

Dusty Strings

TriStander™ Hammered Dulcimer Support System

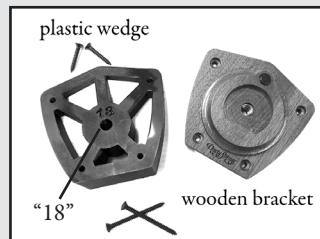
Installation and Use

If you are installing the TriStander yourself, please read the installation instructions carefully before you start. If your dulcimer came to you with the TriStander already installed, go to the Using the TriStander System section for instructions and tips on setting up the system.

Installation

The parts you should have in the box:

- Three wooden brackets
- Two plastic wedges
- Four 2" screws
- Eight 1/4" screws
- Three leather patches
- Three legs (full kit only)



The other tools and supplies you will need:

- Electric Drill
- Masking tape
- 1/8-inch drill bit
- Phillips-head screw driver
- Awl or center punch
- Barge cement or contact cement (optional)

General Notes

- The three wooden brackets are interchangeable.
- Figure 1 shows the typical frame parts of a dulcimer. If possible, the brackets should be placed close enough to the edge so that the screws sink into the rails and/or pinblocks as shown. This is not a requirement, however.
- The two bottom rail corner brackets use the plastic wedges for the proper tilt angle.

Marking and drilling the screw holes for the center wooden bracket

Position the top rail wooden bracket in the center of the top rail as shown in *figure 1*. It may or may not cover the original leg insert. Regardless, the insert won't be needed any longer.

For best results, securely tape it in position using masking tape. Using an awl, carefully mark the center of the mounting holes in the back of the dulcimer.

Now you can drill the pilot holes with the 1/8" drill bit to a depth of about 1 inch. Blow away the chips and screw down the bracket using the 1 1/4" screws supplied. When finished, it should look like *figure 2*.

Set-up

Lay your dulcimer string side down on a padded table top. This will not harm your instrument as long as you are reasonably careful.

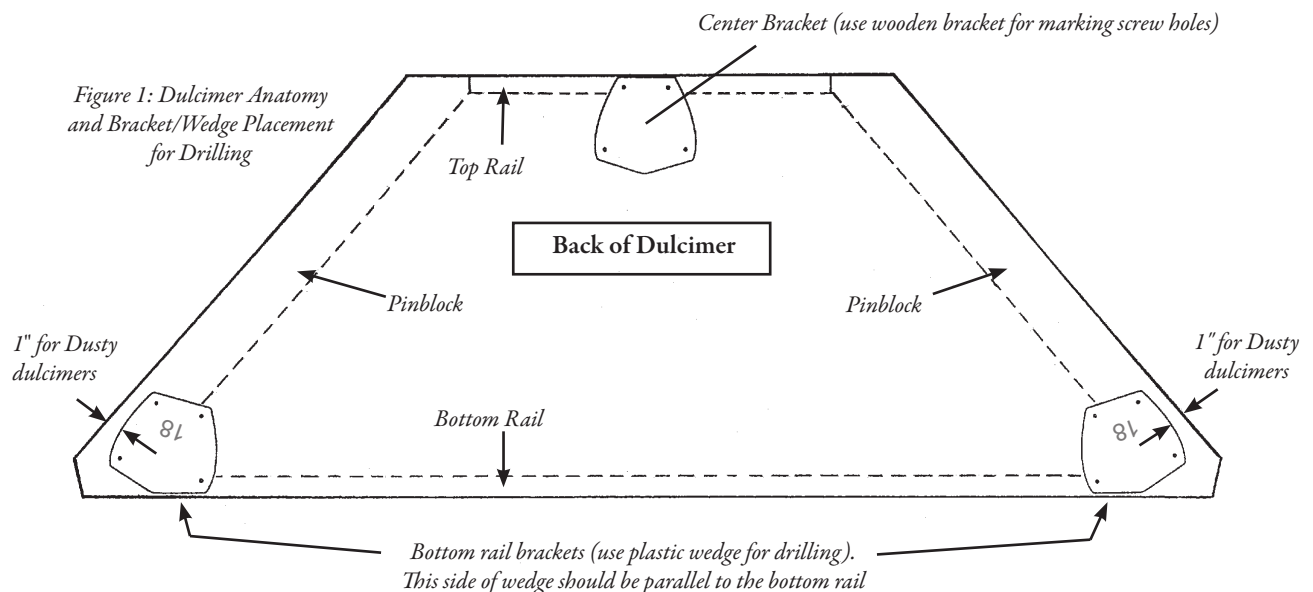
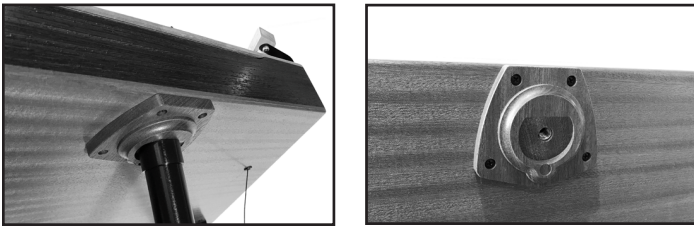


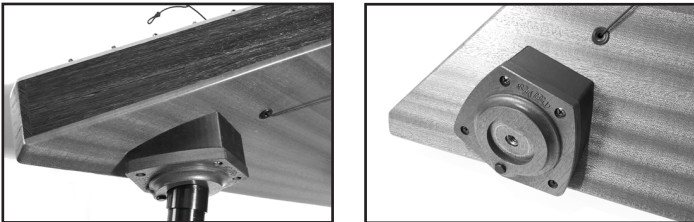
Figure 2: Center Bracket



Drilling the screw holes for the two bottom rail brackets with wedges

The remaining two wooden brackets will each use a plastic wedge underneath them (*see figure 3*). It is important to note that these wedges will be used as the guides for drilling the *angled* holes. Unlike with the top center bracket, these screw hole locations will not be marked with an awl prior to drilling, and will not be drilled perpendicular to the back.

Figure 3: Corner Bracket with Wedge



Using masking tape again, *securely* fasten the wedges in their proper final locations on your dulcimer's back, along the bottom rail. Refer to *figure 1* and the General Notes for guidance. For Dusty Strings dulcimers, set the corner wedges 1 inch in from the edges of the pinblocks as shown in *figure 1*. Make sure the face of the wedge showing the number 18 is facing up towards you.

Now, using the holes in the secured wedges as guides, insert the $\frac{1}{8}$ " drill bit and, following the exact angle of the guide holes, drill the pilot holes in the dulcimer back to a depth of about 1 inch. It is perfectly fine and expected that you will drill right through the back panel on several of these pilot holes.

Now you can remove the tape, clear the wood chips away, and fasten the brackets and wedges using the supplied screws, as shown in *figure 3*. Use the 2" screws for the thicker side of the wedge. Remember that the "18" should face away from the dulcimer and towards the wooden bracket.

Figure 4: Installed TriStander



Using the TriStander System

1. Tightening the Legs. To adjust a leg section, flip open the latch and extend the section to the desired length. Then flip the latch closed to tighten, making sure the handle is pressed all the way down (*see figure 5*). Before attaching the leg to your dulcimer, it is always a good idea to put some pressure on it to make sure all the latches are secure. The legs are designed to hold at least 60 lbs of weight without slipping. If you find that one segment slips even when the latch is all the way closed, you can use a 2.5 mm hex wrench to tighten the latch screw (*see figure 6*). Try a very small adjustment (a quarter turn or less), and then test again. Overtightening the screw and then forcing the latch closed could damage the mechanism, so you want it just tight enough to hold securely under a reasonable amount of pressure.

Figure 5: Latch open & closed

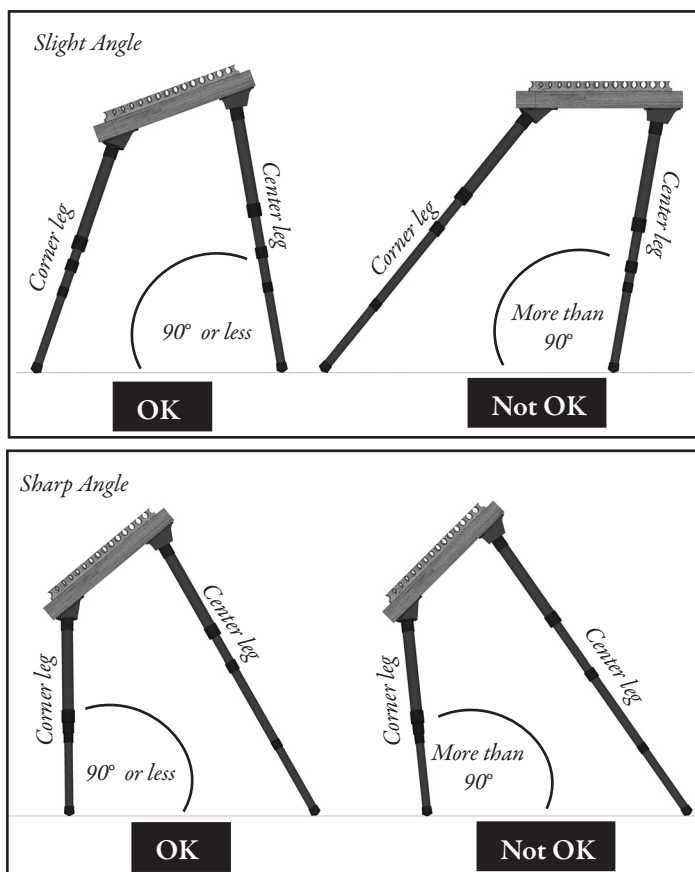


Figure 6: Latch screw



2. Attaching the Legs. Place the adjusted legs on the floor within reach. Set your dulcimer on a carpet, on its case, or other padded surface. With one hand, tip the dulcimer up on its top rail with the back facing you and screw the center leg into the bracket with your free hand. Or, you can straddle the instrument with your legs to hold it upright while you screw in the center leg. With this leg attached, the dulcimer will now stay upright on its own, allowing easy attachment of the corner two legs. Thread the legs in carefully and smoothly to avoid damaging the studs by cross-threading. Then it is ready for you to stand it upright. If you have a dulcimer with a hand hold or handle on the bottom rail side, you can set the dulcimer upright this way: Lift on the handle with one hand and push the back away from you with the other hand. Plant the center back leg on the floor and step backwards until the front legs touch the floor. Taking the legs off is just the reverse of putting them on.

Figure 7: Playing Angles



3. Playing Angle. You can vary the center back leg length to find the angle of the instrument that is most comfortable for you. A range of angles are available, but there are limits to how far you can go without compromising stability. Extreme angles in any direction (if any leg is leaning more than 90° outwards) will cause the instrument to be unstable (*see figure 7*).

4. Leg Length Settings. Each person will have a slightly different height and tilt that is most comfortable for them. It is helpful to adjust the legs to the desired length before screwing them into the brackets. Here are some likely lengths to use as a starting point: for sit-down playing, try setting the front legs to 23" and the center back leg to 32". For stand-up playing, try 32" for the front legs and 40" for the back leg.

5. Marking Your Leg Settings. After experimenting with leg lengths to find your most comfortable standing and/or sitting positions, it is handy to mark the legs so you don't have to measure them to set up the dulcimer in the future. Just make a pencil line around each leg where it disappears under the latch ring. The legs can then be collapsed for transport and easily extended again to the pencil lines for playing.

6. Case Protection. While most gig bags are flexible enough to hold the dulcimer with the brackets attached, the brackets can create wear points in the case lining. We've enclosed protective leather patches to be glued in at the places where each of the leg brackets contacts the lining of the case. We've found that barge cement or contact cement (available at most hardware stores) works well.

Other TriStander Features

1. Uneven Surfaces. Playing outside on hillsides or uneven terrain is easy using the TriStander system. Simply adjust the leg lengths to make the bottom rail of your dulcimer level.

2. Resonance. The TriStander allows the back of your dulcimer to vibrate more freely than a conventional stand does. It will also transfer the vibration to the floor better. On carpeted floors, you may hear no difference. But on hardwood, tile, or linoleum floors, most dulcimers will sound noticeably louder and more resonant with the TriStander.

3. Stability. With the legs adjusted properly, your dulcimer will be extremely stable, very difficult to tip over, and literally impossible to knock off its stand!

4. Portability. The lightweight legs collapse to about 16 inches in length. They will conveniently fit inside the leg compartment or accessory pocket of any Dusty Strings case. You can now carry everything you need in one hand, or better yet, one shoulder strap. This will leave your hands free for opening doors, signing autographs, shaking hands . . .

5. Multiple Dulcimers. It is not uncommon for dulcimer players to own more than one dulcimer. If you are one of those folks, you may want to have the TriStander versatility with all your dulcimers. You can order extra sets of brackets from your dealer or directly from Dusty Strings.

Warranty

The TriStander legs and brackets are warrantied for one year against defects in materials and craftsmanship. You may be asked to provide proof of purchase if you need to make a warranty claim. Legs that show signs of over-tightening are not covered under warranty, but there may be replacement parts available. Please do not hesitate to call us if you encounter any problems or if you have any questions about using your TriStander System.

Rev. 6/15/20

Dusty Strings

3450 16th Ave. W., Seattle, WA 98119 • 206-634-1656 • Fax 206-691-3712 • www.dustystings.com