



Spectral Audio, Inc.
442 Oakmead Parkway
Sunnyvale, California 94086
408.738.8521 Fax: 408.738.8524

Bulletin 9904

Product Overview

The Spectral DMA-100S Compact Reference Amplifier

In 1982 Spectral engineers pioneered the industry's first wideband, high-speed audio power amplifier. The Spectral DMA-100 Class A Instrumentation Amplifier marked the origins of Spectral's unique fast-settling fet amplification topology and, in concert with the innovative DMC-10 Preamplifier, formed the first high-speed, high-resolution audio component system. Almost eighteen years later, Spectral's precision approach to component system design continues to evolve and receive wide acclaim as the ultimate in signal accuracy and realism. High-speed amplifier technology was first made practical by the DMA-100 Class A amplifier and all subsequent Spectral amplifiers draw their basic engineering inspiration from this original benchmark design. To commemorate the introduction of the first high-speed instrumentation audio amplifier, Keith Johnson and the Spectral design team are pleased to introduce the new DMA-100S Compact Reference Amplifier. The DMA-100S pays homage to the original Spectral amplifier while setting contemporary standards in musical performance and high value for the millennium.

Inspection of the new DMA-100S reveals many similarities with the original Spectral amplifier, including similar power and topologies. Although alike in many regards, the compact, cool-running design of the DMA-100S attests to the many engineering advances made since the 1980s at Spectral. The DMA-100S is

actually a contemporary marriage of our state-of-the-art DMA-150 and compact reference DMA-90 technologies. Conceived by Dr. Keith Johnson as a compact reference for recording work, the DMA-100S features a magnificent combination of design elegance and convenient size mirroring the classic packaging of our SDR-2000 and SDR-3000 reference components.

As with earlier Spectral compact amplifiers, little in the restrained appearance of DMA-100S forewarns of the unusual performance potentials which exist within. For under the hood of the compact DMA-100S lurks the heart of the DMA-150 Reference Amplifier with its proprietary "Focused Array" output section design. In this premium topology, each matched output device is mated to its own power supply, including individual filter capacitors, rectifiers and transformer secondary windings. The enormous power supply regulation of the DMA-100S rivals that of the high-current DMA-150 also, with 10,000 μf per output device available. This breakthrough topology aligns high-current fet output devices for rapid, piston-like signal launch, with full rated power delivered with absolute load stability at 1 MHz. The resultant output section response capability is unprecedented in an audio amplifier of this power. Speaker control with the DMA-100S is startling, with transient and dynamic resolution of fine recordings equalled only in our most premium amplifier designs.

The high-value DMA-100S makes premium discrete circuit topologies, which were only available previously in Spectral's high-current reference designs, available for a fraction of the cost. The DMA-100S offers state-of-the-art performance, new design refinement and extraordinary value in the Spectral tradition. The DMA-100S represents the innovative thinking and quality commitment of the original Spectral DMA-100 and more. We think you will agree, some good ideas really deserve an encore.