

## Dennis Stewart Chatter Tool

The DSE Chattertool was designed to create decorative textures on turned objects. Use it to add a touch of elegance and sparkle to boxes, lids, end grain bowls, jewelry, and special inserts for bottles and hollow vessels.

For clearly defined intricate patterns, chatter work should be applied to the end grain of very hard, fine-grained woods without figure. Use Ebony, African Blackwood, Lignum Vitae, Boxwood, etc... Other materials which work very well are acrylics and other plastics, Ivory, Tagua nuts, and soft metals.

Before applying chatter work, be sure the surface is true and smooth by making some light, finish scraping cuts. Prepare to apply chatter work by placing the tool rest on the center line about 2" away from the wood. The Chattertool blade should be inserted into the round hole at the front of the Chattertool with the pointed end out and the bend pointing downward. Tighten the screw to hold the blade firmly against the bottom of the hole perpendicular to the screw, as shown in Figure 1 and Figure 2.

Position the Chattertool so that the shank (not the flexible

Figure 1

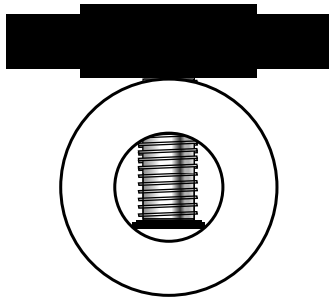
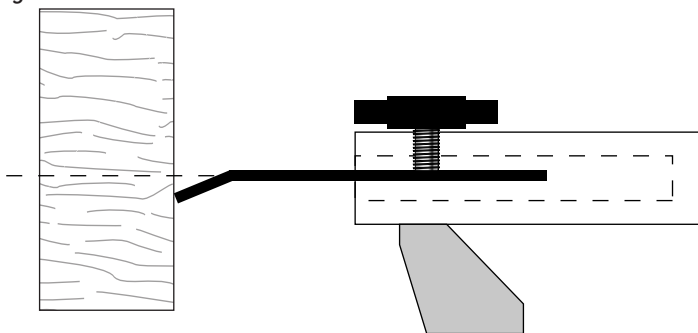


Figure 2



blade) is on the tool rest with the tip angled slightly downward so that the blade would contact the surface of the wood below the center line. Either the flat edge of the blade or the point can be used. Line up the blade with the area of the surface to be textured. Be sure that the angle between the top of the blade and the surface of the piece is less than 80 degrees. This position will allow the blade to pull away from the surface, rather than dig in when it starts to vibrate.

To apply the chatter work, bring the blade into contact with the rotating surface of the turning. As you apply pressure, the blade begins to vibrate. Each time the blade makes contact with the surface, it scrapes a small mark on it. In a matter of seconds, hundreds of marks are scraped into the surface, leaving an intricate pattern of chatter work.

The length of the blade extending from the chattertool

determines the frequency of the vibration. A long blade will have a longer stroke that will be less frequent than a shorter blade. The vibration frequency combined with the surface speed determines the spacing of the marks. So if you want the marks to be close together, a short blade and a slow speed are required. Different patterns can be made by changing the blade length and surface speed.

Another variable that will affect the pattern is the amount of pressure that you apply. More pressure makes the texture deeper. Also, if you move the blade sideways, pulling it across the surface, the rate of side movement per rotation will determine the density of the pattern. A fast side pull will spread a small number of marks over a wide area, while a slow side pull will compact the marks.

Two different parts of the blade can be used. Either of the two straight edges of the spear point will make a linear mark when applied parallel to the surface. These patterns usually work best with short blade lengths and slower speeds so that the lines are close together. The point of the blade will make a vee groove with the chatter marks if pressed directly into the wood without any side movement. With either of these patterns, you should apply pressure to the blade against the wood until you hear the chatter noise peak. Then, quickly pull the blade straight back away from the surface. If you remove the blade too slowly, it will knock the peaks off the chatter pattern.

By moving the blade sideways after it starts to vibrate, you can extend the area covered by the line pattern. But, to keep the line continuous, the side movement of the blade must be parallel to the cutting edge. A broken line pattern will result from side movement that is not parallel to the edge.

Side movement can also be used with the point to create wide bands of spiraling marks. A fine, lacy pattern can be created by rotating the tool about 45 degrees so that the blade vibrates in a diagonal motion. When used with light pressure and a fast side pull, this will produce fine squiggling lines which overlap slightly to create a delicate woven pattern.

Mastering chatter work is not very difficult with the Chattertool. However, before attempting to apply chatter work to a finished project, practice on a scrap of hard end grain wood.

If you make a pattern that you don't like, simply scrape it off and try another one. When you make a pattern that you do like, take note of the variables involved so that you can create it again on future projects.

Chatter work can be so much fun to do that you may be tempted to put it everywhere. However, it is usually best used sparingly with plenty of smooth surfaces surrounding it. Another way to highlight a band of chatter work is to cut a small groove on both sides of it to frame it. Varying the frequency and type of pattern when using several bands of chatter work on the same piece makes it more interesting.

Finishing the chatter work can either improve it or destroy it. For patterns with a smooth background, lightly sanding with 400-600 grit will bring out the contrasts between the marks and the background. Sanding deeper textures without a smooth background will flatten and polish the high points which also increase the contrast. Using fine steel wool or very fine abrasive pads instead of sandpaper will polish but not flatten the high points, giving a softer look. For extremely high contrast, apply contrasting paints, shoe polish, or decorative waxes. Rub it into the texture, and buff to remove it from all untextured areas.

When applying finishes to chatter work, avoid heavy finishes as they will often ruin the patterns. Also avoid sticky oils or waxes that are difficult to polish out of the textures. A light oil or wax is recommended, but be sure to rub out any excess finish from the texture.