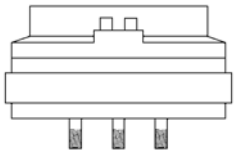
ALTEC LANSING

PROFESSIONAL

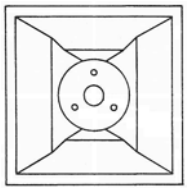
# 399-8B/16B

**1.4" Exit High Frequency Compression Driver**



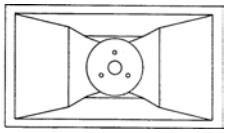
# MR II 564B

**Medium Throw 60° x 40° Mantaray™ 1.4" Throat High Frequency Horn**



# MR II 594B

**Medium Throw 90° x 40° Mantaray™ 1.4" Throat High Frequency Horn**



## FEATURES - THE ALTEC LANSING DIFFERENCE

- Superior Acoustic Output Level
- High Performance 40W AES / 160W Peak Power Handling
- Smooth and Transparent

## 399-8B/16B GENERAL PRODUCT DESCRIPTION

Altec Lansing's 399-8B and 399-16B compact, high frequency, compression drivers have been designed for use in high level sound reinforcement systems where both wide bandwidth and substantial acoustic output level are essential. When used with Altec Lansing Mantaray™ high frequency horns, the energy produced by these drivers can be directed to cover an audience accurately and completely. Their wide range response, when complemented by Altec Lansing low frequency loudspeaker systems, will provide smooth reproduction of speech and music for installations in auditoriums, churches, stadiums, and arenas.

The robust Pascalite diaphragm extends the driver's power handling capability, while maintaining superior high frequency bandwidth. The compact magnetic motor-structure, utilizing a 6.7 lbs. (3.0 kg) ferrite magnet, provides a 2.05 T gap flux density. An exclusive Tangerine™ radial phasing-plug assures a smooth upper range response.

The excellent performance characteristics of these drivers make them the high frequency component of choice for all large sound systems when premium dynamic reproduction is required.

## MR II 564B/594B GENERAL PRODUCT DESCRIPTION

Altec Lansing's MR II 564B and MR II 594B Mantaray™ constant-directivity horns feature efficient mid and high frequency response with proper loading down to 500 Hz, plus excellent directivity control over their respective 60°Horizontal x 40°Vertical and 90°Horizontal x 40°Vertical coverage patterns.

The geometry of the MR II 564B and MR II 594B reduces the problem of high frequency beaming and maintains uniform dispersion at all frequencies within the rated frequency range. Therefore, the same quality sound will be heard by listeners sitting off-axis and on-axis to the MANTARAY™ horn.

Altec Lansing MANTARAY™ horns are constructed of heavy-duty, weather resistant fiberglass. This construction technique results in a horn design that is surprisingly lightweight, yet extremely rugged and non-resonant.

**FREQUENCY RESPONSE** [1, 2]
399-8B/16B with MR II 564B: 500 Hz – 16 kHz
399-8B/16B with MR II 594B: 500 Hz – 16 kHz
(flat 500 Hz – 6 kHz, with 6 dB/octave roll-off to 16 kHz)

**USABLE LOW FREQUENCY LIMIT (-10 dB)** [1, 2]
500 Hz

**USABLE HIGH FREQUENCY LIMIT (-10 dB)** [1, 2]
16 kHz

**SENSITIVITY** [3]
399-8B/16B with MR II 564B: 112 dB SPL
399-8B/16B with MR II 594B: 110 dB SPL

**POWER HANDLING** [4]
≥ 500 Hz: 40 W continuous; 160 W peak
≥ 1 kHz: 80 W continuous; 320 W peak

**PEAK OUTPUT (1 m)** [5]
399-8B/16B with MR II 564B: 135 dB SPL
399-8B/16B with MR II 594B: 133 dB SPL

**COVERAGE ANGLES** [6]
MR II 564B: 60° (horizontal) x 40° (vertical)
MR II 594B: 90° (horizontal) x 40° (vertical)

**DIRECTIVITY FACTOR, Q** [6]
MR II 564B: 23.0
MR II 594B: 12.9

**DIRECTIVITY INDEX, DI** [6]
MR II 564B: 13.6 dB
MR II 594B: 11.1 dB

**IMPEDANCE** [7]
Nominal: 8.0 Ohms or 16.0 Ohms
Minimum: 8.0 Ohms or 16.0 Ohms between 4 kHz and 5 kHz

**HARMONIC DISTORTION** [8]
THD: 1.47%

**INPUT CONNECTIONS**
1 x 2 position barrier strip with 0.250 in. blade type terminals

**FINISH**
Dark gray enamel

**REPLACEMENT HF DIAPHRAGM ASSEMBLY**
25884: 8 Ohms
25885: 16 Ohms

**MOUNTING DATA (DRIVERS)**
Three 3/8-24 studs on a 3.25 in. diameter bolt circle (Altec Lansing Standard)
Four 3/8-24 studs on a 4.75 in. diameter bolt circle

**DIMENSIONS**

| | |
|---|---|
| 399-8B/16B | Diameter: 7.7 in. (196 mm) |
| | Depth: 3.88 in. (99 mm) |
| MR II 564B | Height: 12.75 in. (324 mm) |
| | Width: 12.75 in. (324 mm) |
| | Depth: 12.50 in. (318 mm) |
| MR II 594B | Height: 14.13 in. (359 mm) |
| | Width: 24.00 in. (610 mm) |
| | Depth: 12.00 in. (305 mm) |

NET **WEIGHT**

| | |
|---|---|
| 399-8B/16B: | 20.6 lbs. (9.3 kg) |
| MR II 564B: | 5 lbs. (2.3 kg) |
| MR II 594B: | 5 lbs. (2.3 kg) |

**SHIPPING WEIGHT**

| | |
|---|---|
| 399-8B/16B: | 22 lbs. (10.0 kg) |
| MR II 564B: | 7 lbs. (3.2 kg) |
| MR II 594B: | 7 lbs. (3.2 kg) |

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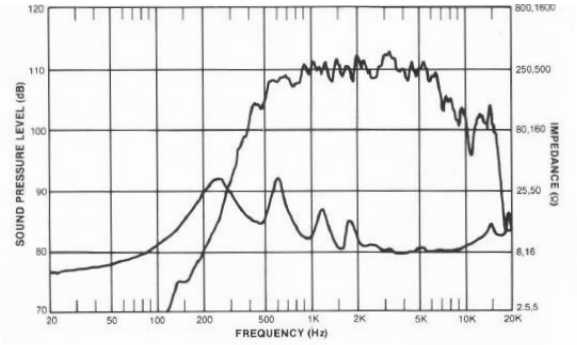
## ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

The motors shall be large format high frequency compression drivers. These drivers shall have an operating bandwidth of 500 Hz – 16 kHz. The minimum power handling capability of the drivers shall be 40 W AES (160 W peak). One driver shall have a minimum impedance of 8 ohms (between 4 kHz and 5 kHz), and the other driver shall have a minimum impedance of 16 ohms (between 4 kHz and 5 kHz). The voice-coil for the drivers shall be an edge-wound, aluminum ribbon, which is 2.83 inches (72 mm) in diameter. These drivers shall have a diaphragm that features an all-metal, Pascalite dome and tangential compliance. The magnetic gap of these drivers shall have a flux density of 2.05 T, resulting from a 6.7 lbs. (3.0 kg) ferrite magnet. A Tangerine™ phasing-plug with thirteen radial acoustic slots shall provide the proper phase relationship between sound emanating from the center and edges of the diaphragm's dome on these drivers. The entire diaphragm and voice-coil assembly for these drivers shall be field replaceable without requiring special tools, because adjustable dowel pins shall allow each voice coil to be precisely centered in the magnetic gap. The driver shall be 7.7 inches (196 mm) in diameter by 3.88 inches (99 mm) deep, excluding the one inch (25.4 mm) depth of the mounting studs. The driver shall weigh 20.6 pounds (9.3 kg).The high frequency compression drivers shall be the Altec Lansing model 399-8B and the Altec Lansing model 399-16B.

The projectors shall be constant-directivity mid and high frequency horns. These horns shall have an operating bandwidth of 500 Hz – 20 kHz. One horn shall have a mean horizontal dispersion angle of 60° and a mean vertical dispersion angle of 40°. The other horn shall have a mean horizontal dispersion angle of 90° and a mean vertical dispersion angle of 40°. When the 399-B series drivers are coupled to the 90° x 40° horn, this combination shall have a sensitivity of at least 110 dB, when measured on-axis, at a distance of one meter, with a one Watt input. When the 399-B series drivers are coupled to the 60° x 40° horn, this combination shall have a sensitivity of at least 112 dB, when measured on-axis, at a distance of one meter, with a one Watt input. The constant-directivity mid and high frequency horns shall be the Altec Lansing model MR II 564B and the Altec Lansing model MR II 594B.

**FREQUENCY RESPONSE AND IMPEDANCE MAGNITUDE OF 399-8B ON MR II 594B**




As we are continually striving to improve Altec Lansing products, specifications are subject to change without notice.
Please visit www.altecpro.com for the latest information on Altec Lansing Professional products.

## SPECIFICATION NOTES

1 The frequency response of the loudspeaker is measured at a distance of no less than 3 meters to obtain full range data. The level is then corrected to be equivalent to a 2.83 V 1 m measurement.
2 The limits of the frequency response are referenced to -10 dB of the loudspeaker's rated sensitivity.
3 The sensitivity of the loudspeaker is the log based average SPL taken over the intended bandwidth of operation for the loudspeaker with a 2.83 V swept sine stimulus. The data is measured and level corrected in a manner consistent with note 1.
4 The power handling capacity of the loudspeaker is tested using a full range form of AES Standard 2-1984. The test stimulus is band limited (500 Hz – 16 kHz) pink noise with a 6 dB crest factor. The applied RMS voltage is determined using the minimum impedance of the loudspeaker. The amplifier used to drive the loudspeaker has a minimum operating headroom of 6 dB referenced to the RMS voltage.
5 The peak output level of the loudspeaker is calculated based on the sensitivity and the peak power handling capabilities of the loudspeaker.
6 The coverage angles for the loudspeaker are taken as the -6 dB points of the directivity response and averaged from 500 Hz – 16 kHz.
7 The minimum impedance of the loudspeaker is taken over its intended band of operation.
8 The distortion measurements of the loudspeaker are performed at a distance of 1 m with RMS input voltages corresponding to 10% of rated power handling calculated using minimum loudspeaker impedance. The distortion percentages are log based averages from 500 Hz – 10 kHz.

VISIT WWW.ALTECPRO.COM FOR
- Authorized EASE data on all Altec Lansing Professional loudspeakers
- Specification sheets in .pdf format. Download page 1 of the specification sheet for you submittals.
- One paragraph A&E Specifications in .doc format

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