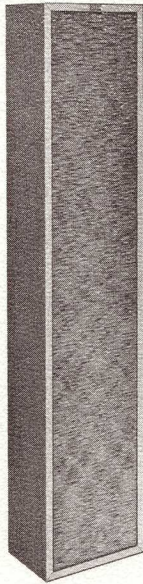


# Column Loudspeaker Systems

839A  
840A

839A



840A



## FEATURES:

- Directivity of sound
- Compact size
- Ease of installation
- High power handling capacity
- Unobtrusive in appearance
- Moderately priced
- Wide horizontal distribution angle
- Uses highest quality component loudspeakers of proven performance

The 839A and 840A are built around well-known ALTEC 8 inch cone speakers in a pre-assembled and adjusted column configuration carefully engineered for use in churches, meeting rooms, small auditoria, etc.

Model 840A incorporates six standard ALTEC 403A speakers which have individual frequency ratings of 70 to 11,000 cycles. The deluxe 839A column system was designed for higher power and wider frequency range by using the ALTEC 755C speaker. The 755C with its unique flat cone was originally designed by the Bell Telephone Laboratories and is famous for its smoothness of response and uniform wide angle of distribution. It has an individual frequency rating of 40 to 13,000 cycles.

Cabinets are of unfinished white birch for ease of finishing to blend with any color. Heavy construction permits security of mounting and prevents stray cabinet resonances. The back cover is removable to facilitate ease of installation and service of the individual units in the event of damage.

The "in-line" or column loudspeaker arrangement exercises a unique control over the vertical distribution of sound to provide an extremely narrow angle in the vertical plane. This pattern will reduce the projection of sound into very reverberant ceiling areas and, when the column is located above or below the microphone, tends to reduce certain critical conditions of feedback. The column design exercises no control over the horizontal distribution pattern, which pattern will be essentially the same as the angle of distribution of the individual cone speaker of which it is built.


Other features of the column loudspeaker system are its compact size, light weight, ease of installation, and the fact that its simple form factor often can be unobtrusively inserted into the decor of elaborately styled auditoria or listening areas where higher quality 2-way systems with multicellular or sectoral horns cannot be used because of size, appearance or installation difficulties.

Since the angles of vertical and of horizontal sound distribution of the column type loudspeaker vary with the frequency being reproduced, ALTEC columns are carefully measured at several frequencies to provide the sound engineer with useful information for the most effective layout of a system of columns. This is in contrast to the published specifications of many commercial columns which provide an angle of distribution without reference to frequency and can be misleading.

The frequency response of the column type speaker and its horizontal dispersion can be no better than that of the individual speakers it uses. For these reasons and because of its better bass response, the 839A system incorporating the 755C speaker is recommended for maximum realization of the capabilities of the column system in highly reverberant areas or where extreme cases of feedback are encountered.

Careful evaluation of the frequency response of the particular cone speakers used in any column as well as verification of angles of horizontal and vertical distribution of the column at various frequencies should always be made to forestall unsatisfactory results with this type of loudspeaker system.



A Division of  Ling Altec, Inc.

1515 S. Manchester Ave., Anaheim, Calif.  
New York

# ALTEC COLUMN SPEAKERS

## SPECIFICATIONS

### MODEL 839A COLUMN LOUDSPEAKER SYSTEM

**Power Rating:** 90 watts  
**Impedance:** 16 ohms  
**Pressure Sensitivity:** 103.5 db Sound Pressure Level at 4 ft. from 1 watt (or 123 db for full power rating of 90 watts), equivalent to E.I.A. rating of 56.5 db at 30 ft. from 1 milliwatt.

**Distribution Pattern:**  
(varies with frequency)  
**Horizontal Distribution:** Wide angle 90°. (120° and more at 3000 cps and lower).  
**Vertical Distribution:** Narrow angle 7.5°. (30° and more at 700 cps and lower).

**Frequency Response:** Essentially same as individual loudspeaker in array. (755C, 40-13,000 cycles)

**Dimensions:** 53¾" H.  
11½" W.  
7¼" D.

**Finish:** Unfinished white birch  
**Weight:** 59 Pounds

### MODEL 840A COLUMN LOUDSPEAKER SYSTEM

**Power Rating:** 72 watts  
**Impedance:** 16 ohms  
**Pressure Sensitivity:** 107 db Sound Pressure Level at 4 ft. from 1 watt (or 126 db for full power rating of 72 watts), equivalent to E.I.A. rating of 60 db at 30 ft. from 1 milliwatt.

**Distribution Pattern:**  
(varies with frequency)  
**Horizontal Distribution:** Wide angle 60°. (120° and more at 2000 cps and lower).  
**Vertical Distribution:** Narrow angle 7.5°. (30° and more at 700 cps and lower).

**Frequency Response:** Essentially same as individual loudspeaker in array. (403A, 70-11,000 cycles)

**Dimensions:** 53¾" H.  
11½" W.  
7¼" D.

**Finish:** Unfinished white birch  
**Weight:** 52 Pounds

## ARCHITECTS AND ENGINEERS SPECIFICATIONS

### 839A

The loudspeaker system shall be of the column type employing six 8-inch cone type radiators and the pressure sensitivity of the system shall be at least 103.5 db SPL at 4 feet from 1 watt input (or 123 db for full power rating of 90 watts), equivalent to E.I.A. rating of 56.5 db at 30 feet from 1 milliwatt.

The horizontal sound distribution pattern shall be 90° (120° and more at 3,000 cycles and lower). The vertical angle shall be 7.5° (30° and more at 700 cycles and lower). Column loudspeakers having published angles of distribution (horizontal angles in excess of 90° and vertical angles in excess of 7.5°) without reference to frequency at which the angles apply shall not be acceptable under this specification.

The rated frequency response of the individual loudspeakers in the array shall be from 40-13,000 cps and the continuous power rating shall be at least 15 watts for the individual loudspeaker and 90 watts for the complete system.

The individual component loudspeakers shall be Altec 755C, each having a voice coil 2-inches in diameter operating in a magnetic field of at least 9,000 gauss derived from an Indox V magnet. Individual loudspeakers that do not have high compliance linen surrounds and Indox V magnets shall not be acceptable under this specification.

The impedance of the entire column system shall be 16 ohms. All component loudspeakers in the system shall be built of heavy steel frames to prevent distortion and shall be completely sealed against dirt and magnetic dust, by the incorporation of both front and rear seals and the individual loudspeakers shall not exceed 2¼" in depth. The loudspeaker array shall be assembled into an unfinished white Birch cabinet capable of being finished in any specified color. The cabinet shall include no less than 515 square inches of sound absorbent material Type PF 612 Fiberglass properly affixed to the front and rear surfaces of the enclosure. The cabinet shall measure 53¾" H x 11½" W x 7¼" D and the net weight of the system shall not be less than 59 lbs. Columns using individual component cone loudspeakers not actually manufactured by the column system manufacturer, or column loudspeaker systems which are sealed to prevent internal examination and/or maintenance, shall not be acceptable under this specification. The column loudspeaker system shall be Altec Lansing Model 839A.

### 840A

The loudspeaker system shall be of the column type employing six 8-inch cone type radiators and the pressure sensitivity of the system shall be at least 107 db SPL at 4 feet from 1 watt input (or 126 db for full power rating of 72 watts), equivalent to E.I.A. rating of 60 db at 30 feet from 1 milliwatt.

The horizontal sound distribution pattern shall be 60° (120° and more at 2,000 cycles and lower). The vertical angle shall be 7.5° (30° and more at 700 cycles and lower). Column loudspeakers having published angles of distribution (horizontal angles in excess of 60° and vertical angles in excess of 7.5°) without reference to frequency at which angles apply shall not be acceptable under this specification.

The rated frequency response of the individual loudspeaker used in the array shall be from 70-11,000 cps and the continuous power rating shall be at least 12 watts for the individual loudspeaker and 72 watts for the complete system.

The individual component loudspeakers shall be Altec 403A, each having a voice coil operating in a magnetic field of at least 9,000 gauss derived from an Alnico V magnet and column systems not using Alnico magnets shall not be acceptable under this specification.

The impedance of the entire column system shall be 16 ohms. All component loudspeakers of the system shall be built on heavy steel frames to prevent distortion and shall be completely sealed against dirt and magnetic dust by the incorporation of both front and rear seals and the individual loudspeakers shall measure approximately 4 inches in depth. The loudspeaker array shall be assembled into an unfinished cabinet of white Birch, capable of being finished in any specified color. The cabinet shall include no less than 515 square inches of sound absorbent material Type PF-612 Fiberglass, properly affixed to the front and rear surfaces of the enclosure. The cabinet shall measure 53¾" H x 11½" W x 7¼" D and the net weight of the system shall not be less than 52 lbs. Individual loudspeakers of unknown origin or column loudspeaker systems which are sealed to prevent internal examination and/or maintenance shall not be acceptable under this specification.

The column loudspeaker system shall be Altec Lansing Model 840A.

**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.