

## News Releases

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Dec 3, 2004

### Smart Sonic Ultrasonic Stencil Cleaners Assure PCB Integrity

Smart Sonic Corporation developed the original ultrasonic stencil cleaning process in 1989. During the development phase it was realized that the new ultrasonic process was revolutionary for cleaning stencils, but their initial customers showed reservations about using the system for cleaning misprinted PCBs as the Mil Spec disallowed the use of ultrasonics for cleaning PCBs.

As a result, Smart Sonic designed their ultrasonic stencil cleaning process to clean at very low power density (watts/liter) as early research by GEC Marconi and the EMPF Laboratory indicated that lower power density equals higher safety.



Recent studies by GEC Marconi Ltd. (“A Study on the effect of Ultrasonic Cleaning on Component Quality”) and the report by William G. Kenyon in the October 2004 issue of *SMT* magazine (“Why Not Ultrasonic cleaning”) indicate that ultrasonic power densities of 10 watts per liter or less are desirable for the safe cleaning of populated PCBs. Smart Sonic stencil cleaners have always been rated at 10 watts per liter or less yet are still guaranteed to clean any type of solder paste from any fine-pitch stencil.

Other ultrasonic stencil cleaners have taken the traditional approach of “the more power, the better” (15 – 25 watts per liter) without regard to potential damage caused to populated misprinted PCBs that are often cleaned in their ultrasonic stencil cleaners.

Smart Sonic has been able to successfully clean all types of solder paste at low power densities due to the cleaning efficiency of their proprietary 440-R SMT Detergent and the mechanical efficiency of the ultrasonic transducers used in all Smart Sonic stencil cleaners. Smart Sonic designs their cleaning machines for use with 440-R SMT Detergent and therefore can assure proper cleaning at low power densities. Other stencil cleaners are designed for use with generic cleaning chemistries (some requiring heat) that need higher power densities to compensate for the less efficient cleaning chemistries.

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