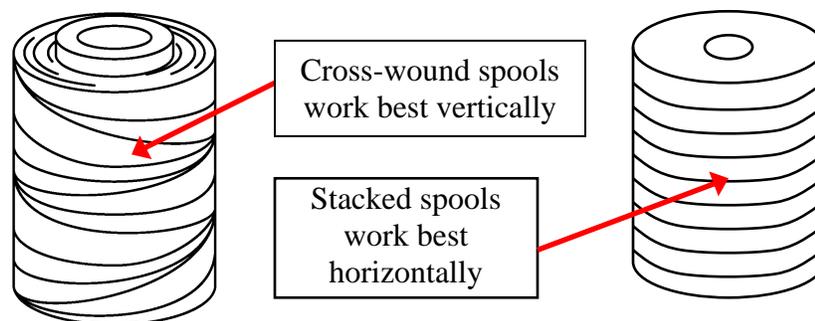


Threading Your APQS Quilting Machine

Before threading your machine, take a moment to read this section regarding different thread types and usage hints. It will save you many headaches later!

When shopping for your thread, consider purchasing two spools of a color if you intend to also use it in the bobbin. This is much easier than continually removing the spool from the needle and moving it to the bobbin winder.

Pay attention to the way a spool is wrapped with thread. If you see thread criss-crossing itself on the spool, it is called “cross-wound” and will usually work best on the vertical spool holder. However, many “stack wound” threads may work better when mounted horizontally. You can purchase an optional horizontal spool holder from APQS.



Common Thread Types

New thread varieties appear rapidly on the market. Be aware that nearly all threads will run on your long arm machine, as long as you are willing to adjust the tension (sometimes on both the top and the bottom) accordingly. However, you'll still find a spool once in a while that simply will not work well, no matter what you do. Remember that thread can also have a “shelf life” and can even come from a “bad batch.” Sometimes it's better to simply try another spool than to become frustrated over one thread that breaks often. Some manufacturers offer guarantees on their thread quality. If you come across a spool that doesn't work well, consider returning it to the manufacturer in exchange for another one.

100 % Polyester Thread

Polyester thread is versatile and is effective for most quilting situations. It is strong, smooth, and comes in a variety of colors, including lovely variegated versions. Polyester thread breaks very little, and produces little or no lint in the bobbin area. Some types provide a sheen or appear shiny, while others can be difficult to distinguish from cotton. It also works very well with metallic thread and pre-wound bobbins.

Polyester is a good choice when durability is important. For example, if your project will receive heavy use or will be laundered in a washing machine, polyester thread helps prevent the quilting lines from snapping (especially along the bias areas of a quilt.) Since it is more stable, you'll also have fewer thread breaks than you'll experience with cotton.

One down side to some polyester thread is difficulty in securing your starts and stops. Since polyester can be slick, you may have to take extra care to secure your beginning and ending stitches so that they do not become undone.

100% Cotton Thread

Cotton thread comes in a huge variety of plies and weights, and also a wide range of colors and quality. Usually, the larger the weight number is, the finer the thread is. For example, a 12 wt. thread will be heavy like jeans stitch thread, and a 60 wt. will be fine like lingerie thread. While your APQS machine will sew with cotton thread, you'll have to make some adjustments to the tension. Also be aware of other factors that can affect cotton's performance, such as how smooth the thread is, what its ply is, and its thickness and tensile strength. Generally, inexpensive cotton thread will not perform well, as it often has weak areas and "slubs" of fibers which cause it to feed erratically from the spool.

In nearly all cases, when you use cotton thread in the top and/or bobbin area, you'll need to *loosen* the top tension (sometimes significantly) and may also need to loosen the *bobbin* tension as well (look ahead to the bobbin section on Page 120 for instructions on how to do this).

Cotton thread is more susceptible to the elements, and can dry out in arid climates or in the winter. It becomes brittle and breaks more frequently. Some quilters gently mist a spool with water the night before they plan to use the thread to re-hydrate it; others put the spool in the freezer overnight. Still others treat the spool with liquid silicone (Sewers' Aid is one brand available in the notions department of sewing stores). In any case, store your thread out of the light to prevent fading, preferably in a closed container to help retain "freshness."

Cotton thread will be easier to secure at the beginning and ending lines of your stitching, since it tends to grab itself and the fabric. This same tendency also causes friction and drag on the thread as it enters and exits the quilt and batting, resulting in more frequent breaks as opposed to polyester thread.

While you can certainly mix and match thread types and even thread weights in both the top and bobbin, the easiest place to begin is with thread that is similar in weight and type in both locations. If you have difficulty, try a fine thread in the bobbin. As you become more comfortable with your machine, feel free to experiment with different combinations to suit your creativity. Your success depends on your willingness to make tension adjustments, and on your understanding of the characteristics of the particular thread you're working with in conjunction with the quilt sandwich's own unique properties.

Serger Thread

Threads designed to be used in sergers are not as strong as other types of thread. These are meant to be used with 3-4 other spools in a serger to finish a seam or to do a cover stitch. Therefore, serger thread may not hold up to heavy wear and tear on a quilt. However, some quilters have used it for thread painting or other embellishments on the quilt. You certainly can use serger thread in your APQS machine; just remember that the thread quality may impact the desired look on your quilt. Again, since the thread may not be as durable as other cotton or polyester thread, you'll have to make tension adjustments.

Cotton-Wrapped Polyester Thread

This thread has the same characteristics as 100% polyester, in terms of strength and durability. Its core is polyester, but then the core is wrapped with cotton fibers to give it the appearance of cotton. The quality of this outer layer varies considerably from smooth to fuzzy, and will often cause a great build-up of lint in the bobbin area. Check it frequently.

Rayon Thread

If you've done machine embroidery, you may already have a large supply of rayon thread. It can also be used in your APQS machine, but has its own issues as well. Thread designed for high-speed embroidery machines will work, but will require you to loosen the top tension quite a bit, and possibly to slow down as you quilt. As the needle enters and exits the fabric, the friction heats the needle, which can cause the thread to break more frequently. You can also treat the thread with liquid silicone (Sewer's Aid is one brand) to help reduce friction.

You won't find many designers who advise you to seam your pants with rayon thread—it's not strong enough to withstand heavy stress. Keep this in mind when choosing rayon for your quilt; it may not hold up as well as other types of thread if the quilt will get many washings or heavy wear.

Try using lingerie or light weight thread in the bobbin, which will help reduce the stress on the rayon thread. If you are looking for the luster of rayon but are concerned about durability, you can also treat your APQS machine like a big "free motion" embroidery machine. Load the quilt top only on to the frame, along with an appropriate stabilizer under the top, and do decorative stitching on the surface of the quilt. Later, re-load the quilt with batting and backing, and use a more stable thread to stitch the layers together.

Metallic Thread

You'll discover many wonderful metallic threads on the market. Some are smooth and shiny, others rough and textured. For best results, look for strong, smooth metallic thread. Many metallic threads are not strong

enough to withstand lots of wear and tear in a quilt, though some are. Make your selections based on the quilt's intended use. You can still use more fragile threads as accents or decorative elements.

Loosen the top tension considerably with metallic thread. Unlike your domestic machine, you will not need a different needle. The MR 4.0 needles will work well. Change the needle when you're finished, since the metallic thread can wear tiny grooves into the needle's eye that may cut other thread. Also check the thread guides for wear or grooves, and replace them if necessary.

Use a light weight bobbin thread, preferably *not* cotton (its fibers grab the metallic and tend to break it more easily.) Move the machine more slowly to reduce friction and heat build-up. You can also treat the spool with liquid silicone as described in the previous sections.

Another way to get metallic thread to break less often is to actually run *two* threads at a time—the metallic thread and invisible thread or fine weight polyester thread together. (Check into our optional dual spool holders to make this easier.) The threads join up at the tension disks and then travel together through the thread guides and the needle.

Invisible (Monofilament) Thread

Many quilters are opposed to using invisible thread on their quilts. This opinion often stems from misinformation regarding how the thread will look or perform in their quilts. They've been told that the thread will cut or tear the fabric, and will disintegrate after years of use. These ideas stem from the first invisible threads available to quilters, which came from the bedding industry. These heavy duty, industrial invisible threads were used to quilt bedspreads, hem curtains, etc., and had to be strong. Today's invisible fibers are nothing like that.

Look in your local quilt shop for invisible thread that is .004 in diameter. This thread is very fine and soft, not like the "fishing line" first available. You'll find thread available in both *nylon* and *polyester* formulations. Each type has advantages and disadvantages; make your selection based on the quilt's intended use. Nylon invisible thread may have the appearance of being more supple and finer (even though it's the same diameter) but may

melt if touched by a hot iron or put into a very hot dryer. It may also get brittle with age or when exposed to long periods of sunlight. Polyester invisible thread holds up to heat better and will not get brittle. However, some quilters feel that it appears to be stiffer and reflects more light.

Invisible thread is versatile for many applications. Use it to “stitch in the ditch” when choosing a colored thread might prove difficult (or when your skills are still developing.) It’s also helpful for outlining appliqué patches, and stitching around fused pieces with traditional blanket stitching near the edges. You can also use invisible thread to “couch” fibers on top of the quilt, stitch in the ditch, outline embroidery, plus many other techniques.

Thread the invisible thread normally, but loosen the top tension considerably. You want the invisible thread to behave like normal thread, and not to stretch as it passes through the tension disks and thread guides. If you use invisible thread in the bobbin, only wind the bobbin half full, and loosen the tension mechanism on the bobbin winder so that the invisible thread doesn’t stretch as it winds on the bobbin. Finally, loosen the tension on the bobbin case as well, to avoid stretching the bobbin thread. (Many quilters choose to purchase a second or third bobbin case, and set the tension on each case according to the thread normally used in it. Mark the case with permanent marker or a drop of nail polish to distinguish it from your other cases.)

Invisible thread can be used in the top only, bottom only, or in both locations. Each situation will require different tension adjustments. Experiment until you are satisfied with a balanced stitch.

Change the needle after extensive use of invisible thread, as it can wear a groove in the needle’s eye. Also check the thread guides for grooves, and replace as necessary. If you find yourself using invisible thread on a regular basis, you may wish to change the thread guides provided with your quilting machine for “fishing pole” line guides with a ceramic insert. These can often be found at a well-stocked sporting goods store.

Thread Path

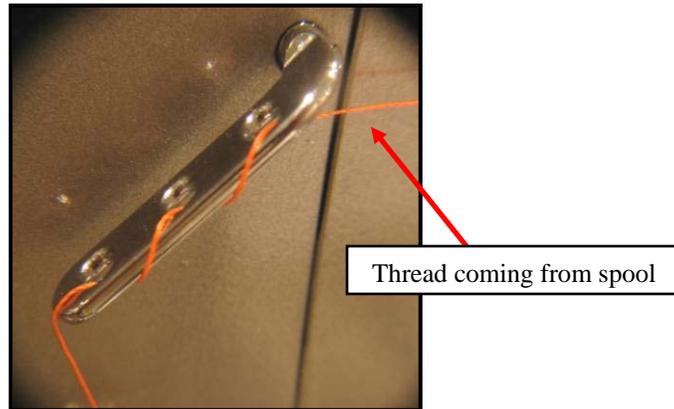
- Position the spool on left rear spool holder. Take the thread up through the rear thread guide, as illustrated above. Make sure that the thread guide is positioned over the center of the thread cone. NOTE: Some threads, especially silky or slippery ones, function better with some pre-tension on the thread. Use a thread net over the cone, or take a small piece of batting and wedge it into the thread guide opening, leaving room for the thread to pass below it. This technique helps prevent the thread from jumping off the spool erratically or from puddling on the bottom of the spool holder.



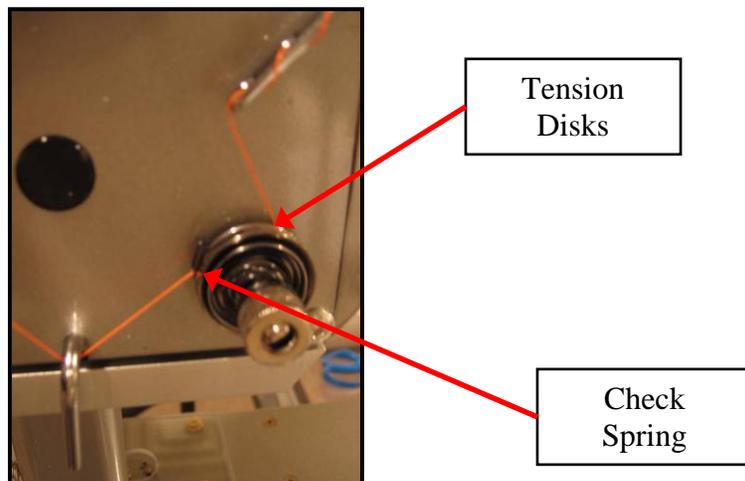
- Pull the thread through one hole only of the mid-point 3-hole thread guide. The hole you choose doesn't really matter. There are three holes in the guide simply because we can use the same part in two places—here and right before the tension disks.



- Bring the thread through all 3 holes of the 3-hole guide directly above the tension control, as shown below, ending with the hole closest to the tension disks. Take the thread from back to front on each hole, resulting in the spiral pattern shown. This helps to “untwist” the thread before it passes through the tension disks.

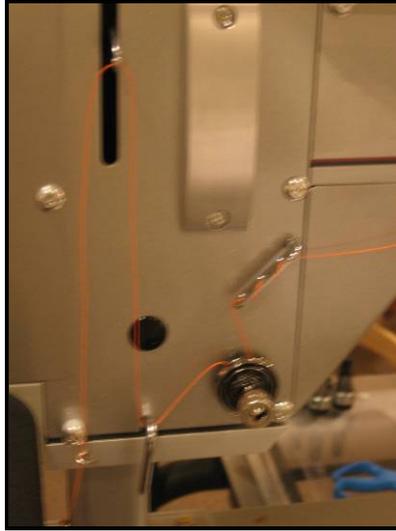


NOTE: While this is the recommended threading path for most threads, occasionally you may find a thread that is being particularly fussy. You may want to try skipping the first or second holes to provide less drag. Remember to re-thread the machine when you switch threads again.

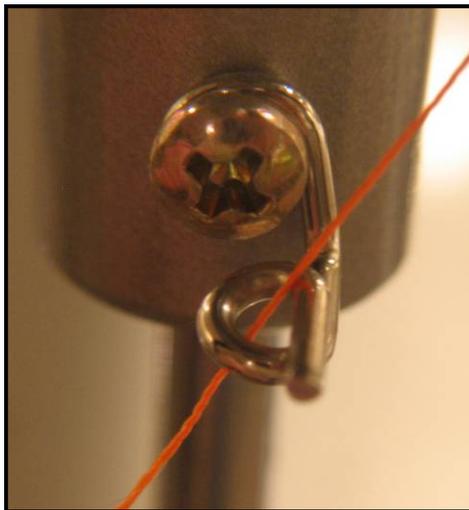


- Pull the thread between the tension control disks and over the check spring as shown. Hold on to the thread just before it enters the tension disks, and pull on the remaining tail firmly to be sure the thread is seated completely between the tension disks. If your stitch quality appears to have changed, such as

loops of thread on the quilt surface, this is one of the first places to check. The thread must be between the two tension disks for proper operation.



- From the check spring on the tension disks, feed the thread under the L-shaped guide, up through the take-up-lever and down through the side pig-tail thread guide as illustrated above. To insert the thread into the pig-tail guide, take the thread behind the guide on its rounded side, on the left. Next, grab the portion of thread that is coming down from the take-up-lever and pull it forward past the sharp edge of the pig-tail guide, from the right. This will slip the thread inside the guide without having to poke it down into the guide.



- Take the thread through the front pigtail thread guide as you did in the step above, then through the needle, *front to back*. Make sure the needle is inserted correctly. You can either pass the thread inside and under the hopping foot at this point, or you can wait until your quilt is loaded and you take your first stitch.



- One way to quickly change thread colors is to cut the thread currently being used just above the spool. Remove the spool and replace it with the new color. Tie the new thread to the old thread with an overhand knot. Remove the old thread from the eye of the needle, and then pull on the old thread just above the needle until the new thread is tugged through all the thread guides and the tension disks, up to the needle. You'll need to cut the knot off the thread and re-thread the needle, but will have saved lots of time changing colors! *NOTE: take a moment to double check that the thread passed correctly through all thread guides, and is firmly pulled between the tension disks before proceeding.*