HAND SANDING

Secrets

Get the job done so you can get back to fun

By Paul Anthony

If you survey any group of woodworkers as to the craft’s pleasures, you won’t find “sanding” on anyone’s list. But this dusty, tedious task has a big payoff when it’s done well, yielding the kind of smooth, clean, well finished surfaces that announce top-shelf work. On the other hand, sanding done poorly can make even a well-designed project look like you decided to let your helpful 8-year-old nephew pitch in after all because, well, you don’t like sanding.

Power sanders have minimized the muscle required for preliminary sanding, but they stop short of the ability to finesse your work. That has to be done by hand, and that’s what I’ll talk about here. I’ll let you in on a bunch of tricks for creating professional results as quickly as possible. I’ll also introduce you to some great tools and supplies to get you down that dusty road fast (see Buyer’s Guide, p. 64). I mean, sure, we want to do the job well, but we also want to minimize sanding suffering, and get back to the fun of sawing, making joints, and putting things together!

The right paper makes all the difference

Fight your natural woodworker’s frugality, and buy good quality sandpaper. Cheap paper only wastes time and produces poor results. Good paper costs more, but it works faster, lasts longer, and produces a more consistent surface. For raw wood, I typically use aluminum oxide paper, beginning with the finest grit that will do the job efficiently, then moving through successively finer grits, stopping with 220 grit. For smoothing finishes, I usually begin by dry-sanding the first coat with 320-grit stearated silicon carbide paper, which is designed to prevent loading. I wet-sand the next two coats respectively with 400-, then 600-grit waterproof (wet/dry) silicon carbide paper. Regardless of the type of paper you’re using, pitch it when it stops cutting well. Trying to “get the most from your paper” by using it dull is definitely a false economy.
Many types of sandpaper for hand sanding are available in standard sheet form. You can also hand-sand with discs designed for random-orbit sanders if you prefer. Self-adhesive sandpaper (in rolled form here) is particularly handy for use with custom backers.

Detect defects with the right light
Subtle surface flaws that lurk undetected in normal overhead light have a nasty way of announcing themselves when you apply a stain or finish. The best way to expose them during sanding is to work under a strong raking light in a semi-darkened shop. I mount a high-wattage clamp light on a portable helper post to do the job (see page 14). Before moving on to the next finer grit, make sure to scrutinize the surface from all angles.
Flat panels need finesse

Hand-sanding panels? Isn’t that what random-orbit sanders are for? Well, yeah, but they often leave swirl marks and aren’t well suited to smoothing edges. I only power-sand panel faces, not edges, and I always follow up by hand-sanding in the direction of the grain, working in raking light. As for edges, I hand-sand them only, which is often quicker and which affords more control than a power sander. A well-finished arris (the sharp edge created by the intersection of two surfaces) is the kind of detail that makes a piece noteworthy. Whether you decide to ease an arris only slightly or to round it more prominently, consistency matters, as does efficiency. Here are a few tricks for getting the job done well, and efficiently.

Preppin’ Weapon

My favorite general-purpose sanding block, the Preppin’ Weapon is comfortable to use, and has a rubber sole that’s firm but forgiving. A quarter-sheet of standard 9 × 11” paper is easy to install, and virtually all of its surface is put to use.

Know when to get wet

When finishing projects, you sometimes want to bring liquid into the picture. For example, before applying a water-based stain or finish, it’s wise to “pre-raise” the grain on a finish-sanded surface, and then sand it once more to minimize grain-raising when you apply the finish. Also, many finishes need to be scuff-sanded between coats, often using water or mineral spirits as a lubricant. In this case, you’ll need to use wet/dry paper and a waterproof block.

Diagonal dub

To quickly knock down an arris, tilt the sanding block diagonally off the edge of the panel. Also orient it diagonally to the length of the arris to maximize abrasive contact in use. Then scrub back and forth in long, diagonal strokes as you move forward along the length of the arris. This makes fast work of stock removal, but creates a sort of chamfer that needs neat rounding over as a follow-up.

Whisker lop

After wiping wood with water to pre-raise the grain in advance of applying a water-based finish, sand diagonally using very light pressure. This snaps the raised wood whiskers off to the side rather than simply pressing them back down into their pores only to have them rise again when the finish is applied. Finish up by sanding with the grain using the same amount of pressure. I use a felt block wrapped with 320-grit paper for the job.
To consistently ease an arris, perform a flat-to-flat rollover. Begin with the block contacting the edge, and take as many maximum-length strokes as necessary to remove any tool marks. Follow up with a series of 5 or 6 full-length back-and-forth strokes, tilting the block over gradually with each stroke until the paper contacts the face of the work in the case of long-grain sanding. When sanding cross-grain, stop just shy of the surface, as shown at right.

When easing a corner, begin on the long-grain edge, and take a series of uninterrupted pulls that fully round the corner and finish with the block in contact with the end-grain edge. Regulate your pressure and count the strokes to achieve the desired effect. Then treat any similar corners exactly the same way.

This hook-and-loop sanding block allows you to use 5" discs for hand-sanding. I consider it a good backup for when I run out of regular sheet paper.

Felt rubbing block
A hard felt block is typically used for rubbing out finishes. However, its size and relatively soft composition afford great control as a backer for light-pressure sanding.

Sanding between coats of finish is necessary to knock down dust nibs and level any drips or other imperfections. Lubricating the paper—using water for water-based finishes and mineral spirits for solvent-based products—keeps it from clogging. Use a soft, waterproof backer wrapped with wet/dry silicon carbide paper.

Hand-sanding with discs
This hook-and-loop sanding block allows you to use 5" discs for hand-sanding. I consider it a good backup for when I run out of regular sheet paper.

Wet rub

Foam block
This closed-cell foam block was cut from a garden kneeling pad. Pliable and waterproof, it’s a great backer for wet-sanding.
Save time with custom backers

Often, the best approach to a particular task is to use a custom backer that is specifically designed to reach around or into the target surface. The two examples shown here—one commercially produced, and one shop-made—provide ideas for the sort of approach you can take to speed up your work.

Double-edge dub

A V-shaped sanding backer will ease both arrises of a panel edge at the same time. It’s great for fast chamfering or for aggressive roughing over of edges before following up with the rounding roll-over technique shown in section #2.

Navigate curves with control

Coved moldings, profiled edges, and other curved shapes present a special challenge because they demand complementary backers for the most efficient sanding attack. In some cases, you can create shop-made backers from dowels or scraps of styrene (see sidebar). Manufacturers of sanding accessories also offer backers in a variety of shapes and sizes. Self-adhesive sandpaper is particularly useful for these curved backers.

To sand a cove, grab a dowel with a radius that matches. If you don’t have self-adhesive sandpaper, just pinch the paper onto the dowel as you work. Don’t make a dowel backer too long; cut it to a length that’s easy to handle and that suits the paper size.

Emery manicure

Emery boards, sold for filing fingernails, do a good job of cleaning up flat or convex edges of scrollwork. The best emery boards for woodworking have one face coated with medium grit abrasive, and the other with fine abrasive.

Detail sanders get into tight spots

When smoothing the interior edges of scroll sawn work or finessing a carved surface, you need a way to essentially poke stiffened abrasives into the openings. An emery board or paper-wrapped dowel will often do the trick, as will commercially available detail sanders.
A hardboard spline makes a great backer for reaching into grooves. You want easy movement, not a tight fit in the groove, so its thickness is important. For efficiency, press flat against one side of the groove, then the other. Then tilt the backer against the arris on each side in turn to remove any stray fibers. Tempered hardboard that’s smooth on both sides and $\frac{1}{8}$" to $\frac{3}{16}$" thick makes a great backer for sanding $\frac{1}{4}$"-wide grooves. The piece shown here was sawn from an office clipboard.

The fastest, cleanest sanding of profiles is achieved with a backer like this rubber contour sanding pad that presses the paper in full contact with the surface.

It’s easy to make a sanding block that perfectly matches many molding contours. Just adhere fine sandpaper to the face of the target surface, and then rub a piece of packing styrene against the paper as shown. You now have a perfectly complementary styrene backer that you can wrap with sandpaper.

The tapered tips on these belt-wrapped detail sanders allow them to reach easily into and around carved features and other complex elements. The belts are available in various grits.

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