

BE BOLD. GO GOLD.

How to embroider with a multitude of metallics
BY BONNIE NIELSEN WITH PAT WILLIAMS



There's magic in the metal. And that can appear as new revenue, coming from customers who are tired of the *same old, same old* and looking for something new, unusual, special—a look that sets them, and you, apart from the competition.

Metallic embroidery thread comes in many weights, colors, textures. Some is easy to work with, others more challenging. But each has the capacity to literally sparkle and bring to embroidery a unique look that brings with it a higher price tag. Learning to master metallics is like investing in a course that enables

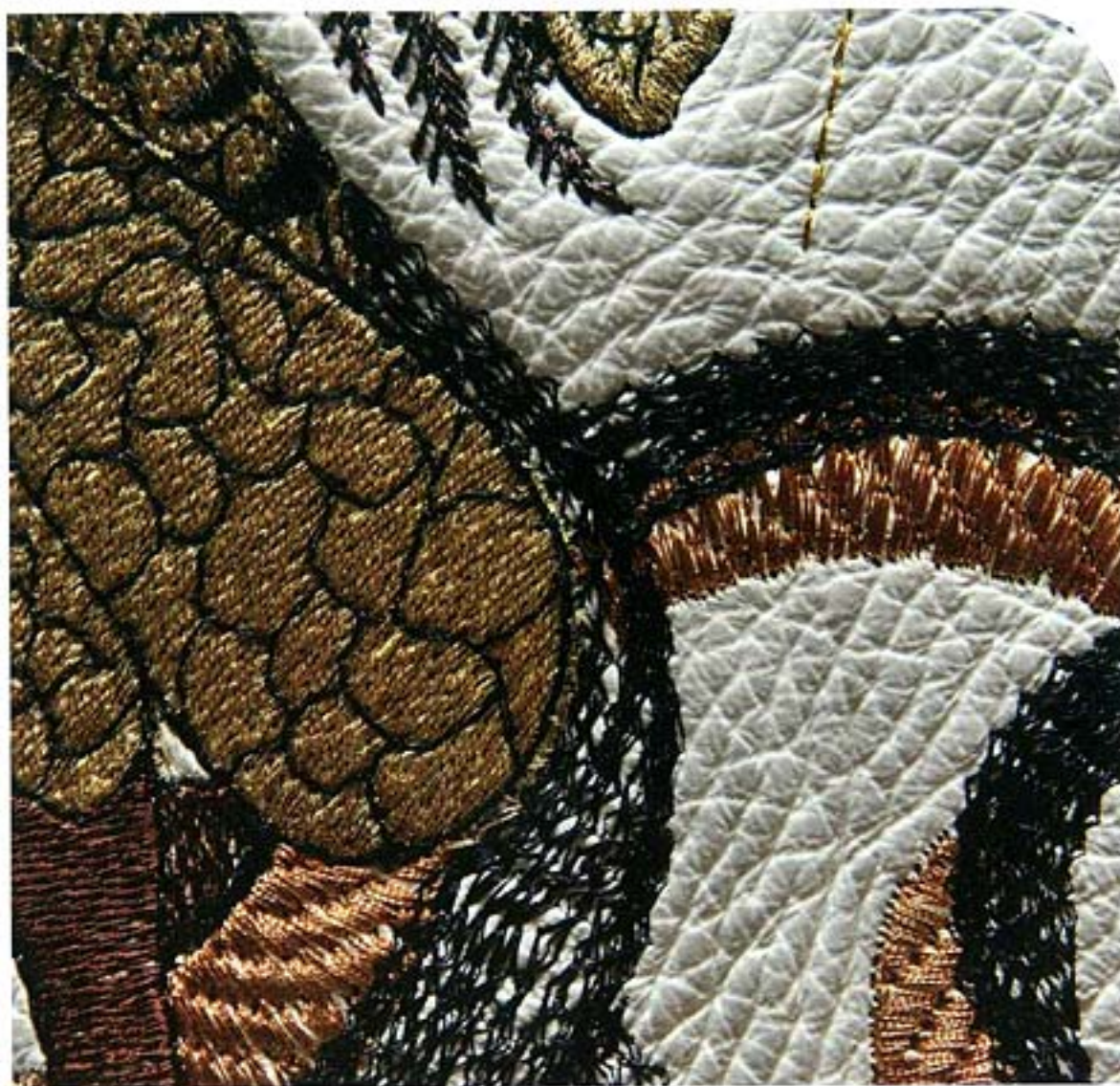
Born in the U.S., designer/digitizer **Bonnie Nielsen** works in the Freiburg, Germany, headquarters of embroidery thread manufacturer Madeira. She recently published her first book on digitizing, *Punch: Digitizing for Embroidery Design*, in which she provides a full account of the design process and creative techniques involved in digitizing award-winning embroidery. Nielsen has distinguished herself internationally with her embroidered art pieces and articles that appear in professional apparel and embroidery magazines.



Pat Williams has 20 years of experience in the embroidery industry. Her original designs are sold at www.embroiderydesigns.com and www.embroiderydesignsplus.com. Reach her at pwilliams22@cox.net.



An original design by Bonnie Nielsen for Madeira, the Dragon Lady is stitched in many types of metallic threads on leather. (All images courtesy Madeira)



This close up of the Dragon Lady design illustrates the designer's choice of longer stitches when working with metallic thread.

those who do it to offer a new service to customers, and a new source of revenue to their accountants.

TYPES OF METALLICS

From texture to sparkle to color, metallics offer many choices. And, while some are designed to solve specific concerns, others demand their own set of considerations. The two most popular types of metallic embroidery thread are core-wrapped and twisted.

The core-wrapped construction is when a metallic foil is wrapped around a core

thread, such as a polyester, rayon or nylon. This type of thread comes in many different sizes (or weights). The 35 and 40 weights have been around for a long time and are used throughout the industry. The 35 is thicker than the 40 weight, which, in turn, is thicker than a general purpose 40 weight rayon or polyester embroidery thread. For each, the stitch density should be set 10 to 15 percent less than required by a rayon or polyester thread.

The twisted type of metallic lends a lot of shimmering and sparkling effects to

embroidery designs. This metallic is made with a special twist that gives it a unique textured, almost loose appearance. It is available in 30 weight and 12 weight, in iridescent tones with an almost gem-like quality. Due to the twisted nature of the metallic foil, when light hits the thread, its reflection results in an effect of light dancing off it.

DESIGN CONSIDERATIONS

It's imperative that designs for whatever metallic thread is chosen are digitized

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SFX EMBROIDERY

with that metallic in mind. Those subbing out digitizing should inform the digitizer of the particular metallic, its weight, and what it will be stitched on, so they can digitize appropriately. Stitch lengths and density will be affected by the choice of thread.

Those editing designs in-house should reduce the density in metallic areas by about 20 percent. Or, increase the size of the design by 10 percent, which should have the same effect. The nature of metallic thread is to be a little less pliable. Therefore, tensions need to be readjusted.

Run a sample on the production fabric before attempting to run the production order. Metallic thread should run well, provided that tensions are looser than normal.

Specific fabric type and weight, along with the execution of the design, will determine how loose or tight the tensions should be set.

MACHINE CONSIDERATIONS

When stitching with metallic on any machine, make certain the equipment is in excellent running condition. The thread

guides should be free of rough spots. When switching to metallic from another thread type, start with a new needle. Also, bobbin cases should be checked and cleaned.

Finally, slow down a little! Especially for more intricate designs, a slower machine speed will give better results. For example, set the speed at 650-700 spm at first. You can always speed up if all is going well.

Competition in the decorated apparel market is steep. Embroiderers need every edge they can find. Mastering metallics will put you ahead of the shop that just opened up down the street.



Far Left: The simple metallic design on this denim pocket was done in 30 weight. It illustrates that even a small touch of metallic can add a lot of style. **Left:** Digitized by Bonnie Nielsen, this photo-realism effect was achieved with the use of only two colors of 45 weight metallic embroidery thread.

NEEDLE SELECTION

Various metallic thread weights require the correct needle for best productivity. Here's a quick reference for the right needle to pull the thread at hand.

THREAD	NEEDLE
#50	#65/9
#45	#90/14
#40	#75/11
#35	#90/14
#30	#90/14
#20	#100/16
#15	#100/16
Supertwist #30	#90/14
Supertwist #12	#100/16



Metallic embroidery thread comes in a wide range of textures, colors and weights, offering a tremendous amount of choice. Even variegated metallics are available.

WHAT WEIGHT?

The properties of all the different weights are each individual. Here, then, is a list of the weights both core-wrapped and twisted metallic are available in and suggestions for possible uses. Remember that, when referring to thread weight, the greater the number, the lighter the thread.

#12 and #15

Whether core-wrapped (smooth, #15) or twisted (multi-faceted surface, #12), both are heavyweight threads. They are best for very long stitches, used as a border or accent. Number 15 is often used for decorative seams on home furnishings or denim. While decorative, it is very strong and durable. Supertwist 12 is shimmery and creates a voluminous or raised effect.

#20

An elegant, soft metallic made from spun rayon wrapped with a metallic foil, #20 is another heavy thread. It lends itself to outlining and accent stitches. Colors appear "antiqued" or "retro" in their appearance.

#30 Smooth

The exclusive twist construction and double-layer protection make this the most abrasion-resistant thread in the industry. A true specialty thread, it was developed for outdoor exposure, chlorine and bleaching. It can withstand commercial laundering, making it suitable for use on uniforms and linens, and will stand up to work wear, canvas and sporting goods.

#30 Twist

The strong nylon core and genuine metallic base ensure smooth running and shimmering appearance on everything from denim to heavy upholstery to bath towels or decorative seams. Unique in the industry, this thread is the right choice for embroiderers looking for a lot of personality for spirit wear, dance costumes, or anywhere decoration is key.

#35

This reliable metallic is used for decorative stitching in open designs. It fills in well and can be used on almost any fabric. Using even a small amount in a design will add glitter and shine.

#40

From fine drapery material to coarse upholstery fabric, this metallic is a high performer. It is thicker than a standard #40 embroidery thread, but can be digitized into more design space, fills well, and performs on industrial machines. Its razor-thin Polyamide core provides strength, while its appearance is designed for sophisticated embroidery designs.

#45

Using an aluminum coating rather than pure silver, this metallic is more economical, while retaining a strong, durable construction. A reduction of the metalized wrapping produces a slightly thinner thread than the #35, and allows the trilobal polyester core to gleam. The resulting two-tone color creates an almost "tarnished" effect with antique tones.

#50

The industry's thinnest metallic thread, this thread will run as smoothly as a general-purpose #40 embroidery thread. Use it for letters smaller than 5mm and small detail. It is designed for fine monograms and filigree embroidery work. Due to its ease, versatility and capabilities, if you've never tried a metallic before, begin with #50. **pw**

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Laser cutting software

Vision is an optional software program offered by BITO that is designed to work with Proel laser cutters. Combined with a video camera, this program gives a laser cutter the added capability of cutting complex and detailed shapes at high speeds. It works with the LaserBridge machine and galvanometric laser-cutting equipment such as the Spartacus. Although the LaserBridge machine can contour cut most objects, it gets its direction from the accompanying digitizing and laser cutting software. The capability of a laser bridge machine can be expanded by adding a peripheral bridge roller or bridge board along with a camera and Vision software. It can then cut, etch or engrave jobs that are not appliqué-related.

Visit: www.bitousa.com | Call: 866-248-6872



Fluorescent thread

Madeira's fluorescent kits are available in both 100 percent polyester Polyneon #40 and matte finish Frosted Matt #40. Both of these polyester threads are bleachable and colorfast. Item #919-6-FL consists of six 1,100 yard spools of neon colors packaged in a black-light-sensitive neon or-gandy drawstring bag. The Frosted Matt version, item #940-6-FL, consists of six 2,700 yard cones that are reportedly colorfast to extreme UV conditions.

Visit: www.madeiramart.com/trend-spot | Call: 800-225-3001

Tearaway backing

EnMart introduces JSI brand's EconoTear, a 1.7-oz. moderate tearaway backing said to tear away cleanly and hold stitches well. This stabilizer is a non-woven backing designed for general use, and is recommended for sturdier fabrics. The JSI brand of backing is of wet-laid construction, meaning the fibers are dispersed in a solution and then dried creating a multi-directional, uniform non-woven.

Visit: www.myenmart.com | Call: 866-516-1300



Water-based inks

International Coatings' GEN IV Series is a water-based, non-Phthalate, non-PVC high-solids ink said to produce a soft hand with good opacity, yet maintain many of the same advantages of traditional plastisol inks. The ink does not contain heavy metals or other harmful ingredients and meets Oeko-Tex standards. The product line consists of 19 primary colors, as well as several specialty inks, such as a clear base, puff additive, foil/transfer adhesive and glitter base.

Visit: www.iccink.com | Call: 800-423-4103



Chenille machine

Hirsch offers the Tajima TCMX-601 single-head six-color chenille machine. Features include automatic tie-offs, frame backward/forward control, automatic trimmers, thread break detection and automatic needle height adjustment. The 6.5" screen displays the image of the design with the location of the needle at any point in the design. The TCMX-601 stores as many as two million stitches and/or 200 designs in memory and will sew at maximum speeds of 800 stitches per minute. Color sequence can be programmed into the design data via the Tajima DG/ML Pulse Software or loaded manually via the control panel and an automatic chenille color change system.

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