,000.
Impedance	— 8 ohms.
Power Rating	— 15 Watts, peaks to 30

## E-300 ENCLOSURE

Sold only without speakers, this 5-cubic-foot infinite-baffle enclosure is the smallest recommended for a single-woofer Bozak System. It accommodates the B-207A Coaxial unit alone, or the B-207A plus B-209 Mid-Range with an N-101 Crossover Network (the B-302A system).

The screwed-on back is removable. Openings are cut for the B-207A and B-209, the latter closed with a removable panel, so that you can start with a two-way system and then easily add the Mid-Range unit and Network at a later date to form a three-way B-302A System. The totally-enclosed box is built of ¾-inch plywood, glued and screwed for rigidity to prevent cabinet resonance. A heavy lining of acoustical-damping materials, plus a free-hanging curtain of the same, prevent peaking from cavity resonance. Available in Walnut, Mahogany or Birch veneer, with harmonizing wrap-around grille cloth.

### E-300

Dimensions	— 24" wide, 30½" high, 17" deep.
Enclosed Volume	— about 5 cubic feet.
Weight	— without speakers, 42 pounds.
Accommodates	— B-207A, B-209, N-101 Network.

Complete instructions are available for those who wish to build the E-300 Enclosure themselves.



E-300

## B-305

This medium-size three-way System is the first choice of music lovers who are denied, by limitations of cost and space, the magnificent perfection of the Bozak B-310. The bass has full, robust, true-pitch power down to 35 cycles—the "transparent" middle frequencies are tailored faithfully to the bass and retain the individuality of every instrument through complex passages for full orchestra—and the sweet, non-metallic highs add natural accents to the music, without the dominating shrillness often associated with so-called, "high fidelity". The clean, typically-Bozak balance, perfect transients, wide-range high efficiency from the deep bass to the highest treble, inaudible distortion, and a full 120" of useful listening area, combine for superb fidelity and listening ease with an amplifier of 30 Watts or more in average-size listening rooms. The distinctive, yet tasteful, styling of the cabinet goes well with contemporary or traditional interiors.

The B-305 is formed from two B-207A Coaxial units, a 16-ohm B-209, and an N-102 Network giving 6-db-per-octave crossovers at 800 and 2500 cycles. The three ranges blend smoothly, with perfect phasing and freedom from "ringing" and image distortion. 700 square inches of speaker panel, backed by an acoustically-lined infinite-baffle enclosure of eight cubic feet with heavy cross-bracing and an acoustical curtain, give a broad, resonance-free source for the sound. The rugged, tasteful cabinet is of ¾-inch plywood with Walnut, Mahogany or Birch veneer and harmonizing grille cloth. For mounting in a wall or suitable existing infinite-baffle enclosure, this system is also available on a ¾-inch fir-plywood panel as the P-305P.

Response	— 35 to 16,000 cycles; useful beyond 20,000.	Dimensions	— 36½" wide, 32" high, 18½" deep.
Impedance	— 16 ohms.	Weight	— 110 pounds
Power Rating	— 30 Watts.	Equipment	— two B-207A, one 16 ohm B-209, N-102 Network.
		Complement	



B-305

# Systems

Bozak Speaker Systems are formed by the combination, in multiples, of three basic drivers, each designed specifically for its particular function: the B-199A Bass, the B-209 Mid-Range, and the B-200X Treble Speakers. When mounted in an infinite baffle, such as a rigid, acoustically-lined, totally-enclosed box... with true wide-range low-distortion program material and powered by equipment of a quality equal to its own... a Bozak Speaker System is admittedly unchallenged for the closeness with which its performance approaches absolute realism.

There is a Bozak Speaker System for any listening room and listening level. Since they do not become obsolete, and actually improve with age and use, Bozak Speaker Systems can be enlarged in realism and power without the sacrifice of existing speakers. Bozak Speakers, dollar-for-dollar, are the purest voice possible for a fine music system... you can listen for hours with growing enjoyment and without a trace of listening fatigue. Among experienced listeners, accustomed to the sound of "live" music, the name Bozak has come to mean

*The Very Best in Sound.*

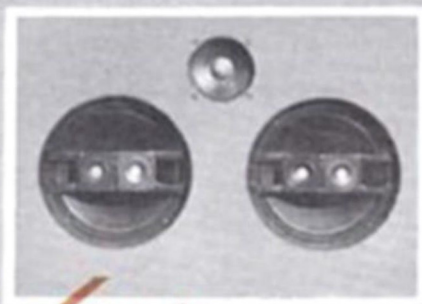
## B-302A

This three-way system is formed by the addition of a Bozak 8-ohm B-209 Mid-Range Speaker to the B-207A Coaxial, connected through a N-101 Crossover Network. It makes a compact, attractive package delivering a quality of sound far beyond the expectation of its size and price. Mounted in an E-300 or larger infinite-baffle enclosure, the B-302A System is wide and balanced from 40 to beyond 16,000 cycles. There is plenty of "bottom," the middles are crystal-clear and the highs well-mannered. Distortions are vanishingly-low, transient response practically perfect. With an amplifier of 20 Watts or more it is the ideal speaker system for the small listening room—or, in pairs, for binaural programs from AM-FM radio, or two-channel discs or tapes. The N-101 Network gives crossovers of 6 db per octave at 800 and 2500 cycles. The B-302A can be assembled from separate components, for mounting in a totally-enclosed box of 5 cubic feet or more; or it can be purchased ready-assembled with the N-101 Network on a panel, ready for installation in a wall or suitable totally-enclosed cabinet: on a panel it is designated model P-302AP.

**Enclosure** — Infinite baffle, minimum 5 cubic feet; optimum 9 cubic feet.  
**Equipment Complement** — One B-207A, one 8-ohm B-209, one N-101 Network

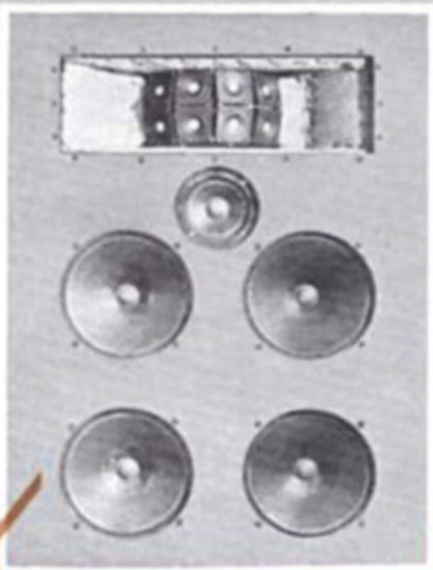
## Panel-Mounted P-305P

**Dimensions** — 34½" x 24" x ¾" fir plywood.  
**Weight** — 45 pounds.  
 Other specifications same as B-305.



## Panel-Mounted P-310P

**Dimensions** — 36" x 48" x 1½" fir plywood.  
**Weight** — 93 pounds.  
 Other specifications same as B-310.



## B-310

In the B-310, the potentialities of the Bozak Loudspeakers are realized to such an outstanding degree that the instrument is described as the supreme accomplishment to date in the art of Speaker-System design and craftsmanship. With amplifiers of 50 Watts or more, the B-310 achieves the closest approach to reality yet experienced in the reproduction of sound.

Four B-199A Bass Speakers, one 8-ohm B-209 Mid-Range, and an 8-unit B-200XA Tweeter Array, crossing over 6 db per octave at 400 and 2500 cycles with an N-104 Network, recreate the entire audible spectrum from the subsonic "feel" of the organ's lowest pedal notes to the ultrasonic shimmerings of the triangle. Its power-handling capacity encompasses, with outstanding smoothness, a dynamic range from the merest whisper of a single violin string to the shattering crescendo of a full chorus and orchestra—with every tone in its true perspective and most subtle shadings. The B-310 is not "spectacular"—because it possesses, to the highest degree, the vital quality of realism. Its efficiency is high over the widest usable range of frequencies available today, its listening area a full 180°. From below 28 cycles to beyond 20,000, distortion is almost unmeasurable, transient response outstanding, and balance true to nature.

The 16-cubic-foot infinite-baffle enclosure is heavily cross-braced, and lined and curtained with acoustical-damping material, so that it is free of cabinet and cavity resonance to preserve the clean bass and near-perfect transient response inherent in the speakers. Bass and Mid-Range drivers are mounted on a 1½" panel, while the Tweeter Array is isolated from the main cavity. Finished in Mahogany veneer with harmonizing grille cloth, the clean lines of the B-310 cloak its massive proportions. For those who wish to install the B-310 System in a wall or other suitable infinite baffle, the P-310P is available completely assembled on a 1½-inch plywood panel.



B-310

**Response** — 28 to 16,000 cycles, useful below and beyond.  
**Impedance** — 8 ohms.  
**Power Rating** — 50 Watts, peaks to 100.

**Dimensions** — 36" wide, 53" high, 19" deep.  
**Weight** — 210 pounds.  
**Equipment Complement** — Four B-199A, one 8-ohm B-209, one B-200XA, N-104 Network.

# BOZAK

# Loudspeakers

The "building-block" Bozaks are *one line of one quality*, each unit designed to do a specific job perfectly and in concert with the others. They are completely compatible with each other and combine easily into various Speaker Systems that, properly mounted and powered, are unchallenged for realism and listening ease.

Many Bozak features can be found in no other speakers; others, which we pioneered, are now being imitated. *But the quality of Bozak Sound is nowhere duplicated.* The heart of any loudspeaker is its cone. We, alone among makers of fine speakers, perform in our own plant every step from the compounding of the special felted-paper pulp to final assembly into the rugged cast-aluminum frames, for it is only thus that the critical requirements of our exclusive variable-density diaphragms can be met.

Transient Response of all three types is practically perfect. Frequency Response is smooth, and balanced naturally between the three ranges. All units are direct-radiating, with equal velocities of sound propagation: Mounted in the same plane, with infinite baffling and Bozak "slow" (6-db-per-octave) Crossover Networks, they have equal sound-path lengths, broad overlaps, perfect phasing, freedom from transient distortion, and extraordinarily high efficiency over the widest usable range of frequencies available today. The unique realism and listening ease of the Bozaks mean growing pleasure through the years with

*The Very Best in Sound*

## B-200X

Treble Speaker for use in Bozak two-way and three-way Systems



The dual-unit B-200X is a direct-radiating paper-and-aluminum-cone speaker. Its exclusive patented rubber damping affords a sweet, velvet-smooth response which is a pleasure to ears that cannot tolerate the shrill, piercing highs associated with so many so-called "high-fidelity" systems. The angled position of the units gives a high degree of realism over a wide listening area. Use in multiples increases power-handling capacity.

- Response — 2000 to 16,000 cycles, useful to 20,000.
- Horizontal Coverage — 120° at 10 kc.
- Impedance — 8 Ohms (two 16-ohm sections in parallel).
- Power Rating — For use in 15-Watt Systems.\*\*
- Field — Two 8-ounce Alnico-V Magnets.
- Weight — 2 3/4 pounds net.
- Dimensions — 6 1/2" wide, 3 1/8" high, 2 1/2" deep.
- Mounting — Coaxially on B-199A, or in separate chamber.

## B-209

Mid-Range Speaker for use in Bozak three-way Systems



This is the only available speaker designed specifically for the range that gives intelligibility to speech and character to musical tones. The B-209 owes its crystal clarity to its variable-density diaphragm, and to the critical damping achieved through rubberized-cloth edge suspension and the foam-rubber abutment under the dome. Used with the B-199A, the B-209 retains the full subtlety and individuality of all sounds.

- Response — 200 to 3500 cycles.
- Crossover† — 400 (or 800) and 2500 cycles.
- Impedance — 8 or 16 ohms.
- Power Rating — For use in 50-Watt Systems.
- Resonance — None — Acoustically.
- Voice Coil — 1 1/2" diameter, ribbon wire on aluminum form.
- Field — 1 1/2-pound Alnico-V Magnet.
- Weight — 6 1/2 pounds net.
- Dimensions — 6 1/2" diameter, 3 1/2" deep.
- Mounting — In woofer cavity or in 1-cu-ft lined enclosure; 5 1/2"-diameter cutout.

## B-199A

Bass Speaker for use in Bozak two-way and three-way Systems



This outstanding driver, noted for its clean, powerful and efficient low-frequency response, is the result of correct resolution of diaphragm area, stiffness, mass, displacement, and built-in damping. The exclusive variable-density cone, overhanging voice coil, and powerful Alnico-V magnet, built into a rugged cast-aluminum frame, enable it to outperform the largest commercial woofers. For increased power, bass range and realism, they are used in multiples. Infinite baffling is essential to preserve its robustness, smoothness, celebrated frequency and transient response, and unequalled low-frequency power.

- Response — One driver down to 40 cycles; two, 35 cycles; four to 28 cycles or lower. All to 4500 cycles with gradual rolloff.
- Impedance — 8 Ohms (16 Ohms on special order).
- Power Rating — 15 Watts.\*\*
- Resonance — Below 40 cycles in free air.
- Voice Coil — Ribbon Wire on 1 1/2"-diameter aluminum form.
- Field — 1 1/2-pound Alnico-V Magnet.
- Weight — 8 pounds net.
- Dimensions — 12 1/2" diameter, 5 3/8" deep.
- Mounting — 11"-diameter cutout.
- Enclosure — Infinite Baffle, lined acoustically and cross-braced. Optimum volume for one driver, 9 cu. ft., minimum 5 cu. ft.

## B-200XA

Tweeter Array for use in Bozak three-way Systems



This is the most advanced and distinctive high-frequency unit available — tomorrow's tweeter *here today*. Composed of four B-200X dual tweeters positioned for the greatest horizontal and vertical coverage, even with center-wall placement, the B-200XA gives room-wide distribution of sweet, natural velvet-smooth highs for complete realism and listening ease.

- Response — 1500 to 16,000 cycles; useful beyond 20,000.
- Horizontal Coverage — 180° at 15 kc.
- Impedance — 8 Ohms.
- Power Rating — For 50-Watt Systems
- Field — Eight 8-ounce Alnico-V Magnets.
- Weight — 11 1/4 pounds.
- Dimensions — 12 1/2" wide, 6 1/2" high, 5" deep.
- Mounting — Outside woofer cavity.

All statements about the quality of Bozak Loudspeakers and Speaker Systems are predicated on their being mounted in a rigid, resonance-free infinite baffle of adequate size, powered by equipment of the highest quality, and used with true wide-range, low-distortion program material.

# BOZAK

- \* — US Patent No. 2,563,452
- \*\* — Use in Multiples for greater power and realism.
- † — Recommended Values

Designed & Manufactured by

**The R. T. BOZAK MFG. CO.**

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Export Office: Manufacturers' Export Company, Hicksville, New York

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