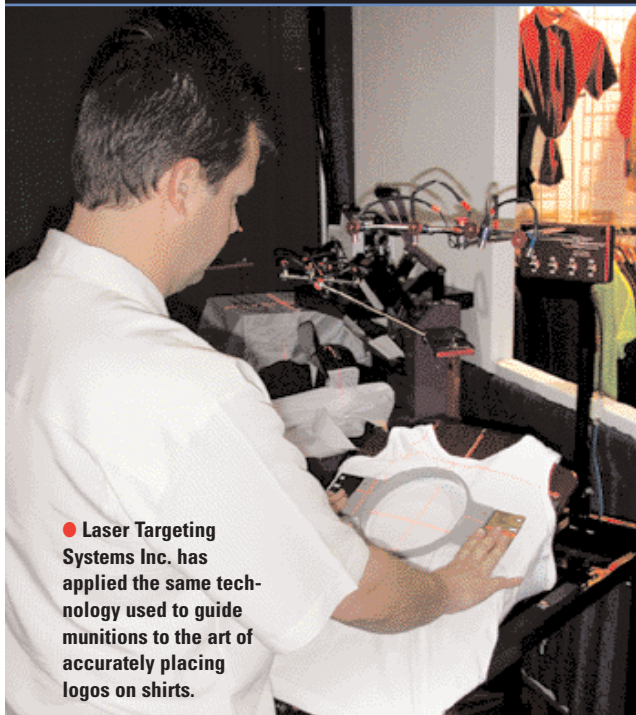


## New Equipment Foreshadows Embroidery's Future

Embroidery equipment and supplies manufacturers unleash a wave of new technology in 2005.



● Laser Targeting Systems Inc. has applied the same technology used to guide munitions to the art of accurately placing logos on shirts.

by Richard Lebovitz

**T**echnological developments in commercial embroidery usually come in fits and starts. Yet, advancements in computer technology and the changing dynamics of the U.S. market are engendering a new wave of machines and accessories that will be shaping the shop floors of tomorrow.

Driving the innovations are changes in the American embroidery industry itself, which today is characterized by smaller shops handling smaller orders, as well as the emergence of a large number of embroiderers making the transition from household hobbyist to home-based commercial. These factors have led manufacturers to create simpler, more robust, more versatile equipment, whether a high-tech machine or low-tech accessory.

Additionally, new alternative decorating options offer high-volume embroiderers in particular a cost-effective way to produce complex, multimedia designs that would be otherwise impossible using embroidery alone.

### A New Breed

At ISS Atlanta, Hirsch Intl. Corp. rolled out a new name — Tajima USA Sales & Support — and Tajima a new breed of machine, the M Series, whose symbol is a snarling tiger.

To drive home the point that it is a born-again customer-focused company and an aggressive technological leader, Tajima rolled a tiger named Mia into the middle of its ISS Long Beach booth. While the publicity stunt drew a crowd, the real attraction was not the beast in the middle but the array of all-new machines displayed around the perimeter.

The M Series represents not one but a whole family of small machines featuring more than 40 electronic and mechanical enhancements, according to the company. In brief, Tajima cleaned house, introducing a line of equipment in 15-needle singlehead and 2-, 4-, 6- and 8-head formats especially suited for today's smaller embroidery operations. The result, says Jimmy

# OPERATIONS

Lamb, Tajima USA's director of education, is a machine that requires less maintenance, runs quieter, produces better quality embroidery and demands less downtime than the previous generation of Tajima machines.

The core development is Tajima's proprietary MicroSmart technology, which acts as the machine's brains. Tajima integrated the advanced electronic component into the machine's design and operation so that it more or less thinks for itself. For example, the MicroSmart-controlled frame drive allows for faster frame movement and yields a more precise stitch length, according to the company. As Lamb says, "The machine knows exactly what it's doing. It knows where the frame is supposed to be at all times and verifies it is there."

But the M Series is not just about new and improved electronics. The machines also include such features as a quick-change thumbscrew system for easily changing from cap to cylindrical to tube operation, a sewing arm designed to accommodate low-profile caps and a thread-locking system developed to prevent thread pullouts.

## Seeing Double

For Sunstar Precision Co. Ltd. — the Korean company responsible for the SWF brand of machines distributed east of the Mississippi by SWF East in Tampa, Fla., and west of the Mississippi by Mesa Distributors in Dallas — the solution to achieving production efficiency is a machine called the SWF/Dual Series, which offers dual functionality. The new machine allows one operator to man one piece of equipment that's capable of embroidering two different items or two different designs. "This machine was made especially for the American market," says Scott Colman, president of SWF East.

As of ISS Long Beach, the company has introduced four dual-



● Tajima USA rolled a caged tiger into its booth at ISS Long Beach to emphasize the aggressive technology behind Tajima's all-new M-series embroidery machines, featuring more than 40 electronic and mechanical enhancements.

function machines, including 15-needle, 4-, 6-, 8- and 12-head models featuring sewing speeds as fast as 1,000 stitches per minute.

These split-brain machines feature a centrally located LCD control panel that sends the same or different instructions to each bank of embroidery heads. This gives the shop owner the flexibility to run, for example, an order for shirts and caps simultaneously, without having to run shirts first and then change over to caps.

"You can get jobs out the door together," Colman says. He estimates a shop owner can save 10 hours of production time a week by not having to change



● SWF showed a prototype 2-head machine that can simultaneously embroider different items or different designs on each head.

from flats to hats.

Shown in prototype at ISS Long Beach was SWF's latest dual-function model, a split-level 2-head with a compact 49" x 26" footprint, only a few inches more than the footprint of a full-size singlehead. By staggering the height of the sewing areas, Sunstar reduced the machine's size while still allowing the simultaneous sewing of the same or two different items.

"This machine is going to fit the retail shop that doesn't have the square footage or that wants to do two items at the same time," Colman says. He expects the 2-head to be commercially available in nine to 12 months.

## Sleight of Hand

While Sunstar has responded to the U.S. market in one way, another Korean company, Inbro Co. Ltd., has responded in another. During the past seven years, Inbro has been developing a single-needle, automatic threading, multicolor machine,



● Inbro spent seven years developing a self-threading, multicolor, single-needle embroidery machine.

which the company displayed in prototype at ISS Atlanta. As of ISS Long Beach, the machine is now commercially available, says Uihoon Kim, president of Garland, Texas-based Inbro USA.

Currently sold as an eight-color model, the machine uses a pneumatic system to deliver each new thread to the needle. Once the threads are manually clipped into

place and the machine started, the air-assist system does the rest. "It automatically blows the thread through the machine and into the needle," explains Eddy Woodham, an Inbro USA distributor in Opelika, Ala.

The operative word for this machine, which runs at 1,300 stitches per minute, is "simplicity." Fewer parts translate into fewer adjustments, fewer thread breaks, less maintenance and more efficient production, according to the company.

In the fall, Inbro plans to introduce 2-, 4- and 6-head models of the machine, which also can be configured to handle as many as 16 colors, Woodham says.

## High-tech Hooping

The same technology used to guide smart bombs to their targets is now being used in the embroidery industry to perform precise, consistent logo placement. Laser Targeting Systems Inc., an Apple Valley, Calif., company, has introduced a hooping

device that uses laser lighting to lay down a grid on top of the garment, providing accurate positioning and speeding up production. “You’re marking the center of the hoop, which provides a visual reference, so you don’t have to guess,” says Glen Boettcher, CEO. Conversely, you can work backwards from the placement to the hoop, he adds.

The laser hooping assembly bolts to a tabletop and can adapt to any hooping system. “You will be able to use it with your existing board so you won’t have to invest in a new one,” he explains.

Boettcher says the system sells for \$510 for two lasers, but it also is wired to expand to as many as four. More lasers simply provide more applications, he adds. Line, spot and crosshair lasers are available.

### Laser Embroidery

In addition to lighting the way, lasers can slice and dice their way, as well as create a



● **Alternative decorating technologies like the inline GMI Laser II from Permaboss give high-volume embroiderers the opportunity to regain their competitiveness by creating cost-effective, complex designs with low stitch counts.**

variety of special effects on a variety of materials, including fabric. “Lasers enable you to get creative, to add layers and texture,” says Robert Harbauer, owner of Permaboss, an Aurora, Ontario, company that specializes in decoration alternatives and manufacturers the GMI Laser II.

The GMI Laser II is one of two brands

of inline laser systems available in the United States, the other being the Proel Bridge Laser distributed by B.I.T.O., Oceanside, N.Y. These inline lasers allow high-volume embroidery operations to combine laser cutting and engraving techniques with embroidery, creating dramatic effects while reducing production time.

As Ed Balady, president of B.I.T.O. explains, the Proel laser retrofits to multi-head embroidery machines measuring up to nine meters long, traveling the length of the machine to mark, cut or engrave. “The machine allows you to embroider, then prior to removing the embroidery, you can frame out and cut [or engrave], embroider again and so on,” he says.

An option to an inline laser is a standalone unit, which Viable Systems Inc., Medfield, Mass., is offering. While lasers may be cost-prohibitive for small shops, they are an attractive option for high-volume embroiderers seeking to offer different looks and gain a competitive edge. **EMB**