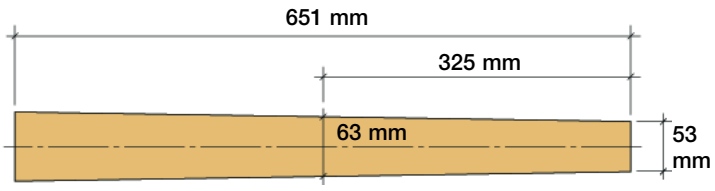
Using a Marked Stick to Measure

One thing that was impressed upon us in the Fine Woodworking Program at the College of the Redwoods is to get away from using numbers as a means of measurement as much as possible. This is something that I learned the hard way. Wherever possible, use a stick with a mark on it that is labeled and carefully measured with a ruler, so that while you are working it is not necessary to remember number measurements and details, and you can concentrate on what you are doing. There could not be a more appropriate place to introduce this practice than here.

Bridge Measuring Stick



Note: Tapered as fingerboard, continue taper to saddle.

14-27

INSTALLING A BRIDGE is not as difficult a task as it is nerve-racking. The bridge is installed after the instrument has been finished, which puts everything at risk. This is not meant to scare you, but to make you conscious that concentration and care are necessary to install a bridge correctly.

Bridge Measuring Stick

Before doing any work installing the bridge, build a bridge measuring stick (**14-27**). Start with a piece of ¼-inch plywood or similarly stable material approximately 3 inches wide by 24 inches long and square one end. The end just squared will be the nut end. Now measure from the nut edge down 650 mm plus 1 mm. This extra millimeter is for compensation due to string tension and other factors that make the system imperfect. Mark a centerline down the middle of the stick, and draw in the taper of the fingerboard, which is 53 mm wide at the nut and 63 mm wide at the twelfth fret, and continue this taper all the way to the end of the stick. This stick will be used to position the bridge.

Fitting the Nut Blank

Cut and file or sand the nut blank to fit in the slot. It is all right if it is too wide and too high at this point; it just has to fit in the slot. Sand a saddle blank to fit in the saddle slot on the bridge. The slot is ⅛ inch wide; therefore, using a ⅛-inch saddle blank will require only a little sanding. Sand with no less than 320-grit sandpaper, and be sure to sand both sides to remove any marks.

Positioning the Bridge

Once both the nut and the saddle fit their respective slots, place the bridge stick on the fingerboard up against the nut and clamp in place. The stick should fit perfectly over the fingerboard without hanging over on either side. Take the bridge and place it on the lower bout, up against the saddle (**14-28**). It is important that the middle of the bridge be lined up with the centerline of the stick. The middle of the bridge should also be lined up with the center seam in the top. If this is your first guitar and it is not lined up with the center seam, it's okay. You'll get it the next time. It is much more important that the stick be placed properly on the fingerboard and the center of the bridge be lined up to the center of the stick.

14-28 Positioning bridge with bridge stick clamped to fingerboard

Masking the Bridge Area and Protecting the Top

Once the bridge is positioned correctly, take a piece of low-adhesive masking tape and place it on the top, up against the back edge of the bridge. Place another piece up against the edge of each wing. Remove the stick and place a piece along the front edge of the bridge. Continue to mask off the bridge until there are about three layers of tape on each edge. Make a cardboard template of the top with a cutout for the fingerboard and the bridge area. Tape this down to protect the finish from damage while you are working, and remove the bridge (**14-29**).

14-29 Bridge postion masked, cardboard to protect the top

14-30 Scraping off finish

14-31 Caul for under the bridge

Preparing the Bridge Area for Gluing

Using a chisel you feel comfortable with, begin to scrape off finish in the masked-off area (**14-30**). Scrape right up to the tape without forcing it beyond, and scrape all the way down to the wood. Once the finish has been removed, sand lightly with 320-grit sandpaper.

Going through the sound hole, tape a caul to the underside of the top directly under the bridge with regular adhesive masking tape (**14-31** and **14-32**). The caul should have notches for the fan braces, enabling it to fit over the braces without crushing them. Place the bridge in the masked-off space, and perform a dry run with the bridge clamp to make sure there are no problems. Small cauls will be necessary to protect the bridge from the metal and screws of the clamp. These should be fashioned out of thin material and covered with a thin gasket cork to prevent damage to the bridge.

14-32 Taping caul to the underside of the top