

## Embroidery Terms

**Appliqué:** Decoration or trimming cut from one piece of fabric and stitched to another to add dimension and texture. Designs with appliqué can be more economical than embroidery alone if appliqué occupies a significant amount of the design.

**Arm Machine:** Multihead embroidery machine driven by a single main shaft. Each sewing head is attached to the shaft, usually by gears. Sewing heads resemble industrial sewing machines in the "arm" that the needle case is attached to.

**Automatic Color Change:** The ability of a multi-needle commercial embroidery machine to follow a command to change to another specified needle without intervention.

**Backing:** Woven or non-woven material used underneath the fabric being embroidered to provide support and stability.

**Bean stitch:** Three stitches placed back and forth between two points, often used for outlining.

**Birdnesting:** Collection of thread between goods and needle plate resembling a bird's nest. May be caused by improper tensioning of the top thread or not following thread path correctly.

**Blatt Stitch:** Schiffli term meaning "to feed the yarn", which produces a long zigzag stitch with threads lying close together.

**Bobbin:** Spool or reel that holds the bobbin thread which helps form stitches on the underside of the fabric.

**Bobbin Case:** Small, round metal device for holding the bobbin. Used to tension the bobbin thread, it is inserted in the hook for sewing.

**Boring:** Open-work incorporated into embroidered designs; a sharp pointed instrument punctures the fabric, and stitches are made around the opening to enclose the raw edges.

**Bridge Machine:** A bridge machine has the heads suspended on a bridge that goes across the machine. Without the arm on the base, a bridge machine is able to provide a larger sewing field from front to back on the machine. A bridge machine is good for cut pieces and also for yard goods. Compare with arm machine

**Buckram:** Coarse woven fabric stiffened with glue, used to stabilize fabric for stitching. Commonly used in caps to build the front panel.

**Cap Frames:** Specialized embroidery frames designed to hold finished caps for embroidering. Available in a variety of styles for various machines, with two basic styles being to sew the finished cap flattened out, or sewing the finished cap (on a tubular machine) in its natural curve.

**Cartoon:** Finished artwork of an embroidery design to be digitized.

**Chain stitch:** Stitch that looks like a chain link formed with one thread fed from the bottom.

**Check Spring:** Assists in upper thread tensioning and is used to detect upper thread breaks in many embroidery machine models.

**Chenille:** Form of embroidery in which a loop stitch is formed on the top of the fabric.

**Column Stitch:** A series of zig-zag stitches placed closely together to form a column. Also know as a steil stitch or satin stitch.

**Complex fill:** A digitizing capability that allows void areas to be so designated when mapping perimeter points.

**Condensed format:** Method of digitizing in which a proportionate number of stitches are placed between defined points after a scale has been designated.

**Conversion Software:** Programs that read information and translate it from one machine to another.

**Customizing:** (see [editing](#))

**Cylinder Arm Machine:** Refers to machines with "cylinder" beds. The hook assembly is housed in a cylinder-shaped arm, allowing goods to curve around the cylinder for embroidery.

**Cross-stitch:** Two stitches that cross at the center to form an X.

**Cylinder Spring:** Refers to machines with "cylinder" beds. The hook assembly is housed in a cylinder-shaped arm, allowing goods to curve around the cylinder for embroidery.

**Design library/catalogue:** A computer program which catalogs a collection to digitized designs kept by embroidery shops for embroiderers to access the design by subject, stitch count, etc.

**Denier:** Unit of weight used to measure the fineness of thread. Deniers are represented by the weight of the strands of thread, a slash, and the number of strands per thread.

**Digitize:** Term for punching that reflects the computerized method of converting artwork into a series of commands to be read by an embroidery machine's computer.

**Digitizing tablet:** A computer-aided design device used by digitizers to plot needle penetrations for embroidery designs. Typically, a pencil drawing of the design is enlarged and then taped to this tablet. The digitizer then uses a device known as a puck to indicate stitch types, shapes, underlay, and actual needle penetrations.

**Disk reader:** An external or internal device used to read machine movements from a computer disk.

**Download:** Transferring a file from the Internet to your computer.

**Editing:** Changing aspects of a design via a computerized editing program. Most programs allow the user to scale designs up or down, edit stitch by stitch or block by block, merge lettering with the design, move aspects of the design around, and other features.

**Emblem:** Embroidery design with a finished edge usually worn on outer clothing.

**Embroidery Point:** Unit of measurement in embroidery, in which 10 points equals 1 mm.

**Embroidery Unit:** The machine part that holds and guides the hoop so you can embroider.

**Embroidery:** Decorative stitching on fabric.

**Expanded format:** A format where individual stitches in a design have been digitized, generally meaning that the design can't be enlarged or reduced more than 10-20% without causing distortion.

**Fabric Grin Through:** Where the fabric is seen through the embroidery design either in the middle of the pattern or on the edge. See also [gapping](#).

**Facing:** Material hooped or placed on top of fabrics with a surface texture that are to be embroidered, compacting the texture and holding the stitches above it.

**Fill stitch:** Series of running stitches commonly used to cover large areas.

**Finishing:** Process done after embroidery is complete, including trimming loose threads, cutting or tearing away excess backing, removing facing, cleaning, pressing and packaging for sale or shipment.

**Flagging:** Up and down motion of goods under action of the needle.

**Flat Embroidery:** Embroidery that is framed in hoops, usually exclusively on the top of the embroidery machine's hook assembly.

**Font:** Used to describe a complete typeset from a particular typeface. Examples include Helvetica, Times New Roman, Arial, Verdana, etc.

**Format:** Machine specific readable information.

**FOX test:** Method of testing thread tension and soundness of timing. Sew the word FOX in one inch satin stitch block letters. Examine the reverse side for correctly balanced ratio of one-third bobbin thread to two-thirds top thread.

**Frame:** Holding device for insertion of goods under an embroidery head for the application of embroidery. May employ a number of means for maintaining stability during the embroidery process.

**Framing Press:** Machine to aid the framing process.

**Frame Sash:** Part of the pantograph to hold the frames. Also called a sash.

**Gang-loading:** Variety of techniques that allow loading of multiple units to be embroidered in a single loading operation.

**Gapping:** Where the fabric is seen through the embroidery design either in the middle of the pattern or on the edge.

**Geflect Stitch:** (see [fill stitch](#))

**GIF file:** Graphic Imaging Format; a type of picture fil

**H test:** Method of testing thread tension. Stitch one inch block letters for each needle bar. The reverse side of the completed embroidery should show a ratio of two-thirds top thread to one-third bobbin thread.

**Holding fixtures:** Devices used to hold or frame small or unusually shaped items such as socks or gloves.

**Hardware:** The physical parts of a computer.

**Hook:** Holds the bobbin case in the machine and plays a vital role in stitch formation. Making two complete rotations for each stitch, its point meets a loop of top thread at a precisely timed moment and distance to form a stitch.

**Hoop (n):** A device made from wood, plastic, or steel with which fabric is held in place for machine embroidering. A frame that attaches to the embroidery unit to hold the fabric taut while stitching. **Hoop (v)** The process of placing the fabric and/or stabilizer into the embroidery hoop.

**Hoop Burn/Hoop Mark:** The temporary marks that remain on the fabric after the embroidery hoop has been removed. Also referred to as a Hoop Ring. Such marks can typically be removed using steam or Magic Sizing spray.

**Hooping Board:** Board designed to hold the outer portion of the hoop while the goods to be embroidered are placed over the board to be hooped. Once the goods are aligned and placed correctly over the outer hoop, the operator inserts the inner portion of the hoop.

**Hooping aid or hooping station:** A device used to aid in the hooping process, generally by holding the substrate and/or hoop as the rings are engaged, in order to enhance hooping efficiency and consistency.

**Hooping Device:** Device that aids in hooping garments or items for embroidery. Especially helpful for hooping multi-layered items and for uniformly hooping multiple items.

**Interlock stitch:** Two or more rows of overlapping satin stitches.

**Jump stitch:** Movement of the machine without needle penetration commonly used to get from one point in a design to another.

**Kern:** To add or delete space between pairs of adjacent characters.

**Lettering:** Embroidery using letters or words.

**Lip hooping:** Known as recessed hooping, this technique is useful when hooping bulky or slick fabrics such as insulated jackets.

**Lock stitch:** Commonly referred to as a lock-down stitch, it is formed by three or four consecutive stitches of at least a ten point movement. It should be used at the end of all columns, fills and any element where jumps will follow.

**Logo:** Short for logotype, name, symbol or trademark of a company, organization or individual.

**Looping:** Erratic stitch construction-often due to improper top-thread tension-resulting in loops on the surface of the embroidery.

**Marking:** Marking of goods to serve as an aid in positioning the frame and referencing a needle start point.

**Modular:** Machine system where many separate stitching heads or head configurations are controlled by a central computer.

**Monogram:** Embroidered design composed of one or more letters, usually the initials in a name.

**Moss Stitch:** (see [chenille](#))

**Nap:** A fuzzy or downy surface of fabric covering either one side or both, produced by brushing

**Needle:** Small, slender piece of steel with a hole for thread and a point for stitching fabric. Sharp points are for piercing heavy, tightly woven fabrics. Ball points are for gliding between fibers of knits.

**Needle bar:** Bar that holds the needle and regulates the distance to which the needle is driven into the bobbin assembly.

**Network:** To link embroidery machines via a central computer and disk drive system. A group of machines linked via a central computer.

**Nippers:** (see [thread clippers](#))

**Offset:** The ability to move the pantograph out of the design with a specific movement and then return to the original point. Used for placing appliqués.

**Origin:** The starting point of your design.

**Overrun:** Specialties produced in excess of the number originally ordered.

**Pantograph:** A bar, rack, or holder that frames or holding fixtures are attached to. The pantograph moves in X and Y directions to form the embroidery design, controlled electronically or mechanically depending on the machine.

**Pencil Rub/Pencil transfer:** A low-cost way of producing a "sample" of an embroidery design. Consists literally of a piece of tracing paper placed over a sewout and rubbed lightly with a pencil to produce an impression of the embroidery.

**Presser Foot:** Metal device that touches the goods being embroidered while the needle is in the goods. The main function of the presser foot is to hold the material being embroidered until the hook point catches the thread loop formed by the needle rise.

**Pre-tensioner:** Thread tension assemblies that are before the main tension assembly in the thread path. The function of the pre-tensioner is to apply a light amount of tension in order to make the main tensioner work.

**Puckering:** Result of the fabric being gathered by the stitches. Many possible causes include incorrect density, loose hooping, lack of backing, incorrect tension, or dull needle.

**Pull Compensation:** A degree of distortion built into a design by the digitizer to compensate for pull on the fabric caused by the embroidery stitches.

**Punching:** Conversion of artwork into a series of commands to be read by an embroidery machine's computer.

**Push-Pull Compensation:** Digitizing technique which takes into account the distortion of the design that will occur because of the interaction of the thread with the fabric. "Push and pull" will cause a circle digitized perfectly round to sew out with the sides pulled in, resulting in an egg shape. Generally, it is necessary to extend horizontal elements and reduce vertical elements.

**Registration:** Correct registration is achieved when all stitches and design elements line up correctly.

**Repeat:** Layout used for making emblems or designs on a fabric span that are repeated at regular intervals.

**Running stitch:** Consists of one stitch between two points, used for outlining and fine detail.

**SPI:** Stitches per inch.

**SPM:** Stitches per minute for measuring the running speed of an embroidery machine.

**Satin stitch:** Formed by closely arranged zigzag stitches.

**Scaling:** Ability to enlarge or reduce a design.

**Shears:** Cutting utensil having a curved handle with one hole for the thumb, another hole for two or more fingers, and an overall length of usually more than six inches. Used for cutting fabrics on a table or other flat surface.

**Short stitch:** A digitizing technique that places shorter stitches in curves and corners to avoid unnecessarily bulky build-up of stitches.

**Special fill:** A function available in some digitizing software that automatically incorporates special patterns or textures into fill areas.

**Stabilizer:** Woven and non-woven material used underneath the item or fabric being embroidered to provide support and stability. Can be hooped with the item, or placed between the machine throat plate and the hooped garment. Available in various weights and in two basic types: cutaway and tearaway. Also referred to as Backing.

**Steil Stitch:** (see [column stitch](#))

**Stitch editing:** Digitizing feature that allows one or more stitches in a pattern to be deleted, lengthened or altered.

**Stitch Processing:** The calculation of stitch information by means of specialized software, allowing scaling of expanded format designs with density compensation.

**Stock Designs:** Digitized embroidery designs that are commercially available for general use by embroiderers.

**Tackle Twill:** Letters or numbers cut from polyester or rayon twill fabric that are commonly used for athletic teams and organizations.

**Tatami:** Another term used to describe fill stitches. (See Fill Stitch).

**Tension:** Tautness of thread when forming stitches. Top thread tension, as well as bobbin thread tension, needs to be set. Proper thread tension is achieved when about one third of the thread showing on the underside of the fabric on a column stitch is bobbin thread.

**Tensioner:** Device used to adjust the tautness of thread when forming stitches.

**Thread:** Fine cord of natural or synthetic material made from two or more filaments twisted together and used for stitching. Machine embroidery threads come in rayon, which has a high sheen; cotton, which has a duller finish than rayon but is available in very fine deniers; polyester, which is strong and colorfast; metallics, which have a high luster and are composed of a synthetic core wrapped in metal foil; and acrylic, which has rayon's sheen.

**Thread clippers:** Small cutting utensil with a spring action that is operated by the thumb in a hole on the top blade and the fingers cupped around the bottom blade. Useful for quick thread cutting, but unsuitable for detailed trimming or removal of backing.

**Tie In Stitches:** Small stitches used at the beginning of a sewing cycle, particularly on satin stitches, to prevent the thread from pulling out of the embroidery.

**Tie Off Stitches:** Small stitches, usually about 1 mm in length that "lock" the stitches in the fabric to prevent the stitch from unraveling when the thread is trimmed. Without Tie off stitches the thread can potentially unravel and destroy the embroidery. They are particularly necessary when making satin stitches wider than 1.2mm, as satin stitches have a tendency to unravel more easily than running or fill stitches.

**Tiff (of TIF) file:** Tagged Image File Format, it is a type of graphics file.

**Timing:** Relationship between the embroidery machine's hook and needle. To form a stitch, the hook and the loop formed by the top thread must meet at a precise moment or else improper stitch formations, thread breakage, skipped stitches, or broken needles could result.

**Topping:** Material hooped or placed on top of fabrics that have definable nap or surface texture, such as corduroy and terry cloth, prior to embroidery.

**Trimming:** The action of cutting loose thread, removing backing, etc., from the final embroidered product.

**Tubular Embroidery:** Embroidery produced on an embroidery machine which allows tubular fabric or pre-assembled garments to be placed around the hook assembly. Allows sewing of the front of a garment without sewing through the front and back of it.

**Two-ply Stitch:** A double running stitch. The stitch is formed by the machine sewing a complete running stitch area and then coming back over the same area

and stopping where it started. Sews from Point A to Point B and then from Point B to Point A.

**Underlay:** Used under the regular stitching in a design. The stitches are placed to provide stability to the fabric and to create different effects. Underlay is normally a series of running stitches or a very light density fill often placed in the opposite direction that the stitching w/ill go.

**Underlay Stitch:** Stitches laid down before other design elements to help stabilize stretchy fabrics and to tack down high wales or naps on fabrics so the design's details don't get lost.

**Variable Sizing:** Ability to scale a design to different sizes.

**Verify:** Sample sewout or print-out of a new embroidery design to make sure the pattern is correct.

**Walk Stitch:** (see [running stitch](#))

These were gathered by Sandra M (one of the Team Floriani Moderators from the Forum) Chat with her as SewnGraphics.com on the Forum!