

Forté Audio

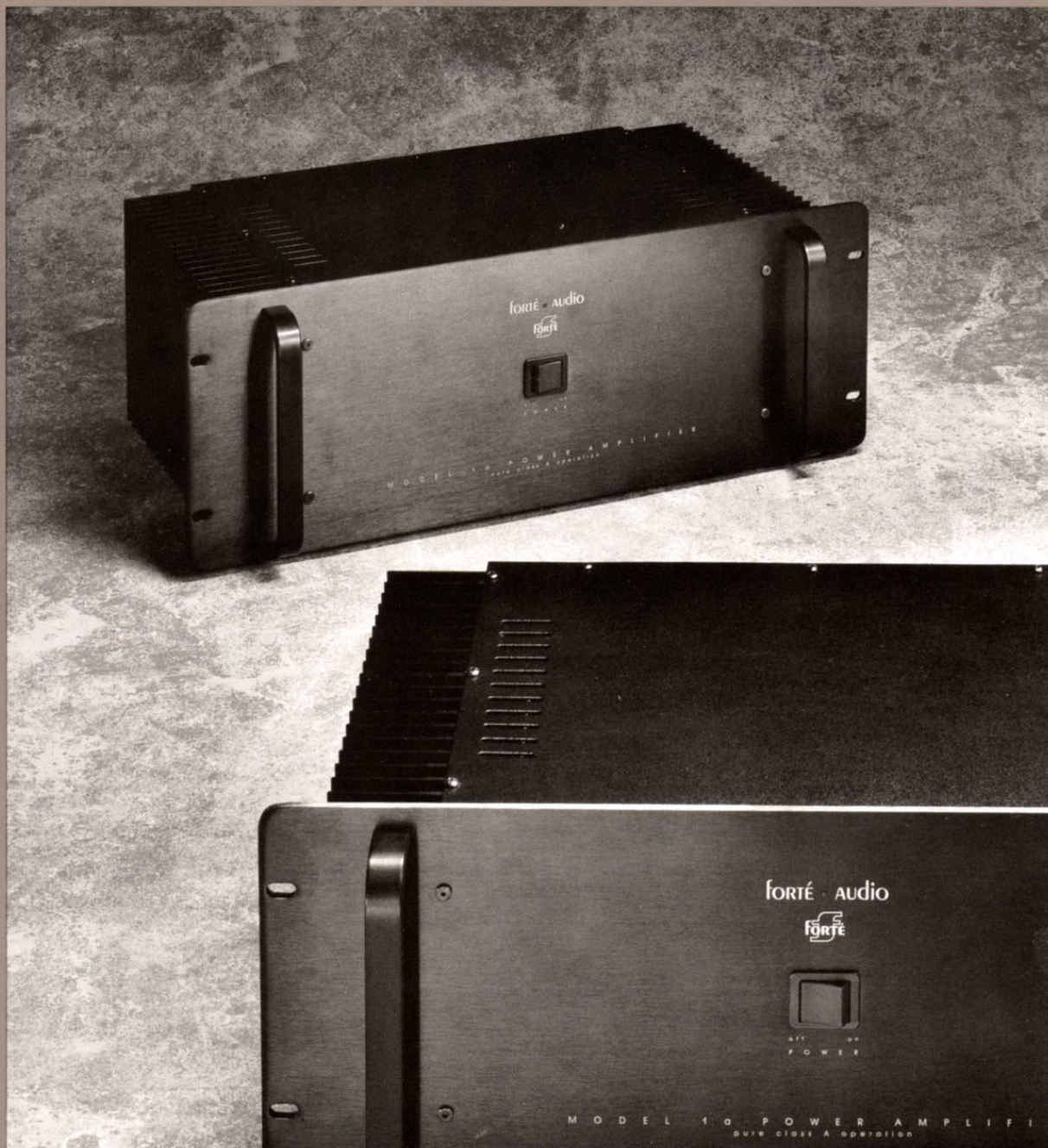


Model **1a**

50 watt + 50 watt
Pure class A

Dual channel
power amplifier

Pure class A operation and advanced FET front-end design make the Forté Model 1a suitable for application in systems whose primary criteria is unparalleled musical accuracy.



Model 1a**50 watt + 50 watt
Pure class A****Dual channel
power amplifier****Advanced technology in a classic operating mode.**

To create the Model 1a Forté called upon the expertise of an engineering group under the direct supervision of Nelson Pass, a noted innovator in high performance analog technology. The goal was creation of an amplifier design having the signal purity required by a serious music listener within an investment level suitable for the majority of home music systems. The Forté Model 1a, styled by René Besné, is the culmination of this design project.

The exceptional performance of the Model 1a amplifier is based upon the highly linear characteristics of classic pure class A design — long recognized as the "ideal" amplifier operating mode for music reproduction. A newly developed FET/bi-polar front end topology and the latest ultra-wide bandwidth power output devices further assure "perfectionist" levels of musical accuracy and spatial coherence.

Now, the Forté Model 1a offers music re-creation that sustains every nuance carried by the recorded media. State-of-the-art signal purity and unit fabrication on an individual basis make the Model 1a suitable for consideration in any high-performance music system whose primary criteria is unparalleled playback accuracy.

**The front end design:
Musical purity under the most
demanding dynamic require-
ments.**

The Forté Model 1a has a direct coupled input stage using matched, cascoded N-channel field-effect transistors. These input FETs are biased with regulated constant current sources to a level that maintains pure class A operation under all signal conditions. The inherent linearity of these devices, particularly when operated in the class A mode, is very high and minimal feedback need be applied. This assures phase and amplitude accuracy over an extended frequency/gain envelope.

A substantial power supply rejection ratio is built into the front end gain stages. This completely insulates the gain devices from the minor irregularities which characterize a supply's waveform under operating conditions. The audio signal simply cannot be modulated through the supply rails as a result of dynamic conditions occurring in the front-end or output stages. Such isolation means there are virtually no interchannel effects and the signal purity of both channels is precisely maintained during instantaneous peaks on either.

**The power output stage:
Extraordinary accuracy and
control without regard to load
dynamics.**

The output stage of a Forté 1a employs 20 extended bandwidth power devices. Each device is rated by the manufacturer for a dissipation capability 10 times greater than actual usage in the Model 1a. The result is an extended operating margin within which the output stage is virtually impervious to stress. Each power device is therefore assured greater operating linearity and longer life.

Such a level of overdesign also allows the amplifier to maintain a musically pure signal into low impedance and/or highly reactive loudspeaker loads. In addition, it is unnecessary to use active protection to safeguard the output stage, impose fuses between the output transistors and the loudspeaker, or insulate the amplifier from the outside world through an isolation inductor at the output. The absence of these protective mechanisms — all of which can affect performance aspects — means that the Forté 1a will maintain its signal accuracy over the widest range,

into the most "difficult" load, and under the heaviest power demands.

The output stage of the Forté 1a is biased to operate in pure class A under all signal conditions. Despite the idling dissipation exacted by class A designs this operating mode has long been regarded by enthusiasts as providing the highest level of musical fidelity in the reproduced sound. Forté employs a proprietary class A output stage of such accuracy that minimal feedback is required. In this way the anomalies associated with wide-bandwidth, high-level corrective loop systems are completely avoided.

**The power supply:
An unflinching energy source.**

The Forté 1a derives its power from a custom manufactured toroidal power transformer that is capable of providing twice its continuous rating for an extended period. A product of the same overdesign philosophy as the output stage this transformer insures that there will always be a constant voltage source under any load demand encountered by the amplifier. The output of the transformer is routed through 35 ampere diode bridges and is smoothed into a dc voltage by computer-grade electrolytic capacitors.

**Components and construction:
Individual attention, not
volume production.**

Each Forté 1a is individually constructed to the highest standards of workmanship. Circuit components are selected from the finest available. Circuit boards are military-grade glass-epoxy. Metal film and wirewound resistors are used as are high frequency silver mica capacitors. Every subassembly is checked before installation and each completed amplifier is checked out prior to shipment to InConcert and again by InConcert prior to shipment to the retail dealer. The result is a level of musical accuracy coupled with reliability that makes the Forté Model 1a an investment consideration worthy of any high-performance music system.

Specifications

Rated output	50 watts/channel @ 0.05% THD @ 8 Ohms. 80 watts/channel @ 0.1% THD @ 4 Ohms. 20 Hz-20 kHz both channels driven.
Bandwidth	-3 dB points @ 7 Hz and 100 kHz.
Slew rate	40 volts per microsecond.
Input impedance	75,000 Ohms.
Output impedance	0.02 Ohm 7 Hz-20 kHz (equivalent df = 400).
Output current	30 amperes maximum.
Output noise	300 microvolts.

As Forté is continually evaluating new technology and materials, the option is reserved to incorporate changes into ongoing production without notice or obligation.

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InConcert
12919 Earhart Ave.
Auburn, California
95603

