

Composing: A Flexible Way to Design

Keep options open
from the initial idea
to the finished piece

BY TIMOTHY COLEMAN

James Krenov may be remembered best for his charming, diminutive cabinets, his emphasis on unusual woods and hand-wrought details, and his practice of working with tools and methods that encourage intimacy between maker and material. As a student at the school where he taught, though, I learned the most by observing him immersed in the creative experience as he brought a piece to life: “composing,” as he called it.

He would scurry about the workshop making parts, rough-clamping them together, stepping back with a fist under his chin, and looking long and hard. The piece might stay in that place for days before the next steps were clear to him. Other times he would see right away, take things apart, and chop 2 in. off the legs.

Composing, as Krenov saw it, was a way for the maker to have freedom to improvise and make discoveries during the build. One could respond to characteristics in the material as they emerged, and make changes to the piece as it evolved.

This method had enormous appeal to me. By creating a flexible process, I could weave together designing and building

Design doesn't stop at the drawing board

The key to success in composing is to develop a method that keeps options open as long as possible. This means making design choices even during the build, when there are still plenty of options for shaping parts, profiling edges, and determining the role the material will play.



Capture the idea

Before you build, you may begin with a sketch, a model, a full-size drawing, a mockup, or some combination of these.

SKETCHES

Bold lines limit fussiness. Move quickly from one notion to another as you try to capture the overall shape and feeling of the piece. Sometimes this means quick work with a marker; other times it means color and isometric views. But don't dive deeper than necessary.



in a way that would allow me to be more spontaneous. Having worked this way for three decades, I've developed some strategies to leave wiggle room and manage what can be an unwieldy process.

Remember that learning the techniques of composing takes practice, like any other furniture-making skill. Try it on small projects at first, or on just a few components of a piece while you develop your own strategies and become comfortable with the process.

Before you build

In the beginning, all options are open. There is the idea of the piece and the desire to work, but where to start? Look for an anchor, a fixed starting point from which you can begin working and exploring possibilities for the next steps. Sometimes the search is easy, like when dimensions are determined by the space for the piece. Other times, the starting point is elusive and it may take some pondering before you find it. Ultimately, you are looking for a spark—it may be a sketch, model, mockup, full-size drawing, or mix of these—that gives you the confidence and energy to begin building. It's not necessary, or even desirable, to have everything figured out at this stage.

Dive in with sketches, scale models, and mockups

Sketches are rough by nature, so I often use a broad marker for its bold lines. Using a scale ruler can help give a rough approximation of the dimensions as drawn, and colored markers can mimic different wood tones.

While sketching, envision the piece but also pay attention to what is emerging on paper. Sometimes an errant line will suggest



SCALE MODELS

Scale models bring the design into tangible reality, giving you a further sense of the piece, from its visual heft to joinery considerations. Coleman handles the small parts at the scrollsaw. Hot glue and double-sided tape make quick work of attaching the little pieces together (1). Take a photo to get a preview of the full-size piece. Set up a small environment, with a fake wall and floor, to photograph the model (2). Evaluate its proportions and shapes. Then use the model to identify complex joinery or shapely curves, which you should then explore and record on a full-size drawing (3).

an unexpected direction. Squint your eyes at the sketch to take it out of focus and just show the outline.

A scale model turns a sketch into a 3-D object, which can be studied from multiple angles. Setting up a small environment for the piece and photographing it helps, too. After you crop and edit the photos to remove distractions, the shot can make the model look quite realistic. Still, avoid being fussy with the details. This is about establishing overall proportions and shapes.

A full-size mockup takes you a step further toward determining the proportions and volume of a piece. Large case pieces with curving surfaces in particular benefit from mocking up so you get a clearer sense of the actual volume. Leave the details sketchy. You can even simply staple and tape sheets of cardboard to a stick frame. When possible, though, make the



Put your ideas to the test

Try out ideas full-size, whether they're leg shapes, material options, or decorative panels.

FULL-SIZE MOCKUPS

Scaling up gives you a much better sense of a piece's impact, including how its volume, lines, and material will look when the project's done. For a dining table's mockup, Coleman pulled up a chair to examine the veneer and make sure there was sufficient leg room.



mockup using the same type of wood you plan to use in the piece. Sheets of veneer taped to plywood are a crude but effective way to do this. If your piece includes patterns or decorative elements, add a rough version of them too, but don't do more than you have to.

Observe the mockup in different lighting conditions, especially low light at night, which can emphasize the volume. Keep the full-size mockup around while building to test out details.

Full-size drawings are useful for working out joinery details and precisely laying out parts, but it's typically not necessary to rely on them early in the process. If there is a dominant feature, such as a curving leg or bow front, full-size drawings can be a good place to define it. Most of the time, however, mine are a record of where I've been, rather than a road map from the outset. So much happens in the moment that I find it impossible to make a firm plan in advance.

During construction

By now you have established overall dimensions and proportions, but there are still plenty of choices to be made regarding shaping, profiles, and the material's role in the piece. For each project, make a roadmap identifying a few tasks that will be pivotal in determining the look of the piece. These fixed points act as guideposts as you build and also keep you from limiting your options too early.

For instance, it may be important to see the doors of a cabinet before you can envision other details of the construction. So build the doors first. They will help determine the volume of the cabinet and the next steps in the construction.

Staying flexible with joinery

Joinery will be a key component on your roadmap, but if you plan ahead it doesn't need to lock in your overall design. When composing, the general strategy around joinery is to make parts larger and less shapely than you think they'll end up. This leaves you with the flexibility to decide as you build. For example, when building a cabinet, keep the panels for the case oversize while you decide on the joinery. Also, if you plan for a cabinet top that



TRY OUT DETAILS

if you're integrating a pattern—whether pierced, carved, or inlaid—make a sample of it or sketch it out to see how it looks on a mockup. Even patterns that you decide not to use could inspire a related design in the final piece of furniture.



overhangs the sides, it will allow you to trim the height of the sides before cutting joints.

A sample apron—There are even strategies to create options after the mortises and tenons have been cut. Take, for example, a cabinet with a shaped apron and leg (see photos, p. 62). Once you have a general idea of the size and shape of the legs and aprons, define the margins around the joinery where shaping can begin. You don't need to know the precise shapes yet, just the potential margins.

Make an extra leg and apron to help test shaping ideas. It helps to create a full-size drawing of the joint area with top and side views. These drawings need to be precise, since moving a mortise just $\frac{1}{8}$ in. can greatly limit or expand your options when refining the parts. Leave as much as $\frac{1}{2}$ in. at the bottom shoulder of the tenons. This allows you to trim the width of the apron or add a curve along the bottom edge. You can cut to the very bottom of the tenon without exposing the joint.

Even after you've cut the tenons on the apron blank, the length of the apron can be adjusted by cutting back the shoulders of one tenon and recutting the cheeks. Slip tenons make it even easier to trim the length. Leave the legs oversize, primarily at the two



Refine as you build

Build in a way that doesn't shut down your options prematurely.



LEAVE ROOM FOR SHAPING

On this apron and leg, Coleman left plenty of stock around the mortise and tenon to explore shaping options. Coleman uses drawing templates, a ruler, and a pencil to outline his shapes, and he doesn't hesitate to erase and try again.



outside faces. With the piece dry-fitted and standing, use tape or a marker to define shapes on the leg or apron. You can do the shaping now, or after assembly.

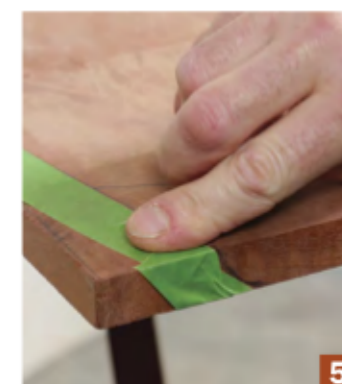
Don't veneer yourself into a corner

Building oversize is useful with veneered work, too. Consider a veneered tabletop and three methods for constructing it, each with its own degree of flexibility: 1) an edge-banded plywood core with veneer on top, 2) veneer on plywood with edge-banding applied after the veneer, and 3) a solid-wood core with veneer running the same direction as the core. Option one is the least flexible, as it forces you to size the top close to its final dimensions to avoid cutting off the banding and exposing the substrate. Option 2 leaves more room to compose because you can make the panel oversize, but applied edge-banding could disturb the flow of the face grain. Option 3, veneer on solid wood, offers the most flexibility. You can make the veneered panel oversize and retain the freedom to size the panel and shape the edge in a way that best suits the base without adding an edge band. This is



KEEP MOCKING UP

Drawings and full-size mockups can be helpful during construction. Here, with the real legs shaped and glued to the short stretchers (1), Coleman uses a piece of $\frac{1}{4}$ -in. plywood to explore possible shapes for the long stretcher. After cutting out the mock stretcher, Coleman colors in the shape (2) to better match it with the table. For the tabletop, he starts with an oversize blank (3), which allows him to dial in the shape. Laying down tape sets off the piece's outline (4). Determining the edge profile is the next step (5). He uses tape again to explore square, bullnose, thumbnail, undercut, and beveled profiles.



valuable because it's important to see the top on the actual table base before deciding on the top's shape and edge profile.

Edge profiles can often be decided later, so leave enough dimension for options once the piece comes into focus. You may have to guess on the thickness of the top when you build it, but the edge can be made to look thinner and lighter with an undercut, or thicker and heavier with a thumbnail profile or bevel on top. Similarly, when building a table or cabinet with an overhanging top, leave the maximum overhang, knowing it can be trimmed back.

Walk away

One further strategy I find helpful if I'm feeling stuck: healthy disengagement from a project. It can be frustrating when the next move isn't clear, but it's a natural part of the process. Put it aside for a while and work on something else. You can still look for ways to keep the project moving forward while ignoring the immediate roadblock. □

Timothy Coleman is a furniture maker in Shelburne, Mass.



Online Extra

For a glimpse into the design journey behind one of Coleman's cabinets, watch the video at [FineWoodworking.com/270](https://www.finewoodworking.com/270).