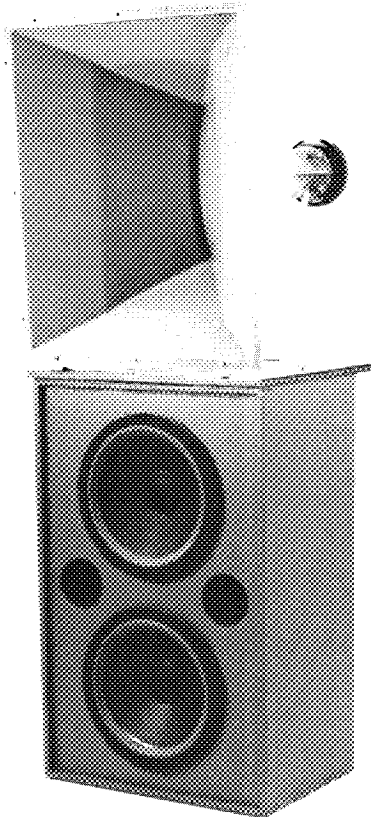




A10/MR945A LOUDSPEAKER SYSTEM



DESCRIPTION

The **A10/MR945A** is the newest addition to the famous Voice of the Theatre® loudspeaker system family. The **A10/MR945A** System has been approved by THX® for behind the screen applications. It consists of a low frequency system using two 16 inch (40.6 cm) long-excursion woofers in a 8.0 ft³ (.23 cubic meters) optimally tuned Thiele-Small enclosure, which provides low frequency response from 45 Hz—500 Hz, the recommended crossover frequency.

The high frequency system consists of a 1.4 inch (3.6 cm) throat compression driver coupled to a Mantaray® constant directivity horn which gives excellent directivity control over the full frequency range from 500 Hz to 13 kHz. The **A10/MR945A** is intended to be used with an electronic dividing network with a suggested crossover of 500 Hz.

The connections to the drivers are made using screw terminals. The enclosure is constructed of 3/4 inch (1.9 cm) thick particle board with the exception of the front baffle which is 3/4 inch (1.9 cm) thick plywood for maximum strength. Threaded insert mounting points are provided on the top of the enclosure to conveniently attach the high frequency section of the system. The **A10/MR945A** reproduces sound in a predictable, wide angle pattern for maximum uniformity of tonal quality at all listening positions. It provides smooth response and excellent linearity throughout the audio band.

The **A10/MR945A** will deliver the high output full range sound that is required for theatres, hotels, or in any large room.

NOTE: THX® is a registered trademark of Lucasfilms Ltd.

SPECIFICATIONS

System Type:	Two-Way, Vented, full range loudspeaker system
Pressure Sensitivity:	HF: 112 dB SPL, 500 Hz - 3.15 kHz LF: 97 dB SPL, 45 Hz - 500 Hz, (1W, 1m, re: 20 μ Pa, see Note 1)
Frequency Response:	45 Hz - 13 kHz (see Figure 1, Note 2)
Power Handling:	HF: 40 watts, 500 Hz - 5 kHz, AES Method 160 watts, 500 Hz - 5 kHz, peak power LF: 500 watts, 45 Hz - 500 Hz, 2000 watts, 45 Hz - 500 Hz, peak power (See Note 3)
Maximum Long-Term Output:	HF: 128 dB SPL 134 dB SPL Peak LF: 122 dB SPL 128 dB SPL Peak (1m, re: 20 μ Pa, see Note 4)
Impedance:	HF: 8 Ω nominal LF: 4 Ω nominal
Distribution Pattern:	90° horizontally by 40° vertically
Components:	8254 low frequency loudspeaker system, 906-8A type high frequency driver, MR945A type high frequency horn, 1233A horn mounting system, 30281 horn mounting board

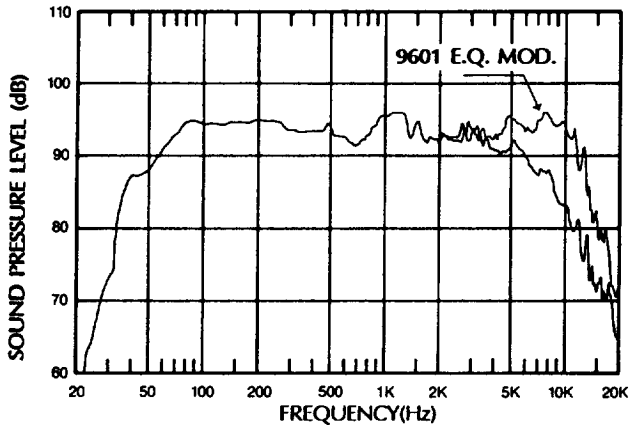


Figure 1. Frequency Response (See Note 2)

Crossover Frequency:	Recommended at 500 Hz with Altec Lansing 1631A active crossover network (18 dB/octave slope, third-order Butterworth type)
Enclosure:	Vented type, for optimum response, built of 3/4 in (1.9 cm) particle board with appropriate bracing, lined with glass wool, includes mounting points for H.F. section. Screw terminals for both H.F. and L.F. components
Input Connection:	
Replacement H.F. Diaphragm:	Model 25626
Replacement L.F. Recone Kit:	Model R3154
Dimensions:	73 1/2 inch (187.4 cm) high 26 1/2 inch (67.6 cm) wide 37 inch (94.4 cm) deep 154 lb. (70 kg)
New Weight:	154 lb. (70 kg)
Finish:	Theatre gray spatter finish paint
Accessories:	Altec Lansing 1631A active crossover network, 9601A equalization module, 15581 dual channel crossover module (24 dB/octave slope 4th order Linkwitz-Riley) used in conjunction with the Altec Anniversary Series Power Amplifiers.

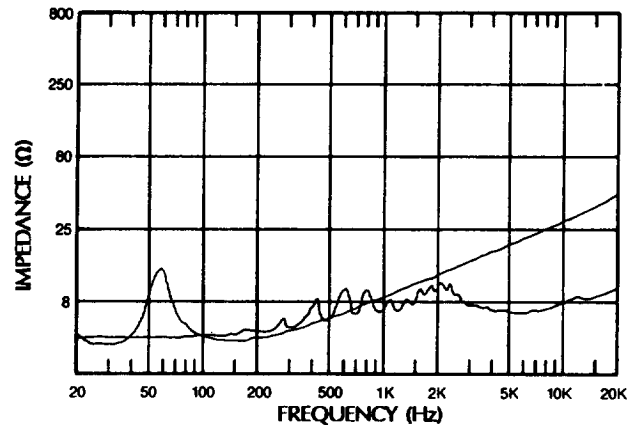


Figure 2. Magnitude of Impedance

NOTES ON MEASUREMENT CONDITIONS:

1. Pink noise signal, one watt calculated using E^2/Z_{min} , 3.16 meter measurement distance referred to one meter.
2. On axis, one watt calculated using E^2/Z_{min} , 3.16 meter measurement distance referred to one meter, low frequencies corrected for anechoic chamber error. System tested with the Altec Lansing 1631A active crossover network.
3. The AES method for individual drivers uses a test signal of pink

noise with 6 dB crest factor over a one decade bandwidth with power calculated using E^2/Z_{min} , for two hours. Peak power is defined as 6 dB greater than the AES rating using a pink noise signal with 6 dB crest factor.

4. This measurement is made under the same conditions as pressure sensitivity, but at rated power, and takes into account any power compression effects due to non-linearities in the system.

ARCHITECTS AND ENGINEERS SPECIFICATIONS

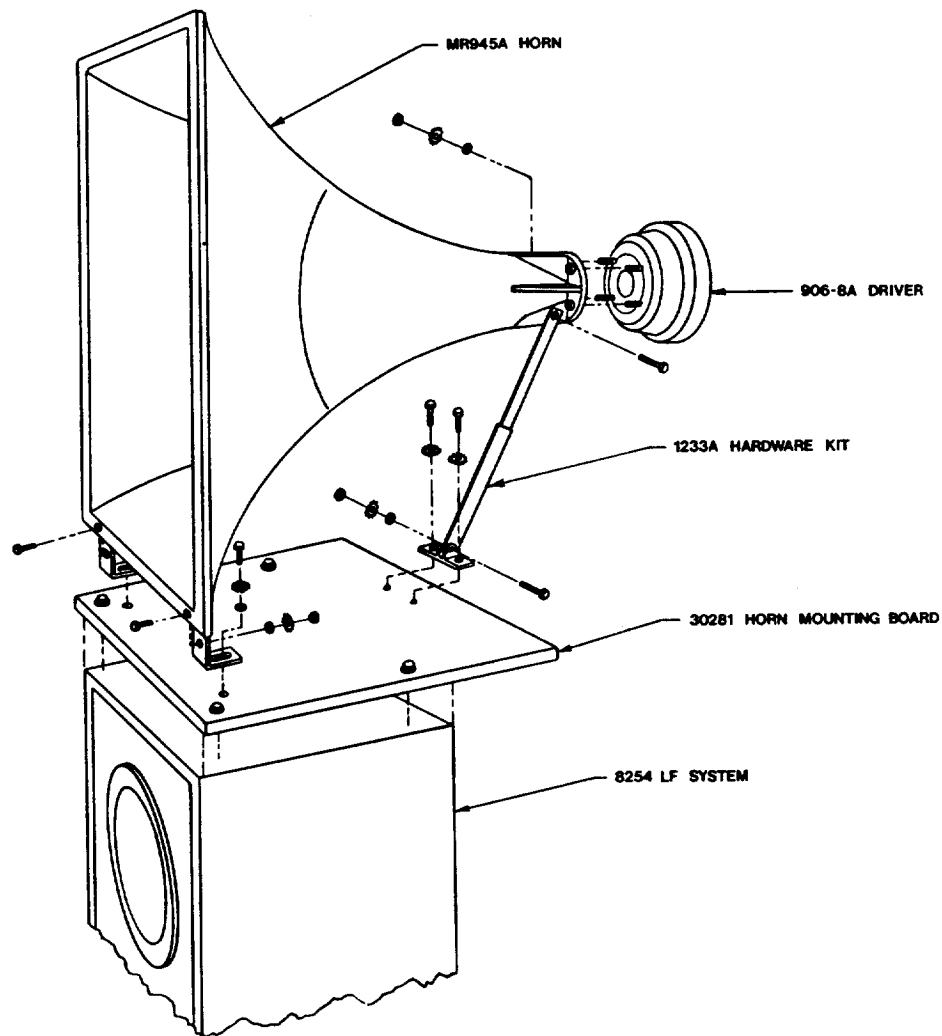
The loudspeaker system shall be of the two-way bass reflex type, consisting of a low frequency system which utilizes two sixteen inch (40.6 cm) low frequency drivers in a 8.0 ft³ enclosure, and a 1.4 inch (3.6 cm) throat high frequency compression driver coupled to a Mantaray[®] constant directivity horn. The high frequency section shall be mounted above the low frequency cabinet which shall be constructed of heavily braced 3/4 inch (1.9cm) particle board, damped with glass wool. The loudspeaker shall meet the following performance criteria. Power handling; low frequency, 500 watts of pink noise with 6 dB crest factor, band limited from 45 Hz — 400 Hz; high frequency, 40 watts of pink noise with 6 dB crest factor, band limited from 500 Hz — 5k Hz. Frequency response, smooth and uniformly usable at high levels from 45 Hz to 13 kHz. Pressure sensitivity; low frequency, 97 dB, one watt, 45 Hz to 500 kHz, at one meter on axis; high frequency, 102 dB, one watt, 500 Hz — 3.15 kHz, at one meter on axis. Impedance; low frequency, 4 Ω nominal; high frequency, 8 Ω nominal. Distribution pattern, 90° horizontally x 40° vertically. The dimensions of the assembled system shall be 73.5 inches (187.4 cm) high by 26.5 inches (67.6 cm) wide by 37 inches (94.4) deep. The loudspeaker system shall weigh 154 lb. (70 kg). The loudspeaker system shall be the Altec Lansing model A10/MR945A.



a Mark IV company

P. O. BOX 26105 • OKLAHOMA CITY, OK • 73126-0105 U.S.A. • TELE: 405/324-5311 • FAX: 405/324-8981

©1989 Altec Lansing Corporation



ASSEMBLY INSTRUCTIONS FOR A10/MR945A

1. Remove the MR945A horn from its box and place it face down (throat up).
2. Remove the 906-8A driver from its box and install studs (provided in box). Place the 906-8A on the throat of the horn.
3. Place a lock washer and nut on the four studs. Finger tighten each nut first, then snugly tighten nuts alternating from one side to another in an "x" pattern until all nuts are snugly tightened.
4. Remove the 8254 system from its box, making sure the enclosure is right-side up with the input panel on the lower right side as you face the speaker cones.
5. There are five hole plugs in the top of the 8254 enclosure. Remove all plugs at this time.
6. Open the 1233A horn mounting kit at this time. Remove the 30281 horn mounting board from its box. The two small slotted L-brackets should be mounted to the top front of the horn mounting board. The base mount and slide brackets should be installed at the rear of the mounting board. (see figure 1.)
7. The horn/driver assembly should be mounted to the 30281

mounting board at this time. This can be done easily by resting the front of the horn on the front L-brackets and resting the 906-8A on an object of similar height.

8. The two front L-brackets should now be attached to the horn with 3/4" screws, flat washers, lock washers and nuts provided.

9. Install the slide bracket by placing a 1 1/4" screw through the hole in the neck of the horn and securing it with a flat washer, lock washer and nut. Everything should be double-checked for tightness.

10. Place the horn and mounting assembly on top of the 8254 and attach it using four 1 3/4" screws, a flat washer and a lock washer. (see figure 1.)

11. All that remains is to connect the system to the amplifier and active crossover network you are using. Be sure not to confuse the high-frequency and low-frequency amplifier outputs when connecting the loudspeakers. Always be sure to check connections for proper phasing.