

# **NEWS RELEASE**

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### FOR IMMEDIATE RELEASE

Ultrasonics Hits the Runway: Evening Gowns Bonded by Sound Waves
Debut at the International Textile and Apparel Association Meeting

Sonobond®'s Ultrasonic "Sewing Machine" used by Cornell University Fashion Design Students to Streamline Apparel Assembly

WEST CHESTER, Pennsylvania, September 25, 2007 – When models appear on the runway at the annual International Textile and Apparel Association



meeting in Los Angeles this November, some of them will be wearing evening gowns assembled by Cornell University fashion design students who used Sonobond®'s SeamMaster™ High Profile ultrasonic bonder. The machine has enabled students to

stretch their creativity by streamlining traditional sewing and embellishing techniques that once took considerable time to master.

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"I wanted to challenge the students to increase their problem-solving abilities with an innovative technology for fashion design," says Anita Racine, Ph.D., senior lecturer for the Apparel Design program at Cornell. Seventeen sophomore apparel design majors used the SeamMaster™ to assemble their final project designs for their intermediate-level patternmaking course.

Ultrasonic bonding occurs when high frequency acoustic energy – converted to mechanical vibrations and channeled through a horn – creates a rapid heat buildup at the material contact point. This causes the material to melt and fuse between the horn and rotating pattern wheel of the bonder. For successful ultrasonic bonding, fabric must be at least 60 percent synthetic.

## Benefits of Ultrasonic Bonding in Fashion Assembly

The students found the SeamMaster™ to be similar to a typical industrial



sewing machine but powerful, versatile and easy to use, without requiring thread or adhesives. Different pattern wheels enabled them to create everything from delicate lacy

cutouts to structured embossed patterns in just one pass. Ultrasonic bonding also eliminated worry about fraying or unraveling fabric and speeded up the process of creating time- and labor-intensive decorative details – such as spaghetti straps, appliqués, decorative flowers, and pin tucking – allowing students to focus on the design process, fitting, and construction.

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Additionally, ultrasonic bonding opened up new possibilities for seam configurations. For example, one student used a topstitch wheel on a self-lined jacket to create a mock bias binding and enclose all the seams at the same time, making the jacket reversible. Another student precisely attached together rows of multilayered ruffled fabrics in just one pass, using a cut and seal pattern roller.

### **Assembling Synthetic Fabrics**

The final project challenge for the Cornell students was to create a two-



piece cocktail or evening ensemble using synthetic fashion fabrics and reflecting the styles of the 1950s. While the dress could use traditional construction techniques, including some handwork, the jacket had to employ Sonobond® Ultrasonics' SeamMaster™ to make decorative or finished edges, create

surface details, or emboss fabric.

The students were prepared with basic knowledge of the Sonobond® machine, which is normally used to assemble functional apparel (primarily medical garments) and industrial products. They also received training from a company representative and developed 150 fused and embossed samples combining 15 different pattern rollers and 10 synthetic fabrics in a variety of textures and weights.

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### The Rewards of Non-Traditional Sewing Techniques

For most students, the challenge of using ultrasonics to assemble their designs delivered practical and creative rewards. "I don't have to worry about finishing my delicate jacket in the traditional way," said one student. "It doesn't get bogged down by seam bindings and heavy hems with this new machine." Another added, "I have so much more creativity than I realized just through using this new technology. I'm learning that I can stretch myself more but without abandoning my interest in graceful, elegant pieces."

Instructors in Cornell's apparel design program have been so delighted with the results of their Sonobond® machine, that they've purchased four more pattern wheels and have decided to make the SeamMaster™ a continuing feature of the intermediate-level patternmaking course. Students are enthusiastic about the machine and its promise of future use in ready-to-wear clothing production. They've asked to use it in upper-level studio courses and for creating fashions for their annual spring fashion show.

### A Leader in Ultrasonic Bonding Technology

Sonobond® is a worldwide leader in the application of ultrasonic welding and bonding technology. In 1960 Sonobond®, then known as Aeroprojects, received the first patent ever awarded for ultrasonic metal welding. During the intervening 47 years, Sonobond® has earned an outstanding reputation for its

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pioneering work and quality-engineered products. Today, Sonobond® manufactures a complete line of ultrasonic bonding and welding equipment for a wide variety of customers in the automotive, appliance, electrical, HVAC, aerospace, filtration, medical, and apparel industries.

#### **Additional Information**

More information on Sonobond®'s ultrasonic technology, plus specific information on Sonobond® welding and bonding equipment, is available by visiting its website, <a href="https://www.SonobondUltrasonics.com">www.SonobondUltrasonics.com</a>, or by calling 800-323-1269.

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Photo captions: in order of appearance:

Two Sonobond® Ultrasonics' SeamMaster™ pattern wheels create different effects on this satin jacket. The design produced by a decorative pattern wheel gives the fabric a metallic sheen, while cutouts made by another pattern wheel allow self-fabric ribbons to accent the edge of the hem.

**Design:** Amanada Zheng **Photography:** Shai Eynav

Sonobond® Ultrasonics' SeamMaster™ High Profile bonder employs ultrasonic technology to fuse synthetic materials. Normally used to assemble functional garments and industrial products, the Cornell students found that the SeamMaster™ streamlined traditional time- and labor-intensive sewing and embellishing techniques without sacrificing high-fashion quality or elegance.

Cornell fashion design students were challenged to design a dress using traditional construction techniques and a coordinating jacket using ultrasonic bonding for constructing seams or embellishments.

**Design:** Heber Sanchez **Photography:** Shai Eynav