Okay – true confession time. In school, I was a theater rat... always in plays and musicals, always taking artsy-fartsy classes, including “How To Mime” or, as I remember it, “How To Pretend You’re Stuck In A Box And Look Foolish Doing It.” Unless you’re Marcel Marceau, you look really silly doing mime. So... no mime today. But, we are still making a box. In particular, a boxed corner. This is a sewing technique everyone should have in her/his arsenal. The boxed corner creates space in
something that would otherwise be flat. For example, in a bag, you’ll have a lot more room to stash your stuff if you create boxed corners. Basically, any sewn corner can be turned into a boxed corner with a few simple steps. We show you the two most common methods.

*Projects shown in top image, clockwise from top right: Messenger Style Brief, Quintessential Plaid Tote, Back to School Totes, Big Canvas Beach Tote, Dritz Buckle Bag.*

If you sew two squares together, then turn them right side out, the square is still flat. If you were to stuff it with some filler, it would make a lovely knife-edge pillow. If you want to turn your flat square into something with more dimension, you add boxed corners.

We love the box corner here at S4H. Below are just a few of our projects made more appealing and functional thanks to their boxed corners.

*Aurifil Thread Carry Case*
Go everywhere slim messenger...

Mustang Messenger Bag with Push Locks
Kitchen Chair Cushions

Patent Leather Color Block Tote
Structured Fabric Baskets

Grocery Bag

It's NOT easy being green!
Make your own healthy grocery bags.
Box Style Zippered Cosmetics & Toiletries Case
The basic box corner

For this tutorial, we've used a light colored fabric with contrasting thread so you can clearly see the steps of our techniques. You would use the fabric of your choice with coordinating thread.

In this example, we're assuming you’re working on a project that has sewn corners and is shaped like a square or rectangle. If you’re following a pattern or tutorial, the boxed corners (as well as the exact measurements) will be indicated.

1. Place the fabric right side together.
2. Using a straight stitch, and the indicated seam allowance, sew the side and bottom seams, pivoting at each corner. We used a ½” seam allowance.
3. With the sewn fabric still right sides together, use both hands to pinch and pull apart the corner. As you pull, the fabric will begin to form a little peak with the corner point at the top and the seam lines running down the middle of the front and the back. Align these side and bottom seams. The seam allowances should be facing in opposite directions. Place a pin in the matched seams to hold them together. It is very important that you exactly match the seams; that is what will make the intersecting lines of your finished corner look good.
4. Mark the depth of the boxed corner with a fabric marking pen or pencil and a straight ruler, positioning your ruler so the desired depth is measured from side to side at the base of the “peak.” Our desired boxed corner depth is 3” (more on how to determine measurements below). Slide the ruler down from the peak until you reach the point at which your “triangle” is the appropriate width (3” in our sample). Draw a horizontal line at this measurement.

5. Another measuring option is to measure vertically from the corner point of your seam (the actual end point of the seam – not the tip of the fabric) down along the seam line. In this case, you measure HALF the width of your finished corner – or 1½” in our sample. It’s a bit harder to tell in the photo below, but from the point of the seam to the ruler is 1½” – look at the grid lines on the cutting mat, which are 1” squares. Draw a horizontal line at this measurement.
6. Sew across the peak on the drawn line. Be sure to backstitch at the beginning and end of the seam.

NOTE: Depending on the project you’re sewing, you may want sew across two or three times to reinforce for added strength at corner.
7. Trim away the peak to ¼” – ½” from the line of stitching.

8. Gently pull apart the corner at the seam line to see the boxed corner take shape.
9. Turn the fabric right side out to really see what your finished boxed corner looks like. Lovely!
Cut-out box corner

As with many sewing techniques, there’s an alternate way to create a boxed corner. Some people prefer to cut a square from each corner, then bring the seams together to sew the corner. You get the exact same finish as above, just in a different way. You may find this to be a better approach when sewing a boxed corner with heavier-weight fabrics.

1. Place the fabric right sides together on a flat surface.
2. Measure, mark, and then cut squares of equal size from each corner. In our example, we wanted a 4” finished corner and so cut out our corner squares at HALF that size or 2” x 2” squares (if you are using a pattern, you should be given your cut dimensions, but there are additional notes on measuring below).

3. Using a straight stitch, and the indicated seam allowance, sew the side and bottom (or adjacent) seams separately (because you just cut away the corner where you would have pivoted!).

   NOTE: You can also sew the side and bottom seams first, pivoting at the corner (as above) and then cut out the corner. You just need to be sure of all your sizing. It doesn’t matter that you are cutting into the seam as it will be secured again when the corner itself is stitched.
4. In the same manner as the basic box corner above, carefully match the side seam with the bottom or adjacent seam. Pin in place. The seam allowances should be facing in opposite directions.
5. Sew along raw edge of the corner, using a straight stitch and the indicated seam allowance, which should be the same as the side and bottom seam allowances. In our example, our side and bottom seams were ½” so our seam allowance across the corner should also be ½”. Be sure to backstitch at the beginning and end of the seam, or as above, double or triple stitch the seam.
Measurements

If you’re not following a pattern or tutorial that tells you the proper measurements, you will need to do some calculating to determine the size (or depth) of your boxed corner. It’s recommended you start with a shorter distance and go from there; you can always increase the size of a box corner, but ya can’t go smaller after you’ve made your cuts. As always, we recommend testing any new technique on scraps prior to starting your project.

Basic box corner

With a basic box corner, the distance from one folded edge to the other at the base of the peak is the depth of the box corner. Remember, in our example above, we sewed 3” across the peak from fold to fold, which yielded a 3” box corner. Or from the top fold of the peak, you can measure HALF the width of what you want your finished corner to be.
The farther away from the peak that you draw your line and sew, the deeper the box corner will be. Using a ruler to mark the stitch line will help you determine the depth, plus it helps you stay consistent on the other corner(s).

In general, remember these rules:

- The deeper or larger the box seam, the shorter the project.
- The smaller or shorter the box seam, the less depth you will have overall.

**Cutout box corner**

When you plan to use the cutout box corner method, you need to pre-determine the size of the box corner. The most important thing to remember is: the size of the square you cut away is HALF the size of your finished box corner. In our example above, we cut out a 2” x 2” square, which resulted in a 4” box corner.
The other detail to remember is seam allowance. You want to use the exact same seam allowance across the box corner seam as was used for your side and bottom (or adjacent) seam allowance.

As always, accuracy in cutting is key so the box corners are consistent in size.

If you’re making a lined bag/box, remember that you will need to create matching box corners on your lining.

**Formulas to help you determine the cut width & height of your panels**

The drawing below of a simple rectangular bag identifies the main measurements of your finished project. The top edge in these calculations is raw; don’t forget to add the inches needed for the hemmed, seamed, or faced finish needed for your particular project.
As you work through our formulas, here is a key to the measurements with which we’re working:

Depth; the desired size of the box (or the side of the bag) = D

Cutout = C

Raw Height (cut size) = RH

Finished Height = FH

Raw Width (cut size) = RW

Finished Width = FW

Seam Allowance = S

Let’s say you want to end up with a bag that is 13½” tall (see the note below regarding any additional height needed for your top finish) x 11” wide x 4” deep. What size panels (front and back) would you need to cut?

For our example, we are working with a standard ½” seam allowance.

Cutout we’ve addressed above several times. As a formula it is represented as C = D ÷ 2. In our sample: C = 4” ÷ 2 or 2”.

Raw or cut height is represented as RH = FH + C + S. In our sample: RH = 13½” + 2” + ½” or 16”. 
Raw or cut width is represented as $RW = FW + D + (S \times 2)$. In our sample: $RW = 11” + 4” + 1”$ or 16”.

Our front and back cut panels should be 16” x 16”.

Don't be fooled by your seam allowance when doing the calculations. The diagrams below show a cut-out corner that will result in a 4” boxed corner. In figure 1, the side and bottom seams are both stitched with a $\frac{1}{2}”$ seam allowance and the corner box is cut out at 2” x 2”. In figure 2, the corner is folded into place to yield the 4” width when stitched across with a matching seam allowance ($\frac{1}{2}”$). “But, but, but,” you scream. “Where did that $\frac{1}{2}”$ go? The $\frac{1}{2}”$ seam allowance is accounted for because all three seams are a consistent $\frac{1}{2}”$ (side seam, bottom seam, and diagonal seam). A diagonal is always wider than an original square cut corner… that’s how it works. We love geometry, don’t we?

The basic box corner method works in the same manner. Make sure your side and bottom seam
allowances are both the same (figure 3 below). Pull and flatten the corner, then draw in the stitching guide line at the point where you measure the desired width – 4" in our example (figure 4 below). As mentioned above in the step-by-step section, you can also measure HALF the desired depth from the point of the seam.

So, both methods yield the same result: a 4" boxed corner.

Hopefully this walk through of the formulas also helps your brain wrap around how the height of each panel is reduced. You lose the 2" in the box plus ½" in the bottom seam allowance.
What about the top?

In our calculations and formulas above, we do not address how the top raw edge of your finished box/bag might be handled. There are just too many variables that come into play! Simply remember that you DO need to account for that top finish. For example, if you are just doing a simple hem at the top, you may need to add another 1-2” to the Raw Height to account for that hem.