



GREAT PLAINS AUDIO

MODEL 399-8/16A

HIGH FREQUENCY COMPRESSION DRIVERS



Great Plains Audio's 399-Series of high frequency compression drivers are designed to give excellent audio reproduction at high output levels over a wide frequency range with extremely high efficiency. When used with constant-directivity, sectoral, or other appropriate horns, the **399-series HF Drivers** provide uniform response that is superior to all other large-format drivers available today. When combined into system that incorporate low frequency loudspeakers and dividing networks, the **Great Plains Audio Models 399-8A and 399-16A High Frequency Compression Drivers** provide the natural sound reproduction demanded by even the most discerning listeners. Designed for use in large-format sound reinforcement systems, where high-level output is required, **Great Plains Audio's 399-series High Frequency Compression Drivers** will provide the most realistic sound reproduction possible today without the induced distortion found in drivers that have larger diaphragms and 2-inch exit throat diameters..

Superior HF Reproduction -

All high frequency compression drivers consist of three basic parts: (1) the diaphragm; (2) an acoustical transformer (also known as a phasing plug); and (3) a motor (the magnet). All **Great Plains Audio** high

frequency compression drivers are designed and built using the finest engineering methods and materials to the highest manufacturing tolerances in the industry.

The focal point of our **399-series HF Drivers** is the diaphragm/voice coil assembly, the design of which is critical to accurate sound reproduction. Even though many manufacturers today try to claim they have discovered a superior method of high-frequency reproduction, **Great Plains Audio** has chosen a different paradigm. By utilizing only the finest, time-tested materials and manufacturing methods in the construction of it's high-frequency section, including: (1) an all-metal **Pascalite™** dome structure; (2) a tangential compliance; and (3) a voice-coil of 2.88-inch edgewound copper clad aluminum ribbon, our **399-series** of high frequency drivers exhibit superior sound reproduction of the frequencies above crossover at high levels.

In order to assure that the sounds being generated by the diaphragm leave the loudspeaker in proper phase alignment, the **399-series** use our exclusive **RADIALWAVE™** phasing system, which ensures maximum high frequency reproduction while maintaining proper phasing and smooth overall response to 15 kHz.

Finally, a powerful magnet structure combines the other two portions of our **399-series** of high frequency compression drivers together and transforms them into a system that reproduces the sound in a natural manner. Each **399-series** high frequency compression driver has an efficient magnetic structure utilizing a 6.7-pound ferrite magnet with a flux density of 22,500 gauss.

Working in tandem, the **Pascalite™** diaphragm, **RadialWave™** phasing system, and the small yet powerful motor structure ensure that the **GPA Models 399-8A and 399-16A High Frequency Compression Drivers** are capable of uniform, peak-free reproduction throughout the range of human hearing, thus making them excellent choices as the high frequency components in large sound system environments where high output is also desired. ■

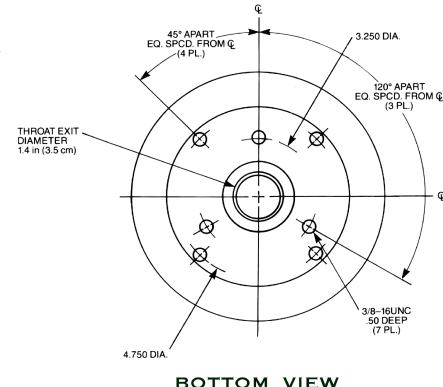
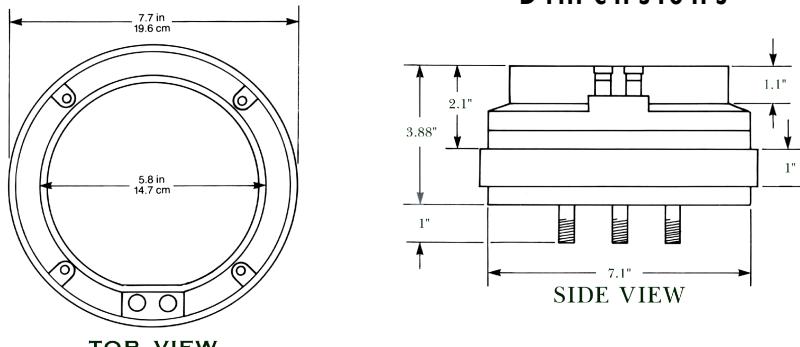
"*The Legacy Lives On*"
TM

399-8A & 399-16A HIGH FREQUENCY COMPRESSION DRIVERS

PERFORMANCE SPECIFICATIONS -

| | | | |
|--------------------------------|---|--------------------------------|---|
| Frequency Response: | 500 Hz - 15 kHz at rated power. | Flux Density: | 20,500 gauss |
| Power Handling: | 50 watts continuous pink noise from 500 Hz to 15 kHz. | Acoustical Transformer: | RadialWave™ Phasing System. |
| Pressure Sensitivity: | 110 dB SPL measured at 1 meter from the mouth of a GPA Model MRII594A Horn with 1 watt input of band limited pink noise. | Venting: | Balanced, internal magnet venting/large rear cover. |
| Minimum Impedance: | Model 399-8A = 8 ohms Model 399-16A = 16 ohms | Dimensions: | Diameter = 7.7-inches Depth = 5.8-inches (less mounting studs) |
| Input Connections: | Pushbutton terminals. | Net Weight: | 20 lbs. |
| Diaphragm Construction: | Hydropneumatically formed all-metal Pascalite™ dome and tangential compliance driven by a 2.88-inch diameter voice coil of edgewound aluminum ribbon. | Shipping Weight: | 24 lbs. |
| Magnet: | Ferrite V, 6.7 pounds. | Mounting Data: | Three 3/8-24 studs on a 3.25-inch diameter bolt circle, or four 3/8-24 studs on a 4.75-inch diameter bolt circle. |
| | | Finish: | Gray powder coat paint with black rubber boot. |
| | | Replacement Diaphragms: | Model 399-8A = #25884 Model 399-16A = #25885 |

- Dimensions -



ARCHITECT'S AND ENGINEERS SPECIFICATIONS

Power capacity: 50 watts continuous pink noise, band-limited from 500 to 15,000 Hz when mounted on a Great Plains Audio Model MRII594A Horn. Frequency Response: uniform from 500 - 15,000 Hz. Pressure Sensitivity: 110 dB SPL when measured at one meter on axis from the mouth of above specified horn with one watt of pink noise, band limited from 500 - 3,000 Hz. The minimum impedance shall be 8 ohms for the Model 399-8A, and 16 ohms for the Model 399-16A. The voice coil shall be 2.88-inches in diameter, manufactured using of edgewound aluminum ribbon, and shall operate in a magnetic gap having a flux density of 20,500 gauss derived from a 6.7-pound Ferrite V magnet. The diaphragm dome and tangential compliance shall be of all-metal Pascalite™ construction. An acoustical transformer with 13 radial acoustic slots installed underneath the diaphragm shall provide proper phase relationship between the sound emanating from the center and edges of the dome. The entire diaphragm shall be field replaceable without requiring special tools. The driver exit throat shall be 1.4- inch in diameter and shall mount to appropriate horns with three 3/8-24 studs mounted on a 3.25-inch diameter bolt circle or four 3/8-24 studs on a 4.75-inch diameter bolt circle. The driver shall be 7.7 inches in diameter, 5.8 inches deep, and shall have a weight of 6.7 pounds.

The compression driver loudspeaker shall be the Great Plains Audio Model 399-8A, or the Model 399-16A.

GREAT PLAINS AUDIO
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