

# V-Groove Designs Made Easier

by Seth J. Bogdanove, CPF

To paraphrase that famous line from “The Sixth Sense,” I see v-groove designs. I see them everywhere! Seriously, every time I see a straight-line design whether it be in a neon light, on a gallery label, or on a building, I see the potential for a new and lucrative v-groove to carve into a mat.

The basic problem I was faced with in the past was how to get that design from its simple form onto the mat. One summer day, when business was slow and I had some extra time, I noticed a pad of graph paper on one of the shop shelves. I sketched a design onto a sheet of the paper and then the light dawned! I thought to myself, “I could set these on a grid and it would be easier to plot out!” Sure enough, I tried it and it was a perfect solution. After plotting out the design onto a mat, I cut the design, but found myself losing my place from time to time.

That’s when I came up with the numbering system you’ll see on the designs in this article. With the numbering system, all you have to do is count from your starting point to your finishing point on each cut, and you can’t lose your place!

We all know that if you can do something that the other framer in town can’t do, you’re going to get more business. Here you’ll see three

The grid is the key to cutting the mat designs you see on the next page. I generally cut these designs using a mat with 4” borders, spacing the lines  $\frac{3}{8}$ ” apart. You can do them on a mat with a 3” border with  $\frac{1}{4}$ ” spacing, but I’d recommend that you practice on the  $\frac{3}{8}$ ” grid first so you get the feel of the process.

Setting your guide or scribe to 4”, draw the first four lines the same way you would if you were scribing them for a mat. After you’ve done this, back it off  $\frac{3}{8}$ ” and repeat the process. Keep going back  $\frac{3}{8}$ ” and scribing until you have 8 sets of lines. If you’ve done this right, you should have something that resembles graph paper on all four corners of the mat. Next, number the lines from the outermost to the innermost (see the Basic Mat Grid).

Now you’re ready to transcribe the design from the diagrams to the grid! (See designs on next page.) Using a ballpoint pen (yes, I know, but you’ll be putting tape over these lines so don’t worry about it!), draw the cut lines as specified on the diagram, using the numbering guide to show you where the lines will start and stop. It’s easier if you extend the cut line a bit past the start and stop points so you can see what you’re doing as you cut. Once you have all four corners lined and NUMBERED, it’s cutting time!

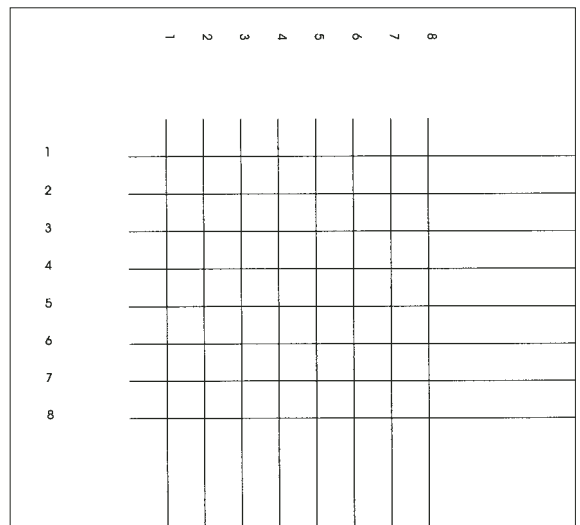
Before you do anything, change the blade in your mat cutter; dull blades make nasty cuts. Cutting on the back side of the mat and beginning at line 1, cut all the lines specified there. Move your guide and cut all the specified lines on that row. Take the mat out of the cutter and tape the cuts with J-Lar® tape, burnishing it down well with a burnishing bone.

Repeat the process on lines 3 and 4, take the mat out, tape and burnish again. Repeat again, taping after every two lines until all the specified cuts have been made. Now you’re halfway done.

Change your blade again, and turn the mat face up. Set your guide to the outside line, take a deep breath and start cutting the v-grooves. (Hint: make sure your work area is very well lit; the more light you have, the easier it will be to see the lines!) Start at the top of a cut, plunge the blade halfway in, and go slow! You don’t want to go past the end of the cut. Watch carefully, and when you get to the end, the groove will give an almost imperceptible “jump.” When it does that, stop! Cut the same way you did when you were cutting from the back; cutting all four sides of the mat and then advancing the gauge  $\frac{3}{8}$ ” and then going again. Change your blade every two lines whether you think you need to or not. Remember—blades are cheap, mats and your time aren’t!

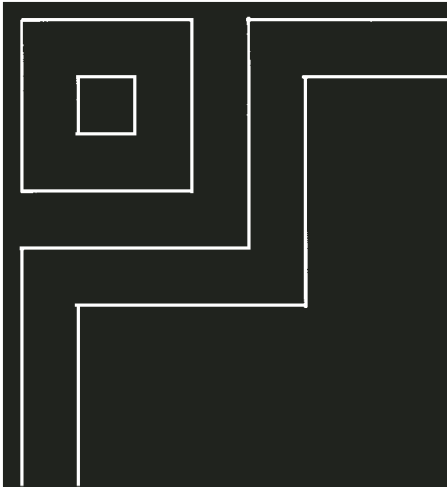
After the whole mat is grooved, turn it over again, set the gauge at  $4\frac{3}{8}$ ” and cut your opening, but save the dropout. You should always do these mats as double mats as the grooving seriously undermines the strength of the board. After you’ve cut the undermat, turn the mat face up again. Look at the grooves carefully. If you have little nubbins of mat at the corners, take an X-Acto® knife with a fresh blade and clean them up.

A word of caution: These designs take practice! Don’t be discouraged if it doesn’t turn out perfect the first few times. Once you master them, they can be quite profitable, and even fun! Good luck. ■

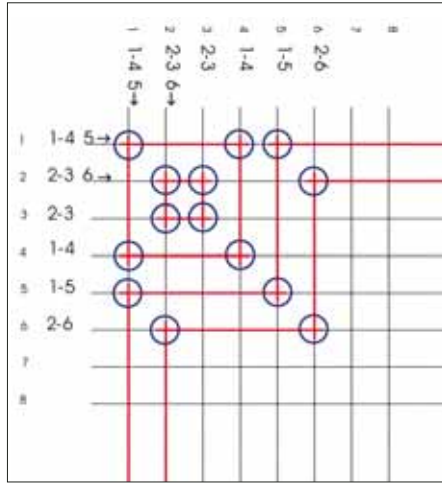


*Basic Mat Grid: This grid is designed for a 4” mat border. Each corner of the matboard should look like this before you draw your cut lines for the desired design.*

\*"Cut lines" are indicated in red. I also draw a circle at the ends of each cut line for visual assistance.



Basic Square Corner



Grid Layout for Basic Square Corner

of the many designs that can be created using the grid and numbering system. These designs can give you that creative edge over your competition. The most important thing to keep in mind as you read about, and later try, these designs is to have fun doing it.

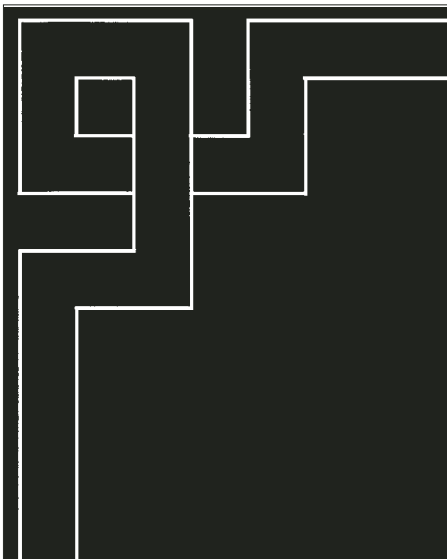
## Getting Started: Basic Necessities

I use a scribe to make the lines on my mats. If you don't have a scribe, the guide on your mat cutter will do, but first you have to true it. If your guide is off by even a fraction of a degree, it will result in an uneven and ugly groove.

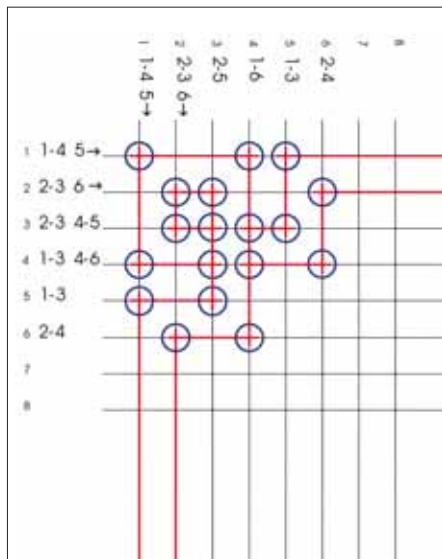
If you are using a scribe, I suggest one that will hold a mechanical pencil with a .5mm lead. The thinner the line on your mat, the less chance for mistakes to occur. I use an X-Acto® Parallel line marking gauge, but they have been out of production for a long time, so check your art supply store or framing supply dealer for something that will do the job.

To test the trueness of your guide, set it at 2½" and make a slice in a piece of black matboard turned face down. (I don't have to tell you to use a fresh blade, do I?) Turn the mat face up and slice again, without moving your guide. If the guide is straight, your groove will be too.

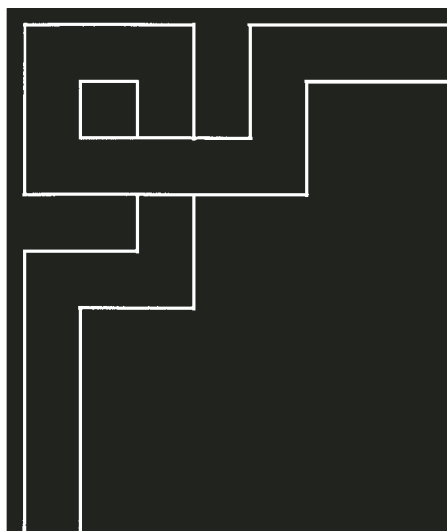
If the groove is uneven, adjust the guide accordingly as per the manufacturer's instructions. If the groove is evenly spaced, but the thickness wavers, then the head of your mat cutter may be loose, or you may not have your wrist locked. When you cut a mat, your arm should be parallel with the bar, and all motion should come from



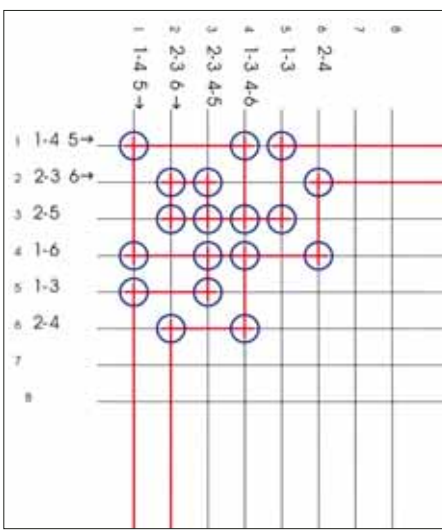
Variation 1 of Square Corner



Grid Layout for Variation 1 of Square Corner



Variation 2 of Square Corner (reversed)



Grid Layout for Variation 2 of Square Corner

your shoulder and elbow.

You'll need a clear, medium tack, thin, 1/2"-wide tape, preferably with a polyester base to keep the mat from falling apart as you make the cuts. I recommend J-Lar® tape for this purpose. (I purchase it from United Manufacturers Supplies.)

## Basic V-Groove Cutting

Executing the designs featured in this article requires mastery of the basic surface v-groove technique. To cut a simple surface v-groove, set your gauge to 2 1/4" and cut a window opening in the usual way. Take the mat out of the cutter and place it face down on your table, putting the dropout back in the way it came out. Using the J-Lar, tape it back onto the mat. Now you're ready to cut the v-groove.

Without changing your mat

guide, put the mat face up in the cutter and starting at the top of the cut, plunge the blade about halfway in and cut until the blade reaches the bottom of the cut without going past the bottom line. Turn the mat a quarter turn and repeat. Keep going until you've done this four times. If you have done this correctly, the v-groove should be clean and you should have an even line on all four sides.

Next, take the mat out and reset your guide to 2 1/2". Place the mat face down in the cutter and cut your opening. If you have followed these instructions properly, your mat should have the illusion of being a double mat.

I find acid-free boards are best for v-grooving because of the clean, white bevel and denser texture. Your blades should be changed

often, as you want your cuts to be clean. The only drawback to the surface v-groove method is that sometimes you will have a little nubbin of mat in the corner, but a sharp X-Acto blade and a steady hand will remedy this situation.

Practice is the key to successful v-grooving, so practice as often as your schedule will allow. It is also important that you can cut mats without a stop, as these designs preclude the use of these "modern" conveniences. ■

---

Seth J. Bogdanove, CPF, grew up listening to his parents tell him not to play with razor blades and broken glass. In 1979 he discovered picture framing and has been proving them wrong ever since. He developed this v-grooving system during his tenure at Frame-It & Co., Inc. in Brooklyn, NY where he has been the Master Framer since 1994.

