



Shaping refines a table's design. The author first uses models, measurements and full-scale drawings to work out a dining-table design. Plywood templates (foreground) help execute that design. But even so, subtle shaping in the shop makes the table more inviting to the touch and to the eye.

"Make furniture that people can be comfortable living with." So said Sam Maloof, the noted chairmaker, and this same guiding principle is at the heart of the furniture I build. Optimum comfort certainly applies to chairs, and the same holds true for dining tables. When building a dining table, I start by finding out how the owner likes to dine and where the table is going. I use this information to come up with rough sketches and scale models, which convey material and proportions better than drawings. Then I measure everything—people, dining room, rugs, existing furniture and china—so I can translate dimensions to drawings and occasional mock-ups. This multi-step process almost always leads to a table that best suits the customer.

Design is always a compromise

How a dining table relates to its users is just as important as how it relates to its surroundings. The best tables are the ones that make tiny compromises. For example, when building a table for a family with children, the durability of the finish on the tabletop outweighs the need of the finish to be authentic to the table's style period. Fortunately, there are some simple guidelines that will help with design decisions.

Seating—The first step is to determine the number of people to be seated, so you can figure the table size that will fit them comfort-

Making Dining Tables That Work

Careful measuring and common sense ensure stability, comfort and good looks

by Peter Tischler

ably. If the owner entertains regularly, you'll want to make a table with an expanding top that doesn't require a complicated leaf system or a forest of legs. I consult a number of references (see the further reading box on p. 63) to get ideas for seating needs. They are only a starting point, though. General rules (for example, the commonly given 24 in. of elbow room per person) may have to be increased or decreased to take into account the type of table, the space needed for the chairs or how else the table might be used. Figure 1 on p. 62 shows a typical table plan for seating six people.

Basic dining dimensions—

I've found that the most comfortable height of a dining table is between 28 in. and 28½ in., which is a bit lower than what the textbooks say. But for a family, that height is more informal and makes the sitters feel relaxed. The height, of course, depends on the chairs and whether the table has an apron that will limit leg clearance (see figure 2 on p. 63).

The width and shape of a dining table's top also affect seating arrangement. Most chairs are 20 in. wide or so, but you will need better than 24 in. of place-setting width for most people and even more if you're dealing with squirming teenagers. For the minimum overall width of the table, I use 36 in. A table much over 40 in. wide will lose any feeling of intimacy between eaters on opposite sides. An oval top offers more side seating than a rectangular top of similar square footage. (It's easier to squeeze two more people

It takes more than a measuring tape for good table design. The author uses small models, full-size chair and sideboard mock-ups, full-scale drawings and templates.



Quarter-scale models show table options—From the left, the model bases are single pedestal, double pedestal, trestle and leg and rail. Models also present wood choices.



in at the ends of an oval when company comes over). But because square and round tables take up less space, they often fit better in small dining areas.

Measure everything before you cut anything

After you've figured out the seating and overall table size, take out a tape measure, sit at a comfortable dining table and think about the relationships of sitter to chair to table.

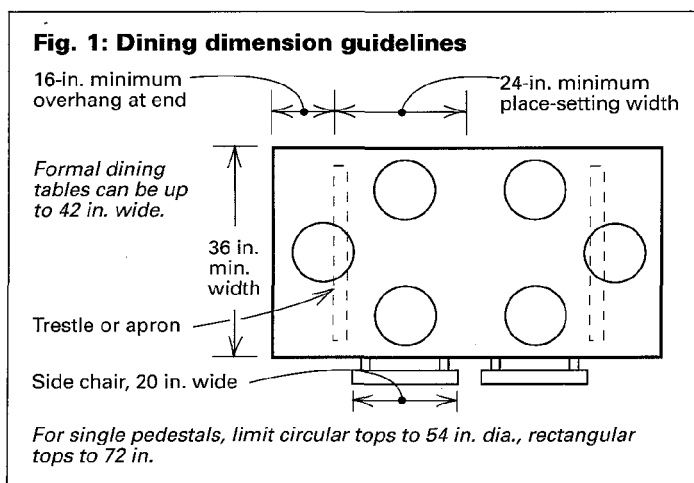
Then start taking real-life dimensions. With the biggest sitter in a relaxed, seated position, measure the distance between his or her elbows and knees. Measure knee heights, and add a little extra to establish the bottom of the apron height. Measure how far forward the person likes to put his or her feet. Measure dinner plates, serving platters and the room where the table is going. Exact dimensions aren't as important as how they all relate. Once you get to the final shop drawings (see the top photo), you'll already have a good idea of how the table will look, and consequently, how it will match the room and furnishings that surround it.

Models show table proportions and styles

Most styles of furniture offer variations for dining tables, such as top shapes, woods to use and options for bases. It's worth looking at lots of examples of the period you're working in because you

may have to do some hybrid designing to come up with a table that matches a sideboard or china hutch. Similarly, if you're making a contemporary table, it's useful to know the tastes of your client because you're likely to borrow the lines or elements of his or her favorite furniture pieces. Here's where models can help.

When I build quarter-scale table models, I make several variations to help the customer visualize differences in proportions and materials. I use various woods to show what color, figure and grain patterns will look like in the room. Alternative shapes for the top, such as free-form edges and book-matched halves, are another example of what models can depict. Models can also present a variety of base forms, which show how much room there will be under the top and how stable the footprint will be (for more on this, see *FWW* #92, p. 28). The following are the four most common base types I use.



Single pedestal—In terms of stability and looks, the mahogany model (the first one in the bottom photo) shows the relative proportions a single-pedestal table should have. An oval top resting on a single-pedestal base is probably my favorite dining table, partly because it allows for extra sitters. Because this type of table has a central column, it makes sense to have an even number of people on each side (an odd number can cramp the person sitting in the middle).

Single pedestals also lend themselves well to a round top, but there is a size limit that the pedestal will support. I limit round tops to 54 in. dia., unless the undercarriage is quite heavy. A rectangular top on a pedestal shouldn't be much over 72 in. long.

Double pedestal—A double-pedestal table (the second model in the bottom photo) will fit an odd number of sitters per side staggered around the columns. The model shows how a free-form top, here in wormy red maple, looks over a walnut base. The top's slightly asymmetrical shape, which widens in places, actually offers extra knee space where the curved vertical members are. The two pedestals spread out the center of gravity, so the table can be quite long. Double-pedestal tables are good for expansion (using draw leaves) because the place settings will be in the right spots.

Trestle—Trestle tables (see the third model in the bottom photo on the facing page) are great for accommodating many people because there are lots of expandable-top options. Even without leaves, a trestle table can be long because the length mainly depends on the strength of the stretcher and how far the top boards can span. In the case of the trestle model, the book-matched cherry top has butterfly keys joining two large boards, similar to classic George Nakashima tables. The model also shows that the base uprights are shaped inward at knee level to accommodate sitters at the ends of each side.

There are two major drawbacks of a trestle table: First, it requires lots of overhang (compared to a leg-and-rail table) at each end to give enough room for end sitters. To allow for this, pull a chair up to the edge of a dining table, and measure how far in the ends are. I generally allow 16 in. as a minimum amount of overhang all around the tabletop. Second, the trestle's feet interfere with people seated at the ends of each side.

Leg and rail—Leg-and-rail tables, such as the fourth model in the bottom photo on the facing page, can be strong, as well as quick and economical to build. But because a table's legs can take up much of the sitter's leg room, I give each sitter at least 28 in. of width for comfort because about 3 in. is lost around each post. Or a leg-and-apron table can be fitted with a bow-sided top, like the model, and the legs spread out to the corners to provide more seating room. I build leg-and-rail tables slightly higher—about 29 in.—to allow enough leg clearance because the apron will take up some height. To do this, determine the bottom of the apron height by measuring the largest sitter in a chair. Chairs are typically 17½ to 18 in. high at the seat. Allowing 6 to 7 in. for the thighs to go under the top, the bottom of the apron should usually be 24½ to 25 in. above the floor (see figure 2).

The importance of scale drawings and materials

Proportions are such an important part of overall design. I've found that one-quarter scale drawings and models bring up the design issues and questions that I need to present to the customer.



Designing for family needs—The author had the family in mind when he designed this table to seat six comfortably, with room for a high chair. He used end leaves to allow plenty of elbow and leg room without dividing or disrupting the figure in the tabletop's center.

But to work out final construction details and to produce templates, I usually make full-scale drawings. I then use the templates to shape the parts (see the photo on p. 61).

There are benefits to using solid wood for the whole table, including the top. For me, the durability, variation in grain and smooth transition of top to edge make solid-wood tops worth the effort (see the photo). Though veneered tops may be stable and show consistent pattern and color, there are ways of achieving similar results in solid wood.

For stability, I use only well-seasoned stock. To keep the boards flat, I rough-mill in several sessions over two weeks to acclimate the wood to my shop. The best way I've found to keep consistent grain and figure patterns is by using the widest boards available. Wide boards are usually much easier to match than narrow ones.

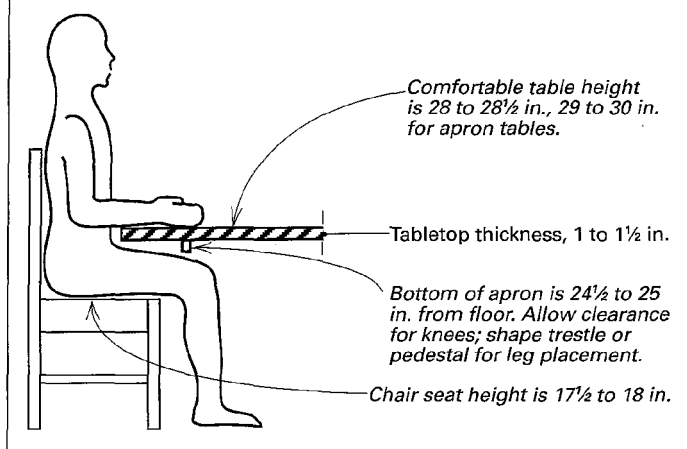
For color continuity, I like the logs that are to be cut into tabletop stock to be sawn clear through. If this isn't practical,

select boards from the same lot, and buy all your wood at the same time. Then when gluing up the top, go for the best grain match rather than trying to orient all the end grain a certain way.

Changes in top thickness as small as ¼ in. can have a dramatic effect on how we perceive the table as a whole. My tops vary from 1 to 1½ in. thick. I allow extra thickness for planing the wood a few times before matching up the boards for glue-up. Longer boards will likely be cupped or twisted, so give yourself enough wood rather than under-sizing the top's thickness just to get it flat. When connecting the top to its base, allow for seasonal movement by using screws in slotted holes or cabinetmaker's buttons. □

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Fig. 2: Seating clearances for dining



Further reading

Designing Furniture by Seth Stem, The Taunton Press, PO Box 5506, Newtown, CT 06470

Encyclopedia of Furniture Making by Ernest Joyce, Sterling Publishing Co. Inc., 387 Park Avenue South, New York, NY 10016

Fine Woodworking on Tables and Desks, The Taunton Press, PO Box 5506, Newtown, CT 06470