



GREAT PLAINS AUDIO

MODEL 604-8H-II

TWO-WAY STUDIO MONITOR LOUDSPEAKER SYSTEM



Great Plains Audio is pleased to announce the most significant advance in the famous 604-series of loudspeakers since the advent of the constant-directivity horn: *The GPA Model 604-8H-II Two-Way Loudspeaker System.*

The *Model 604-8H-II* is a two-way loudspeaker that is designed to provide unsurpassed reproduction of the audio spectrum over a wide frequency range with extremely high efficiency. When connected to an appropriate crossover unit and installed in a proper enclosure, the **GPA Model 604-8H-II Two-Way Loudspeaker System** reproduces the entire spectrum of human hearing with naturalness, extremely accurate phasing, and excellent stereo imaging.

A True Point-Source Speaker -

Actually two loudspeakers in one, the **Model 604-8H-II** is comprised of an extremely efficient low-frequency loudspeaker and a high-frequency compression driver/horn assembly that are coaxially mounted together. This method of magnet construction is what makes the **Model 604-8H-II** sound so good - since both its low and high frequency signals emanate from the same vertical *AND* horizontal planes, extreme accuracy of reproduction and spatial separation are attained.

Digital Ready!

"Digital Ready" is a phrase heard often in the audio world. Part of what makes digital records so impressive is the amount of low-frequency content they contain. Most loudspeaker designers, in an attempt to make it possible for their products to be able to "handle" the demands of digital audio, utilize large, heavy voice coils, inarticulate suspension systems, and cones that weigh far too much to be able to reproduce the middle of the audio spectrum accurately. In addition, this approach results in loudspeakers that

require large amounts of audio power so that they may operate. Not only that, but the majority of designs of that type have voice coils that "overhang" outside of the magnetic field. The benefits of constructing a loudspeaker in this manner are many, the most notable ones being a significant loss of control of cone movement, which reduces the ability of the loudspeaker to articulate sounds accurately.

The **GPA Model 604-8H-II Two-Way Loudspeaker System** does not require design and construction techniques such as these in order for it to be able to respond to the demands of digital music and sound effects. Instead, the **Model 604-8H-II** utilizes a lightweight cone with a high-compliance suspension, and the low-frequency voice coil remains in the magnetic gap at all times. When combined with the largest motor structure ever used on a 604-series loudspeaker, these features allow the **Great Plains Audio Model 604-8H-II** to exhibit cleaner, more natural response, tighter low-frequency control, and the most accurate low-frequency sound reproduction found in any other system of its type available today.

Superior HF Reproduction -

The focal point of the high-frequency section of the **Model 604-8H-II** 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 its high-frequency section, including: (1) an all-metal aluminum dome structure; (2) a tangential compliance; and (3) a voice-coil of 1 3/4-inch edgewound copper clad aluminum ribbon. These features assure superior sound reproduction of the frequencies above crossover in the **Model 604-8H-II**.

In order to assure that the sounds being generated by the diaphragm leave the loudspeaker in proper phase alignment, the **Model 604-8H-II** uses our exclusive **RADIAL-WAVE™** phasing system, which ensures maximum high frequency reproduction while maintaining proper phasing and smooth overall response to beyond 20 kHz.

When operating, the audio waves leave the high-frequency diaphragm, go through the **RADIAL-WAVE™** phasing system, enter an exponential throat where they are conducted through the center of the low-frequency pole piece and into our small constant-directivity horn. Most horn designs tend to narrow their dispersion patterns as the pitch goes up. Our horn design doesn't have this problem. It produces the same dispersion pattern throughout its bandwidth. The result at the listening position is a startling, nearly 3-D stereo image that exhibits superior latitude in the seating position.

These different parts of the **Model 604-8H-II** - the low-frequency section, the high-frequency diaphragm, the **RADIAL-WAVE™** phasing system, the small constant-directivity horn, and the powerful Ferrite V magnetic assemblies - all combine in the **Model 604-8H-II** to create a loudspeaker capable of uniform, peak-free reproduction throughout the range of human hearing, thus making it ideal as the loudspeaker of choice where natural, unadulterated sound reproduction is required. ■

"The Legacy Lives On"™

604-8H-II TWO-WAY STUDIO MONITOR LOUDSPEAKER SYSTEM

PERFORMANCE SPECIFICATIONS -

Frequency Response: 30 Hz - 20 kHz

Power Handling: 100 watts continuous pink noise from 60 Hz - 20 kHz, AES method.

Pressure Sensitivity: 99 dB SPL (1 watt, 500 Hz - 3 kHz, re: 20 μ Pa).

Minimum Impedance: 8 ohms

Input Connections: Spring-loaded push terminals.

Components: 16-inch, high efficiency, low-frequency driver with a coaxially mounted, 1-inch high-frequency compression driver and Mantaray™ horn.

Standard Crossover

Network (optional): Full-section with 1,500 Hz crossover frequency, 12 dB per octave slope for the low frequencies, and 18 dB per octave for the high frequencies.

Thiele-Small Parameters:

<i>X_{max} (inch)</i>	=	0.20
<i>R_e (ohms)</i>	=	6.80
<i>V_d (cu. in.)</i>	=	19.20
<i>F_s (Hz)</i>	=	30.90
<i>V_{as} (cu. ft.)</i>	=	16.35
<i>Ref. Eff (%)</i>	=	4.87
<i>Q_{ts}</i>	=	0.261
<i>Q_{ms}</i>	=	8.49
<i>Q_{es}</i>	=	0.270
<i>V_{id} (cu. ft.)</i>	=	0.24

Magnet Type: FerriteV

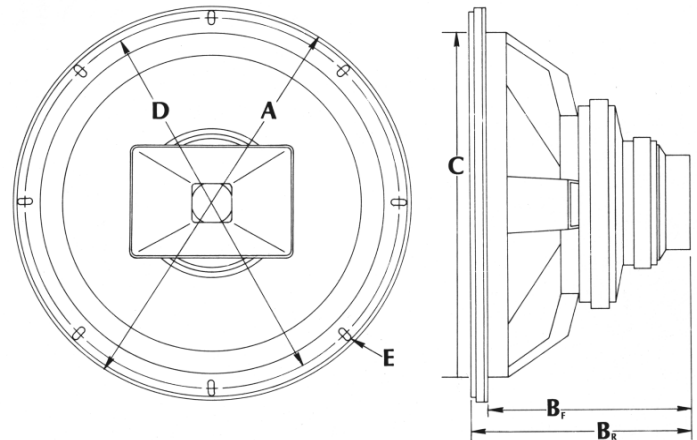
Flux Density: LF = 12,800 Gauss
HF = 17,000 Gauss

Dimensions: Diameter = 16-inches
Depth = 8-inches

Net Weight: 34 pounds, less network.

Finish: Gray powder coat paint.

Loudspeaker Mounting Dimensions:



- A = Loudspeaker Diameter: 16"
- B_F = Depth When Front Mounted: 8"
- B_R = Depth When Rear Mounted: 8.75"
- C = Baffle Opening Diameter: 14 1/8"
- D = Bolt Circle Diameter: 15"
- E = Bolt Hole Slots: 1/4" x 3/4" (8 slots spaced 45° apart)



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GPA-604-8H-II-Rev. 4, 12/19/06