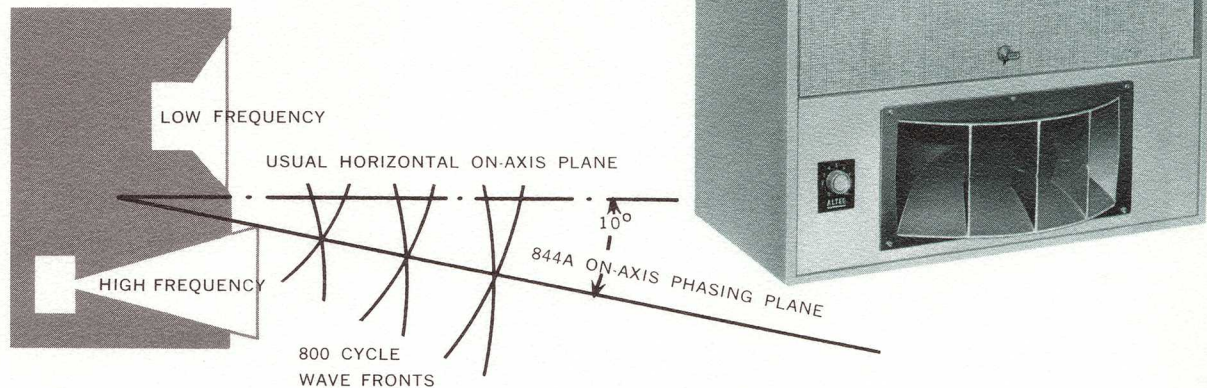


Monitor / Playback Speaker System

844A SPEAKER SYSTEM

844A



Features:

- Complete Two-Way Monitor Speaker System
- Recording and Broadcast PLAYBACK Quality
- From 30 to 22,000 cycle range
- Wide Angle 40° x 90° Distribution
- 10° Downward Projection Angle When Mounted Flat Against Wall
- Compact
- Acoustically Engineered
- Two LF Speakers
- Heavy Cast Aluminum Sectoral HF Horn
- Compression HF Driver
- High Efficiency
- Field Replaceable HF Diaphragm and Voice Coil
- Distortion-Free Reproduction
- Low 800 Cycle Crossover Frequency
- Dual Full-Section Crossover Network
- Adjustable HF Shelving Control

MONITORING SPEAKER SYSTEMS FOR: RECORDING STUDIOS BROADCASTING TELECASTING STATIONS MOTION PICTURE AND AUDIO VISUAL STUDIOS

The unusual new Altec 844A Monitor/Playback speaker system has been created to fulfill requests from the recording and broadcast industry for a compact wall-type monitor comparable with the famous Altec "Voice of the Theatre" series. An exceptional advantage lies in a new concept of enclosure design. When the 844A is mounted flush to the wall above control room observation windows, it provides a ten-degree downward in-phase projection angle. No special tilting or "aiming" of the enclosure is necessary; a feature which permits fast, simple installation.

Engineered to conform to rigid laboratory specifications, the 844A meets the "no compromise" requirements of the professional sound engineer and, utilizing Altec's years of experience in sound reproduction backed with proficient production principles, the 844A is priced within the financial ability of the modestly budgeted studio or broadcasting station.

The professional Playback quality of the Altec 844A Monitor Speaker System makes it equally suitable for nightclubs, discotheques, small auditoriums, restaurants, or similar establishments employing public address or sound reinforcement systems that require the highest quality of sound reproduction.

The 844A includes two special Altec 414-type, low frequency speakers which produce a uniform response from 30 cycles to the crossover frequency of 800 cycles. Utilizing heavy Alnico V permanent magnets, these outstanding 12-inch transducers contain edge-wound copper ribbon voice coils of the largest practical diameter and exceptionally compliant cone suspension; features which combine the advantages of long-term operation with unparalleled response throughout the entire bass frequency range. Rear-loading for these low frequency speakers is provided by the exacting bass-reflex enclosure.

An Altec 806A high frequency compression driver coupled to a cast aluminum sectoral horn reproduces from the crossover frequency of 800 cycles up to 22,000 cycles, furnishing the distortion-free mid- and high-frequency reproduction that is required by all major recording and broadcasting studios. The driver has a voice coil of notably large diameter (1 3/4") edge-wound with aluminum ribbon and coupled to a large 2 1/4" aluminum diaphragm which has tangential compliance. A mechanical phasing plug (pole piece) with two exponential acoustic slots is used to guarantee a proper phase relationship between the sound emanating from the center and outer edge of the diaphragm and the voice coil assembly, assuring maximum high frequency reproduction with remarkably uniform response.

The dual full-section dividing network provides frequency division and a variable rotary control mounted on the front of the cabinet permits high frequency shelving from 0 to -10 db. Encased in a compact but efficient bass-reflex cabinet designed for wall-mounting, the Altec 844A Monitor measures 31" wide by 24" high by 16" deep, and is finished in a light studio gray.



A Division of Ling Altec, Inc.

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New York

RECORDING &

BROADCASTING

EQUIPMENT

SPECIFICATIONS

Power:	30 watts
Frequency Response:	From 30 to 22,000 cycles
Impedance:	Designed to operate from 8 to 16 ohms
Pressure Sensitivity:	99 db SPL at 4 ft. from 1 watt*, or 114 db SPL at 4 ft. from 30 watts
Horizontal Distribution:	90°
Vertical Distribution:**	40°
Crossover Network:	800 cycles, dual full-section (furnished with speaker)
Cone Resonance:	30 cycles
Voice Coil Diameter:	3 inches
Magnets —	
Type:	Alnico V
Weight:	(HF) 0.81 lbs (LF) 1.8 lbs each
Structure Weight:	(HF) 5.63 lbs (LF) 9.44 lbs each
Flux:	(HF) 13,000 Gauss (LF) 10,000 Gauss
Dimensions:	31" W x 24" H x 16" D
Finish:	Gray lacquer
Weight:	90 pounds

*measured 4 feet from mouth of horn over warble frequency range 600 - 2,500 cps. (Ref: 0.0002 dynes/cm² for 1 watt input.) EIA rating of 52 db at 30 ft. from 1 milliwatt.

**with 10° downward in-phase projection angle.

ARCHITECTS AND ENGINEERS SPECIFICATIONS

The speaker system shall be of the two-way type. The frequency response shall be uniform from below 30 to above 22,000 cycles per second.

The low-frequency section shall employ two (2) 12-inch, cone-type loudspeakers mounted within an enclosure whereby the rear loading shall be provided by a bass-reflex design principle. The low-frequency section shall reproduce from 30 to a crossover frequency of 800 cycles per second. The voice coil shall be approximately 3" in diameter and shall be of edge-wound copper ribbon operating in a magnetic field of at least 10,000 Gauss derived from an Alnico V magnet weighing 1.8 pounds minimum. The free-air resonance of the speaker shall not be greater than 30 cycles, and it shall have a frequency response capability ranging from 30 to 4,000 cycles.

The high frequency section shall consist of a compression-type driver coupled to a straight cast aluminum sectoral horn with exponential expansion and straight throat. Horns employing bends, or of non-metallic construction shall be unacceptable under this specification; nor shall folded or re-entrant type horns be acceptable because of their inherent tendency toward phase shift. The horn shall provide uniform coverage over a horizontal angle of 90° and a vertical angle of 40°, and shall have a 10° downward in-phase projection angle. It shall produce a uniform sound pressure level of 114 db at 30 watts when coupled to the high-frequency driver. The driver shall utilize a 2¼" diameter aluminum diaphragm having tangential compliance, coupled to a voice coil of edge-wound aluminum ribbon having a diameter of 1¾". The voice coil gap shall have a flux density of at least 13,000 Gauss, produced by a magnet structure having a weight of 5.63 pounds. A machined phasing plug, which also serves as the pole piece, having two exponential acoustic slots, shall be utilized to provide the proper phase relationship between the sound emanating from the center and edges of the diaphragm and voice coil assembly, thus insuring maximum high frequency reproduction while maintaining a smooth overall response. The entire diaphragm and voice coil assembly shall be field replaceable without special tools or skills. This shall be interpreted to mean that the speaker shall incorporate self-centering dowels to insure proper spacing and alignment of the diaphragm and voice coil assembly. The frequency response of the high-frequency driver shall be uniform over the range of 800 to 22,000 cycles.

Proper phasing of the high and low frequency elements shall be provided at all frequencies. The crossover between the two sections shall be at 800 cycles derived by means of a dual full-section dividing network having variable high frequency shelving from 0 to -10 db.

The loudspeaker system shall have a continuous power rating of 30 watts, and shall be designed to operate from 8 or 16 ohms impedance. The dimensions of the system shall not exceed 31 inches in width, 24 inches in height, and 16 inches in depth; and shall be encased in a cabinet designed for wall mounting and having a gray lacquer finish.

Any loudspeaker system not meeting these requirements shall not be acceptable under this specification.

The speaker system shall be the Altec Lansing model 844A.

NOTICE

We recommend that you obtain your Altec products from factory trained authorized Altec Sound Contractors and Distributors. This will assure you of proper installation, a continuing source of knowledgeable advice, service, and quick warranty protection.