



Tech Made Simple

I-TECH: SO MUCH POWER, SO LITTLE CURRENT DRAW

How can I-Tech™ amplifiers provide so much output power with so little current draw?

The answer is in I-Tech's unbeatable combination of Crown's patented Class-I output stage – the world's most efficient amplifier output design – combined with Crown's switch-mode power supply with Power Factor Correction (PFC).

Class-I

I-Tech's patented interleave switchmode design delivers better efficiency over conventional Class-D switching designs due to its unique, interleaved characteristics. Switchmode designs generally offer much greater efficiency over dissipative designs due to their inherent switching operation. Class-I takes this efficiency to a whole new level. In short, Class-I provides more power to the load, more efficiently, than was ever before possible. For more information on Class-I, close this document and read the Technical Papers "BCA Technology Overview" and "BCA White Paper", and the Tech Made Simple document "Class I (BCA)."

SMPS (Switch Mode Power Supply)

I-Tech's unique switchmode power supply combines Power Factor Correction (PFC) and massive energy reserve to provide ample power to the Class-I output stage while keeping current draw low.

Crown's innovative PFC technology allows I-Tech to draw current from the mains in a more controlled and efficient way than non-PFC amplifiers. This efficiency translates to massive amounts of power from a single 20 amp breaker. PFC does this by drawing a smooth and quiet current waveform that is in phase with the mains voltage waveform.

Crown also designed massive amounts of energy reserve into I-Tech's switchmode power supply. With plenty of energy available to reproduce transient program material, I-Tech is able to draw power from the AC mains in a more consistent fashion. Coupled with PFC, I-Tech's power supply can handle even the most demanding workload without drawing excessive amounts of current.

The amperage capacity of the power cord is determined by the amount of current drawn by the amplifier from the AC mains when measured according to CSA/CAN E60056, IEC60056 and UL 6500 standards, which all relate to audio/video and musical instrument apparatus for household, commercial, and similar general use. When tested under the conditions set forth in the above standards, I-Tech amplifiers pass with a 20-amp power cord and inlet. For further details about the test parameters, refer to the documentation for the standards.

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