



GREAT PLAINS AUDIO

MODEL 390-4/8/16A

HIGH FREQUENCY COMPRESSION DRIVERS



Great Plains Audio's 390-Series of high frequency compression drivers are designed to give excellent audio reproduction within their rated bandwidth at very high output levels extremely high efficiency. When used with constant-directivity, multicellular, sectoral, or other appropriate horns, our *390-series* of high-frequency drivers provide excellent frequency response within it's rated bandwidth. Primarily designed for voice-only reinforcement in large outdoor systems, our *390-series* of high-frequency drivers provide excellent clarity and articulation at high levels in ball parks, race tracks, stadiums, and is ideally suited for voice warning systems.

□ **Superior Voice-Range 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 *390-series* of high-frequency

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) a single-piece phenolic diaphragm with roll suspension; and (2) a voice-coil of 2.88-inch edgewound copper clad aluminum ribbon, our *390-series* of high frequency drivers are able to produce superior voice-range reproduction at extremely high levels over extended periods of time.

In order to assure that the sounds being generated by the diaphragm leave the loudspeaker in proper phase alignment, the *390-series* use our exclusive **RADIALWAVE™** phasing system, which ensures maximum high frequency reproduction while maintaining proper phasing and smooth overall response to 7 kHz.

Finally, a powerful magnet structure combines these other two portions of our *390-series* of high frequency compression drivers together and transforms them into a system that reproduces the sound in a clear, natural manner. Each *390-series* high frequency compression driver has an efficient magnetic structure utilizing a 6.87-pound ferrite magnet with a flux density of 18,500 gauss.

Working in tandem, the diaphragm, **RadialWave™** phasing system, and the small yet powerful motor structure ensure that the *Great Plains Audio 390-series* of high-frequency drivers are capable of uniform, peak-free reproduction within their rated bandwidth at extremely high levels, thus making them the choice as the high frequency components in large sound system environments where high output is also desired. ■

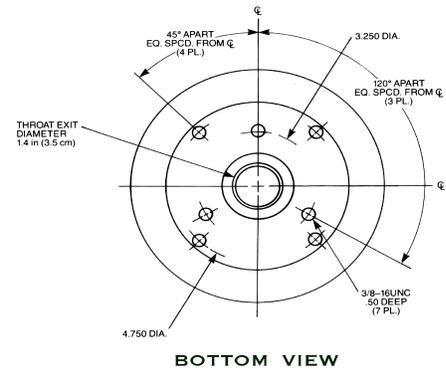
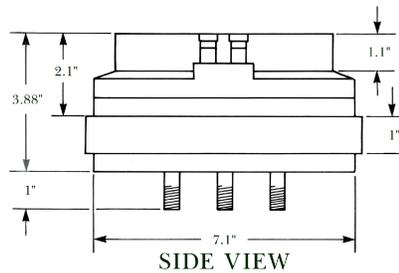
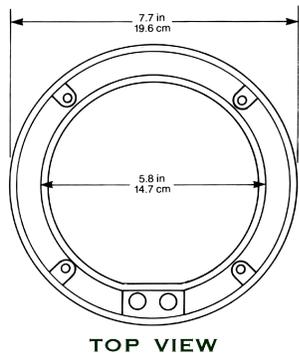
"The Legacy Lives On"™

390-4/8/16A HIGH FREQUENCY COMPRESSION DRIVERS

PERFORMANCE SPECIFICATIONS -

| | | | |
|--------------------------------|--|--------------------------------|---|
| Frequency Response: | 300 Hz - 7 kHz at rated power. | Flux Density: | 18,500 gauss |
| Power Handling: | 120 watts continuous pink noise from 300 Hz to 10 kHz. | Acoustical Transformer: | RadialWave™ Phasing System. |
| Pressure Sensitivity: | 114 dB SPL measured at 1 meter from the mouth of a Great Plains Audio Model MR42C Horn with 1 watt input of band limited pink noise. | Venting: | Balanced, internal magnet venting/large rear cover. |
| Minimum Impedance: | Model 390-4A = 4 ohms Model 390-8A = 8 ohms Model 390-16A = 16 ohms | Dimensions: | Diameter = 7.7-inches Depth = 5.8-inches (less mounting studs) |
| Input Connections: | Pushbutton terminals. | Net Weight: | 20 lbs. |
| Diaphragm Construction: | Phenolic with phenolic roll-type suspension driven by a 2.88-inch diameter voice coil of edgewound aluminum ribbon. | Shipping Weight: | 24 lbs. |
| Magnet: | Ferrite V, 6.87 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 390-4A = #21136 Model 390-8A = #23372 Model 390-16A = #34333 |

- Dimensions -



ARCHITECT'S AND ENGINEERS SPECIFICATIONS

Power capacity: 120 watts continuous pink noise, band-limited from 300 to 7,000 Hz when mounted on a Great Plains Audio Model MR42C Horn. Frequency Response: uniform from 300 - 7,000 Hz. Pressure Sensitivity: 114 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 - 2,500 Hz. The minimum impedance shall be 4 ohms for the Model 390-4A, 8 ohms for the Model 390-8A, and 16 ohms for the Model 390-16A. 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 shall be of one-piece phenolic construction with roll-type suspension. 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 20 pounds.

The compression driver loudspeaker shall be the Great Plains Audio Model 390-4A, Model 390-8A, or the Model 390-16A.

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GPA-390-Rev. 1, 02/08/07