



Phase Linear 700 Power Amplifier

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Weighing 45 pounds and selling for \$749, with a certified output of over 350 watts per channel, the Phase Linear 700 amplifier set the audio world on its ear. When it was commercially released in 1971, few took 27-year-old Robert W. (Bob) Carver's claims for it seriously. Remember, this was Carver's first commercial product and he was then completely unknown to audiophiles. Before the Phase Linear 700's appearance, an average high-powered amplifier offered somewhere on the order of 80–85 watts per channel, with the Crown DC-300 sitting atop the output throne, providing (an often unstable) 150 watts per channel.

The Crown, originally designed as an industrial device and only made available as an audio amplifier as an afterthought, had a nasty habit of blowing up under real-world conditions, especially if someone accidentally shorted or overloaded the circuit. It had no effective way of protecting its output transistors from damage, and quite frequently they would let go in a puff of smoke at the slightest sign of overload or incorrect load impedance.

Aside from using the remarkably robust DTS 410 transistors, which were only manufactured by Delco and made specifically for automobile ignition systems, part of the genius of Bob's creation was something he called an Energy Limiter. With this early form of protection as safeguard, you could literally short the amplifier—even overdrive it—and the output transistors typically would not fail.

To support cooling (eliminating the need for a loud and noisy fan), lower the overall operating temperature, and facilitate component servicing, Bob cleverly mounted both the output transistors and the power transformer to the exterior of the chassis. The output transistors were visible from the back, mounted directly to the rear heat sinks. The front panel of the first-generation 700 was asymmetrically laid out, with

the large VU meters and control knobs mounted towards the right side. At a width of just 19 inches, the unit was easily rack mounted.

Given its then-gargantuan output, remarkable reliability, and convenient mounting capability, the 700 soon became a favorite of recording studio engineers, rock bands, and jazz musicians. And it wasn't long after Harry Pearson's very favorable review in the very first issue of *The Absolute Sound*—celebrating the 700's tight bass, midrange clarity, and high-frequency definition—that the amp would be adopted by and become the darling of the audiophile community, as well. In fact, not only did the Phase Linear 700 herald the start of one of the most successful, prolific, and lengthy careers in our industry; it also set the stage for the ascent of solid-state audio electronics—and for the arrival of more and more powerful contenders yet to come. **tas**