# Gluing the top braces with clamps and cauls

The alternative to the go-bar deck. When the deck is busy, glue the same brace set with clamps and cauls instead — same positions, same glue, same cure. Only the clamping changes.

> **Use this sheet instead of the go-bar steps** (Session 3 handout, page 3) when the deck is full. Everything before glue-up — layout, brace preparation — and everything after — cure, trim, shape — follows the Session 3 handout.

## WHAT YOU NEED

- Clamps with enough reach to get onto the top — at least one long-reach clamp; smaller clamps for brace ends.
- Wooden clothespins + rubber bands (see box below).
- Four scrap-wood cauls, two per round — Round 1: one for the bridge plate, one spanning the transverse pair; Round 2: one for the fans, one for the soundhole reinforcements — plus scrap to protect the top from clamp jaws.
- Masking tape, waxed paper, a glue brush, a bowl of water.
- A strip of wood clamped to the bench edge as a stop, to hold the top in place with room to arrange clamps.

## CLOTHESPIN CLAMPS

A plain clothespin spring is too weak for brace clamping — wrap a rubber band around the clothespin for real pressure. When you need still more, add a second clothespin, backwards, as in the photo below.

## THE BRACE SET

Bridge plate, UTB, MTB, 3 fan braces, 2 soundhole reinforcements — laid out exactly as in the Session 3 handout, and glued in that order. Confirm the fans mirror left to right and the bridge plate is on centerline before any glue comes out.

## SEQUENCE

**1. Dry run, no glue.** Arrange every clamp and caul first and check that each brace is held down tightly from end to end. You do not want to figure out clamping while the glue is drying.

**2. Tape the joint lines.** Lay masking tape alongside each brace line. Squeeze-out lands on the tape; peel it away and most of the mess goes with it.

**3. Glue the top, not the braces.** Brush a thin, even film of **Titebond Original** onto the top wood between the tape strips. A brush trimmed smaller with scissors gives better control. Keep the bowl of water handy for cleanup.

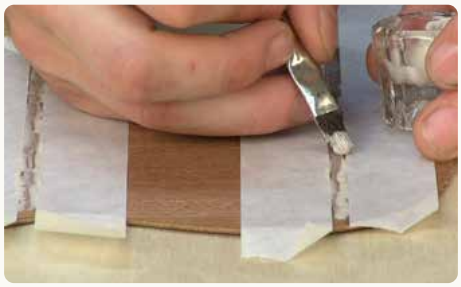
## SEQUENCE, CONTINUED

**4. Clamp in order, in two rounds. Round 1:** bridge plate on centerline under its own caul, and the transverse pair (UTB + MTB) under one spanning caul, at the same time. **Round 2:** the fans under one caul, and the soundhole reinforcements under a second caul, at the same time. Test-fit each fan first: it will need a bit of trimming where it crosses the bridge plate and the middle transverse brace (MTB) to sit flat, with no rocking and no gap — pare or sand a little at a time and test-fit again. The fans go on top of the bridge plate, so the plate must be down first — check the plate is still on centerline before the fans go on. One caul can span two or even three braces of the same height, so one clamp can glue several at once, but do not span two groups with one caul: bridge plate, transverse braces, fans, and reinforcements are all different heights. Put waxed paper under the cauls so squeeze-out cannot glue them down, and use clothespin clamps on the brace ends.

**5. Leave it clamped and undisturbed to cure.** Titebond Original takes hours to set — trimming and shaping wait until the start of the next session, exactly as with the deck. Leave the clamps on until the instructor clears them.



One clamp through a spanning caul glues the transverse pair at once.



Glue goes on the top wood, between the tape strips.



Rubber-banded clothespins for brace ends; a second one, backwards, for extra pressure.

## CHECKPOINT

Before you walk away from a clamped top:

- Every brace seated on its Session 3 line.
- Bridge plate on centerline; fans on top of the bridge plate, trimmed to sit flat at the plate and MTB crossings.
- Waxed paper under every caul.
- Pressure even — no brace starved or swimming.
- Squeeze-out wiped before it skins over.
- Clamps stay on until the instructor clears them.

## WHEN TO USE WHICH METHOD

Deck free? Use the go-bar steps in the Session 3 handout. Deck full? Use this sheet. The joint is the same either way — only the clamping differs, so a pair can switch methods without redoing any layout or prep.

### Watch out — three StewMac differences

Some StewMac photos show **X-braces** — our class top has fan braces only, so follow the Session 3 layout and never copy a StewMac brace pattern. StewMac glues with **Titebond III** and quotes 45 minutes — we use **Titebond Original** and cure until next session. And the photos show kit parts in other sizes and woods — they illustrate the *method*, not our parts.



2 · Method and photos adapted from StewMac Ukulele Kit Assembly Instructions (Sheet i-5351), “Brace the top and back.”