Preparing a reedplate for use with a flat comb.

All out-of-the-box harmonicas can benefit from increased airtightness. A very effective way to accomplish this is to make the draw reedplate fit tightly against a flat comb. Many stock combs can be made flat or replaced by a flat aftermarket comb. My combs offer superior flatness and will not warp over time. They are the easiest and most economical way I know to provide an airtight harp.

The work to flatten the draw reedplate can be done in about two minutes by flat sanding. The rivets that secure the reeds to the reed plate protrude out of the bottom of the draw reedplate and don't allow the comb to touch the reedplate. Stock combs have small indentations in them to give these rivets room but those indentations can contribute to lower performance because there is less room for a good seal.

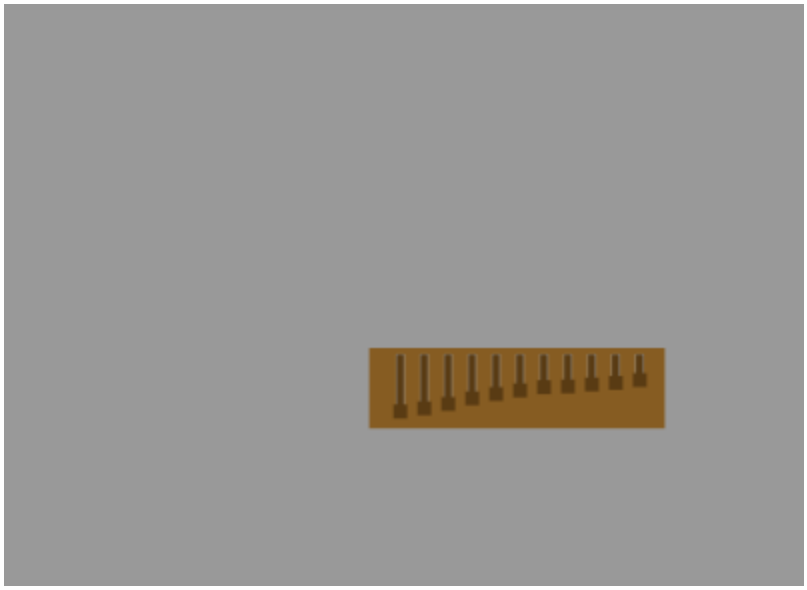
My flat combs don't leave room for these bumps. Instead, the bottom tips of the rivets must be sanded down. This does not impact the reeds in any way - they will still be securely attached to the plate once we are done.

Sanding also levels high spots in the brass between the slots which prevent the reed plate from making good contact with the comb.

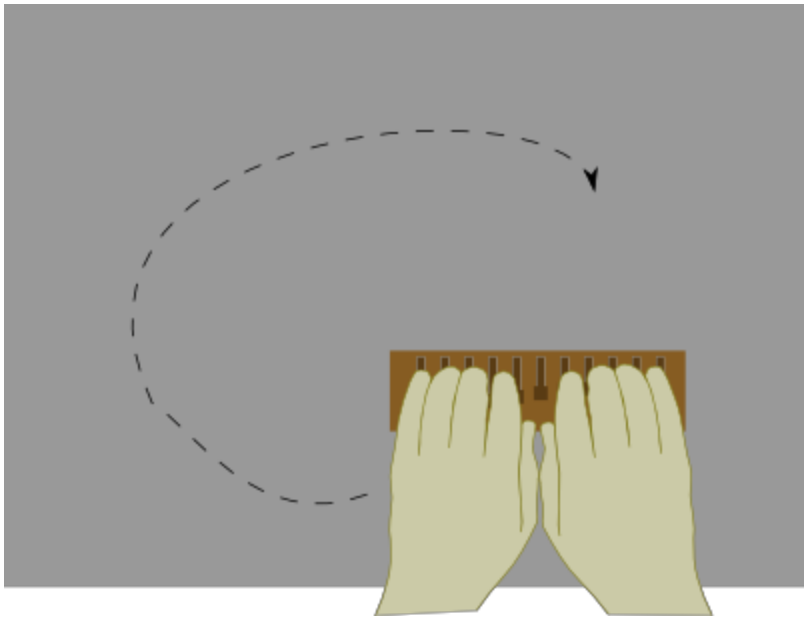
Suzuki reeds are welded on to the reedplate and don't have protruding rivets. However sanding down the reedplate will increase airtightness by making the reedplate flatter. Manji reed plates are chrome plated and sanding off this coat may not appeal to you but rest assured that the underlying metal will not corrode when the plating is sanded off. And that part of the plate won't even show since it's up against the comb so it's not even a cosmetic problem. It's perfectly safe to flatsand a Manji reedplate and I encourage you to do so to benefit from increased airtightness.

Use 220 to 400 grit all-purpose wet/dry sandpaper. Tape it to a flat surface. Ideally, something perfectly flat like a mirror pane or a piece of glass should be used. But a flat countertop will also provide excellent results. Ensure that there is no debris under the sandpaper before you tape it down.

Do not use double-sided tape. The sandpaper should be completely flat against the surface.

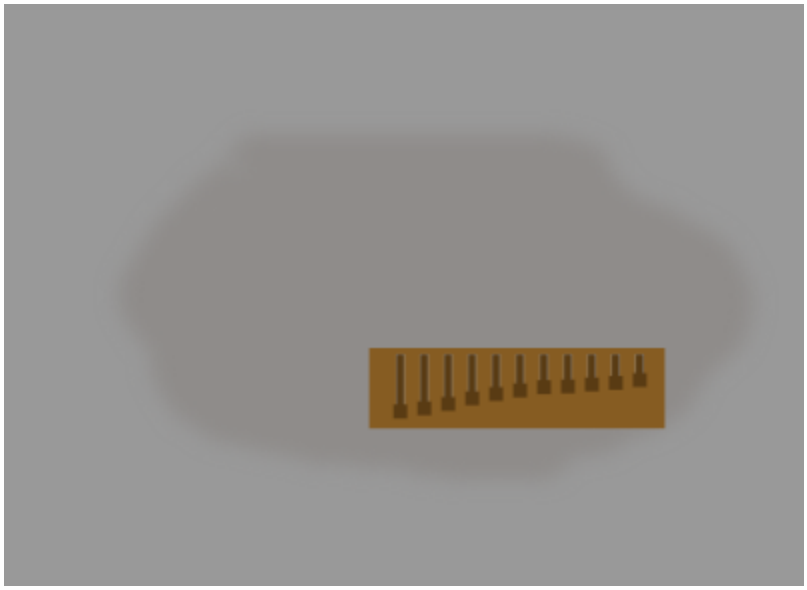


Place the draw reedplate on the sandpaper. Wet the tips of your fingers a little so that they will allow you to have good traction and move the reedplate around the sandpaper.

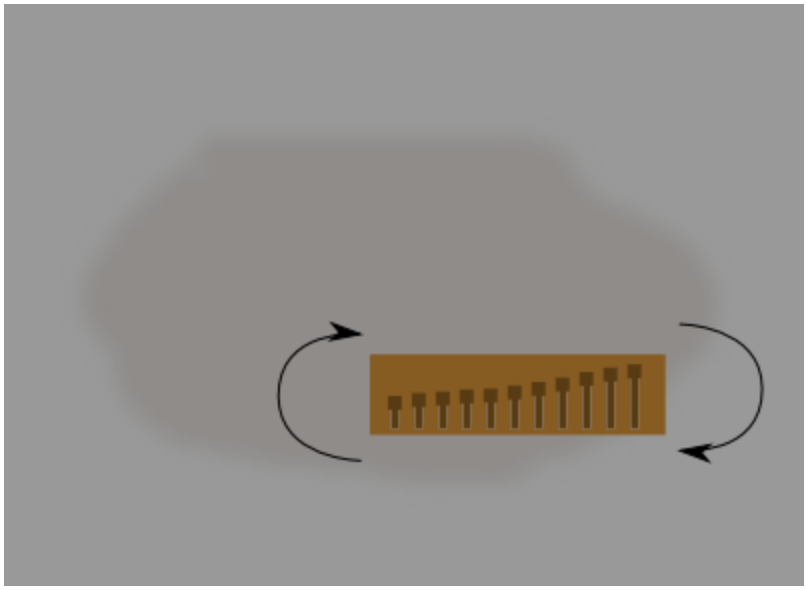


Place the fingers of both hands over the top of the reedplate and evenly distribute downwards pressure. Briskly move the reedplate in a circular pattern so that the reedplate gets sanded in all directions. It's better to make lots of quick passes with light pressure than fewer passes with hard pressure because we want to evenly distribute the work over the whole surface of the reedplate. Make sure the whole reedplate stays in contact with the paper - don't run off the edge of the sheet.

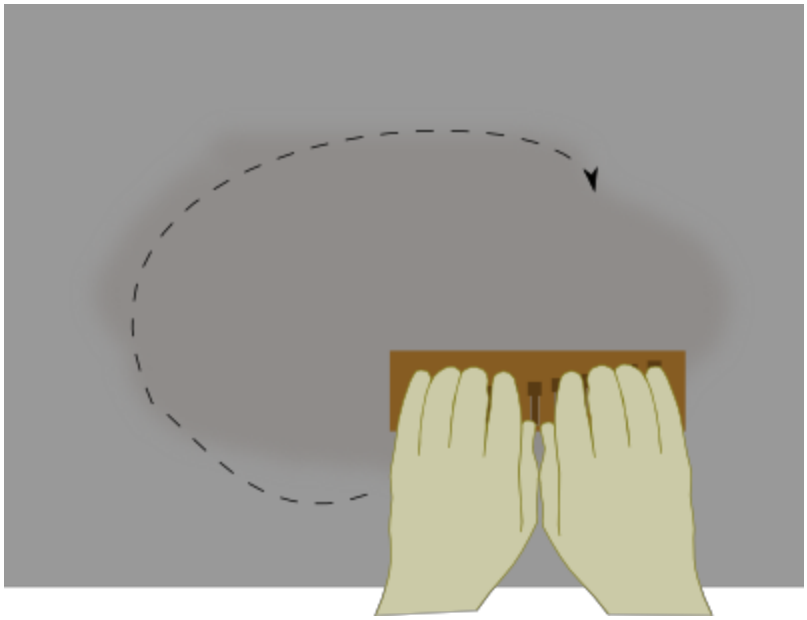
Don't press too hard or you will push the reeds through the slot and their tips will get sanded. If this happens, they will be out of tune.



At first, the reedplate will feel rough but keep going! You will feel it smooth out after a few moments.

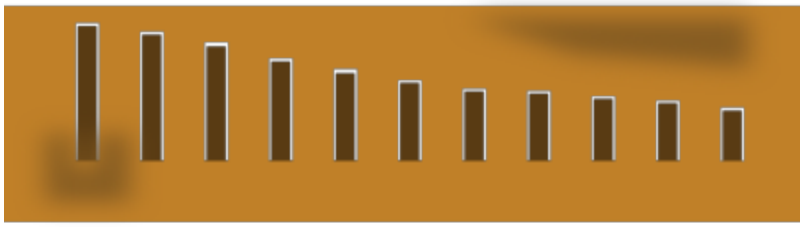


After a few more spins, stop and rotate the reedplate 180 degrees (the reeds stay on the top side of the plate, not in contact with the sandpaper) and repeat the process. Move the reedplate in a circular pattern so that the reedplate gets sanded in all directions

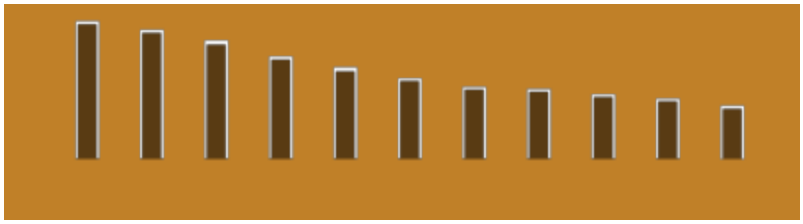


This evens out the work by redistributing our finger pressure.

Once you have completed sanding in both directions flip the reedplate over and look at the bottom side.



The sanded part will appear very bright. Darker areas are low spots. Those low spots are areas where the comb will not fit tightly with the reedplate and you will lead to worse tone and poor performance. Repeat the flat sanding process until the low spots are under control. You may find that some reedplates are stubborn and need repeated attempts. But many reedplates don't have to be perfect to play well.



Rinse off the reedplate to get rid of any debris or dust and reassemble the harp.