## Technique: Strip-Pieced Triangles

When I learned this easy technique in 2003 I took it one step further and put my Seam Guide to work. This is the fastest way to get many half-square triangle blocks from the same fabrics, or multiple fabrics when using fat
 quarters. Fabric strips may be cut on the straight grain or the diagonal. If you cut on the straight grain they are easier to cut and sew, but you will have bias edges on the finished block, so I almost always cut on the diagonal. I prefer this method over paper piecing or drawing diagonal lines and sewing $1 / 4$ " from each side of the line. But I sometimes make these blocks using other techniques depending on the quantity and size needed and my fabric choices.

For this sample I will be making 36 blocks. That's close to the number I need to make the Combination Blocks for my Sweet Sampler pattern which finish at $41 / 2 "$. I will need 2 fabric rectangles measuring 19" x 38". Here's how I figured the fabric size needed:

I need 34 blocks. Using 2 fabrics, each fabric will make 17 blocks. If I used a square of fabric for $4 \times 4$ blocks it would only make $16 \times 2$ and I would be short 2 blocks. $5 \times 5$ blocks would make $25 \times 2$ which is a lot more than I need. So I rounded the desired blocks from each fabric to 18 which is divisible by 3 and 6 . I chose a rectangle 3 squares wide and 6 squares long to get the amount of blocks I need plus a couple extra. It's okay to make a few extra blocks, but you don't want to be short or you will have to piece them separately. Since my finished block is $41 / 2^{\prime \prime}$ and these will be Combination Blocks when finished which use quarter-square and half-sqare triangles, I will need to add $11 / 4$ " to that measurement plus a little extra to make them oversized. If adding $1^{1 / 2 \prime \prime}$ that would give me 6 " squares and a rectangle size of 18 " x 36 ". I always add an extra inch or two when cutting these strips so I won't be short so decided on a 19" x 38" rectangle. If I were just going to make half-square triangles I would add at least $1^{1} / 8^{\prime \prime}$ to the finished size for $55 / 8^{\prime \prime}$ squares then round that to $53 / 4$ " for a rectangle $171^{1 / 4 " ~} \times 34 \frac{1}{1} 2^{\prime \prime}$ which I would cut 18 " x 36 ".

So how wide do we cut the strips? There is an easy formula for this. My 6" Bias Edge Ruler has charts for cutting sizes of single strips. But we are going to be using double strip widths so you would have to double the measurements. The easiest way is to measure the diagonal of the finished block and add $13 / 4$ " for half-square triangles or $21 / 4^{\prime \prime}$ for quarter-square triangles which is the size I need. The diagonal for a $41 / 2^{\prime \prime}$ square is $63 / 8^{\prime \prime}$. So my strips need to be $63 / 8^{\prime \prime}+2^{1 / 4 "}$ which equals $85 / 8^{\prime \prime}$. Sometimes I round up or down to avoid dealing with $1 / 8^{\prime \prime}$ measurements and since adding $2^{1 / 4} 4^{\prime \prime}$ gives plenty of excess fabric I chose to round to $8^{1 / 2 "}$. Another way to get the measurement is to add $1^{1 / 1 / 8^{\prime \prime}}$ to the finished block size for half-square triangles and $1 \frac{1}{2 \prime \prime}$ to the finished block size for quartersquare triangles, then measure the diagonal of that size or multiply by 1.414. For example: For a 4" finished block multiply $5.125 \times 1.414$ to get $7^{1 / 1 / 4 "}$ for half-square triangles or $5.5 \times 1.414$ to get $73 / 4$ " for quarter-square triangles.

## CUTTING CHART FOR BASIC BLOCK SIZES:

| Finished Block Size | 1" | $2 "$ | $3 "$ | $4 "$ | $5 "$ |
| :---: | :--- | :--- | :--- | :--- | :--- |
| Half-Square Triangles | $31 / 4 "$ | $41 / 2 "$ | $6 "$ | $71 / 4 "$ | $83 / 4 "$ |
| Quarter-Square Triangles | $33 / 4 "$ | $5 "$ | $64^{\prime \prime} / 2^{\prime \prime}$ | $73 / 4 "$ | $9^{1 / 1 / 4 "}$ |

Now we're ready to get started.
Tip: For a little fun, I'm going to show you how to add color to your Seam Guide Bars for cases when you might want them to be a little less sticky when they need to be repositioned multiple times. You will need some super sticky notes in the color of your choice, your Guide Bars, and a rotary cutter and mat. This works best on Guide Bars with fresh tape. Position the notes on the sticky side of the Guide Bars with sticky side up, covering the full length. On a lint free mat, turn the Guide Bars over and use a rotary cutter to trim excess paper. They are now ready to use.


STEP 1: In order to use these double width strips with my Seam Guide you will need the Cabinet Size. The Portable size will only work for strips up to $5^{1 / 2} 2^{\prime}$. If you don't have a Cabinet Size Seam Finder ${ }^{\text {TM }}$, cut twice as many strips half the width which in this case will be $4 \frac{1}{1 / 4}$ ". Place the Seam Guide Bars, tacky side down, on the Seam Guide at the $8^{1 / 2 "}$ " lines. That is halfway between the 8 and 9 black numbers on the Seam Guide. I usually place them slightly to the left of the
 line for a scant $1 / 4$ " seam. Measure to make sure both Guide Bars are located $4^{1 / 1 / 4}$ from the center line.

STEP 2: Layer the 2 fabric rectangles right sides together on a large cutting mat. Unless you are using a directional print, the direction they are layered and cut does not matter. Cut one $61 / 4$ " triangle from one corner. To get this measurement I added $1 / 4^{\prime \prime}$ to the size I would have normally cut for this size triangle which would have been 6". This gives me insurance in case my cutting and sewing isn't completely accurate. I usually use my 6" Bias Edge ${ }^{\text {TM }}$ Ruler for this but since it is only 6 " I am using a larger triangle ruler and measuring over $6^{1 / 4 "}$. This will make 1 block.


Then cut four $8^{1} / 2^{\prime \prime}$ diagonal strips as shown, sliding your ruler as needed to complete the cut without removing the blade from the fabric. If you don't have a long $8 \frac{1}{1 / 2}$ ruler, place 2 rulers side by side. A 6 " and $21 / 2^{\prime \prime}$ or larger ruler will work. As you cut the strips fan-fold them and stack them on top of each other. Sometimes I use a few pins so the fabrics won't shift. If you choose to cut your strips on the straight grain, you will only need two $81 / 2 "$ strips. Keep in mind that you will lose the fabric on the straight ends when making half-square triangles so you will need to cut a longer rectangle, but they will work for the quarter-square triangles that I will be making. Since these blocks will be used for the pieced border on my Sweet Sampler quilt I do not want bias edges.


STEP 3: Sew the $61 / 4$ " triangles with a scant $1 / 4$ " seam and trim to 6" on short sides. Place the layered strips between the Guide Bars and sew from end to end, chain sewing them all at the same time. Make sure the left side stays against the Guide Bar, especially as it reaches the needle, and that the fabrics don't shift. As the angled edge passes the left Guide Bar, make sure the right side stays against the right Guide Bar until the seam is sewn. Since the blocks will be cut oversized the seams don't have to be perfect. Rotate the strips $180^{\circ}$ and sew in the opposite direction. There should be a scant $1 / 2^{\prime \prime}$ between seams. Remove the Guide Bars. Sew a scant $1 / 4$ " seam on both long sides of all strips.
Note: Refer to the Double Strip-Pieced Four Patch tutorial for more information on using this strip-piecing technique.


STEP 4: Press all seam lines to set seams, then cut the strips in half down the center between the stitching lines. Fold longer strips in half for faster cutting. For this block size you will end with $41 / 4$ " strips that are sewn on both sides making tubes.


STEP 5: Layer 2 strips, matching the lengths when possible and cut into 6 " triangles by aligning the $6 "$ mark on the ruler with the bottom of the strips. You will be cutting 2-4 triangles at a time. Use a second ruler or precut block at the top left of the strip for a guide. I'm using my 6" Bias Edge ${ }^{\text {TM }}$ Template and Ruler. A regular 6" or larger square ruler will also work placed on the diagonal, or any $45^{\circ}$ triangle ruler that has even measurements on the short sides.


STEP 6: Pull stitches loose at corner. These should pull out quite easily by giving the fabric a slight tug. If there are more than a few stitches give the fabric a slight tug on both sides of the stitches. Press seam to darker fabric. Placing the units with the darker fabric on top makes this easier. You should have 36 blocks measuring approximately $55 / 8$ " square. If these were to be used as half-square triangles, they would be trimmed to the size needed. But since they will be used for Combination Blocks we will save the trimming until the next step is completed.


STEP 7: Cut 6 strips $55 / 8^{\prime \prime} \times 35^{\prime \prime}$ from a different fabric. These can be cut on the crosswise or lengthwise grain. Cut these strips into 36 squares $55 / 8^{\prime \prime} \times 55 / 8^{\prime \prime}$. Layer the half-square triangle units with the squares right sides together, matching raw edges, and the half-square triangles on top. No pinning needed. It's okay if they aren't a perfect match as they will be trimmed to size after sewing. Stagger the layered units to pick up easily for sewing.

For this block size you will need to use the Seam Guide Extension if you plan on sewing without marking the seam lines. Line up all lines exactly and tape in place. Place a ruler or straight edge along the red sewing line to make sure they are lined up correctly.


Line up the top corner of the layered units with the edge of a $1 / 4^{\prime \prime}$ presser foot. Line up the bottom corner with the Center ( $1 / 4^{\prime \prime}$ ) Line on the Seam Guide or Extension. Keep bottom corner on this line until seam is sewn. Rotate $180^{\circ}$ and repeat for other side. Don't worry if your seams aren't exactly $1 / 2$ " apart. A narrower seam on the bias edge won't matter since it won't unravel. Sometimes the seam will bow slightly as it's sewn. This usually isn't a problem since the block will be squared after it is pressed. Too much bowing could be caused by not holding the fabrics steady or not working on a flat surface. Also I use a sewing machine with dual feed for all of my piecing to get more accurate results.


STEP 8: Cut from corner to corner between sewn lines and press seam to larger triangle.


Square block to 5 " square by aligning the 5 " marks on the ruler with the long diagonal line.


You will have 36 right hand and 36 left hand blocks. These were used for the ribbon border on my Sweet Sampler pattern along with 4 half-square triangles for the corners. There are also many traditional quilt block patterns that use these blocks.


BONUS: Sometimes you will have scraps leftover that can be cut into presewn bonus triangles and squares to use in another project. That's what I used to make the quarter-square triangle blocks on my miniature quilt "Bits and Pieces" pictured in the Gallery.

